# Students' Motivation for Attending Varsity Football Matches

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## Abstract

It is important to understand what motivates members from a specific community to attend sports events. The objective of this study was to determine the factors that motivate students at a university of technology to attend Varsity Football matches at the university's main stadium. Twelve items of the fan motivation questionnaire relating to fan attendance at college soccer matches in the USA were adopted in this study. A principal component factor analysis with varimax rotation was performed on Likert scale data gathered from 329 respondents. Items clustered into three factors, namely enjoyment, friendship and relaxation, fandom, and belonging and self-esteem. The instrument used in this study had acceptable validity and reliability. The value of the research results from this study confirms the following: Promotional campaigns to draw students to Varsity Football matches should focus on excitement and emotions because attendance is motivated by the vibe at the stadium and to spend time with their friends. The university should build the brand of the football team. A vibrant crowd at a Varsity Football match provides advantages to the sponsors of the events, it contributes to the image of the university, and it contributes to the viewing experience of the television audience that watches the matches. The results confirm that event sponsors, organisers and host universities should understand the motivational factors that attract fans to attend football matches.

**Keywords**: Motivation, fandom, factor analysis, Varsity Football, South Africa

## Introduction

The purpose of this study was to determine the factors that motivate students' to attend a varsity sports event such as a varsity football match. This will enable the event organisers to make an informed decision on how to structure attractions that will draw students to repeatedly attend matches. Attendance at college sports events in the United States has received substantial attention (Anderson & Lee, 2017; Kim, Duncan, & Jai, 2016; Kirk & Weaver, 2019, Owen, 2016; & Palanjian, Cooper, Weight & Mihalik, 2014). A universal view is that institutions of higher learning offer financial compensation to students to reward them for their participation in sports activities. They inter alia receive academic support, financial aid, health care, and training by well-experienced coaches. Media coverage of college/university sports has escalated to the extent that it provides an additional marketing

tool to attract students to an institute of higher learning that performs well in inter-college/university sports events and competitions. Universities that participate in limelight sports quite often generate a strong fan base, have large sports budgets, and offer a substantial number of scholarships to elite athletes. In line with global trends, the university sport industry in South Africa continues to grow (Kirkpatrick, Pederson & White, 2018).

The varsity sports model in South Africa is very similar to the collegiate sports model in the United States in the sense that it establishes a co-existence between competitive sports participation and studying towards a higher post-school qualification. Varsity Sports (established in 2009) is a Cape Town- and Sandton-based sports entertainment and media company. The main objective of Varsity Sports is to administer, develop, coordinate and promote non-professional sport between higher education institutions in South Africa in a number of different sporting, namely athletics, hockey, cricket, football, rugby sevens, and netball. The two main limelight competitions hosted by varsity sports are varsity football and varsity cup rugby. These competitions are branded individually and they have overlapping key sponsors. Limited academic attention has been devoted thus far to varsity cup rugby (Hodges, Keyter, Tarr, Serra & Surujlal, 2014) and varsity football (Nthangeni, Toriola, Paul & Naidoo, 2021). Varsity sports rely on participating universities to ensure that stands are "packed" with student football fans. The success of these events hinges on enabling sponsors to expose their brand to student market segments, in enhancing a spectator vibe at the stadium, and creating an exciting viewer experience during televised coverage of matches.

Motivation of students to attend events (such as Varsity Football matches) is influenced by the event's ability to satisfy an individual's needs, for example the desire to be a part of an unforgettable moment in the sport's history or the desire to express one's joy (Pons, Mourali & Nyeck, 2006: 277). Hall, O'Mahony and Vieceli, (2010) describe motivation or reasons for attending a sports event in terms of accessibility to the event, entertainment at the event, performance of the team, the attractiveness of the event (and the venue), emotions (social experiences), and individual preferences for the event. Research on sport consumption motivation has led to the development of different sports motivation theories, in an effort to identify the factors that affect sports attendance (Karakaya, Yannopoulos & Kefalaki, 2016; Trail, Anderson & Lee, 2017). Two studies from 1995 (Wakefield & Sloan, 1995; Wann, 1995) provided seminal output on spectator attendance. Recent studies (Hallmann, Zehrer & Rietz, 2021; Prayag & Grivel, 2018; Prayag, Mills, Lee & Soscia, 2020) indicate that the relationship between spectator (and fan) motivation and attendance at sports events is still under investigation.

## Literature review

Van Heerden (2003: 261) developed a Three Scenario-view on sport marketing. Scenario 1 covers the marketing of sport products and services, while Scenario 2 describe the marketing of a company through its association, such as a sponsorship, with sport events, teams or individual. Sponsoring Varsity Sports events falls into Scenario 2. Scenario 3 was postulated as "The way sport bodies and codes market themselves and their events to attract participants, spectators, funding, and corporate involvement. Investigating student motivations to attend Varsity Football matches is embedded into Scenario 3.

### *Spectators and fans*

Maxton (2019:18) states that several studies have been undertaken on both sports fans as well as sports spectators, but few of them provide accurate definitions of the two, and research output, which does conceptualise the two rarely provides consistency. Sports fan motivation can be defined as a reason for sports fans to attend matches or to behave in a certain manner

towards a team. Understanding this motivation is important to pinpoint the benefits that sport fans receive when attending live sporting events and to "move spectators to becoming fans" (Wiid & Cant, 2015: 387). Milano and Chelladurai (2011: 24) explain that sports can be seen as a "universal language". It can be understood by everyone in the world and can bring people from different spheres of life together even though different things motivate them. Sport consumption motivation research resulted in the development of different sports motivation theories in an effort to identify the factors that affect sports attendance (Karakaya, Yannopoulos & Kefalaki, 2016: 322). Researchers seem to agree that the individual motivation of a spectator is a key factor affecting repeat sport event attendance. The word 'fandom' is widely used in academic circles when referring to the level of interest in sports events and teams and participation (eg. attendance) of sport spectators. Wiid and Cant (2015: 385) define a sports spectator as "one who is observing a sporting event". They state that the word spectator is derived from the Latin word meaning 'to see' or 'to watch'. It highlights that a spectator might be a refined watcher of an event but could "remain passive in their interaction with the game". A spectator is likely to analyse and examine team results without becoming actively involved in sharing their enthusiasm or spending their energy on the sport (Wiid & Cant, 2015: 385).

The difference between a spectator and a fan (Withey, 2013: 11) is that a "fan does not only expect a good performance from the team". A fan has a vested relationship and interest in the sport (event) and/or the team (university football team). Dedicated fans commit monetary resources (eg. travel cost) and time (travel and attendance) to follow an event and/or team. Fans travel to games, watch matches on television, and even wear branded apparel, all of which "indicate some form of monetary support" (Withey, 2013: 11). A sports fan is known as a person who is enthusiastic about a certain sporting code, sports star or sports team. The word 'fan' is taken from the word 'fanatic', which explains passion, eagerness and also moving beyond reason. The atmosphere at a sporting event can be greatly influenced by the presence of a group of fans. Fans also play a big role in uplifting the team they support. For example, a team often has a home-field advantage because of the wider support of their community attending the match, cheering them on and offering emotional support. The opposite is true when the fans shows competitiveness towards their rivals, and negative energy gets transferred to the players (Wiid & Cant, 2015: 385). In contrast to spectators, fans are considered to be excited and enthusiastic and take an interest in a particular sport team or athlete. The undisputable influence a large group of sports fans has on each other translates to the electric atmosphere and excitement at most large sporting events (Wiid & Cant, 2015: 385). Wann, Melnick, Russel and Pease (2001) outlined the differences between spectators and fans and argued that researchers who do acknowledge the differences between the two have generally reached consensus that the difference lies in the level or degree of devotion and passion displayed toward a team or a player. Maxton (2019: 24) describes fans of sporting events or particular teams as having "a certain degree of involvement or an attachment to the sport (and/or team) itself".

### *Sports fan motivation*

To be motivated means to be moved to do something (Ryan & Deci, 2000). Maxton (2019, 14) states that understanding the motivation of sports fans or spectators is an important area of research for sports brands and other entities associated with live sports productions. When hosting sports events in the local community (such as Varsity Football), it is vital to understand the elements that motivate the target audience (students) to attend the event or not (Hall et al., 2010). Sloan (1985) was among the first researchers to develop research theories

based on the motives of sports fans to attend matches. He categorised two important motives namely, "salubrious effects and entertainment". He inter alia postulated the following:

- The salubrious effects theory suggests that involvement in sport is motivated by pleasure and increased physical and mental well-being;
- Entertainment theories are linked to the attraction to sport based on the aesthetic and moral representations derived from the meaning of the sports event.

Wiid and Cant (2015: 383) developed a sports fan motivation scale (SFMS), which inter alia included the following:

- Aesthetics refer to the skills demonstrated by the team or athlete. Fans motivated by this are usually drawn to a specific sporting code.
- Entertainment drives sports fans to watch sporting events for the amusement of watching a contest that will hopefully lead to a victory for the team or athlete they are supporting.
- Escape is also closely linked to entertainment. The sports fan uses the sports event to break away or escape from daily routines.
- Eustress is referred to as positive stress and is experienced in the exciting atmosphere when watching a live sports event. It creates a feeling of psychological wellbeing and encompasses the value of enjoyment and entertainment. This is an important motivator for the fan who desires excitement.
- Group affiliation is defined as the need to develop social links through the shared experience of attending sports events. The necessity to spend time with friends, may be the key driver for sport consumption.
- Self-esteem gives the fan a sense of accomplishment when their favourite team performs well. Some sports fans maintain a positive self-concept based on their team's performance referred to as 'basking in reflected glory'. Fans feel motivated for attending games when their favourite team is winning.

The motives that drive sports tourism can be divided into three categories, namely pull, push, and sports specific (Vaughan, Chih-Wei & Kim, 2018: 123). Although originally coined as motives of sport tourism it is argued in this paper that pull, push, and sports specific categories could also apply to fans attending sport events without them being labelled as "tourists". Pull factors relate to the "destination itself and the attractions it has to offer". This could be applied to a football stadium as follows: Push factors relate to a student who travel to a sport stadium to escape, socialise, and relax. This could be applied to fan attendance factors. The third category in sports motivation relates to the motives specific to sports, for example identification with and loyalty towards the university football team - also fan attendance factors. It could also include being a fan of a specific type of sport such as football and a specific team such as the university's football team. The third category also includes contextual factors, such as the likelihood of winning and the special occasion that a specific game or sports event may represent. The key issue underpinning this study is the notion that there is a strong link between a fan and a team. This link is constituted by "team identification, team loyalty, and team performance" (Yun-Tsan, 2017: 7). This link is based on a commitment (loyal), a connection (psychological) and emotional involvement and value that fans attach to a team they strongly support. A sports fan is therefore someone who displays "an affiliation in which a great deal of emotional significance and value are derived from group membership" (Maxton, 2019: 19).

## Methods

A measuring instrument to measure motivation to attend varsity football matches was replicated from a study by Withey (2013) that investigated fan motivation with regards to motivation to attend men's division college football matches. The items represent salubrious effects and entertainment (Withey, 2013) and also associate with some of the elements included in the sports fan motivation scale of Wiid and Cant (2015). Leisure and recreational events significantly increase for young people, once they finish their school careers and enter

university level. The students experience freedom from parental control and become more exposed to recreational activities provided by universities (Hudson, 2010). The population of this study was defined as senior students at a South African university of technology. This university has residences on six campuses. All residences are within an hour's driving distance from the football stadium, namely Campus West (A), Distant Campus North (B), Distant Campus South (C), City Campus West (D) (stadium is located here), Central City Campus 1 (E) and Central City Campus 2 (F). The unofficial estimate is that the targeted residences on these campuses accommodate just more than 3 000 students. The university busses spectators (free of charge) to the football stadium to attend Varsity Footbal matches. After the match they are transported back to their places of residence, According to Kgomo (2017), the estimated attendance at varsity football matches at the football stadium is between 3 000 and 4 000 spectators. A convenience sample was drawn to collect the responses from the six campuses. The collection process is affordable and the subjects are easy to reach - i.e. they reside in university residences on the respective campuses. Field workers distributed and collected completed questionnaires (n=331).

## Results

### *Descriptive statistics*

The following is a brief summary of demographic variables relating to the respondents: 83% of the respondents attended football matches at the university's stadium in the previous years - representing a specifically target group (labelled as *previous attendance*); 179 of the respondents were male and 150 were females; Campus distribution - 94 (28%) respondents from Campus A; 55 (17%) from Campus B; 25 (8%) from Campus C; 113 (34%) from Campus D; 36 (11%) from Campus E and 8 (2%) from Campus F. Campus A, B, C, E & F are considered as "distant campuses" because students from these campuses need to travel to the venue of the varsity football and/or the university organises bus transport to students who wish to attend varsity football matches.

### *Factor analysis*

A principal component factor analysis (Kruskal, 1978) with varimax rotation Kaiser (1958) of the 12 Likert scale questions was performed on data gathered from the respondents. Factor analysis is used to reduce relatively large sets of variables into more manageable units and it is also used to purify and validate the variables (Reio Jr. & Shuck, 2015: 12). A scree plot is used to determine the number of factors to retain in exploratory factor analysis or principal components to keep in the principal component analysis. In multivariate statistics, a scree plot is a line plot of the eigenvalues of factors in an analysis. The procedure of finding statistically significant factors or components using a scree plot is also known as a scree test (Cattell, 1966). The scree plot for the analysis in this study is depicted in Figure 1.
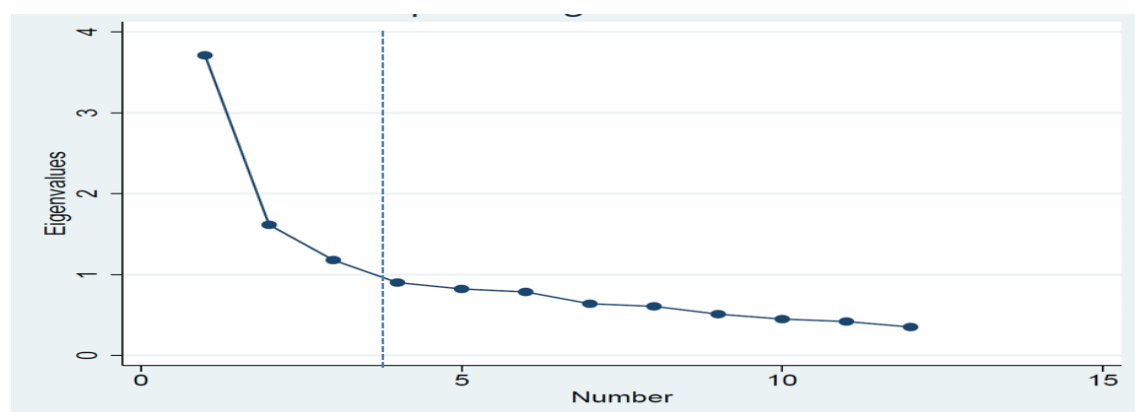
**Figure 1 Scree plot of eigenvalues after conducting a factor analysis**

The orthogonal method with varimax rotation was used to ensure that the factors extracted are independent and unrelated to each other. An orthogonal rotation method minimises the number of variables that have high loadings on each factor. This method also simplifies the interpretation of the factors. The factors that loaded in this study are listed in Table 1.

**Table 1 Factor matrix relevant to this study**

| Factors | Eigenvalue | Difference | Proportion | Cumulative |
|---|---|---|---|---|
| **Factor 1** | 3.71039 | 2.09482 | 0.3092 | 0.3092 |
| **Factor 2** | 1.61557 | 0.43581 | 0.1346 | 0.4438 |
| **Factor 3** | 1.17976 | 0.27795 | 0.0983 | 0.5421 |
| **Factor 4** | *0.90181* | *0.07866* | *0.0752* | *0.6173* |
| *The LR test: independent vs. saturated: $X^2$ (66) = 877.14 Prob > $X^2$= 0.0000* | | | | |

Based on the scree test and using the Kaiser criterion (Yeomans & Golder, 1982) three factors with eigenvalues greater than one were retained. According to Samuels (2017:1) every variable is allocated a score and loaded for each factor. Factor loadings less than 0.3 were suppressed and removed. Scores greater than 0.4 were considered to be stable. Therefore, loadings which were less than 0.4 were excluded, the analysis therefore yielded a three-factor solution (factor loadings >.40). There were no factors excluded from this test. The total variance was 54.21%. A fourth factor (Factor 4 in Table 1) had an eigenvalue of 0.90181 (close to 1.0), which would have brought the total variance to above 60%. This factor was not included in the final factor matrix because it only included two variables and a number of double loadings with variables in Factor 1, 2, and 3 occurred. Literature seems to indicate that a general rule of thumb specifies that cumulative variance should be between 70% to 80%, which in this study would have generated six factors. In this study a six factor matrix was very unstable as a large number of double loadings occurred. UCLA Institute for Digital Research and Education (2021) states that a cumulative variance percentage above 70% is regarded as untenable for social science research where extracted factors usually explain only 50% to 60%.

*Analysis of results*
Statistical data analysis was employed using the statistical software SPSS 26.0. Cronbach's alpha (α) is a widely accepted measure of internal consistency. When using Likert-type scales it is imperative to calculate and report Cronbach's alpha coefficient for internal consistency reliability for any scales or subscales one may be using. Cronbach's alpha reliability coefficient normally ranges between 0 and 1 (Taber, 2018: 1274). There is no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale. According to (Taber, 2018:1277) an α > 0.9 is excellent, α >0.8 is good, α > 0.7 is acceptable, α > 0.6 is questionable, α > 0.5 is poor and α <0.5 is unacceptable for the Test Scale. When α is 0.70 or higher it is considered acceptable in most social science research situations. The column that includes the Cronbach's alpha score is probably the most important to analyse in the following tables. The scores represent the scale item's Cronbach's alpha reliability coefficient for internal consistency if any individual item is removed from the scale.

Table 2 Cronbach's alpha for Factors 1, 2 and 3

| Factor 1 | | | |
|---|---|---|---|
| **Item** | **N** | **Item-test Correlation (r)** | **Alpha (if deleted) (α)** |
| V6 | 307 | 0.7004 | 0.6739 |
| V7 | 307 | 0.7510 | 0.6369 |
| V11 | 307 | 0.7603 | 0.6541 |
| V12 | 307 | 0.7425 | 0.6700 |
| **Test scale** | | | 0.7204 |
| **Factor 2** | | | |
| **Item** | **N** | **Item-test Correlation (r)** | **Alpha (if deleted)** |
| V1 | 307 | 0.6067 | 0.7098 |
| V3 | 307 | 0.7024 | 0.6866 |
| V4 | 307 | 0.7313 | 0.6687 |
| V8 | 307 | 0.7422 | 0.6630 |
| V9 | 307 | 0.6893 | 0.6981 |
| **Test scale** | | | 0.7322 |
| **Factor 3** | | | |
| **Item** | **N** | **Item-test Correlation (r)** | **Alpha (if deleted)** |
| V2 | 307 | 0.5523 | 0.6132 |
| V5 | 307 | 0.7348 | 0.3304 |
| V10 | 307 | 0.8087 | 0.1120 |
| **Test scale** | | | .0.4938 |
| **Factor 3 (revised by removing V2)** | | | |
| **Item** | **N** | **Item-test Correlation (r)** | **Alpha (if deleted)** |
| V5 | 307 | | 0.7348 |
| V10 | 307 | | 0.8087 |
| **Test scale** *(revised after V2 had been removed)* | | | (0.6132) |

*Item-test correlation (r) - An r of above 0,7 indicates a high positive correlation between the item (V – variable) and the test score. The test is therefore internally consistent. The item can be accepted as a "good" contributor to what the test measures (Hinkle, Wiersma, & Jurs, 2003).Alpha (α) - According to (Taber, 2018:1277) an α > 0.7 is acceptable for the Test Scale.*

In this Table the Cronbach's alpha of the Test scale for Factor 1 would be lower than 0.7204 if any of the 4 items were to be removed. A Cronbach's alpha coefficient (α), of >0.7 indicates an acceptable consistency of the items (V6, 7, 11, and 12) in this factor regarding the reasons why students attend Varsity Football matches. These motivational items have acceptable reliability and can therefore not be ignored. The Cronbach's alpha for Factor 2 would be lower than 0.7322 if any of the five items were to be removed. A Cronbach's alpha coefficient (α), of >0.7 is thus an acceptable consistency for the items (V3, 4, and 8) in terms of reasons students attend Varsity Football matches. These motivation factors have acceptable reliability and can therefore not be ignored. Items V1 and V9 will also be included in statistical analysis later in this paper. The Cronbach's alpha for Factor 5 is lower than the acceptable alpha of >0.7. An α of below 0.5 is unacceptable according to (Taber, 2018:1277). When removing V2 ("to support any team opposing the University's Football team" the α will increase to 0.6132. A the bottom of the table the revised Alpha after V2 had been excluded, is depicted. The results presented in Table 3 summarise the rotated factor loadings (pattern matrix), unique variances of the three factors, unique elements and variables grouped together, and the label assigned to every factor.

Table 3 Unique variance of the attendance variables

| Variables - relating to attendance | Factor 1 | Factor 2 | Factor 3 | Uniqueness |
|---|---|---|---|---|
| V1    To support my university's football team | | 0.5649 | | 0.4999 |
| V2    To support any team opposing the university's football team | | | 0.5983 | 0.5823 |
| V3    Because f I am a football fan | | 0.8035 | | 0.3533 |
| V4    To watch skillful players | | 0.7552 | | 0.4014 |
| V5    To gain a sense of belonging | | | 0.6026 | 0.5637 |

| V6 | To enjoy the vibe at the University's Stadium | 0.7779 | | | 0.3790 |
|---|---|---|---|---|---|
| V7 | To spend time with my friends | 0.8135 | | | 0.3262 |
| V8 | To interact with other Football fans | | 0.5533 | | 0.4403 |
| V9 | As a form of recreation | | 0.5360 | | 0.5712 |
| V10 | To increase my self-esteem | | | 0.7556 | 0.3883 |
| V11 | As an opportunity to forget about my stress | 0.5646 | | | 0.4455 |
| V12 | To relax after the hustle and bustle of daily activities | 0.5627 | | | 0.5431 |
| **Factor** (Variables)Label | | **Variance** | **Difference** | **Proportion** | **Cumulative** |
| **Factor 1** (V6, V7, V11, V12) Enjoyment, friendship & relaxation | | 2.38592 | 0.07787 | 0.1988 | 0.1988 |
| **Factor 2** (V1, V3, V4, V8, V9) Fandom | | 2.30805 | 0.49630 | 0.1923 | 0.3912 |
| **Factor 3** (V2, V5, V10) Belonging & self-esteem | | 1.81175 | | 0.1510 | 0.5421 |
| *The LR test: independent vs. saturated: $X^2(66) = 877.14$ Prob $> X^2 = 0.0000$* | | | | | |

The following section and tables outline Pearson's Chi-square Tests for Independence between variables that loaded under the three factors and a question relating to whether respondents have previously attended Varsity Football matches at the university stadium.

## *Pearson's Chi-square Tests for Independence (Factor 1 - Enjoyment, Friendship & Relaxation)*

Table 4 indicates the association between variables (V6, V7, V11 and V12) relating to Factor 1 and previous attendance of Varsity Football matches.

Table 4 Previous attendance associated with enjoying the vibe at the university stadium

| | | **I attend Varsity Football matches to enjoy the vibe at the University's Stadium (enjoyment) (V6)** | | | |
|---|---|---|---|---|---|
| | | *Disagree* | *Agree* | *Neutral* | *Total* |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | 22 | 213 | 34 | 269 |
| | | 8.18 % | 79.18% | 12.64% | 100.00% |
| | *No* | 16 | 32 | 8 | 56 |
| | | 28.57% | 57.14% | 14.29% | 100.00% |
| **Total** | | 38 | 245 | 42 | 325 |
| | | 11.69% | 75.38% | 12.92% | 100.00% |
| *Pearson $X^2$ (2) = 19.5699 Pr = 0.000 (significant as < 0.05)* | | | | | |
| | | **I attend Varsity Football matches to spend time with my friends (V7)** | | | |
| | | *Disagree* | *Agree* | *Neutral* | *Total* |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | 31 | 189 | 48 | 268 |
| | | 11.57% | 70.52% | 17.91% | 100.00% |
| | *No* | 11 | 29 | 15 | 55 |
| | | 20.00% | 52.73% | 27.27% | 100.00% |

| Total | | 42 | 218 | 63 | 323 |
|---|---|---|---|---|---|
| | | 13.00% | 67.49% | 19.50% | 100.00% |

*Pearson X² (2) = 6.6876  Pr = 0.035 (significant as < 0.05)*

| | | **I attend Varsity Football matches as an opportunity to forget about my stress (V11)** | | | |
|---|---|---|---|---|---|
| | | *Disagree* | *Agree* | *Neutral* | *Total* |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | 65 | 148 | 55 | 268 |
| | | 24.25% | 55.22% | 20.52% | 100.00% |
| | *No* | 17 | 29 | 10 | 56 |
| | | 30.36% | 51.79% | 17.86% | 100.00% |
| **Total** | | 82 | 117 | 65 | 324 |
| | | 25.31% | 54.63% | 20.06% | 100.00% |

*Pearson X² (2) = 0.9460  Pr = 0.623 (not significant as >0.05)*

| | | **I attend Varsity Football matches to relax after the hustle and bustle of daily activities (relaxation) (V12)** | | | |
|---|---|---|---|---|---|
| | | *Disagree* | *Agree* | *Neutral* | *Total* |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | 53 | 170 | 45 | 268 |
| | | 19.78% | 63.43% | 16.79% | 100.00% |
| | *No* | 14 | 30 | 11 | 55 |
| | | 25.45% | 54.55% | 20.00% | 100.00% |
| **Total** | | 67 | 200 | 56 | 323 |
| | | 20.74% | 61.92% | 17.34% | 100.00% |

*Pearson X² (2) = 1.5625  Pr = 0.458 (not significant as >0.05)*

Table 4 depicts that there is a statistical difference between respondents who have attended before (yes) and those who have not attended before (no) in terms of the vibe at the stadium (V6) and of the opportunity to spend time with my friends (V7). Variables V6 and V7 can be regarded  as "pull: factors. There are no statistical differences between respondents who have attended before (yes) and those who have not attended before (no) in terms of stress relief (V11) and relaxation after the hustle and bustle of daily activities (V12). Thus, V11 and V12 are intrinsic in nature and can be viewed as "push" factors.

### *Pearson's Chi-square Test for Independence (Factor 2 - Fandom)*
Table 5 indicates the association between variables (V1, V3, V4, V8 and V9) relating to Factor 2 and previous attendance of Varsity Football matches.

**Table 5 Previous attendance associated with supporting my University Football team**

| | | *Disagree* | *Agree* | *Neutral* | *Total* |
|---|---|---|---|---|---|
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | 11 | 242 | 16 | 269 |
| | | 4.09% | 89.96% | 5.95% | 100.00% |
| | *No* | 8 | 38 | 9 | 55 |
| | | 14.55% | 69.09% | 16.36% | 100.00% |
| **Total** | | 19 | 280 | 25 | 324 |
| | | 5.86% | 86.42% | 7.72% | 100.00% |

*Pearson X² (2) = 17.2357  Pr = 0.000 (significant as < 0.05)*

| | | | I attend Varsity Football matches because I am a football fan (V3) | | | |
|---|---|---|---|---|---|---|
| | | | *Disagree* | *Agree* | *Neutral* | *Total* |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | | 33 | 185 | 50 | 268 |
| | | | 12.31% | 69.03% | 18.66% | 100.00% |
| | *No* | | 20 | 27 | 9 | 56 |
| | | | 35.71% | 48.21% | 16.07% | 100.00% |
| **Total** | | | 53 | 212 | 59 | 324 |
| | | | 16.36% | 65.43% | 18.21% | 100.00% |

*Pearson $X^2$ (2) = 18.7437  Pr = 0.000 (significant as < 0.05)*

| | | | I attend Varsity Football matches to watch skillful players (V4) | | | |
|---|---|---|---|---|---|---|
| | | | *Disagree* | *Agree* | *Neutral* | *Total* |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | | 42 | 168 | 59 | 269 |
| | | | 15.61% | 62.45% | 21.93% | 100.00% |
| | *No* | | 17 | 28 | 9 | 54 |
| | | | 31.48% | 51.85% | 16.67% | 100.00% |
| **Total** | | | 59 | 196 | 68 | 323 |
| | | | 18.27% | 60.68% | 21.05% | 100.00% |

*Pearson $X^2$ (2) = 7.6248  Pr = 0.022 (significant as < 0.05)*

| | | | I attend Varsity Football matches to interact with other football fans (V8) | | | |
|---|---|---|---|---|---|---|
| | | | *Disagree* | *Agree* | *Neutral* | *Total* |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *Yes* | | 43 | 172 | 54 | 269 |
| | | | 15.99% | 63.9% | 20.07% | 100.00% |
| | *No* | | 18 | 24 | 12 | 54 |
| | | | 33.33% | 44.44% | 22.22% | 100.00% |
| **Total** | | | 61 | 196 | 66 | 323 |
| | | | 18.89% | 30.68% | 20.43% | 100.00% |

*Pearson $X^2$ (2) = 10.0853  Pr = 0.006 (significant as < 0.05)*

| | | | I attend Varsity Football matches as a form of recreation (V9) | | | |
|---|---|---|---|---|---|---|
| | | | *Disagree* | *Agree* | *Neutral* | *Total* |
| | *Yes* | | 54 | 142 | 70 | 266 |
| | | | 20.30% | 53038% | 26.32% | 100.00% |
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | *No* | | 17 | 23 | 15 | 55 |
| | | | 30.91% | 41.82% | 27.27% | 100.00% |
| **Total** | | | 71 | 165 | 85 | 321 |
| | | | 22.12% | 51.40% | 26.48% | 100.00% |

*Pearson $X^2$ (2) = 3.5206  Pr = 0.172 (not significant as > 0.05)*

From Table 5 the following observations are made. There is a statistical difference between respondents who have attended before (yes) and those who have not attended before (no) in terms of them attending the Varsity Football matches to support their University's Football team (V1),  attending the Varsity Football matches because they are football fans (V3),

watching skillful platers (v4) and to interact with other football fans (V8). There is no statistical difference between respondents who have attended before (yes) and those who have not attended before (no) in terms of them watching Varsity Football as form of recreation (V9). Variable V1 ("supporting my university's football team") scored lower than 0.7 (see Table 5) in terms of item-test correlation but it should not be disregarded as it does contribute to fandom (Factor 2) for this group of respondents. Four variables of fandom (Factor 2) have a significant statistical association with repeat attendance. In particular, the results show significant differences with regards to supporting their University Football team, being a football fan, watching skillful players, and interacting with other football fans.

### *Pearson's Chi-square Test for Independence (Factor 3 - Belonging & Self-esteem)*

Table 6 describes the association between variables (V5, and V10) relating to Factor 3 and previous attendance of Varsity Football matches.

Table 6 Previous attendance associated with gaining a sense of belonging

| | | Disagree | Agree | Neutral | Total |
|---|---|---|---|---|---|
| **Did you attend any Varsity Football matches at your University's Soccer Stadium in the previous year?** | Yes | 93 | 112 | 64 | 269 |
| | | 34.57% | 41.64% | 23.79% | 100.00% |
| | No | 21 | 19 | 16 | 56 |
| | | 37.50% | 33.93% | 28.57% | 100.00% |
| **Total** | | 114 | 131 | 80 | 325 |
| | | 35.08% | 40.31% | 24.62% | 100.00% |
| *Pearson X² (2) = 1.2265 Pr = 0.542 (not significant as > 0.05)* | | | | | |
| | | Disagree | Agree | Neutral | Total |
| | Yes | 105 | 101 | 60 | 266 |
| | | 39.47% | 37.97% | 22.56% | 100.00% |
| | No | 18 | 19 | 16 | 53 |
| | | 33.96% | 35.85% | 30.19% | 100.00% |
| | | 123 | 120 | 76 | 319 |
| | | 38.56% | 37.62% | 23.82% | 100.00% |
| | | | | | |

From Table 6, it can be deduced that there are no significant statistical differences in terms of attending Varsity Football matches to gain a sense of belonging V5) nor to increase self-esteem V10) and whether the respondent has attended previously or not. The two variables that loaded under Factor 3 (belonging and self-esteem) have no significant association with repeat attendance. These variables are related to intrinsic motivation. Table 7 summarises the results of the Pearson's Chi-square Tests for Independence on the association between previous attendance and items (variables) loaded into Factors 1, 2 and 3. Respondents who have attended Varsity Football matches before, enjoy the vibe at the stadium, enjoy spending time with friends, support the university's football team, are fans of football, like to watch skillful players and like to interact with other football fans. There was no statistical difference between students who have attended Varsity Football matches before and those who haven't

in terms of forgetting about stress, relaxing, recreation, sense of belonging and increase in self-esteem.

Table 7 Pearson's $X^2$ for independence that was significant (Pr <0.05) for students who have previously attended Varsity Football matches and those who haven't

| Item | Factor | Association (statistically significant) | Pr |
|------|--------|----------------------------------------|-----|
| V6 | F1 | Previous attendance and the vibe at the university's Stadium | 0.000 |
| V7 | F1 | Previous attendance and to spend time with my friends | 0.035 |
| V1 | F2 | Previous attendance and to support my university's football team | 0.000 |
| V3 | F2 | Previous attendance and because I am a football fan | 0.000 |
| V4 | F2 | Previous attendance and to watch skillful players | 0.022 |
| V8 | F2 | Previous attendance and to interact with other football fans | 0.006 |
| | | **Association (statistically insignificant)** | **Pr** |
| V11 | F1 | Previous attendance and forgetting about stress | 0.623 |
| V12 | F1 | Previous attendance and to relax after the hustle and bustle of daily activities | 0.458 |
| V9 | F2 | Previous attendance and as a form of recreation | 0.172 |
| V5 | F3 | Previous attendance and to gain a sense of belonging | 0.542 |
| V10 | F3 | Previous attendance and to increase my self esteem | 0.477 |

Pearson's Chi-square Test for Independence was also conducted to find significant associations between gender and campus residence as grouping variables and items (variables) loaded into Factors 1, 2 and 3. The results are indicated in Table 8.

Table 8 Pearson's $X^2$ for independence that was significant (Pr <0.05) for gender

| Factor 1, 2 and 3 | |
|-------------------|--|
| **Grouping variable** | **Findings** |
| Gender | The results reflect that gender only has a statistical significance with two variables from Factor 2 (fandom). Males are more strongly associated to being a football fan and watching skillful players than females. |

*Note - Pearson's Chi-square Tests for Independence on the association between grouping variables such as campus residence and items (variables) loaded into Factors 1, 2 and 3 are not reported as it was deemed not to fall within the main aim of the study.*

## *Discussion of results*

Three factors - *Enjoyment, friendship and relax*, *Fandom,* and *Belonging & self-esteem* emerged from the factor analysis. The results of the Pearson's Chi-square Test for Independence indicate that certain items (V1, V3, V4, V6, V7 and V8) are important underlying reasons to repeatedly attend Varsity Football matches at the university football stadium. Items V1, V3, V4 and V8 loaded under Factor 2 (Fandom) and items (V1, V6 and V7) scored the highest percentage in terms of the "Strongly agree"-option in the measuring instrument on the 5-point Likert scale. It is therefore argued in this study that the following variables are strong motivational indicators for the respondents to repeatedly attend Varsity Football matches at the university's stadium: To support my university's football team; I am a football fan; I want to watch skillful players; I want to interact with other football fans; I like the vibe at the university's stadium; and I want spend time with my friends. These findings also align with five of the eight motives included in the SFMC of Wann (1995), namely "eustress (excitement through sport such as the vibe at the stadium)", "entertainment (desire to be thrilled at a live event)", "self-esteem (feelings of success and accomplishment which they experience when their team wins a certain match or tournament)", "escape (desire of sports fans to escape their daily routines)", and "group affiliation". By wanting to spend time with friends supports the notion expressed by Da Silva and Las Casas (2017) that affiliation refers to the event's social nature (i.e., the need for one to be with other people). Kaynak, Salman and Tatoglu (2007) found that there is a relationship between escape and fan

loyalty and that a there is a clear relational benefit between a sports experience (attending Varsity Football matches and escape or the diversion from one's (a university student) daily or routine stresses. The findings also confirm the sport attendance motives of Ferkins, Shilbury and McDonald (2009), namely social interaction, performance, excitement, esteem, and diversion. In this study intrinsic ("push") motivational factors (such as to relax, sense of belonging and self-esteem) did not associate with repeat attendance but "pull" and event-specific factors (such as the vibe at the stadium, spending time with friends, and watching skillful players) are important drivers of repeat attendance.

## Conclusion

The objective of this study was to determine the factors that motivate students at a university of technology to attend Varsity Football matches at the university's main stadium. This study validated that students who attend Varsity Football matches are motivated by a variety of variables such as the vibe at the stadium, watching skillful players, and supporting the home team. They can therefore be labelled as football fans and they are not merely spectators. The factor analysis indicate that the motivational variables to attend Varsity Football matches can be conceptualised as "Enjoyment, friendship and relax", "Fandom", and "Belonging & self-esteem". The variables that loaded into each factor need to be unpacked to ensure that football fans continue to attend Varsity Football matches. Emphasis must especially be placed on two principle issues, namely creating continuous enjoyable experiences at the stadium, and ensuring that the football team stays competitive and recruit skillful players. The findings imply that event promotions should focus on excitement and emotions as several respondents have identified that they attend the Varsity Football matches because of the vibe at the university's stadium and to spend time with their friends. Pre-match promotions should strengthen the motive (excitement and emotions) for the students to attend the football matches at the stadium. It is also implied that the focus of the university should, therefore, be to build a strong brand for the football team and the university should invest in the players by supporting them to excel as football players. The results of this study support the decision by university management to bus students (free of charge) from other campuses and the university's department of sport and recreation who devote resources to pre-match promotions and entertainment. The findings triangulate with important recent international literature relating to sport fan motivations to attend live sport events such as Kirk and Weaver (2019), Trail et al. (2017), and Vaughan, Chih-Wei and Kim (2018). It therefore confirms that accepted fan motivation factors are also valid in a sport context such as live Varsity Football events at a university of technology in South Africa.

## References

Cattell, R. B. (1966). The Scree test for the number of factors. *Multivariate Behavioral Research*, 1, 245-276.

Clark, L. A. & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7(3), 309-319.

Da Silva, E. C. & Las Casas, A. L. (2017). Sport fans as consumers: An approach to sport marketing. *British Journal of Marketing Studies*, 5(4), 36-48.

Ferkins, L., Shilbury, D. & McDonald, G. (2009). Board involvement in strategy: Advancing the governance of sport organizations. *Journal of Sport Management*, 23(3), 245-277.

Hall, J., O'Mahony, B. & Vieceli, J. (2010). An empirical model of attendance factors at major sporting events. *International Journal of Hospitality Management*, 29(2), 328-334.

Hallmann, K., Zehrer, A. & Rietz, J. (2021). Sport events as experiencescapes: the spectator's perspective. *International Journal of Sports Marketing and Sponsorship*, https://doi.org/10.1108/IJSMS-04-2020-0056

Hinkle, D. E., Wiersma, W. & Jurs, S. G. (2003). *Applied Statistics for the Behavioral Sciences (5th Ed.).* Belmont, CA, USA. Wadsworth Cengage Learning.

Hodges, S. L., Keyter A. K., Tarr M. D., Serra, P., & Surujlal, J. (2014). Influence of commercialisation of university sport on sporting values: a case of the Varsity Rugby Cup marketing. *African Journal for Physical Health Education, Recreation and Dance,* 20(Supplement 2).

Hudson, M. (2010). *Factors that influence Cal Poly students' decision to attend sporting events and theatrical performances*. B.Sc.Study. San Luis Obispo: California Polytechnic State University.

Kaynak, E., Salman, G. G. & Tatoglu, E. (2008). An integrative framework linking brand associations and brand loyalty in professional sports. *Journal of Brand Management*, 15(5), 336-357.

Kaiser, H. F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika,* 23, 187-200.

Karakaya, F., Yannopoulos, P. & Kefalaki, M. (2016). Factors impacting the decision to attend soccer games: *An exploratory study. Sport, Business and Management: An International Journal*, 6(3), 320-340.

Kim, Y. H., Duncan, J. L. & Jai, T.-M. (2016). Segmenting the collegiate football game spectator: a cluster analysis approach. *Sport, Business and Management*, 6(1), 76-96.

Kirkpatrick, N., Pederson, J. & White, D. (2018). Sport business and marketing collaboration in higher education. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 22, 7-13.

Kgomo, K. (2017). *Personal interview* with Sports Officer at Tshwane University of Technology, 6 February, Pretoria.

Kirk, R. & Weaver, A. (2019). Footballers, Migrants and Scholars: The globalization of US men's college soccer. *Soccer & Society*, 20(6), 781-794.

Kruskal, J. B. (1978). Factor analysis and principal component analysis: Bilinear methods. In: Kruskal W. H., Tannur, J. M. (Eds). *International Encyclopedia of Statistics*. New York: The Free Press, pp. 307-330.

Maxton, B. (2019). *Understanding sports fan motivation: a study into fan involvement, satisfaction and loyalty*. A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

Milano, M. & Chelladurai, P. (2011). Gross domestic sport product: The size of the sport industry in the United States. *Journal of Sport Management*, 25(1), 24-35.

Nthangeni S, Toriola A, Paul Y, & Naidoo V. (2021). Student-Athlete or athlete-student: analysis of benefits and barriers of university sport participation in South Africa. *Annals of Applied Sport Science*, 9(2).

Owen, M.-J.E. 2016. *College athletics*. Salem Press.

Palanjian, S., Cooper, C., Weight, E. & Mihalik, J. 2014. Factors influencing student and employee attendance at NCAA Division I Fbs college football games. *Journal of Contemporary Athletics*, 8(4), 249.

Pons, F., Mourali, M. & Nyeck, S. (2006). Consumer orientation toward sporting events: Scale development and validation. *Journal of Service Research*, 8(3), 276-287.

Prayag, G. & Grivel, E. 2018. Antecedents of sport event satisfaction and behavioral intentions: The role of sport identification, motivation, and place dependence. *Event Management*, 22(3), 423-439.

Prayag, G., Mills, H., Lee, C. & Soscia, I. 2020. Team identification, discrete emotions, satisfaction, and event attachment: A social identity perspective. *Journal of Business Research*, 112, 373-384.

Reio Jr, T. G. & Shuck, B. (2015). Exploratory factor analysis: Implications for theory, research, and practice. *Advances in Developing Human Resources*, 17(1), 12-25.

Ryan, R. & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54-67.

Samuels, P. (2017). Advice on exploratory factor analysis Available at https://www.researchgate.net/publication/319165677_Advice_on_Exploratory_Factor_Analysis [Retrieved 21 October 2018].

Sloan, L. R. (1985). The motives of sport fans. In J. H. Goldstein (Ed.). *Sports, Games and Play: Social and Psychological Viewpoints.* Hillsdale: Lawrence Erlbaum Associates, 175-240.

Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research Science Education*, 48, 1273-1296.

Trail, G. T., Anderson, D. F. & Lee, D. (2017). A longitudinal study of team-fan role identity on self-reported attendance behavior and future intentions. *Journal of Amateur Sport*, 3(1).

UCLA Institute for Digital Research Education – Statistical consulting. *A Practical Introduction to Factor Analysis*. Available at https://stats.idre.ucla.edu/spss/seminars/introduction-to-factor-analysis/ (Retrieved 20 April 2021).

Van Heerden, C.H. (2003). Developing a body of knowledge for sport marketing in Africa. *African Journal for Physical, Health Education, Recreation and Dance*, 9(2), 250-264.

Vaughan, R., Chih-Wei, C. & Kim, S. (2018). Identifying attendance motives for an international league fixture. *Asia Pacific Journal of Marketing and Logistics*, 30(1), 121-138.

Wakefield, K.L. & Sloan, H.J. (1995). Research and reviews the effects of team loyalty and selected stadium factors on spectator attendance. *Journal of Sport Management*, 9(2), 153-172.

Wann, D. L. (1995). Preliminary validation of the sport fan motivation scale. *Journal of Sport and Social Issues*, 19(4), 377-396.

Wann, D. L., Melnick, M. J., Russell, G. W. & Pease, D. G. (2001). *Sport fans: The psychology and social impact of spectators*. New York: Routledge.

Wiid, J.A. & Cant, M.C. (2015). Sport fan motivation: Are you going to the game? *International Journal of Academic Research in Business and Social Sciences*, 5(1), 383.

Withey, S. (2013). *Fan motivation for attendance to men's division I college soccer matches*. MS. Thesis, Clemson University.

Yeomans, K. A. & Golder, P.A. (1982). The Guttman-Kaiser criterion as a predictor of the number of common factors. *Journal of the Royal Statistical Society. Series D (The Statistician)*, 31(3), 221-229.

Yong, A. G. & Pearce, S. (2013). A beginner's guide to factor analysis: *Tutorials in Quantitative Methods for Psychology*, 9(2), 79-94.

Young, K., Duncan, H., Jen, L.& Jai, T.-M. (2016). Segmenting the collegiate football game spectator: a cluster analysis approach, *Sport, Business and Management: An International Journal*, 6(1), 76-96.

Yun-Tsan, L. (2017). Influence of spectator motivation and team identification on team loyalty and switching intentions of sports fans. *Advances in Management,* 10(4), April.