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Unlocking the economic value of empty seats in South African stadia

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Abstract

In a country known for its love of major sports such as cricket, football (soccer) and rugby, it seems counterintuitive that attendance at live sport events is declining. With high-performing international teams, star personalities, and beautiful sport venues, emptier sports stadia need investigation. This decline negatively affects sports revenues and has a depressive effect on microeconomies in and around sporting venues as well. This research sought to understand the South African sport consumers' behaviour. It draws on insights from literature on sport consumer behaviour and related psychological fields. An understanding of the antecedent psychological drivers for behavioural intentions to attend live sport events was assessed, grounded by the theory of planned behaviour. A deductive research design employed a distributed survey that gathered 171 observations for analysis and used a multiple regression methodology, with weighted least squares transformations. The findings illustrate that sport consumers' attitudes, subjective norms, and perceived behavioural control all positively influence their behavioural intentions to attend live sport events. The influence of digital media in creating a more competitive sport consumption category – a key insight for stakeholders looking to future-proof their sports marketing and event offerings was highlighted. This research contributes to literature in the fields of behavioural psychology, social science, sport management and sport marketing, among others. Further actionable recommendations to sports industry stakeholders are offered to derive broad-based business value.

KEYWORDS

Theory of planned behaviour, behavioural intentions, behavioural psychology, sport management, sport marketing, social science, consumer behaviour

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Kovilen Naicker
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Glossary

FIFA	– The Federation of International Football
GDP	– Gross Domestic Product
TPB	– Theory of Planned Behaviour
PSL	– Premier Soccer League
CPI	– Consumer Price Index
SABC	– South African Broadcasting Committee
CSA	– Cricket South Africa
TRA	– Theory of Reasoned Action
MSSC	– Motivation Scale for Sport Consumption
MLR	– Multiple Linear Regression
VIF	– Variance Inflation Factor
WLS	– Weighted Least Squares

1. CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM

1.1. The Research Problem

The aim of this research was to investigate declining attendance at live sport events through the lens of assessing sport consumers' intentions to attend such events in South Africa.

1.2. Introduction to the Problem

Since readmission into the global sporting arena at the end of apartheid in 1994, South African sports teams have enjoyed considerable success in major global tournaments. As a result, South Africa is highly regarded both nationally and internationally in competitive sporting events. This reputation extends beyond the professional, as South Africans are also highly invested in sport at amateur levels (Brock, Fraser, & Botha, 2016). It is little wonder, then, that the sport industry contributes two percent directly toward the South African gross domestic product (GDP) and has positive spill-over effects that contribute toward tourism revenue, an improved quality of life for residents, and improved national sentiment. Sporting events in South Africa can be considered a net positive social contribution to the country (Scholtz, 2019).

During the 2010 FIFA Football Word Cup, for example, the quality of life for residents in the five host cities of the showed improvement partly due to increased local incomes (Kaplanidou, Karadakis, Gibson, Thapa, Walker, Geldenhuys & Coetzee, 2013). This was confirmed by Giampiccoli, Lee and Nauright (2015), who found that major sporting events such as the FIFA World Cup have significant economic and political relevance such that they become local and national development imperatives. Saayman and Saayman (2014) further posit that, along with the economic enhancements experienced by communities, a plethora of tangible and intangible socioeconomic benefits are created. These are derived by the likes of government, their respective agencies and non-governement oganisations who utilise sport events as tools for reconcilliation and intercommunity development (Scholtz, 2019). The sport industry further provides opportunities for related businesses to create value through the manufacturing of goods, retail, ticket sales for venues and hospitality, infrastructure, and merchandising (Bing, Miao, ZiWen, XueFeng, & Lu, 2015). As such, the industry of sport creates a opportunities for

economic growth and creating job opportunities through its various value creation elements, stimulating investments in infrastructure, and driving spectator consumption (De Burca, Brannick, & Meenaghan, 2015). This creates a cycle of virtuosity. Sport itself, both participation in it and sports attendance, has proven to aid in nation-building and social cohesion. Additionally, sport can aid social transformation, stimulate health and wellness, improve educational outcomes through personal learning and development, and ultimately yield further economic benefits (Burnett, 2019). Given the many benefits the sporting industry together with South Africa's significant sporting successes and reputation, it was expected that there would be a sustained increase in sports tourism and revenue from sporting events (Department of Tourism, 2014). However, the converse has been true. Specifically, live match attendance in South Africa has been on the decline. South Africans' sports consumption behaviours appear to have changed for the worse.

Many have speculated on why attendance of live sporting events has been declining. In the case of soccer, the Premier Soccer League (PSL), for example, Stadium Management South Africa (2019) feel that ticket sales are depressed due to the combination of inflation (the consumer price index (CPI) being at over 5.5%) whilst the rate of unemployment has grown (to 29%) ([a.] Stats SA, 2019). Simply put, South Africans have less disposable income, and those who are not unemployed cannot afford to buy tickets. Stadium Management South Africa (2019) further suggests that the sheer number of games available in different tournament formats represent an oversupply of viewer content. This situation is exacerbated by events being broadcast on two primary mediums in South Africa, namely: DSTV, a subscription-based satellite broadcaster, and, to a lesser extent, the South African Broadcasting Committee (SABC). This is true for all of the primary sporting disciplines in the country: cricket, football (soccer) and rugby.

In terms of rugby, domestic rugby league match attendances are on the decline, and international matches are beginning to experience the same phenomena (Peters, 2017). Peters (2017) noted, for example, that an international rugby championship match hosted in Durban experienced a half empty stadium. Similarly, Cricket South Africa (CSA) has admitted to financial challenges related to steep spectator attendance declines and administration difficulties (Mtimkulu, 2018). The Premier Soccer League (PSL) further attests to empty seats being prevalent even in the

smallest of its venues. The only exception is the Soweto Derby (a match between national clubs Orlands Pirates and Kaizer Chiefs) (Breakfast, 2018).

Giampiccoli, Lee and Nauright (2015) argue that more attention should be placed on recurring sporting competitions at the local and regional level. Furthermore, sports businesses, politicians and sports managers should use such events to drive domestic tourism. Multistakeholder benefits have already been demonstrated by the FIFA World Cup, which saw the communities surrounding the stadia benefit from the increased foot traffic. Giampiccoli, Lee and Nauright (2015) also argue that an increase in tourism post event is where further economic impacts can manifest. Thus, the South African economy is missing a growth opportunity assocaited with live sporting events. There have been numerous studies reiterating the positive impacts that can result from sport events, namely: (i) positive developments associated with construction and maintenance of infrastructure; (ii) improved economy through job creation, public spending, and improved trade and tourism; and (iii) upliftment of the community psyche by general improvement in living standards and community image (Arcodia & Whitford, 2006; Burnett, 2006; Scholtz & Slabbert, 2015; Scholtz, 2019). Given that the benefits are widely known and understood, if the sporting industry are experiencing a decline in consumption, this needs to be addressed.

In terms of what factors influence the consumption of leisure activities, such as match attendance, the characterisation of the sport market is widely researched. There are various psychological drivers that describe the persona of sport consumers who attend live events, albeit based on various contexts. Wang, Hilsman, Caudill, and Mixon (2014) looked at the National Basketball League in the United States of America (USA), football (or soccer) in the United Kingdom (UK) and Spain, as well as the Austalian Football League from the perspective of television viewers. However, they were unable to determine if there was a direct relationship between televised broadcasting and live event attendance. Sung and Mills (2018) found that in the case of Major League Football in the USA, spectators are unlikely to attend live events if they feel their team is likely to lose, but will attend events with uncertain outcomes, whilst remaining considerably interested if their teams are deemed to be likely winners. Overall, spectators will attend matches if their teams have prolonged winning records, reputable brands, and star performers. A similar study of Spain's La Liga soccer league regarding televised viewership versus match day attendance

was conducted in terms of loss aversion and upset preference (Humphreys & Perez, 2019). Importantly, a strong relationship was found to exist between live match attendance and teams who perform consistently well.

In the South African context, the research on behavioural drivers for sport event attendance is limited. Of the minimal literature, Stander and van Zyl (2016) looked at motivating psychological rewards in the South African Premier Soccer League (PSL), such as life satisfaction and intrinsic psychological rewards associated with consuming live football events. They found a significantly positive relationship between attending a live event and psychological rewards; that adds to the already discussed economic benefits on offer. This research seeks to examine attendance at live sport events, the persona of spectators, and the characteristics that drive intention to attend live sport events in the South African context. The research uses the theory of planned behaviour (TPB). It is a framework that models the behavioural patterns of consumers. It seeks to understand the attitude of spectators, subjective norms that affect behaviour, and perceived behavioural control (Ajzen, 1991). The efficacy of TPB has been demonstrated in disciplines such as exercise, medicine, leisure and marketing (Cunningham & Kwon, 2003; Montano & Kasprzyk, 2015).

1.3. Business Need for the Research

By gaining a greater understanding of what motivates spectators who consume sport by attending live sport events, sports marketing, management and promotion – as well as local sports tourism, job growth and ancillary micro-economies – can all be optimized (Turco, Swart, Bob & Moodley, 2010; Department of Tourism 2014; Stander & van Zyl, 2016). Live sporting events yield benefits off the pitch too, namely through the sale of television rights for live broadcasting. The English Premier League, for example, sold match broadcast rights for £3 billion over three seasons, and the Belgian Pro League (football) sold their rights for €70 million per season in 2014 (Wang, Goossens, & Vandebroek, 2018).

This, of course, presents sport administrators with a dilemma: the want from broadcasters to buy the rights as they make money off the sale of television rights, but at the same time they need to maximise stadium attendance, as ticket sales and hospitality booths account for significant portions of sporting revenues. For example, the top 20 European football teams generate between 10% and 38% of their

revenues from ticket sales (Wang, Goossens, & Vandebroek, 2018). In response to this revenue conundrum in Europe specifically, there is a growing trend from the Union of European Football Association (UEFA) toward the notion of 'financial fair play' to regulate incomes derived from business activities other than actual football matches (Peeters & Szymanski, 2014).

Sport tourism has been reported to have an international value of between 182 billion and 600 billion US dollars (Department of Tourism, 2014). Such value can also be unlocked in South Africa by spectatorship at live events. Sport visitor attractions such as sporting events can grow both international and domestic tourism (Department of Tourism, 2014). There has been limited research into how growth of this kind, of a sports economy, could be achieved in South Africa. Thus, the Department of Sport and Recreation, Department of Tourism, sport organisations, marketing agencies and tourism agencies could tap into the findings of this research and use them to derive economic benefits, and beyond.

1.4. Academic Need for the Research

The research contributes to the fields of behavioural psychology, social sciences, sports management, sports marketing, recreation industries, hospitality, and tourism. The research pertains to the motives and behaviours associated with sport consumption in South Africa. This will aid in understanding the decline in live event attendance and gather insights on how this can improve. Using TPB allows for a predictive analysis of sport consumers' intentions to attend live sporting events, as well as enables prediction of future behaviour by using marketing or imposed nudges (Ajzen, 1985). Applying the TPB framework to leisure activities in South Africa is relatively new, most studies use descriptive scales and primarily focus on the benefits derived from sport events and attendance, leaving the literature on the psychological drivers in the South African context limited. This research does not provide an emotionally sensitive, longitudinally dynamic, psychometric view of South African sport consumers as this is not the objective. It does provide the foundation for future research that would require an extensive longitudinal exercise involving each sporting discipline and including of the entire population to arrive at all the possible influences and changes in sport consumer behaviour within the country over time. Using the theory of planned behaviour provides a critical starting point of understanding South African sport consumers' psychological motivators to attend, or

not to attend, a live sport event. Using this theory also allows the study to be grounded upon a well-established framework that has proven success in predicting behaviour in various fields.

1.5. Conclusion to the Research Introduction

Given the established economic and social benefits yielded by sport consumption in the form of live event attendance in South Africa, this study seeks to discover why event attendance is on the decline. Using the TPB framework, the research aims to gather insights on consumers' attitudes, subjective norms, and perceived behavioural control as antecedents for behavioural intentions to attend live events. The objectives for this study can be formulated as: (i) determine the reasons for the decline in live sport event attendance; (ii) determine if consumers' attitudes have a relationship with their intentions to attend live sport events; (iii) determine if consumers' subjective norms have a relationship with their intentions to attend live sport events; (iii) determine if consumers' perceived behavioural controls have a relationship with their intentions to attend live sport events; and (iv) develop insights on how to improve the attendance at live sport events in South Africa. These objectives will look to provide possible solutions to the defined research problem.

The research report is structured into seven chapters. The structure of the subsequent sections of the research report is as follows:

Chapter 2: Literature Review

This chapter provides an academic argument based on existing literature exploring aspects of the stated research problem. The theory of planned behaviour is used as the underpinning framework to articulate the relationships between antecedent psychological characteristics of sport consumers and their intentions to attend live sports events. There are three key antecedent characteristics of behavioural intentions to attend a live sport event that are investigated: attitude, subjective norms, and perceived behavioural control. The research hypotheses are further developed and justified in this chapter.

Chapter 3: Research Hypotheses

This chapter illustrates the precise purpose of the research. The hypotheses developed are guided by the literature review and are clearly defined in this chapter. This gives way to empirical research and evidence required to fulfil the research objectives in the following chapters and ultimately gain insights about sport consumers in South Africa.

Chapter 4: Research Methodology

This chapter defends the methodology used, defines the unit of analysis, the population, the sample size and sampling method. This chapter will further describe the research instrument, the process of data collection, and data analysis. Quality control measures such as validity and reliability criteria are specified, while limitations of the research are defined.

Chapter 5: Results

The sample and results of the research and data collection is presented in this chapter. Results are presented with regards to the hypotheses developed from the theory of planned behaviour and the literature review provided. Limitations of the results are further presented.

Chapter 6: Discussion of Results

The results are discussed in this chapter in relation to the generated hypotheses. The principal findings are discussed and any relationships, or contrasts, with existing literature will be highlighted and further discussed.

Chapter 7: Conclusion

The concluding chapter will highlight the main findings from the research in a cohesive manner. Recommendations will also be presented to stakeholders of the research both in business and academic sectors. Limitations of the research and suggestions for future research will be further discussed in this chapter.

2. CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

This chapter provided a critical review of existing literature on the research topic selected, specifically the theory of planned behaviour (TPB). This provided a logical foundation upon which the antecedent psychological characteristics of South African sport consumers was framed. The theory looks to assess the relationship between these characteristics and the behavioural intentions to attend live sport events. The major areas assessed in the research included attitude, subjective norms, perceived behavioural control and previous behaviour.

2.2. Sport Consumers

Prior to delving into the theory, it was important to define a sport consumer for the purposes specific to this research. Various studies have defined consumption of sport in various formats, including, but not limited to: social media platforms (de Lira, Macdonald, Ounis, Perego, Renso, Times & Valeria, 2019), smartphone consumption (Larkin, Fink, & Trail, 2015; Chan-Olmsted & Xiao, 2019), television broadcasts; fantasy leagues (Larkin, 2015), both eSport and active participation (Pizzo, Baker, Na, Lee, Kim & Funk, 2018), as well as merchandise procurement, ticket and hospitality package sales for live events (Bing, Miao, ZiWen, XueFeng, & Lu, 2015). For the purposes of this research, the sport consumer is one who has attended a live sport event, or intends on attending a live sport event, or has bought tickets and hospitality packages for live sport events.

2.3. Theory of Planned Behaviour

This theory was first formulated in the early eighties. The theory's basic concepts were to determine the likelihood of specific behaviours occurring, with intentions as a mediatory factor, by assessing: (a) attitude toward the behaviour, (b) subjective norms, (c) perceived behavioural control and (d) different kinds of beliefs that constitute the informational foundation for the behaviour (Ajzen & Madden, 1986). The theory posits that volitional human behaviour is a function of the intention to perform the behaviour and perceived behavioural control. Intentions capture the motivational factors that influence behaviour and are indications of the level of effort people exert to perform the behaviour (Ajzen, 1991). It has been used to evaluate

behaviour in longitudinal and cross-sectional leisure studies such as running, mountain climbing and fishing (Ajzen & Driver, 1992; Cunningham & Kwon, 2003), and further used in fields such as medicine, psychology, social sciences and behavioural economics (Montano & Kasprzyk, 2015). The application of the theory across sectors was suggestive of its usefulness, while its proven record of outcomes attested to its efficacy as a framework. Social cognitive theories that encompass social and psychological determinants of behaviour, such as TPB, are the most adopted frameworks in health education research (Gucciardi & Jackson, 2015). In fact, Gucciardi and Jackson (2015) posited that TPB is one of the most tested social cognitive models, as it adequately predicts different kinds of volitional behaviours such as dieting, exercise routines, or medication usage habits. Meta-analytic studies have further supported the theoretical expectations posited by TPB (see Armitage & Conner, 2001; Hagger, Chatzisarantis, & Biddle, 2002; McEachan, Conner, & Taylor, 2011). The subject of human psychology also presents a cavernous body of knowledge on the usefulness of TPB.

However, the usefulness of this theory to predict behaviour has been called into question. In healthcare, for example, the review of 237 independent behavioural research tests using TPB found a 19.3% variability in predicted health behaviour (Sniehotta, Presseau, & Araujo-Soares, 2014). The same study highlighted that this resulted from the lack of experimental testing in independent healthcare studies, and of those experimentally conducted, the results did not support TPB. Second to the concern around the theory's variability is the concern that it has been used in studies with short timeframes, too short to reliably predict behaviour (Sniehotta, Presseau, & Araujo-Soares, 2014). This may be more of the inevitable risk all such theories face: people change, random events, and different life stages. To mitigate this, TPB could be repeated in its application or be assigned a life cycle to account for variability over time. The basis of TPB has also been criticised for its exclusive focus on rational reasoning and neglect of the unconscious influences on behaviour (Sheeran, Gollwitzer, & Bargh, 2013). It also does not consider the role of emotions beyond anticipated affective outcomes (Conner, Gaston, Sheeran, & Germain, 2013). These studies highlighted the static explanatory nature of the theory but do not posit theories of their own. Another major critique of TPB is that it does not encapsulate new theories around the prediction of human behaviour – that it is a stagnant framework. However, to postulate an all-encompassing, adaptive theory is a

gargantuan task. To date, this has not been achieved in social sciences, behavioural psychology, or any field concerning social cognitive sciences for that matter. Although the application of the theory does not provide an all-encompassing view of South African sport consumers, it has proven efficacy and was deemed acceptable for the purposes of this research.

2.3.1. Attitude Toward Behaviour

Attitude has long been determined by an individual's beliefs about the outcome or attributes of performing a defined behaviour, where the individual's behavioural beliefs are weighted by an evaluation of their behavioural outcomes (Ajzen, 1985; Ajzen, 1991; Montano & Kasprzyk, 2015). For example, a person who holds strong beliefs in a positive outcome will likely perform that behaviour with positive results. That person would then be defined as having a positive attitude toward the said behaviour. The converse would also be true for a person who anticipated a negative outcome after experiencing a negative result, leading to a negative attitude towards that behaviour (Montano & Kasprzyk, 2015). The induction from this component was that a positive attitude toward attending a sporting event was derived from an individual who had a perceived positive outcome from attending a similar, or previous, sport event.

The positive relationship between attitude and intention to behave in a favourable manner has been confirmed in various studies. In the case of sport, Gucciardi and Jackson (2015) utilised TPB to assess the drop-off in active sport participation between adolescence and the young-adult stage of life. Attitude toward remaining engaged in active sport participation proved to have a significant relationship with 'intention to engage', but the adjustment to new routines over this transitional period of life for this demographic group could not be overlooked (Gucciardi & Jackson, 2015). To the extent that participants had strongly intended to remain active sport participants if they were active in their younger years, the importance of a positive attitude as an antecedent to positive intentions to behave was made clear.

If the prestigiousness of the sport event in question was taken into account, the relationship between attitude and behaviour holds. Here, Moital, Bain and Thomas (2019) assessed the cognitive, affective and behavioural outcomes of attending

prestigious sport events, and found that perceived positive outcomes from attending the sporting event lead to a postive attitude that drives both intentions to attend, and subsequent attendance. Avoidance of a negative emotional state and the desire to feel positive emotions was one of the key findings in this study (Moital, Bain, & Thomas, 2019). This neatly supports TPB's antecedent of attitude toward behaviour, while opening up further room for enquiry into how to promote a positive attitude.

One of the greater concerns pertaining to attendance at live sport events has been the rise in alternate forms of sport consumption (Larkin, Fink, & Trail, 2015). The exponential adoption of digital platforms has given rise to the digital consumption of sport. This has certainly influenced the attitudes of consumers toward their intentions to attend live sport events. This has enabled contemporary sport consumers to access sport where, when, and how they choose to. Social media participation, website usage, live video streaming, online radio, online newspapers, and fantasy sport have all influenced sport consumers' attitudes (Chan-Olmsted & Xiao, 2019). Sport consumption had evolved. Pre-internet sport distribution models were not equipped to deal with the competitive threat of internet-enabled devices such as smartphones, tablets, and laptops. The worlds of analog and digital sport consumption have blended. Chan-Olmsted and Xiao (2019) found that 65% attendees at live sport events use their smartphones while at the events themselves, giving credence to the growing ubiquity of mobile access in the sporting event experience.

In the case of fantasy sport, the impact on match-day attendance was stark. Larkin (2015) posited that a reduction in match day attendance was to be expected with an increased participation in fantasy sport. However, Larkin (2015) further found that fantasy sport and sport event attendance were not directly substitutable. The results showed that, although those explicitly motivated to participate in fantasy sport leagues will consume sport from home, those who positively identified with their favourite team were still more significantly likely to attend a live event (Larkin, 2015). Overall, this duality of sport consumption had necessitated a balancing act, as fantasy league developers looked to increase their adoption to make up for expenditure on development and updates, while the physical sporting clubs look to maximise ticket and merchandising revenues through live attendance (Wang, Goossens, & Vandebroek, 2018).

Despite this duality, there has been large inconsistencies in the relationship between televised broadcasting and match day attendance. Wang, Hilsman, Caudill and Mixon (2014) found no significant relationship between televised braodcasts and match day attendance. What they did find significant was that the uncertainty of the outcome determined the choice of the consumption medium. Thus, although the accelerated adoption of new digital mediums may have been a cause for concern, it also provided opportunities for targeted marketing strategies to promote positive attitudes and drive intentions to attend live events. Ultimately, if the motivation to attend a live event – where perceived positive outcomes will have promoted positive attitudes – has been prevalent, so too has the opportunity. This was further affirmed in a meta-analystic review of sport consumer behaviour (Kim, Magnusen, Kim, & Lee, 2019)

Kim, Magnusen, Kim and Lee's (2019) meta-analytic review of factors that affected attendance of sporting events produced an antecedent factor called the "fan-focused factor". This factor was defined by predictive descriptors such as aesthetic, achievement, drama, escape, knowledge and social. In their rudementary sense, these predictors were elements that consumers sought to satisfy their needs. A significantly positive relationship was found between the fan-focused factors and attendance of a live sporting event (Kim, Magnusen, Kim, & Lee, 2019). The results further show that individuals who were highly motivated to satisfy their needs were more likely to consume live sport events. In addition, whether the individual's 'team' won was not seen as a significant positive predictor to attend a live event – contradicting both Sung and Mills's (2018) and Humphreys and Perez's (2019) argument. Studies assessing attendance in the German Premier Football League (the Bundesliga) also found that the success of a team would have positive impacts on home game attendance, while management failures would have the converse impact (Wicker, Whitehead, Johnson, & Mason, 2017). However, some of this variability may have been attributable to differences in context, or due to the intention to substitute the means for consumption.

Larkin, Fink and Trail (2015) looked at constraints and motivators as predictors for the intention to substitute consumption behaviour. Their study revealed that live match attendance was only marginally substituted by the comfort of staying at home and enjoying the televised broadcast (the proverbial 'front-row seat', with action

replays). Furthermore, substitution factors of technological attributes, comfort, ease, and enhancement had only a marginal effect on consumers' intentions to substitute live attendance for other forms of consumption (Larkin, Fink, & Trail, 2015). It was deduced that the postive outcomes perceived to be gained from attending a live event supercede those gained by consuming sport through other platforms. Nonetheless, this did indicate that there was a relationship between intentions to substitute attendance for alternate forms of sport consumption. The implication here was that the experience of sport consumption through technological platforms has enhanced significantly in recent times, to the detriment of the experience of sport consumption at match venues like stadiums.

Choosing a format in which to consume sport has become a more complex decision for the contemporary sport consumer. Further literature has suggested that consumers had preferences for one form of consumption over others – including media dominant consumers (those who consumed sport predominantly through media platforms) who had no strong preferences to attend live events. Media dominant consumers did not exhibit a total lack of interest in attending sport events, but this suggested that driving these consumers to attend sport events would require a greater, more differentiated experience than what one could have experienced through media (Karg, McDonald, & Leckie, 2019).

Context appeared to play a role in the variability in the literature that described the attitudes of sport consumers toward their behaviours. The variability and contradictory nature of the literature certainly justified the assessment of South African sport consumers' attitudes toward attending live events and its inclusion in the research. The meta-analytic research by Kim, Magnusen, Kim and Lee (2019) also indicated "fan-focused factors", or the theory of planned behaviour's attitude toward behaviour, as having the most significant relationship with the attendance behaviour of sport consumers. This hypothesis had to be tested in the South African context as the variability of past literature did not permit that inferences be drawn prematurely.

> $\boldsymbol{H_1}$**:** There is a positive relationship between attitudes and behavioural intentions to attend a sporting event.

This hypothesis ($\boldsymbol{H_1}$) aimed at assessing the relationship between attitudes and behavioural intentions from the data collected. Failing to confirm, this hypothesis will have indicated that there was no relationship between attitudes and behavioural intentions to attend a live sporting event. This will have resulted in a failure to reject the null hypothesis.

2.3.2. Subjective Norms

Subjective norms have been defined as those norms generated by an individual's normative beliefs where referents important to the individual, such as significant others or personal figures of authority, are engaged for the approval or disapproval of the individual's intention to perform a certain behaviour (Ajzen, 1985; Cunningham & Kwon, 2003; Montano & Kasprzyk, 2015). Simply stated, individuals sought counsel or affirmation from those dear to them prior to deciding to carry-out their intended behaviour. An individual who believed that a certain referent supported the intended behaviour will hold a positive subjective norm if that individual was motivated to have met the expectations of their referent person. Conversely, an individual who was not motivated and had a referent who thought that the intended behaviour should not be completed will hold a negative subjective norm. An individual that was not likely to comply with the referents regardless of their referent's opinion will hold a neutral subjective norm (Ajzen, 1985; Montano & Kasprzyk, 2015). Using these insights, the influence of important referents on an individuals' decisions to attend the events, with the associated anteceding behaviour, was assessed in relation to attending live sport events in South Africa,

Subjective norms were an important driver to action, but research has shown that it may not be sufficient to sustain behaviour. Here, Gucciardi and Jackson (2015) posited that subjective norms had less of an impact on continued active participation in sport, while attitude and perceived behavioural control have more significant relationships with behavioural intention. Their study, in which engagement in sport was seen as the output behaviour, considered peers and family who did not play a substantive role in determining intentions to engage continuously and actively in sport. Their study found a weak norm-intention relationship, suggesting that strategies were to focus more on attitudes and perceived behavioural control as a means of promoting active participation in intended behaviour. An assessment of

greater sources for normative beliefs was also implied by these findings (Gucciardi & Jackson, 2015).

Linked to the development and manner in which subjective norms influence behaviour, were findings on word-of-mouth behavioural patterns that emerged from social activities such as recommending attendance (Swanson, Gwinner, Larson, & Janda, 2003), attending in a group (Swanson, Gwinner, Larson, & Janda, 2003; Montano & Kasprzyk, 2015), expressing intentions to 'spread the word' (Koeing-Lewis, Asaad, & Palmer, 2017), and 'bragging' about having attended an event (Burnett, 2003). Word of mouth influence impacted attendance of sporting events, both live attendance and viewership through broadcast platforms (Asada & Jae Ko, 2016). When attendance increased, for example, greater hype was created around events and the subjective norms through word of mouth influence aided in further growing attendance (Asada & Jae Ko, 2016). In contrast, negative word of mouth sentiments exacerbated declining attendance trends. For example, this occurred in South Africa after the 2018 Global Citizen charity music festival in Johannesburg, where numerous incidents of crime around the soccer stadium made news headlines and earned the event and venue significant negative sentiment (Mjo, 2018). These negative sentiments may have marred subsequent event attendance at this venue.

A meta-analytic study by Kim, Magnusen, Kim and Lee (2019) found a postive influence between what they termed "realtionship-focused factors" and the attendance of sporting events. These factors included predictors such as identification, trust and commitment. Identification and commitment were found to have the most significant positive relationship with attendance. These predictors considered the influence of referent persons of importance in sport consumers' decision-making, as well as the influence of those consumers' identification with their favourite team. Although "relationship-focused factors" did have a positive relationship with the attendance of sport events, it could be argued that commitment is a characteristic of attitude toward behaviour. However, commitment is still significantly related to attendance and thus just as important as attitude. Clustered together, the predictors from the study by Kim, Magnusen, Kim and Lee (2019) have aligned to the description of subjective norms in TPB.

Supported by the theory that social interaction represented a need for interaction – which could be achieved through attending an event in a group – Kim, Magnusen, Kim and Lee's (2019) 'social' predictor from the "fan-focused factors" could have been considered a subjective norm. Both da Silva and Las Casas (2017) and Kim, Magnusen, Kim and Lee (2019) showed significantly positive relationships betweeen these respective factors and behavioural intention. Further studies by Swanson, Gwinner, Larson and Janda (2003) and Montano and Kasprzyk (2015) have both corroborated the positive relationship between subjective 'social norms' and attendance. These findings were found to be contradictory the literature by Gucciardi and Jackson (2015) – where subjective norms offered a weak relationship with intention for behaviour.

This variability in the literature that pertained to the relationship between subjective norms and behavioural intention justified the testing of a hypothesis. The South African context was different to that of the existing literature and inferrences from the existing literature could not have been made prematurely. This further justified this research's second hypothesis:

> **H_2:** There is a positive relationship between subjective norms and behavioural intentions to attend a sporting event.

This hypothesis assessed relationships between subjective norms and behavioural intentions from the data collected. Failing to confirm, this hypothesis will have indicated that there is no relationship between subjective norms and behavioural intentions to attend a sporting event. This will have resulted in a failure to reject the null hypothesis.

2.3.3. Perceived Behavioural Control

The theory of planned behaviour (TPB) was conceived from the theory of reasoned action (TRA). TRA consisted of attitude toward behaviour and subjective norms when developed by Martin Fishbein in 1967 (Ajzen, 2012). TRA assumed that the most important determinant for behaviour is behavioural intention, which depended on the extent to which the behaviour is under volitional control. It was determined that this indicator was insufficient and unclear in predicting behaviour where volitional control was reduced (Montano & Kasprzyk, 2015). In response, the concept of perceived

behavioural control was introduced to account for fluctuations in volitional control (Ajzen, 1991). In this research, actual or volitional, behavioural control was evident when individuals had the opportunities and resources available to dictate control (Ajzen, 1991). Perceived behavioural control considered situations where individuals did not have complete volitional control over a behaviour (Montano & Kasprzyk, 2015). Perceived behavioural control was further determined by control beliefs concerning facilitators and barriers to behavioural performance, all weighted by the perceived power of the control factors to have facilitated or inhibited the behaviour in question (Montano & Kasprzyk, 2015).

Perceived behavioural control, simply stated, related to the ease or difficulty experienced when performing the behaviour in question (Ajzen, 1991). This was deduced by the individual's assessment of his or her own capacity, including skills, and abilities, as well as limiting factors such as barriers to access, or facilities pertaining to, the behavioural intention (Cunningham & Kwon, 2003). In a meta-analysis of data, Hagger, Chatzisarantis and Biddle (2002) found that perceived behavioural control held a strong relationship with intentions and behaviour, especially when assessing exercise. A final reference was made to Gucciardi and Jackson (2015) where perceived behavioural control was a significant antecedent to behavioural intention to continue actively engaging in sporting activity. This does conform to the meta-analytic research conducted that ultimtely posited a significant relationship between perceived behavioural control and behavioural intentions (Armitage & Conner, 2001; Hagger, Chatzisarantis, & Biddle, 2002; McEachan, Conner, & Taylor, 2011).

Literature from the United Kingdom posited a relationship between an individual's education level and sport attendance; while mediating the relationship for number of children, age, health, employment, income, ethnicity, marital status, and nationality (Friedman-Soza, Friedman, Galvez-Silva, & Yevenes, 2017). Individuals who dropped out of school were less likely to attend sport events and this was attributed to the likelihood of having the financial means to attend sporting events. Similarly, individuals in good health were more likely to attend sport events (Friedman-Soza, Friedman, Galvez-Silva, & Yevenes, 2017). These results conformed to the premise of perceived behavioural control: individual's earning an income and in good health were more likely to perform activities such as attend sporting events – making them

more motivated to do so. While an individual's education and healthcare levels influenced their perceived ability to attend sport events, the influence of external mediating factors beyond an individual's control needed to be considered. A final antecedentary factor called "product-focused factors" was defined in the meta-analytic review by Kim, Magnusen, Kim and Lee (2019). It included predictors such as accessibility of the event, its cost, the event facility, the opponents, physical attractiveness, how well the event was promoted, skill of the player or players, presence of a star player, and the individual's team winning or not. Altogether, it was found that "product-focused factors" did have a postive relationship with attendance, but not as much as the "fan-focused factors", or attitude toward behaviour. The predictors that were clustered into the factor called "product-focused factors" represented inhibiting or enabling attributes that permit volitional control of the sport consumers, aligning to the TPB's perceived behavioural control antecedent factor.

Kim, Magnusen, Kim and Lee (2019) delved deeper into these factors and found that winning – whether a sport consumer's supported team won – did not have the expected influence on attendance as previously expected. Winning was not everything, contradicting the attitudinal relationship beteween winning and intention. It was previously stated that perceived positive outcomes have been attributed to positive attitudes that ultimately lead to intention and behaviour, and winning was established as a certain way to create a perceived positive outcome (Montano & Kasprzyk, 2015). Counterintuitively, the "product-focused factors" – or inhibiting or enabling factors as TPB defined it – had no sigificant influence on the intentions to attend sporting events (Kim, Magnusen, Kim, & Lee, 2019). Kim, Magnusen, Kim and Lee (2019) also reported that costs – the financial barrier to entry – had only a marginal influence on the decision to attend live events. This contradicted the research that examined constraints and motivators as predictors of sport media consumption substitution intention (Larkin, Fink, & Trail, 2015). Larkin, Fink and Trail (2015) had postulated that the only significant driver for consumers who substitute live attendance for other mediums of sport consumption was cost constraints. That research further posited that sport consumers were willing to overcome poor weather and navigate through dangerous neighbourhoods to attend their desired sport event, but a lack of financial means would be prohibitive.

There is a high degree of variability in the relationship that existed between perceived behavioural control and the intention to perform a behaviour. This variability could have resulted from contextual and demographic discrepancies among the various studies, rendering the results unsuitable descriptors or predictors of the South African sport consumer. The need to have included perceived behavioural control in the research as a hypothesis was then justified.

> **H_3:** There is a positive relationship between perceived behavioural control and behavioural intentions to attend a sporting event.

This hypothesis assessed relationships between perceived behavioural control and behavioural intentions from the data collected. Failing to confirm, this hypothesis will have indicated that there was no relationship between perceived behavioural control and intentions to attend a sporting event. This will have resulted in a failure to reject the null hypothesis.

2.3.4. Influence of Subjective Norms and Attitudes

Understanding the influence of subjective norms and attitudes on intention, and resulting behaviours, was key to the development of the research hypotheses. But it did not provide sufficient insight into what influences subjective norms and attitudes. Thus, an examination of consumer behaviour was necessary. It was found that the presence of social identification, or affiliation, in the decision to attend sport events significantly affected the outcome, or intentions (Cunningham & Kwon, 2003). People satisfied their social needs in public spaces like sport arenas either with relative strangers or referent persons (Cunningham & Kwon, 2003; Swanson, Gwinner, Larson & Janda, 2003; Montano and Kasprzyk, 2015 da Silva & Las Casas, 2017). If a person identified as a fan, they would satisfy social and entertainment needs by subscribing to the social norms of fandom. Performing activities such as attending sport events, for instance, allowed a person to maintain their group affiliations as a fan. This sense of belonging and group affiliation was found to have a greater influence on intentions to attend a sport event, indicating that the subjective norm may have influenced intentions more significantly than the other elements of the theory of planned behaviour (TPB).

The influence of attitude, on the other hand, also suggested its influence as greater than the other elements of the TPB. This was where the event and the teams involved became pertinent. It was found that individuals who attend every home game of their favourite team were more likely to possess a passionate, and positive, attitude toward their team (Cunningham & Kwon, 2003). The literature is widely consistent in describing the most important antecedent toward intention. This suggested that subjective norms and attitudes were more salient in predicting intentions compared to perceived behavioural control. The only exception was Gucciardi and Jackson's (2015) finding of a weak normative relationship between subjective norms and attitudes on intentions towards behaviour.

Again, there was uncertainty as to whether subjective norms and attitude toward behaviour are more saliently related to intentions towards behaviour, especially in the South African context. This justified the inclusion of a hypothesis for testing in the research.

> $\boldsymbol{H_4}$: Attitude and subjective norms will be more positively related to behavioural intentions to attend a sport event than perceived behavioural control.

This hypothesis assessed the relationship between attitudes and behavioural intentions, and between subjective norms and behavioural intentions from the data collected. The aim was to assess if these two relationships had a greater positive influence on behavioural intention than the influence of perceived behavioural control on behavioural intention. Failing to confirm, this hypothesis will have indicated that perceived behavioural control had a greater influence on behavioural intentions.

2.3.5. Previous Behaviour

How a person's previous, or historical, behaviour affected present and future behaviour lead to the inclusion of past behaviour in their analyses of the theory of planned behaviour (TPB) (Ajzen, 2002; Hagger, Chatzisarantis, & Biddle, 2002). It was suggested that previous behaviour served as a distal antecedent to behaviour, implying that attitudes, subjective norms, and perceived behavioural control are informed by previous behaviour (Ajzen, 1991). In this way, previous behaviour had an impact on the intent and behaviour. Thus, each antecedent has already been

mediated by previous behaviour. This was further confirmed by Hagger, Chatzisarantis and Biddle (2002) when assessing exercise behaviour. It was argued that previous behaviour did not only serve as a distal antecedent, but could also be the result of attitudes, subjective norms and perceived behavioural control. Previous behaviour would have then served as the mediator. Previous behaviour worked in concert with the TPB to predict the intentions of future behaviour (Cunningham & Kwon, 2003). For the purposes of this study, previous behaviour was incorporated as a distal antecedent of attitudes, subjective norms and perceived behavioural control.

2.3.6. Conclusion to Theory of Planned Behaviour

The theory of planned behaviour (TPB) was identified as the suitable theory for determining the effect of attitude, subjective norms and perceived behavioural control on South African sport consumers' intentions to attend live sport events. The uncertainty and contradictions established from the existing body of literature justified the use of the theory of planned behaviour to underpin the research. The body of literature on the subject also illustrated that the many indicators, scales, and predictors used to determine the cognitive antecedents for behavioural intentions and their resulting behaviour can be clustered reliably within the framework of the TPB.

2.4. Schematic Layout of the Theory of Planned Behaviour

The schematic presented in Figure 1 depicted the main concepts in the body of literature on the theory of planned behaviour as is relevant to this research.

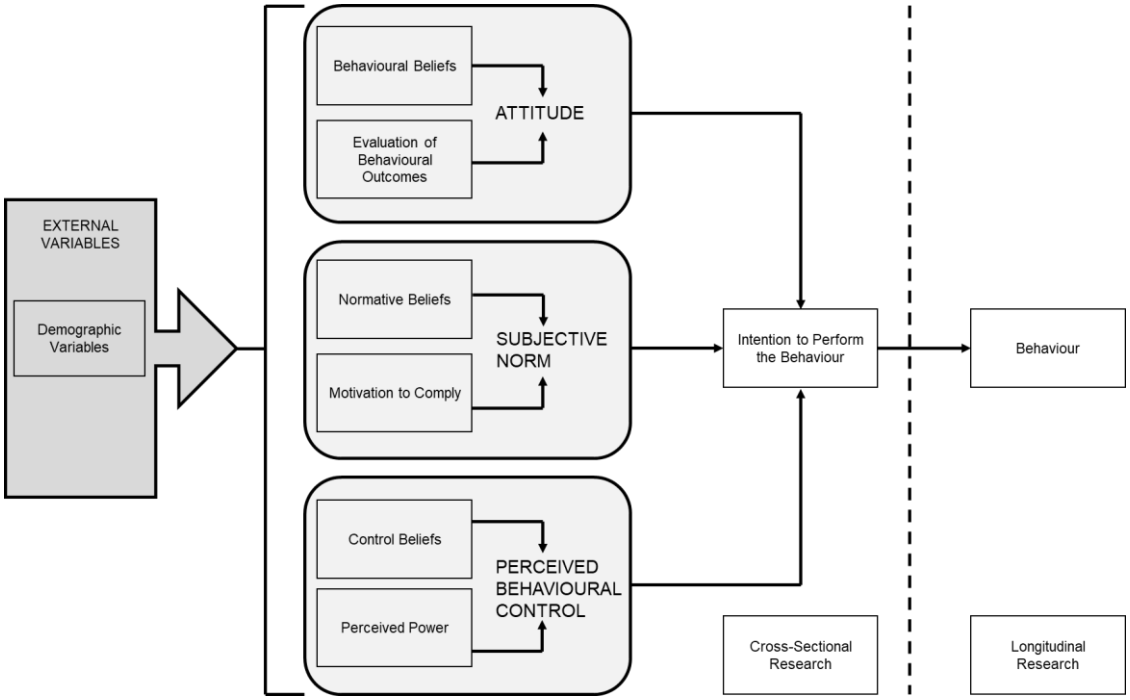

Figure 1 *Schematic representation of the theory of planned behaviour*

Source: Adapted from Azjen (1991) and Montano & Kasprzyk (2015).

2.5. Summary of Literature Review

The theory of planned behaviour (TPB) was identified as the most promising means of grounding the research in relevance and reliability, due to its prominent usage across numerous fields of research. The theory has proved to be robust in its outcomes, and where critiques have been made, little has been done to supersede the theory. Meta-analytic literature reinforced the efficacy of the TPB. Various research frameworks were used to predict intentions to attend live events and resulting behaviour using cognitive antecedents. These antecedents, or predictors, have been evaluated in this chapter as being defensible within the parameters of the TPB. These were further operationalised into the definitions of attitude toward behaviour, subjective norms, and perceived behavioural control.

A commonly used framework in sport consumption behaviour is the motivation scale for sport consumption (MSSC) that was developed from sport sociology. This scale was designed using eight constructs to unpack the reasons why consumers consume sport in the manner in which they have (Trail & James, 2001). The MSSC assessed (i) achievement as a consumer's identification with the success of the team; (ii) aesthetics as the elements of beauty within the sport; (iii) acquisition of

knowledge through consumption; (iv) drama from the uncertainty of the results; (v) escapism from the stress of daily routines; (vi) social interaction between fans; (vii) physical attractiveness of the athletes and (viii) the physical abilities of the athletes (Trail & James, 2001). As illustrated in the literature review, these elements are defensible within the parameters of the TPB. Despite being a popular framework, the motivation scale for sport consumption was not recognised as a theory useful in achieving this study's research objectives. The MSSC does provide a sound base from which to understand sport consumer behaviour but not with the tested efficacy of the theory of planned behaviour. Further, MSSC did not clearly guide research questions and hypothesis development as robustly as the theory of planned behaviour (Cunningham & Kwon, 2003).

To further summarise this chapter, Appendix A tabulated the key literary articles or contributions used in this study. The literature used aided in developing the four research hypotheses that were tested. These hypotheses were developed in this chapter and were operationalised in the methodology section in chapter four.

3. CHAPTER 3: RESEARCH HYPOTHESES

The aim of this research was to interrogate the trend of declining attendance at live sport events as well as sport consumers' intentions to attend such events in South Africa. Using the theory of planned behaviour (TPB) and informed by the relevant literature reviewed in chapter two, the hypotheses listed below were tested to understand what drives behavioural intentions of sport consumers in the South African context.

H_1: There is a positive relationship between attitudes and behavioural intentions to attend a sporting event.

This hypothesis was developed to assess the relationship between attitudes and behavioural intentions from the data collected. If the data failed to confirm this hypothesis, there will be no indication of a relationship between attitudes and behavioural intentions to attend a live sporting event. This will have resulted in a failure to reject the null hypothesis.

H_2: There is a positive relationship between subjective norms and behavioural intentions to attend a sporting event.

This hypothesis assessed the relationship between subjective norms and behavioural intentions from the data collected. Failure to confirm this hypothesis, will have indicated that there is no positive relationship between subjective norms and behavioural intentions to attend a sporting event. This will have resulted in a failure to reject the null hypothesis.

H_3: There is a positive relationship between perceived behavioural control and behavioural intentions to attend a sporting event.

To evaluate the relationship between perceived behavioural control and behavioural intentions from the data collected, this hypothesis was developed. Failing to confirm this hypothesis will have indicated that there is no positive relationship between perceived behavioural control and intentions to attend a sporting event. This, too, will have resulted in a failure to reject the null hypothesis.

$\boldsymbol{H_4}$: Attitude and subjective norms will be more positively related to behavioural intentions to attend a sport event than perceived behavioural control.

This hypothesis was developed to evaluate the relationship between attitudes and behavioural intentions, and between subjective norms and behavioural intentions from the data collected. This was used to assess if these two relationships had a greater positive influence on behavioural intention than the influence of perceived behavioural control. Failing to confirm a greater positive relationship, this hypothesis will have suggested that perceived behavioural control had a greater influence on behavioural intentions.

4. CHAPTER 4: RESEARCH METHODOLOGY

4.1. Introduction to Research Methodology

This chapter established the logic behind the research methodology and design. It included the research's target population, unit of analysis, sampling method and size, measurement instrument, data gathering process, analysis approach, and notes the limitations of the employed methodology. To recap, the research was conducted in order to understand the antecedent psychological characteristics that would have motivated behavioural intentions of sport consumers to attend live sporting events. Three primary sporting disciplines in South Africa were used as the foundation to collect the necessary data, namely: cricket, rugby, and football (soccer). The data was collected through social media platforms and a holistic picture of South African sport consumers was deduced from the data collected.

4.2. Research Philosophy

A positivism philosophy was adopted for this research, meaning that an existing theory was used as the base for hypothesis-development and testing (Saunders & Lewis, 2018). With a positivist philosophy, observations could also be made directly from the collected data in a structured manner to enable an understanding of human behaviour (Antwi & Hamza, 2015). The research looked to investigate the antecedent psychological characteristics that motivated sport consumers' intentions to attend live events. Positivism lead to further discovery of observable and measurable facts and regularities that could have yielded meaningful data (Saunders & Lewis, 2018), more representative of truer information in an empirical form (Antwi & Hamza, 2015). The theory of planned behaviour was used to find relationships that would allow for the generation of measurable facts, regularities, or possible truth (Montano & Kasprzyk, 2015; Antwi & Hamza, 2015; Saunders & Lewis, 2018). This would permit deductions of what was transpiring in the social context concerning sport consumers. This made positivist philosophy relevant to the current research.

For the purposes of this research, the three antecedent psychological characteristics that drove behavioural intentions were explored and interpreted as: attitude toward behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991). The questionnaire used in the study was structured in a manner prescribed by the theory of planned behaviour, in conjunction with the literature reviewed in chapter two. No

interaction between the researcher and participants was required, in order to mitigate any bias in the data collection process (Ajzen & Driver, 1992; Hagger, Chatzisarantis, & Biddle, 2002; Cunningham & Kwon, 2003; Ajzen, 2006; Montano & Kasprzyk, 2015; Kim, Magnusen, Kim, & Lee, 2019). With positivism as the underlying research philosophy for quantitative research, this omission of researcher-participant interaction was important to note when interpreting the collected data (Antwi & Hamza, 2015).

4.3. Approach

The approach to the research was top-down: using an existing theory to test the antecedent behavioural characteristics of sport consumers. This implied that a deductive approach was expected (Saunders & Lewis, 2018) in which the theory of planned behaviour was used to test the data collected (Ajzen, 1991). Deductive research is performed when hypotheses are derived from existing theoretical frameworks and data is collected afterwards in order to test the formulated hypotheses (Hair, Bush, & Ortinau, 2009). A deductive approach was deemed appropriate for this research. Using best practice with this deductive approach, the research commenced with its research problem, followed by supportive evidence of the problem. The deductions implied by the subsequent data-collection were analysed, resulting in contributions towards the body of knowledge and answers to the research question at hand (Svensson, 2009). Emphasis was placed on adopting a scientific structure to move the theoretical framework from theory-based to data-centric. It used the collection of quantitative data to explain, more robustly, the relationships between variables. Additional key elements of the deductive research approach were: to apply validity controls during the data analysis process; to operationalise concepts to ensure clarity of definition; and to obtain a sufficient sample size to enable permissible deductions (Saunders & Lewis, 2018).

4.4. Methodological Choice

Collecting data using a single technique – that being the distribution of structured questionnaires – classified this as a mono-method approach (Saunders & Lewis, 2018). This was suitable as a primary method given the quantitative nature of this research, which made use of statistics to explore relationships between given variables (Creswell, 2014). Data collected was then analysed through statistical

testing of hypotheses using Multiple Linear Regression (MLR) modelling. This method further suited a positivist research philosophy (Saunders & Lewis, 2018) and had been recommended when using the theory of planned behaviour (Montano & Kasprzyk, 2015). Additional benefits of this methodology is that it translated ontological and epistemological principles into guidelines that describe the research process along with the principles, procedures, and practices that governed the process (Antwi & Hamza, 2015).

4.5. Purpose of Research Design

Research design has been described as a master plan specifying the methods and procedures for collecting and analysing data (Zikmund, Babin, Carr, & Griffin, 2013). The design usually fulfils one or more of exploratory, descriptive, explanatory, and evaluative purposes (Saunders & Lewis, 2018). In this study's case, explanatory research established causal relationships between variables and was considered an appropriate purpose for the study. However, causal relationships were required to satisfy: (i) temporal precedence, (ii) covariation of the cause and effect, and (iii) that there existed no plausible alternative explanation. It was important to note that, since the research conducted has limitations in the predictors of its dependent variable, the third requirement fails to conform to the prescriptions for causal precedence (Saunders & Lewis, 2018). Despite literature postulating that use of the theory of planned behaviour by means of a structured questionnaire purports an explanatory purpose (Ajzen, 1991; Montano & Kasprzyk, 2015), this was only somewhat true as only the first two requirements for causal relationships were satisfied.

To get as close to an explanatory result as possible, a numerical descriptive purpose sought to describe the relationship between the independent variables and dependent variable (Saunders & Lewis, 2018). This permitted deductions from the data based on the significance of the relationships that existed between the established variables. A descriptive research purpose was better suited to describing the research, but a combination of explanatory and descriptive purposes suited the research more fittingly. Temporal precedence, covariance, and description of the relationships that existed between variables all existed within the parameters of the research. According to Zikmund, Babin, Carr and Griffin (2013), such a combination of research purposes was permitted. A descripto-explanatory purpose was then used for the research to better describe the relationships between the independent

variables and dependent variable, as compared to a descriptive research design that would have not sufficiently described the purpose in isolation.

4.6. Strategy

The research utilised a survey strategy. This involved the collection of data from a sizeable population in the form of a highly structured questionnaire (Saunders & Lewis, 2018) premised on the theory of planned behaviour (Ajzen, 2006). The research looked to test the developed hypotheses, as described chapter two and three, in the South African context. The descripto-explanatory purpose aimed to understand the antecedent behavioural characteristics of sport consumers that motivated intentions to attend live sport events. Ultimately, the aim of this research strategy was either to fail to confirm, or confirm, the null hypotheses for the proposed test hypotheses.

4.7. Time Horizon

The time horizon for the study was cross-sectional since it looked to evaluate the antecedent behavioural characteristics of sport consumers at a particular time in South Africa. These behaviours may have changed with time depending on a range of individual, exogeneous, and macro-related events and circumstances. To account for this accurately, longitudinal research would have needed to be conducted. Quantitative data was collected that could portray a “snapshot” (Saunders & Lewis, 2018, p. 130) of the current relationship between behavioural intentions and antecedent behavioural characteristics of sport consumers in South Africa. There were two different time horizons for the cross-sectional research conducted. The first was during the pilot test which occurred during the first weeks of September 2019 and November 2019, respectively. The second time horizon was during the data collection period which ran from 07 to 22 January 2020.

4.8. Techniques and Procedures

Structured questionnaires were distributed to participants within pre-established sample groups. In preparation for data collection, the questionnaire was structured in accordance with theory of planned behaviour’s guidelines (Ajzen, 1991) and the relevant literature reviewed. The questionnaire allowed for data to be collected to perform statistical analysis thus permitting the assessment of the relationship

between variables. Due to relationships being correlative and a prediction of the dependent variable being required, a multiple linear regression statistical analysis was conducted. This was deemed appropriate given that there are three independent variables and one dependent variable – as Table 3 illustrates.

4.9. Population

The target population was defined in statistical terms as the aggregation of elements that share common characteristics. It could have consisted of people, organisations, and places (Malhorta, 2007). The target population for the purpose of this study was South African sport consumers; limited to sport consumers of cricket, football, and rugby across all sport consumption mediums. Within this vast group, sport consumers of recurring domestic premier league events formed the basis of the research. Recurring sport events included the Momentum One-Day Cup for cricket, the Premier Soccer League for football, and the Currie Cup for rugby. Despite attempts to narrow the population to a controllable figure, it was important to note that the actual total population of this defined sample could not be fully ascertained and could have been highly volatile, making the data of population size less vital.

4.10. Unit of Analysis

It was proposed that the unit of analysis for a reliable study should indicate what or who should have provided the data and at what level of aggregation (Zikmund, Babin, Carr, & Griffin, 2013). It has been further suggested that determining the unit of analysis is important during the problem-definition stage, since problems could be investigated at more than one level of analysis (Zikmund, Babin, Carr, & Griffin, 2013). Sport consumers, especially those that pertained to this research, were described and defined in chapters one and two. Satisfying the requirements for data-provision and level of aggregation, the unit of analysis for the research was sport consumers of recurring sport events in cricket, football and rugby in South Africa.

4.11. Sampling Method

Sampling involved any procedure that drew conclusions based on measurements of a subset of the population (Zikmund, Babin, Carr, & Griffin, 2013). The sample was identified as a sub-group of the entire population (Saunders & Lewis, 2018). The actual recording and listing of all sport consumers of cricket, football, and rugby in

South Africa was difficult to acquire, so it was not stated. For this research, the top three teams in each sporting discipline were sampled. This was achieved through non-probability sampling techniques, namely, by distributing structured questionnaires (surveys) to Facebook community groups. The details of the targeted groups have been illustrated in Table 1. The top three teams were selected because these were the communities with the most engaged number of sport consumers on the Facebook platform. Furthermore, the survey was distributed through the researcher's LinkedIn profile, which was considered a professional social media platform. Respondents were encouraged to share the survey amongst other sport consumers, triggering a snowball effect. The survey required a selection of a preferred sporting discipline, thereby restricting responses to the specified criteria. However, participants could specify their sport of preference by utilising the "Other" option on the survey. This introduced some degree of variation in the results. Regardless of the sporting discipline stipulated by the consumers, attributes were shared with the primary sport disciplines of cricket, football and rugby, and were considered in the data analysis of the research. The survey was distributed in accordance with the time horizon described in the preceding paragraphs.

Table 1

Online Groups that were targeted

Discipline	Team	No. Members (Aug '19)	Online Contact
CRICKET	Multiply Titans	69 370	Tel: 012 663 1005, Web: https://www.facebook.com/pg/TitansCricketTeam/about/?ref=page_internal
	Hollywood Bets Dolphins	14 738	Tel: 031 335 4200, Web: https://www.facebook.com/pg/DolphinsCricket/about/?ref=page_internal , Mail: social@dolphinscricket.co.za
	Warriors	20 885	Tel: 041 585 1646, Web: https://www.facebook.com/pg/WarriorsCricketEC/about/?ref=page_internal , Mail: adminpe@cricket.co.za
FOOTBALL	Mamelodi Sundowns	48 014	Web: https://www.facebook.com/pg/MamelodiSundownsTeamKby/about/?ref=page_internal
	Orlando Pirates	2 000 000	Tel: 011 483 1730, Web: https://www.facebook.com/pg/OrlandoPirates/about/?ref=page_internal , Mail: comments@orlandopiratesfc.co.za

Discipline	Team	No. Members (Aug '19)	Online Contact
RUGBY	Kaizer Chiefs	2 976 960	Tel: 011 941 1465, Web: https://www.facebook.com/pg/kaizerchiefs/about/?ref=page_internal , Mail: info@kaizerchiefs.com
	Western Province	119 647	Tel: 021 659 4600, Web: https://www.facebook.com/pg/wprugby/about/?ref=page_internal , Mail: glewis@wprugby.co.za
	Sharks	469 275	Web: https://www.facebook.com/pg/TheSharks/about/?ref=page_internal
	Golden Lions	106 000	Tel: 011 402 2960, Web: https://www.facebook.com/pg/lionsrugbyco/about/?ref=page_internal
Other	LinkedIn	688	https://www.linkedin.com/in/kovilen-naicker-36721b60?lipi=urn%3Ali%3Apage%3Ad_flagship3_profile_view_base_contact_details%3BWGCQQwyjQXiSLc1O%2Bc6h1w%3D%3D

Source: Researcher's Own

4.12. Sample Size

Zikmund, Babin, Carr and Griffin (2013) stated that statisitical determination of the sample size required knowledge of the variance of the population, the magnitude of acceptable error, and the relevant confidence level. This suggested that a large population is generally desirable in order to mitigate the effect of sampling error. It has been widely agreed that fewer than 30 observations can be analysed but only in a simple regression (Hair Jr., Black, Babin, & Anderson, 2014). Hair Jr., Black, Babin and Anderson (2014) further postulate that too large a sample – one tending toward 1000 obserations – becomes too sensitive with most interrelationships becoming statistically significant.

Understanding the lower and upper limits of statistically robust sample sizes, the dataset required for this research was to be large enough such that the occurrence and magnitude of sampling error was mitigated. Sample error has been defined as the expected variation in estimated parmeters due to the dataset containing a sample in lieu of the entire population (Hair Jr., Black, Babin, & Anderson, 2014). That sample error was reduced as the sample size increases (Hair Jr., Black, Babin, & Anderson, 2014).

The sample size was thus seen as imperative to the statistical power of the significance testing and the generalisability of the result. This was determined by assessing power in the multiple regression model. Power was the probability of detecting a statistically significant result at a specific level of R^2, or regression coefficient, at a specified level of signifcance within a specific sample size (Hair Jr., Black, Babin, & Anderson, 2014). In a more generalisable sense, it has been widely accepted that the overall sample size should contain 20 observations per independent variable, although this may cause instability as described above – where the sample size becomes too large (Hair Jr., Black, Babin, & Anderson, 2014). The generally accepted lower limit to satisfy the multiple regression was five observations per independent variable.

Maintaining a power at 0.80 in a multiple regression required a minumum sample size of 50, but 100 observations were preferred in order to maximise the degrees of freedom: further improving the generalisability of the sample and addressing the model parsimony and sample size concerns. Care was taken not to add too many predictor variables that would naturally increase the degrees of freedom and produce an overfitting of the model to the sample (Hair Jr., Black, Babin, & Anderson, 2014). With these considerations in mind, this research saught to satisfy the minimum sample size requirements while intending to gather observations toward desired levels of between 15 and 20 observations per independent variable (Hair Jr., Black, Babin, & Anderson, 2014).

4.13. Measurement Instrument

In the survey design, a sample of a population was studied to provide a numeric description of trends, attitudes, or opinion of a population. This would allow inferences to be drawn about the population (Creswell, 2014). For this research, a web-based survey design was used as prescribed by the theory of planned behaviour to investigate the relationship between antecedent behavioural characteristics (or independent variables) and the intention to attend live sport events (or the dependent variable). The survey used comprised six sections: (a) General Information, (b) Attitude Toward Behaviour, (c) Subjective Norms, (d) Perceived Behavioural Control, (e) Intentions and (f) Demographics. Appendix B illustrated the layout of the survey distributed. Data from the survey was imported into Microsoft Excel and cleaned, after which statistical analysis was performed on IBM SPSS Statistics 25.

Section (a) of the survey obtained general information about the participants including: their favourite sporting discipline; importance of a significant other; important factors considered before attending a live sport event; the last time that a live event was attended; and the average number of live events attended by them in a year. Section (b) looked to assess the attitude of the participants toward attending a live sporting event. Section (c) assessed the influence of subjective norms on the participants with regards to attending a live sport event. Section (d) assessed the perceived behavioural control of the participants and its effect on their ability to attend live sport events and Section (e) assessed the intention of the participant to attend a live sport event. Finally, Section (f) recorded demographic data of the participants, including: age; race; gender; geography; home language; level of education; occupation; and salary bracket. The scale items used for the four variables being tested were depicted in their coded construct format in Table 2. The survey used has been presented for reference in Appendix B and the new variables created can be found in Appendix C.

Table 2

Scale Type Constructs Assessed with Coding

Code	Construct Tested
	b. Attitude (ATT)
ATT8	8. For me, attending a live sport event of preference would be...
ATT9	9. For me, attending a live sport event of preference would be...
ATT10	10. For me, attending a live sport event of preference would be...
ATT11	11. For me, attending a live sport event of preference would be...
ATT12	12. When attending a live match, I believe my team will win:
ATT13	13. I would prefer doing other things rather than attend a live sport match.
ATT14	14. I prefer watching games from home where I have choices in the types of media I wish to consume.
	c. Subjective Norms (SN)
SN15	15. People that are important to me will approve of me attending live sporting matches.
SN16	16. Attending a live sporting match with people close to me is something I would like to do.
SN17	17. People close to me are likely to attend a sporting match this season.
SN18	18. I find that it is difficult for children to attend live sporting match in South Africa.

Code	Construct Tested
	d. Perceived Behavioural Control (PCB)
PBC19	19. It would be difficult for me to attend a live sporting match this season.
PBC20	20. I have sufficient time to attend a live sporting match this season.
PBC21	21. I have sufficient money to attend a live sporting match this season.
PBC22	22. I feel that ticket prices are affordable for me.
PBC23	23. I feel that the venues are safe when attending live sport matches.
PBC24	24. I feel that travelling to a live sporting match is convenient.
	e. Intentions (BI)
BI25	25. I intend on attending a live sporting match this season.
BI26	26. I will try and attend a live sporting match this season.
BI27	27. Attending a live sporting match is something I intend on doing this season.

Source: Researcher's Own

Participants were requested to rate their expectations and ability to attend a live sport event on a seven-point Likert scale where one represented "strongly disagree" and seven represented "strongly agree". This has been considered an appropriate ordinal scale for participants to discriminate reasonably between the scale values (Cunningham & Kwon, 2003; Ajzen, 2006; Montano & Kasprzyk, 2015). This was later computed in a continuous scale when the constructs were rolled-up into their overarching variables.

4.14. Data Gathering Process

4.14.1. Pilot Test

A pilot test was conducted to test the user-friendliness and efficacy of the structured survey. The structured survey was distributed to 10 participants who self-identified as sport consumers. All the participants completed the survey accordingly. This was conducted during the first week of September 2019, and November 2019, respectively. The pilot test assessed the flow of the questionnaire and assisted in identifying and eliminating any unintended ambiguity. There were no problems identified by the pilot group, so the completed surveys were collated into the final sample as part of the final dataset for the analysis.

4.14.2. Data Collection

The first stage of the data collection process was to review secondary data and current affairs that pertained to attendance at sport events. This involved a desktop research process where academic literature was reviewed along with local media sources to gain insights into the South African and international contexts associated with the research problem. Despite media sources not being traditionally academic, it was important to consider in order to root the study in a relevant and existing context. From this review, a structured questionnaire was developed in accordance with the theory of planned behaviour and this was distributed in the preliminary pilot test mentioned above.

Following the success of the pilot test, the questionnaire was distributed to community groups on Facebook and LinkedIn. Prior to distribution, the administrators of each page were contacted to discuss the nature of the study and to request permission to distribute the survey. This was to ensure that all ethical requirements were met prior to distribution of the questionnaire. Further to this, ethical standards were upheld by introducing the survey with a clear purpose of the research, a statement on voluntary participation, and a statement indicating that data was to be collected anonymously. In addition, the survey only allowed participation by respondents older than the age of 18. Collection of data commenced once ethical clearance was received for the research. The contact details of the researcher and research supervisor were also provided should any questions or concerns have been raised. Furthermore, a web-based survey was preferred due to the cost effectiveness of its use and the sizeable sample the online platforms offered. Collectively, there were 5 825 577 possible participants in sample group across the selected community pages on both social media platforms.

Cognisance of participants' time was considered to limit the non-response error that is common in these types of data collection methods. Sue and Ritter (2007) stated that there are typically two main non-response errors. One of them is where there is no participation in the survey by those in receipt, and the other is where there are questions skipped. Both errors result in missing data. To avoid the second type of non-response error, every question was made mandatory to permit submission at the end of the survey.

4.15. Data Analysis Approach

Multiple linear regression (MLR) statistical methods were generally used to test relationships in the theory of planned behaviour (Montano & Kasprzyk, 2015). Regression analysis has been considered one of the most widely used and versatile dependence-modelling techniques applicable to studies in business, econometrics, and consumer decision-making – to name few relevant areas of its application (Hair Jr., Black, Babin, & Anderson, 2014). The MLR approach could have been simplified in its definition to that of a statistical technique used to analyse the relationship between a single dependent variable and multiple independent variables. Add to this the fact that data collected by this research for both the independent and dependent variable(s) was ordinal then continuous, this satisfied two of the minimum requirements for the use of MLR.

The statistical analysis was performed using IBM SPSS Statistics 25 software. This approach considered three independent variables in this case, with one dependent variable. In the utilisation of multiple linear regression, patterns of relationships among multiple constructs can be determined. The regression dealt with predicting an outcome by assessing correlative relationships between the multivariate data. This helped determine any relationship significance between the dependent and independent variables. The research purpose looked to understand the antecedent behavioural characteristics (the independent variables) of sport consumers and their intention to attend sport events (the dependent variable). From here on, the idea for the research was that strategies could be developed and adopted to promote an increase in attendance. The relationship between the independent variables and the dependent variable, as depicted in Table 3, was explored using this data-analysis approach using a 95% level of confidence for assessment. A prediction of the intention to attend sport events could have been derived based on the strength of the relationships between the variables. Given that the research was based on a theoretical framework where the independent variables are suggested to have influenced behavioural intention (as the dependent variable), a confirmatory MLR estimation technique was utilised (Hair Jr., Black, Babin, & Anderson, 2014).

Table 3

Independent Variables and Dependent Variable in the Research

Hypotheses	Independent Variable (s)	Dependent Variable
$\boldsymbol{H_1}$**:** There is a positive relationship between attitudes and behavioural intentions to attend a sporting event.	Attitude	Behavioural Intention
$\boldsymbol{H_2}$**:** There is a positive relationship between subjective norms and behavioural intentions to attend a sporting event.	Subjective Norms	Behavioural Intention
$\boldsymbol{H_3}$**:** There is a positive relationship between perceived behavioural control and behavioural intentions to attend a sporting event.	Perceived Behavioural Control	Behavioural Intention
$\boldsymbol{H_4}$**:** Attitudes and subjective norms will be more positively related to behavioural intentions to attend a sport event, than will perceived behavioural control	Attitude, Subjective Norms	Behavioural Intention

Source: Researcher's Own

4.15.1. Regression Variate

The regression variate described the relationships that existed within the holistic multiple regression. This was derived from running the actual regression analysis. This included the individual variables as the independent and dependent variable(s) as shown in Table 3. The variate was assessed to satisfy the assumptions of a multiple regression and corrections were to be made, where required, to ensure a best fitting model (Hair Jr., Black, Babin, & Anderson, 2014). The equations below further explain the relationships that exist within the multiple regression model:

Equation 1 *Multiple Regression Equation*

$$y_i = \alpha + \beta_1.X_1 + \cdots + \beta_i.X_i + \varepsilon_i$$

The y_i-value was the predicted value of the dependent variable with a corresponding input value X_i being the independent variable. The β-value not only represented the gradient of the regression line, but also represented the influence of one standard deviation of the respective independent variable on the predicted dependent variable. The α- value was a constant value that represented the intercept of the y-axis of the regression line. Finally, ε_i–value is the expected error term that is derived from the variate, called the 'measure of prediction error', or the 'residual' (Hair Jr., Black, Babin, & Anderson, 2014). Simply, this was the difference between the observed and predicted value of the dependent variable. For the research, the studentised residual error term (ε_i–value) was utilised when assessing the assumptions of the multiple regression. The i-value is representative of the input independent variable that predicted the dependent variable. For the research, the i-value ranged from one to three, determined from the number of independent variables included in the research.

4.15.2. Stage 1: Data Preparation

Data collected followed a four-step approach as recommended by Hair, Bush and Ortinau (2009). This included – in sequence – validation, editing, coding, data entry and data coding, with error detection throughout the process. The survey was setup to ensure that all questions were completed by making each question mandatory for completion prior to moving to the next. This mitigated the chance of missing data. The data was then coded per the code book provided in Appendix C. This allowed for easier data management and analysis while using IBM SPSS Statistics 25.

4.15.3. Stage 2: Validity and Reliability of Data

Validity has been defined as a measurement concept concerned with the degree to which a measurement instrument actually measures what it intended to measure (Saunders & Lewis, 2018). Saunders and Lewis (2018) have proposed that a survey is only useful if it collects data from a large enough number of respondents where the questions were interpreted by the participants in the manner in which the researcher intended, and the results enable the researcher to answer the research question(s) and meet the prescribed research objectives.

This was especially important for survey designs where the measurement scales have been used in previous studies that proved to be valid and reliable, fulfilling the content and construct validity. Content validity has been defined as the extent to which the data collection tool provides sufficient data to have answered the research question and meet the research objectives. Construct validity has been defined as the extent to which the questions collected data about what they were intended to measure (Saunders & Lewis, 2018). These were both checked at the end of the analysis where the regression model was validated using the adjusted R^2-value (see Section 5.7).

Reliability has been defined as an indicator of a measure's internal consistency and occurs when a test measures the same thing more than once, resulting in the same, or closely similar, outcome (Zikmund, Babin, Carr, & Griffin, 2013). Saunders and Lewis (2018) further stated that reliability is the extent to which data collection methods and analysis procedures will produce consistent findings. The Cronbach Alpha coefficient was used to test for reliability of the constructs (or indicators) that contributed to an independent variable (see Appendix C). It has been the most widely used and accepted estimator to test scale and reliability (Hair, Bush, & Ortinau, 2009). Accordingly, the cut-off value for the Cronbach Alpha was set to 0.7 (Trobia, 2011) – although 0.6 is also commonly accepted (Churchill, 1979; Tavakol & Dennick, 2011; Gallais, Gagon, Forgues, Cote, & Luberge, 2017). Reliability could have also been tested against how easily the adopted research method is replicable, or through the ease of interpreting the research, or how clearly derived its conclusions are, or if the measures used are able to produce the same results if the method was used in other applications (Saunders & Lewis, 2018).

4.15.4. Stage 3: Descriptive Statistics

Descriptive statistics was used as the umbrella term describing the basic features of the data collected from the sample (Saunders & Lewis, 2018). These have typically included response frequencies and normality of distribution of the sample. Multivariate normality has been used to describe a case where data collected for the variables are normally distributed (Hair Jr., Black, Babin, & Anderson, 2014). Skewness and Kurtosis were then assessed as a ratio of the standard error for the relationships. Field (2014) stipulated that for large sample sizes of 160 observations and more, the central limit theorem stipulates that an assumption of normality has

little effect on the analysis of the data. Furthermore, the cut-off values for the Skewness and Kurtosis tests depended of the level of confidence utilised during the research. For a 95% level of confidence, the cut-off for the ratio was ±1.98 (Field, 2014).

4.15.5. Stage 4: Multiple Linear Regression Assumptions

The research took into consideration six assumptions of the data collected for the multiple linear regression model: (i) linearity and additivity, (ii) independence of errors, (iii) homoscedasticity, (iv) normal distribution of residuals, (v) no multicollinearity, and (vi) assessment of influential observations. These assumptions were to be satisfied to remove errors in the relationships of the regression model. To do so, both the variable types were assessed, as well as the relationship as a whole (Williams, Grajales, & Kurkiewics, 2013; Hair Jr., Black, Babin, & Anderson, 2014). Of the error tests, the primary assessment to determine the prediction error was the studentised residual value. The residual value was noted as the difference between the observed dependent values and the predicted value of the same variable (Hair Jr., Black, Babin, & Anderson, 2014). This served as a common feature when assessing the assumptions for MLR. Where assumptions were not satisfied, transformations were performed on the respective variables to attain an acceptable model.

4.15.5.1. Linearity and Additivity

Linearity and additivity assessed that for one unit of increase in the independent variable, a resulting fixed unit of increase should be experienced by the dependent variable (Hair Jr., Black, Babin, & Anderson, 2014). This simply meant that the independent variable would have a linear relationship with the dependent variable. This was evaluated by creating scatter plots of residual values. The scatter plots assessed the collective residuals of the independent variables in relation to predicted values. Additionally, each independent variable was assessed for its relationship with the dependent variable independently through partial regression plots using IBM SPSS Statistics 25. Transformations were required where the data did not conform to linearity both to increase the predictive accuracy of the model and the validity of the estimated coefficients.

4.15.5.2. Independence of Errors

Independence of errors assumed that each predicted value was independent, and that residuals were not correlated (Hair Jr., Black, Babin, & Anderson, 2014). Residuals, or error terms, were established from predictions using the sample. Randomised errors were expected as predictions could not be perfect. Random errors would naturally occur within the population and the subsequent sample that was used (Hair Jr., Black, Babin, & Anderson, 2014). The error terms were derived using IBM SPSS Statistics 25. The Durbin-Watson (DW) test was implemented using lower and upper bounds of 1.5 and 2.5 respectively – with values between zero and four often being acceptable – indicating that the prediction is independent of errors (King, 1983; Banerjee, 2014).

4.15.5.3. Normal Distribution of Residuals

To assess the distribution of the independent variables' residual values, a visual check was performed by adding a best-fit line to the residual histogram (Wegner, 2016). Further to this, a normal probability-probability plot, P-P Plot, was assessed where standardised residuals were plotted against the normal distribution. These assessments were based on the premise that the residual values should closely follow the straight diagonal line of the normal distribution to ensure that normality is present (Hair Jr., Black, Babin, & Anderson, 2014). Post-transformations, a quantile-quantile plot, Q-Q plot, was completed to assess the normal distribution of residuals.

4.15.5.4. Homoscedasticity

Homoscedasticity, otherwise referred to as the constant variance of the error terms, was assumed for the studentised residual errors for all predicted values of the dependent variable. The scatter plots assessed the collective residuals of the independent variables versus the predicted values of the dependent variable. (Hair Jr., Black, Babin, & Anderson, 2014). A best-fit line was produced for the scatter plot and if the distance between best-fit line and plotted data on either side was of similar distance, constant variance of the residuals was assumed (Wegner, 2016). This was a visual inspection of the data. Should this have not been the case, heteroscedasticity would have occurred, placing the regression in violation of the multiple linear regression assumptions.

4.15.5.5. No Multicollinearity

No multicollinearity assumed that independent variables were not highly correlated (Hair Jr., Black, Babin, & Anderson, 2014). This was assessed using the variance inflation factor (VIF) and its inverse, Tolerance, with IBM SPSS Statistics 25 (Field, 2014). The VIF showed the level of significance of the relationships between independent variables (Hair Jr., Black, Babin, & Anderson, 2014). High VIF values would illustrate high collinearity. The accepted VIF values were smaller than three, although values smaller than 10 would also be accepted. A Tolerance value larger than 0.1 was deemed acceptable (Field, 2014). Furthermore, the correlations between independent variables were assessed with a cut-off parameter set at 0.7.

4.15.5.6. Influential Observations

Influential observations were either those that were found outside the general patterns of the data, or observations that had a substantial influence on the regression results. Outliers and leverage points were considered influential observations in the data. Outliers were observations that created large residual values specific to the regression model created. Leverage points were observations that varied from other observations based on their independent variable values (Hair Jr., Black, Babin, & Anderson, 2014). Influential observations needed to be carefully treated, as they could not automatically be considered poor data points in the sample. These observations provided distinctions in the data set to be assessed, and would not necessarily influence the outcomes of the regression model (Hair Jr., Black, Babin, & Anderson, 2014). For this research, a case-wise diagnostic was performed to detect any outliers using SPSS Statistics 25 and, where necessary, outliers were dealt with. Table 4 illustrated the cut-off values and variable assessment criteria used for identifying influential observations.

Table 4

Cut-off Values and Checks for Influential Observations

Variable	Check	Lower Limit	Upper Limit
Standardised Residual	Outliers	Minus 3 Std. Deviations	Plus 3 Std. Deviations
Studentised Deleted Residual	Outliers	Minus 3 Std. Deviations	Plus 3 Std. Deviations
Leverage Value	Leverage Points	< 0.2 – Safe 0.20 < Leverage Point < 0.50 – Risky > 0.50 – Dangerous (Huber, 1981)	
Cook's Distance	Influential Points	> 1.0 - Record and Investigate (Cook & Weisberg, 1982)	

Source: Researcher's Own

4.15.5.7. Variable Transformations

It was expected that common assumptions such as linearity and homoscedasticity would be violated in the multiple linear regression. These have been common to the field of social science – the field of study under which this research falls. In order to improve the predictive ability of the variate, variable transformations were performed to achieve linearity and homoscedasticity (Hair Jr., Black, Babin, & Anderson, 2014). The transformations were carried out based on the degree of skewness of each variable since the regression variate was robust against kurtotic occurrences. Appendix E illustrates the transformations performed based on skewness.

4.15.5.8. Weighted Least Squares Regression

Where variable transformations did not produce the desired outcomes to provide a model with acceptable predictive abilities, a weighted least squares (WLS) regression was to be performed to minimise variances of the residual errors (Hair Jr., Black, Babin, & Anderson, 2014). This form of regression allowed the optimisation of the model as required. This method was further preferred over using ordinary least squares with robust standard error terms as the latter does not provide reliable coefficient estimates (Andersen, 2011). The sum of the squares between measurements and the predicted values are minimised by adequately defining the α– and β-values – the regression parameters (Abdi, 2012). This was particularly

prominent where datasets were heteroscedastic, and the residuals did not remain constant. Each observation was assigned a weighting based on the residual variance of the observation. Care was taken to observe the effect of influential observations, as this was exacerbated by the least squares' application (Berk, 2013).

The weights that were assigned to variables were determined using the following derivation. It was assumed that the predicted value (y_i) from the dataset produced a specific error variance (σ^2) with a mean of zero and a constant variance (Berk, 2013). The sample size affected the variance produced by the variate, as it influences the mean. For each observed unit, the variance was represented by a mean value according to Equation 2 (Berk, 2013).

Equation 2 *Variance Equation to Determine Weights*

$$VAR\ (y_i|X_i) = \frac{\sigma^2}{w_i}$$

Equation 2 represents the residual variance as a function of the predicted value y_i and the corresponding independent variable input X_i. To have assessed the mean value of the variance, σ^2 would have to be divided by m_i. The m_i-value represented the number of observations from which the mean value was derived. The weighted constant was represented by w_i and for each observation, $w_i = m_i$ (Berk, 2013).

If y_i was the sum of m_i observations, the resulting variance would be $VAR\ (y_i|X_i) = m_i.\ \sigma^2$. Weights were considered as proportional to the reciprocals of variances. Larger weights represented smaller produced variances, such that $w_i = \frac{1}{m_i}$ resulted in the variance conforming to Equation 3 stated below (Berk, 2013):

Equation 3 *Weighted Least Squares Variance (Derivation 1)*

$$VAR\ (y_i|X_i) = \frac{1}{w_i}.\sigma^2$$

Alternatively, if the y_i-value was a sum of m_i independent observations, such that $w_i = \frac{1}{{X_i}^2}$ and the variance was a known function of X_i, the variance would then be stated as per Equation 4 (Berk, 2013):

Equation 4 *Weighted Least Squares Variance (Derivation 2)*

$$VAR\ (y_i|X_i) = \frac{1}{w_i^2}.\sigma^2$$

There were many ways to estimate the weight applied to achieve homogenous variances of the error terms (Stanley & Doucouliagos, 2015). For this research, the weight was determined using the studentised residuals from the primary regression performed on the cleaned dataset. The value of w_i was determined by using the absolute values of the studentised residual values produced from the primary regression. The absolute studentised residual value was then used as the dependent variable with the three independent variables in a secondary multiple linear regression. Thereafter, the unstandardized predicted value that was produced was squared, then inversed to produce the w_i-value. The least-squared weighting w_i was applied to ensure that the sum of the squares produced minimal residual error and resulted in Equation 5 for the new residual error terms.

Equation 5 *Residual Error Term Determined from Least Squares*

$$\varepsilon = \sum_{i}^{n=170} w_i.[y_i - (\alpha + \beta.X_i)]^2$$

4.15.5.9. Summary of Assumptions

The assumptions of the MLR required to ensure robust outcomes in the regression model were summarised in Table 5 below.

Table 5

Summary of MLR Assumptions and Tests

Assumption	Check	Test
i. Linearity and Additivity	a. Visual	a. Scatter plot: Collective Independent Variable Residuals vs. Predicted Values
	b. Visual	b. Partial Regression Plot: Independent Variable vs. Dependent Variable
ii. Independence of Errors	Statistical	Durbin-Watson
iii. Homoscedasticity	a. Visual	a. Scatter plot: Collective Independent Variable Residuals vs. Predicted Values
iv. Normal Distribution of Error Terms	a. Statistical	a. Skewness and Kurtosis over Standard Error Term
	b. Visual	b. Histogram: Residuals with best fit normal line
	c. Visual	c. P-P Plots and Q-Q Plots
v. Collinearity	Statistical	Correlations, VIF and Tolerance
vi. Influential Observations	Statistical	Standard Deviations from Residuals, Cook's Distance and Leverage Values

Source: Researcher's Own

4.15.6. Stage 5: Reliability of Results

To test for the reliability of the MLR model utilised, statistical significance of the model needed to be examined. There were two forms in which these tests were conducted: (i) through the coefficient of determination (R^2), and (ii) through a test of each regression coefficient (B) (Hair Jr., Black, Babin, & Anderson, 2014). The R^2-value indicated the proportion of variance of the dependent variable that is explained by the independent variables. The coefficient of determination was assessed utilising the F-ratio that illustrated that, if the amount of variation explained by the regression model was greater than the baseline prediction, R^2 is significantly greater than zero. Where the F-ratio was significantly different from zero, confidence was assured in that the regression model was replicable to other samples from the population, other than the analysed sampled from the research (Hair Jr., Black, Babin, & Anderson, 2014). It was noted that the adjusted R^2 value was preferred when assessing the

coefficient of determination however, this to be assessed in conjunction with the regression coefficients (Willett & Singer, 1988).

Given that the analysis consisted of a sample of the population and was not derived from a census sample, the significance of the regression coefficients (B) was to be assessed. This was simply the assessment of the regression coefficients where they are to be different from zero (Hair Jr., Black, Babin, & Anderson, 2014). To assess these criteria, the significance level (alpha), sampling error, and standard error were assessed. The significance level was the coefficient that denotes acceptance that an estimated gradient (or regression) coefficient is different from zero when it is not. It served as a level-of-confidence measure. The sampling error illustrated the cause for variation in the estimated regression coefficients and this was dependent on sample size. Larger samples were less likely to contain significant variation between the regression coefficients. Finally, the standard error was the expected variation of the estimated coefficients, constant, and regression coefficients that result from sampling errors (Hair Jr., Black, Babin, & Anderson, 2014). The level of significance used for the research was 5% – or 95% confidence – and the regression coefficients were accordingly assessed. These outcomes were derived directly from the statistical analysis conducted using IBM SPSS Statistics 25.

4.15.7. Stage 6: Validation of Results

The theoretical expectations to validate the results from the research posits that the research should be performed again with a new sample from the same population, after which the regression equations from both samples can be compared (Hair Jr., Black, Babin, & Anderson, 2014). This was not possible for this research due to the cross-sectional nature of the study. The PRESS statistic was a further validation method that could be deployed by eliminating one observation at a time and estimating a new regression model (Hair Jr., Black, Babin, & Anderson, 2014). The residuals for the observations are then summed to provide an overall measure of predictive fit. Useful as they are, these tests proved too complex for this research's purposes.

A simpler approach was utilised: assessing the adjusted R^2-value to understand the overall measure of predictive fit in order to validate the results (Hair Jr., Black, Babin, & Anderson, 2014). Statistical significance was further required for a relationship to

have validity, however, statistical significance without theoretical support did not support validity (Hair Jr., Black, Babin, & Anderson, 2014). Since the research conducted was grounded on the theory of planned behaviour and the tests performed were to conform to the minimum requirements whilst using the multiple linear regression approach, validity was possible.

The outcomes required to satisfy the assumptions for a multiple linear regression were assessed first and interpreted as described in section 4.15.5. The regression coefficients in IBM SPSS Statistics 25 are denoted by “B”. These were unit-free and indicated the influence of an independent variable on the dependent variable (Hair Jr., Black, Babin, & Anderson, 2014). The Beta (ß) coefficient displayed the resulting effect of a one standard deviation change on the independent variable and the resulting dependent variable. The ß-value further guided the importance of an individual independent variable on the dependent variable, given that collinearity was minimal. These two coefficients were compared to assess the inaccuracy of interpretation from variables with different scales and variability, in conjunction with the Sig.-values (α) (Hair Jr., Black, Babin, & Anderson, 2014).

4.16. Limitations

As the framework underpinning this study’s research methodology, the theory of planned behaviour provided valuable insights into the behavioural intentions of sport consumers to attend live sport events. However, the methodology was not without its limitations, including:

- The cross-sectional approach provided applicable means to understand behavioural characteristics at a point in time (07 January 2020 – 22 January 2020), during which the research was conducted. Longitudinal outcomes of behaviour may also vary depending on the time horizon and this was identified as a critique of the theory of planned behaviour. These provided a limitation on the outcomes and can only be assessed through future longitudinal studies. The time required for such research was outside the scope of this study.
- It could then be argued that the relationships developed do not ensure behaviour. However, a predictive model was used, one that permitted influence of behavioural intention to increase attendance at live events. A longitudinal study would be required to assess if intentions translated into desired behaviour.

- There may be direct and indirect constructs of attitude, subjective norms, and perceived behavioural control that are not measured. These may be contributors to the behaviour. A more comprehensive list of constructs that are encapsulated within the independent variables may provide variations on the insights derived from the research conducted. However, it should be noted that changing the number of constructs may influence the R^2 values and the degrees of freedom, resulting in an overfitted model or one that fits poorly to the desired variate.
- The effect of demographic variables was not tested as independent, or mediatory, variables to assess their influence on the dependent variable for this research.
- A larger sample size for analysis could be assessed to receive a more accurate prediction of behavioural intention. However, to avoid the sensitivity of regression coefficients that occurs with large sample sizes, the sample size was not increased.

Despite these listed limitations, the documented value of this methodology in the fields of sport management, tourism, behavioural psychology, social science, and sport marketing were deemed valuable enough to draw insights addressing the research problem at hand.

4.17. Conclusion to Research Methodology and Design

This chapter described and defended the research design and methodological choice. The design and method selected was to ensure that the research objectives were satisfied, and to yield useful insights based on the research problem. The assumptions for the application of the analysis approach were listed along with the sequence of research steps followed in order to gain insights into the data collected. Research limitations were then stated. They may introduce biases into the research design but may also present opportunities for future research. The following chapter will present the results obtained from the application of this methodology; all limitations considered.

5. CHAPTER 5: RESULTS

5.1. Introduction to Results

This chapter presents the outcomes from the applied research design and methodology as outlined in the preceding chapter. The outcomes presented here have been defined in the six stages in the preceding chapter in the form of: data preparation, descriptive statistics, validity and reliability of the data, multiple linear regression assumptions, reliability of the results, and a validity assessment of the model. This chapter concludes by testing the hypotheses as postulated in chapters two and three. It should be noted that all results are presented within the South African context in pursuit of the research problem and objectives discussed in previous chapters.

5.2. Stage 1: Data Preparation

Data was collected between 07 January and 22 January 2020 for this cross-sectional research. 171 observations were received, of which one response was deemed invalid. Data was cleaned by assessing string data for inconsistencies. Here, one inconsistency found was under Demographics, Question 32 (DEM32), as shown in Appendix C. Major cities were spelled differently, and any spelling errors were corrected for a consistent format. Furthermore, suburbs were inputted, and these were adjusted to the closest major city. This does not affect the testing of the hypotheses but allows for more generalisable descriptions of, and insights into, the sample.

Additional variables were created called “BehaviouralIntention”, “Attitudes”, “Subj.Norms” and “Perc.Beh.Control”, by rolling-up the indicator constructs into the main variables. The indicator constructs are all positively related to attending a live sport event, with measured values tending toward seven – “strongly agree”– indicating positive behavioural intentions. Where the scales were to be reversed to conform, this was done accordingly. See ATT13R, ATT14R, SN18R and PBC19R in Appendix C.

It is important to confirm that the sample size conforms to the requirements to perform a multiple linear regression, which it does. There are 17 indicator constructs that contributed to the three independent variables, namely: attitudes, subjective

norms, and perceived behavioural control. The lower limit using a 5:1 ratio requires 85 responses, and this has been satisfied. The actual sample conforms to a 10:1 ratio of indicators constructs to the dependent variable with 170 valid observations received. Further, if the actual independent variables are assessed, a ratio of 56:1 is achieved. This further conforms to the desirable sample size as prescribed by Hair Jr., Black, Babin and Anderson (2014).

5.3. Stage 2: Reliability of Data

To assess the reliability of the variables that were derived from indicator constructs associated with the theory of planned behaviour, the Cronbach Alpha is tested. Each independent variable is assessed on its own. Table 6 illustrates the Cronbach Alpha values. It is evident that subjective norms and perceived behavioural control do not meet the reliability requirements. Further, by assessing the column where items are deleted, SN18R and PBC19R are shown to be unreliable constructs. Their removal will provide better overall construct validity of the data. Other indicators may further show non-conformance in isolation, but their removal has little bearing on the construct reliability, or final Cronbach Alpha value.

Table 6

Validity Check through Cronbach Alpha

Variable	Indicators	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach Alpha
Attitudes	ATT8	30,4471	42,497	0,805	0,849	
	ATT9	30,2588	44,252	0,799	0,852	
	ATT10	30,8353	42,470	0,807	0,848	
	ATT11	30,4176	42,801	0,826	0,847	0,882
	ATT12	31,1824	46,659	0,497	0,887	
	ATT13R	32,0588	43,689	0,548	0,885	
	ATT14R	33,0941	45,317	0,519	0,886	
Subjective Norms	SN15	14,2235	8,814	0,310	0,133	
	SN16	13,9824	8,325	0,416	0,028	0,331
	SN17	15,3882	7,304	0,302	0,090	
	SN18R	**16,7235**	**11,538**	**-0,149**	**0,666**	
Perceived Behavioural Control	**PBC19R**	**21,6882**	**29,376**	**0,200**	**0,607**	
	PBC20	21,3353	29,159	0,273	0,571	
	PBC21	20,9471	25,506	0,510	0,470	0,593
	PBC22	21,3471	28,417	0,327	0,549	
	PBC23	22,2176	26,077	0,454	0,493	
	PBC24	22,5529	30,249	0,237	0,584	

Source: Researcher's Own

After removing SN18R and PBC19R, the Cronbach Alpha values that conform to the cut-off value of 0.6 are represented in Table 7 below. This is deemed acceptable for this research. A similar assessment is made for the dependent variable's constructs and an acceptable Cronbach Alpha value of 0.972 is produced. This value indicates that any one of the dependent variable constructs could measure the variable just as well as the other given the value tending toward one; but no corrections were made.

Table 7

Final Cronbach Alpha Values

Variable	Cronbach Alpha
Attitudes	0,882
Subjective Norms	0.666
Perceived Behavioural Control	0.607
Behavioural Intention	0.972

Source: Researcher's Own

5.4. Stage 3: Descriptive Statistics

Descriptive statistics provide useful information that, as the name suggests, describe the features of the sample. Descriptive statistics also illustrate the general trends and tendencies of the data at hand (Creswell, 2014). The relevant data was collected in Sections A and E of the survey where general information and demographic data of the sample was gathered (see Appendix B).

5.3.1. General Sample Information

The general sample information consists of frequency information derived from data gathered in Section A of the survey. The results are displayed in tables below:

Table 8

Sport Consumers' Favourite Sport

Sport	Frequency	Percent	Cumulative Percent
Basketball	1	0,6	0,6
Cricket	**55**	**32,4**	**32,9**
Football	**50**	**29,4**	**62,4**
Gymnastics	1	0,6	62,9
Golf	1	0,6	63,5
Hockey	2	1,2	64,7
Rugby	**51**	**30,0**	**94,7**
Surfing	1	0,6	95,3
Tennis	6	3,5	98,8
Tennis, golf, cycling	1	0,6	99,4
Triathlon	1	0,6	100,0
Total	170	100,0	

Source: Researcher's Own

Table 8 displays sport consumers' favourite sport in South Africa. Unsurprisingly, the three primary sporting disciplines in South Africa are represented evenly with cricket, football and rugby – with frequencies of 32.4%, 29.4% and 30% respectively. These results are consistent with the expectations of the chosen sampling method (see Table 1). The other disciplines entered make for negligible reference. However, the sport consumers' behavioural characteristics toward attending live events will still add value, so they remain included as valid observations.

Table 9

Significant Others of Sport Consumers

Significant Others	Frequency	Percent	Cumulative Percent
Several important people in my life	1	0,6	0,6
Boyfriend	1	0,6	1,2
Brother/Sister	5	2,9	4,1
Children	11	6,5	10,6
Cousins	1	0,6	11,2
Family	1	0,6	11,8
Family as well as extended family	1	0,6	12,4
Father	2	1,2	13,5
Friends	15	8,8	22,4
Girlfriend	2	1,2	23,5
Mother	8	4,7	28,2
No significant other	1	0,6	28,8
Son	1	0,6	29,4
Spouse	**119**	**70,0**	**99,4**
This has nothing to do with my decision of not going to sporting events anymore	1	0,6	100,0
Total	170	100,0	

Source: Researcher's Own

Table 9 highlights that participants indicated their spouse to be the most significant referent person, with 70% of the sample represented by this option. This is an overwhelming majority and should be considered by sport managers in South Africa.

Table 10

Level of Influence of Significant Other on Decision Making

	Frequency								
R	Spouse	Brother / Father	Mother	Father	Children	Friends	Cousins	Work Colleagues	Other
1	27	38	34	45	59	**(88)**	20	52	48
2	6	16	15	16	12	19	21	**(29)**	26
3	21	14	22	14	14	16	21	23	**(25)**
4	6	13	10	7	4	14	20	**(23)**	22
5	9	22	14	12	15	14	**(25)**	18	22
6	8	**(26)**	20	21	14	10	**(26)**	13	14
7	21	20	23	**(28)**	12	6	17	7	8
8	21	16	**(23)**	17	16	0	14	3	4
9	**(51)**	5	9	10	24	3	6	2	1

Source: Researcher's Own

In correspondence with Table 9, Table 10 displays that the most important influence in decision-making is the sport consumers' spouse. This also corresponds with GI3 in the code book. The responses were to be ranked from one to nine with one being "least important" and nine being "most important". However, there seems to have been slight misinterpretation of the question since row one for "least important" influence received 411 responses; the expected total response should have been only 170. Friends being the least important influence is also an unexpected result. There is a level of error in the way in which respondents completed this question which can be assessed from the summation of each row, however, the data is still useful in terms of assessing the most influential significant others obtained: that of spouse, brother or sister, and father in respective descending order.

Table 11

Sport Consumers' Trust in Significant Others

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	1	0,6	0,6
Moderately Disagree	5	2,9	3,5
Impartial	29	17,1	20,6
Moderately Agree	73	42,9	63,5
Strongly Agree	62	36,5	100,0
Total	170	100,0	

Source: Researcher's Own

Table 11 illustrates that South African sport consumers do trust the advice of their significant others. Most respondents are represented by 79.4%; comprising of 42.9% that "moderately agree", and 36.5% who "strongly agree". This shows that significant others play a noteworthy role in the decision-making of sport consumers.

Table 12

Important Factors Influencing Decision Making

Scale	Costs	Time	Safety	Attending in a group	I do not attend
Least Important	14	13	5	9	**132**
Moderately Less Important	13	26	13	**45**	16
Impartial	**50**	47	32	44	14
Moderately Important	47	**59**	45	41	2
Most Important	46	25	**75**	31	6

Source: Researcher's Own

Table 12 illustrates that safety is the most important factor considered by South African sport consumers before attending a live event. This is followed, in descending order of importance, by other concerns of time, costs, attending in a group, and the option of not attending at all. Only eight participants indicated a strong preference toward not attending live events by selecting it as moderately important or the most important consideration to them.

Table 13

Period of Last Attendance at a Live Event

Period	Frequency	Percent	Cumulative Percent
Between 1 and 2 years ago	27	15,9	15,9
More than 2 years ago	62	36,5	52,4
This season	38	22,4	74,7
Within the last year	43	25,3	100,0
Total	170	100,0	

Source: Researcher's Own

Table 13 illustrates that 47.7% of participants have attended a live sport event in the current season or the last. Furthermore, 52.4% of participants have attended live events in a preceding time period. This could be influenced by factors illustrated in Table 12 and actions to promote these factors can nudge these participants to

increase their attendance frequency, and further grow the 22.4% that attended this season to a greater number.

Table 14

Average Number of Live Sport Events Attended Annually

Average	Frequency	Percent	Cumulative Percent
1	**89**	**52,4**	**52,4**
11 +	5	2,9	55,3
2 - 4	64	37,6	92,9
5 - 7	8	4,7	97,6
8 -10	4	2,4	100,0
Total	170	100,0	

Source: Researcher's Own

Table 14 illustrates that 52.4% of participants only attend one live event annually, on average. It is desirable to reduce this figure and increase the numbers in the ranges of 2 to 4 per year, and 5 to 7 per year.

5.3.2. Sample Demographic Information

The general sample demographic information consists of frequency information derived from data gathered in Section F of the survey (see Appendix B). The results are displayed in Table 15 below:

Table 15

Sample Demographics (total for each category is 170)

Demographic Data	Frequency	Percent	Cumulative Percent
Age			
18 - 29	26	15,3	15,3
30 - 39	90	**52,9**	68,2
40 - 49	34	20,0	88,2
50 - 59	15	8,8	97,1
60 - 69	5	2,9	100,0
Race			
Black	24	14,1	14,1
Coloured	5	2,9	17,1
Indian	77	**45,3**	62,4
Ukrainian	1	0,6	62,9
White	63	37,1	100,0

Demographic Data	Frequency	Percent	Cumulative Percent
Gender			
Female	43	25,3	25,3
Male	125	**73,5**	98,8
Prefer not to say	2	1,2	100,0
Region			
Eastern Cape	1	0,6	0,6
Free State	8	4,7	5,3
Gauteng	119	**70,0**	75,3
Kwa-Zulu Natal	27	15,9	91,2
Mpumalanga	2	1,2	92,4
Northern Cape	1	0,6	92,9
Western Cape	12	7,1	100,0
City			
Abuja, Nigeria	1	0,6	0,6
Birmingham	1	0,6	1,2
Bloemfontein	7	4,1	5,3
Cape Town	12	7.1	12,4
Durban	27	15,9	28,2
East London	1	0,6	28,8
Johannesburg	105	**61,8**	90,6
Pretoria	15	8,8	99,4
Standerton	1	0,6	100,0
Home language			
Afrikaans	17	10,0	10,0
English	133	**78,2**	88,2
Ndebele	1	0,6	88,8
Northern Sotho	2	1,2	90,0
Southern Sotho	3	1,8	91,8
Swati	1	0,6	92,4
Tsonga	1	0,6	92,9
Tswana	3	1,8	94,7
Venda	3	1,8	96,5
Xhosa	2	1,2	97,6
Zulu	4	2,4	100,0
Education Level			
Master's Degree / M.Tech	41	24,1	24,1
None	1	0,6	24,7
Ph. D	3	1,8	26,5
Secondary education (high school)	24	14,1	40,6
University Degree / Technikon Diploma	54	**31,8**	72,4
University Honours / B.Tech	47	27,6	100,0

Demographic Data	Frequency	Percent	Cumulative Percent
Occupation			
Manager / Technical (e.g. General Manager, educators, nurse, public services)	58	34,1	34,1
Non-manual / Skilled (e.g. Clerk, cashier, sales, secretaries)	8	4,7	38,8
Professional (e.g. Engineer, Doctor, Accountant, Lawyer)	79	**46,5**	85,3
Self-employed (e.g. Shop owner, entrepreneur, contractor, piece work)	19	11,2	96,5
Unemployed (e.g. Pensioner, stay-at-home parent, seeking employment)	6	3,5	100,0
Income p.m.			
Less than R 5,000	5	2,9	2,9
More than R 40,001	88	**51,8**	54,7
R 10,001 - R 15,000	11	6,5	61,2
R 15, 001 - R 20,000	9	5,3	66,5
R 20, 001 - R 25,000	15	8,8	75,3
R 25,001 - R30,000	14	8,2	83,5
R 30,001 - R 40,000	24	14,1	97,6
R 5,001 - R 10,000	4	2,4	100,0
Total	170	100,0	

Source: Researcher's Own

From Table 15, it is observed that 52.9% of the respondents are aged between 30 and 39. This is the most significant age group, followed by participants aged between 40 and 49, who make up 20% of the sample. The major racial groups that participated in the survey are comprised of 45.3% Indian, 37.1% White and 14.1% Black participants. Male participants represent 73.5% of respondents, which is a significant majority. Participants are primarily from the Gauteng, Kwa-Zulu Natal and Western Cape with 70%, 15.9% and 7.1% of respondents being from these regions respectively. Bearing this in mind, the major cities represented are Johannesburg (61.8%), Durban (15.9%), Pretoria (8.8%) and Cape Town (7.1%). There are participants who live outside South Africa, but these participants contacted the researcher and are South African expatriates. These participants' responses were considered viable as they identified as South African sport consumers, and their behavioural characteristics are still applicable in the South African context.

Most of the sample (78.2%) speak English as a home language, with Afrikaans represented by 10% of respondents. A significant portion of the sample have at least

a university degree or higher, with 83.5% satisfying these criteria. Professionals represent 46.5% of respondents, whilst those in managerial and self-employed roles represented 34.1% and 11.2% respectively. Finally, 51.8% of respondents earns more than R 40,0001 per month, with 14.1% earning between R 30,001 and R40,000 per month, respectively.

5.3.3. Multivariate Normality of Data

The first check utilised to assess normality is the ratio of skewness as a function of the standard error. This is to yield the significance of respective deviations from normality. The cut-off points at 95% confidence are set at ±1.98. A further assessment of normality is a cut-off limit for skewness at ±1 (Hair Jr., Black, Babin, & Anderson, 2014). As per the ±1 cut-off limit for skewness, the variables 'Attitude' and 'Subjective Norms' are not normally distributed. It should be noted that multiple linear regression models are robust and far less sensitive to input data departing from normal distributions in terms of kurtosis (Yanagihara, 2015). Table 16 shows the skewness statistics evident in the data collected.

Table 16

Normality Assessment Table (n = 170)

	Minimum	Maximum	Mean	Skewness		Kurtosis	
Variables	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Behavioural Intention	1.00	7.00	4.7627	**-.604**	.186	-.888	.370
Attitude	1.00	6.71	5.1975	**-1.443**	.186	2.615	.370
Subjective Norms	1.00	7.00	5.5745	**-1.171**	.186	2.149	.370
Perceived Behavioural Control	1.80	6.80	4.3376	**.015**	.186	-.629	.370

Source: Researcher's Own

Further assessment of the histograms with a fitted normal line is used to inspect the distribution of the variables. These are shown in the Figure 2 below and conform to the statistical representation in Table 16. The negative skewness shown by 'Attitudes' and 'Subjective Norms' is clearly visible from the illustrations in Figure 2. These are early indicators that transformations may be applicable to these variables in order to conform to the assumptions of the multiple linear regression.

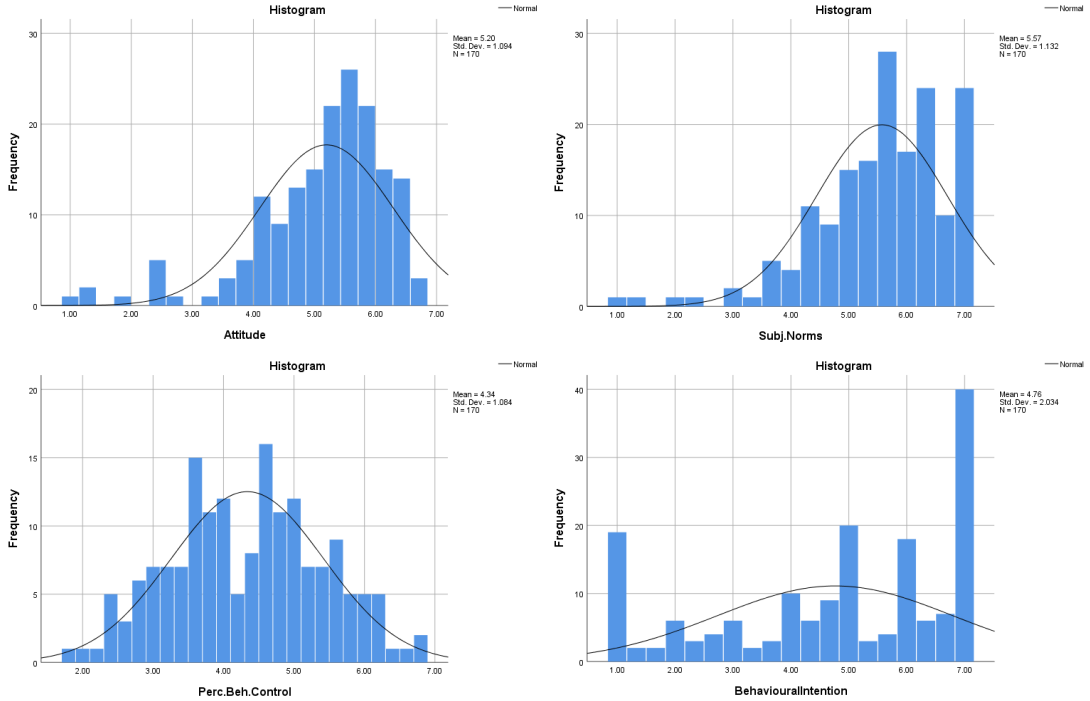

Figure 2 *Normal Distribution Plot of Variables (n = 170)*

Source: Researcher's Own

5.5. Stage 4: Multiple Linear Regression Assumptions

Prior to illustrating the checks to confirm that there is no violation of the MLR assumptions, the code book in Appendix C is referred to for relevant information. The Likert scale utilised in the research is presented from one to seven, with one representing "strongly disagree" and seven representing "strongly agree". This scale is defined as moving from the negative to the positive, from one to seven, for this research. Henceforth, in Appendix C, the column for "relationship to scale" is presented for the tested indicator constructs. For the most part, the indicator constructs are considered to have a positive relationship to the scale that is represented by a "+" symbol. Conversely, for indicators ATT13, ATT14, SN18 and PBC19, the indicators' relationship to the scale are negative. The scale for each of these variables were reversed prior to performing any further analysis. The recoded variables are depicted in the code book as ATT13R, ATT14R, and so on.

5.5.1. Linearity and Additivity

The first visual inspection for linearity and additivity is a scatterplot that represents the unstandardized predicted values and the collective studentised residuals from all independent variables. As Figure 3 shows, the collective residual scatterplot does not illustrate a linear relationship. Furthermore, the scatterplots representing the partial regression plot of each independent variable's residual against the predicted dependent variable show that they have only a slightly linear relationship (see Appendix D). Negating these results is the almost horizontal nature of the scatterplot in Figure 3, illustrating that the there is no linearity within the collective sample.

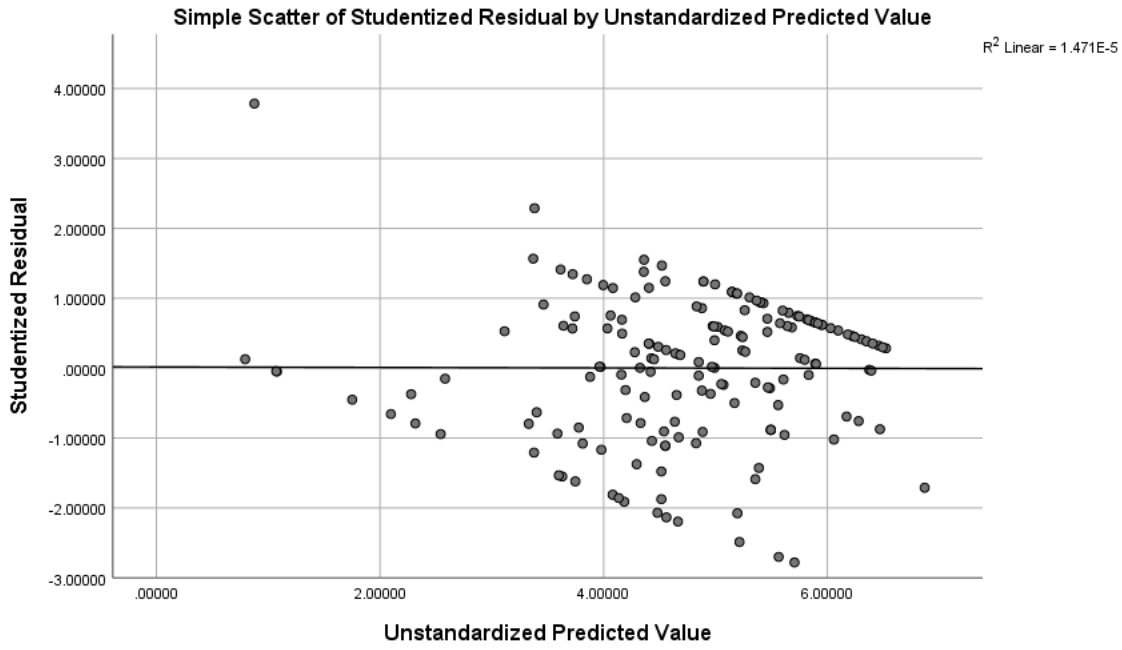

Figure 3 *Scatterplot for Visual Inspection for Linearity and Additivity*

Source: Researcher's Own

It can be confirmed that the requirements for the first assumption have not been satisfied. The dataset is non-linear and non-additive for use in a multiple linear regression. Variable transformations are required to create linear relationships between independent and dependent variables.

5.5.1.1. Variable Transformations

Many variable transformations are performed, as presented in Appendix E. Further transformations were then performed on all variables to all degrees of skewness

along with a combination of transformations on independent variables against various transformations of the dependent variable. Despite numerous combinations of transformations, the combined scatter plot of residuals as illustrated in Figure 3 did not change significantly. Performing a weighted least squares regression is recommended to promote linearity of the sample, and resulting homoscedasticity (Abdi, 2012; Berk, 2013; Hair Jr., Black, Babin, & Anderson, 2014).

5.5.1.2. Weighted Least Squares

As described in section 4.15.4.8., a weighted least squares regression was performed as an auxiliary regression. Residual errors were used to determine the least squares factors w_i, which was then applied in SPSS Statistics 25, where $w_i = \frac{1}{w_i^2}$, to try to achieve an improved variate. The scatterplot is illustrated in Figure 4.

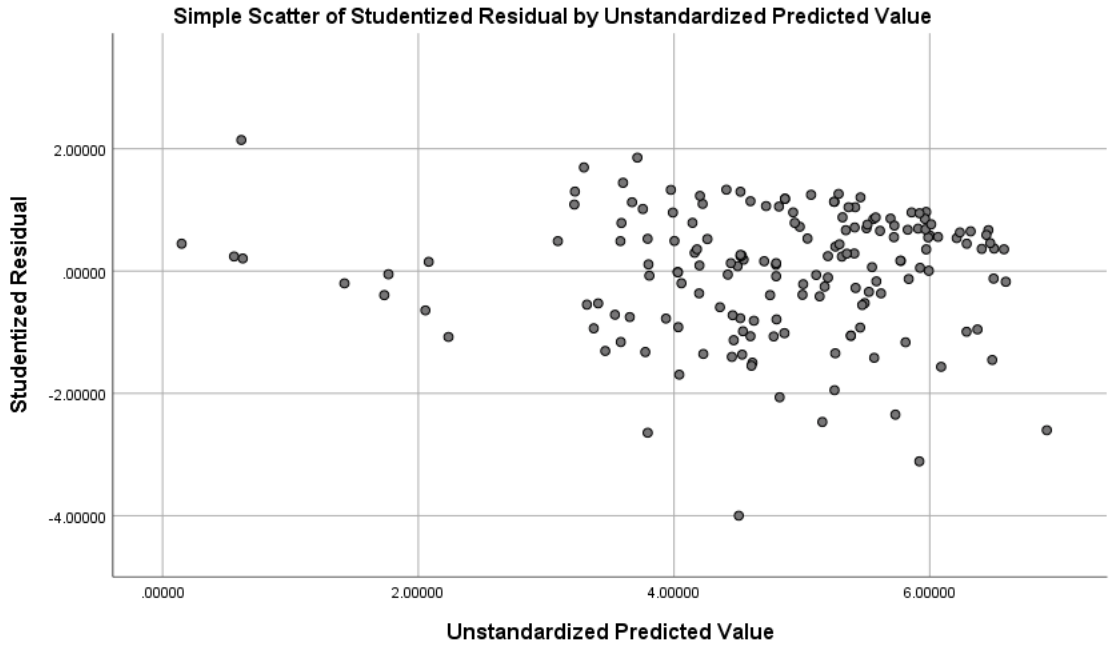

Figure 4 *Weighted Least Squares Regression Scatter Plot*

Source: Researcher's Own

There is a significant improvement from the scatter plot illustrated in Figure 3. Despite a few outliers being present, which is commonly exacerbated by the least squares method. Figure 4 shows a greatly improved linear relationship between the unstandardized predicted values and the studentised residuals. With these results, it can now be confirmed that the requirements for the first assumption have been

satisfied. The dataset is linear and additive for use in a weighted least squares regression.

5.5.2. Independence of Errors

A statistical test in the form of the Durbin-Watson statistic is assessed to ensure data is independent of residual error correlation. Table 17 below yields a Durbin-Watson value of 1.891, which is close to the desired value of 2 and within prescribed cut-off parameters (Hair Jr., Black, Babin, & Anderson, 2014). It can be concluded that the data is independent of residual error correlation by assessment of the Durbin-Watson statistic.

Table 17

Model Summary Reflecting Durbin-Watson Statistic (n = 170)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.601[a]	.361	.349	2.17348	1.891

a. Predictors: (Constant), Perc.Beh.Control, Subj.Norms, Attitude
b. Dependent Variable: BehaviouralIntention
c. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

5.5.3. Normal Distribution of Residuals

Figures 5 below depicts that the standardised residual plots are approximately normally distributed. The quantile-quantile (Q-Q) plot in Figure 5 shows residuals that are closely related to the diagonal line for the data. This is deemed to be approximately normally distributed. This result indicates that the holistic standardised dataset has residuals that are normally distributed, whilst Table 16 illustrates that certain variables are not normally distributed due to skewness or kurtosis. It can be concluded that the regressed data produces residuals that are normally distributed.

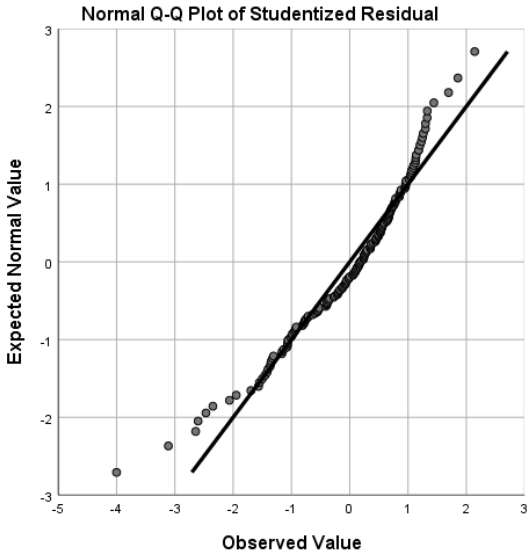

Figure 5 *Normal Q-Q Plot for Distribution of Errors (n = 170)*

Source: Researcher's Own

5.5.4. Homoscedasticity

Figure 3 illustrates the appropriate visual representation to assess the data for equal variances of residuals. Figure 3 illustrates a clustered scatter of plots that form a diamond-like shape collectively. According to Hair Jr., Black, Babin and Anderson (2014), this clustering indicates heteroscedasticity, thus violating the second of the MLR assumptions. Variables are to be transformed to attain a homoscedastic model model where the variance of error terms will be homogeneous.

Similar to the transformations attempted to achieve linearity and additivity to satisfy the first MLR assumption, variable transformations did not suffice here. A weighted least squares regression was then performed to achieve homoscedasticity. This is illustrated in Figure 4 and shows a significant improvement in the distribution of errors as compared to Figure 3. Despite a few outliers, the scatter plot illustrates approximate equality in the distribution of residual errors. Therefore, by visual inspection of the unstadardised predicted values versus studentised residuals, homscedasticity is present in the sample.

5.5.5. No Multicollinearity

Appendix F illustrates two tables that show the results from the collinearity checks as described in section 4.15.4.5. The correlation matrix shows that there is no

significant relationship between any variables: no correlations exceed a value of 0.7. Furthermore, the Variance Inflation Factor (VIF) and Tolerance values are assessed for each variable with all values remaining below the cut-off value of three for VIF, whilst all Tolerance values are greater than 0.1. It can be stated that no collinearity exists between variables and this assumption is satisfied through statistical inference.

5.5.6. Influential Observations

Investigation of the studentised deleted residual variable shows two observations with values that exceed the ±3 standard deviations parameter. These are classified as outliers and are removed from the sample. No observations exceed the leverage point parameter of 0.2, and no observations can be deemed leverage points. Additionally, no observations exceed the Cook's Distance parameter of one, so no points are influential points. Figure 6 illustrates a further improved case for linearity and homoscedasticity as compared to Figure 4, and the preceding Figure 3, with the removal of the two outlying observations.

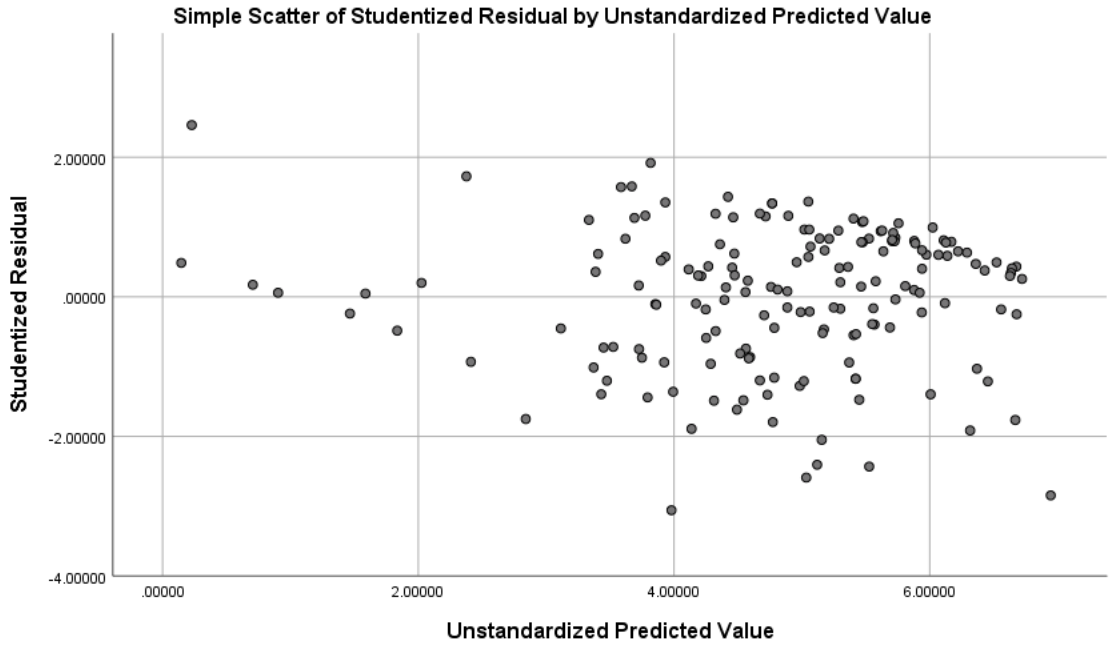

Figure 6 *Scatter Plot of Collective Residuals without Influential Observations (n = 168)*

Source: Researcher's Own

From Figure 6, the removal of outlier observations illustrates improved linearity and homoscedasticity of residuals. Appendix G further illustrates how the data satisfies the MLR assumptions. None of the variable correlations exceeded ±0.7, indicating that the model is free of multicollinearity (see Table 28 in Appendix G). The Durbin-Watson value changed to 1.821, which is close to the desired 2.0 value and still within the cut-off parameters (see Table 4, Table 18, or Table 29 in Appendix G). Furthermore, the VIF values remain below three. Similarly, the Tolerance values are all above 0.1 (see Table 30 in Appendix G). Thus, all preceding assumptions have been satisfied for the weighted least squares regression model when removing outliers.

5.5.7. Re-check: Normal Distribution of Residuals

A quantile-quantile (Q-Q) scatter plot is reproduced to assess the normal distribution of residuals that result from the weighted least squares regression excluding outliers (see Figure 7). The points plot closely to the diagonal line, confirming that there is a normal distribution of residuals after performing the weighted least squared regression and after removing the outlier observations. The outliers observed in Figure 5 are visually removed from Figure 7 when assessing the bottom left area of the Q-Q plot.

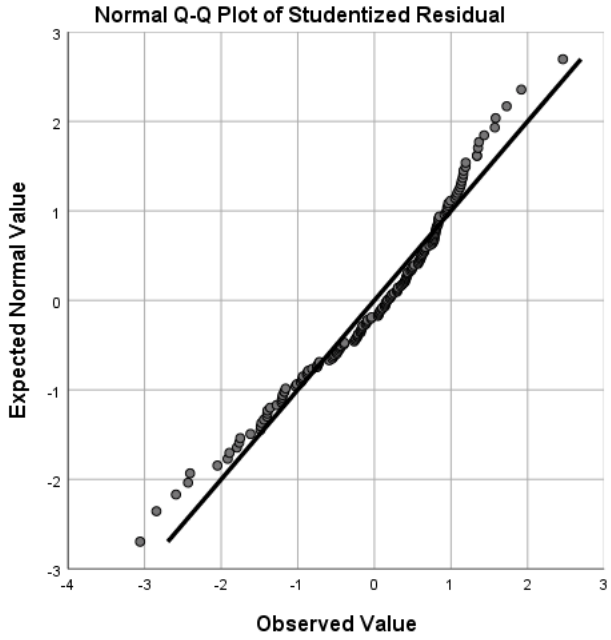

Figure 7 *Q-Q Plot illustrating Distribution of Studentised Residuals (n = 168)*

Source: Researcher's Own

5.6. Stage 5: Reliability of Results

5.6.1. Statistical Significance

The initial measure of reliability of the regression model performed is the multiple correlation coefficient "R". The "R" value is simply the Pearson correlation coefficient between the scores predicted by the model. This highlights the linear relationship between variables, with values closer to 1 indicating a strong relationship. The R-value indicated in Table 18, below, is 0.634, which is marginally better than Table 17's result of 0.601 obtained prior to the removal of outliers. These R-values indicate a moderate strength in the relationship between variables. Albeit rudimentary, the R-value is a useful descriptor of the model. The coefficient of determination (R^2), on the other hand, indicates the proportion of variance in the dependent variable explained by the independent variables. The R^2-value is 0.402 which indicates a moderate level of association between the independent and dependent variables. This indicates that 40.2% of the variability in the dependent variable is explained by the three independent variables when compared to the mean model containing no independent variables. Since a sample is used to represent the population, the adjusted R^2-value is preferred as it removes any biases. Table 18 indicates an adjusted R^2-value of 0.391 which is considered a weak level of association in some fields. However, this value requires further discussion in terms of the field of study within which this research falls.

Table 18

Model Summary (n = 168)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.634[a]	0,402	0,391	2,00845	1,821

a. Predictors: (Constant), Perc.Beh.Control, Subj.Norms, Attitude
b. Dependent Variable: BehaviouralIntention
c. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

Table 19 below indicates a Sig-value of 0.000, which represents a value smaller than 0.0005 in IBM SPSS Statistics 25. For the model to be statistically significant, a Sig-value smaller than 0.05 is required at 95% confidence. It can be deduced that the weighted least squares regression model produced is statistically significant.

Furthermore, the F-value (F-ratio) indicates a comparison to an F-distribution, where the null hypothesis of this test shows a multiple correlation coefficient R-value of zero. It illustrates the variance explained by the regression model over the unexplained variance.

Table 19

Statistical Significance of Model by ANOVA (n = 168)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	445,054	3	148,351	**36,776**	**.000[c]**
Residual	661,557	164	4,034		
Total	1106,611	167			

a. Dependent Variable: BehaviouralIntention

b. Weighted Least Squares Regression - Weighted by Weight.WLS

c. Predictors: (Constant), Perc.Beh.Control, Subj.Norms, Attitude

Source: Researcher's Own

From Table 18 and 19, it can be deduced that the three independent variables significantly predict behavioural intention: $F(3, 164) = 36.776$ *and* $p < 0.0005$ when compared to the mean model or null hypothesis. The df-values in Table 19 indicate the degrees of freedom of the regression model and the residual error respectively. The F-ratio is different from zero, so the weighted least squares regression can be considered reliable and applicable to other samples in the population. However, this is statistical reliability and practical reliability is yet to be assessed based on the limitations of the results.

5.6.2. Regression Coefficients

The second measure of reliability is the assessment of the regression coefficients. These are the unstandardized B-values, as indicated in Table 20, that represent the gradient (or regression) coefficients for each variable. Each B-value represents the change in behavioural intention for a unit change in the respective independent variable. Negative values indicate a decrease in behavioural intention as the independent variables increase and positive values represent the converse. The variable represented as "Constant" is just the y-intercept of the regression line.

Table 20

Regression Coefficients (n = 168)

Variables	Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B	
	B	Std. Error	Beta (ß)	t	Sig.	Lower Bound	Upper Bound
(Constant)	-2,798	0,776		-3,608	0,000	-4,330	-1,267
Attitude	0,605	0,133	0,332	4,554	0,000	0,342	0,867
Subj.Norms	0,568	0,137	0,299	4,152	0,000	0,298	0,838
Perc.Beh.Control	0,301	0,108	0,178	2,783	0,006	0,088	0,515

a. Dependent Variable: BehaviouralIntention

b. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

More importantly from Table 20 are the significance values indicated in the Sig.-column. All three variables show that they have statistically significant gradient (regression) coefficients at a confidence level of 95% (Sig. < 0.05). Furthermore, all three independent variables have positive gradient coefficient values, indicating positive relationships with the dependent variable of behavioural intention. The upper and lower limits also allow for a gradient coefficient to attain a range of values at the 95% confidence. These are depicted in the columns to the right of Table 20. The standardised Beta (ß) value is the B-value resulting from a standard deviation movement on the independent and dependent variable with a mean of zero. This allows all the independent variables to be comparable, which is desirable. Furthermore, the t-values are also statistically significant and different from zero, illustrating that the gradient coefficients are not equal to zero. This provides reassurance that the three independent variables can be assessed as predictors for behavioural intention. As previously mentioned, the ß-values will be utilised for discussion in this research. Again, this is statistical reliability and practical reliability is to be assessed further based on the limitations of the results.

The weighted least squares regression equations for the model predicted can be represented as follows, where ß-values from Table 20 and the respective independent variables are displayed in Equation 6 below:

Equation 6 *Regression Equation to Predict Behavioural Intention*

$$Behavioural\ Intention = \beta_0 + \beta_1.Attitude + \beta_2.Subj.Norms + \beta_3.Perc.Beh.Control$$
$$= -2.798 + (0.332).Attitude + (0.299).Subj.Norms + (0.178).Perc.Beh.Control$$

5.7. Stage 6: Validity of Results

The R-value, R^2 and adjusted R^2-value were discussed in section 5.6.1. As shown in Table 18, their values are 0.634, 0.402 and 0.391 respectively. The adjusted R^2-value represents 39.1% variance of the dependent variable resulting from the independent variables. Since this research is grounded upon the theory of planned behaviour framework, it can be deduced that the measurement instrument – distributed surveys – successfully measures what it has intended to measure. This makes the model valid. Furthermore, this presents acceptable results for data validity as discussed in section 4.15.3.

5.8. Hypotheses Testing

The regression coefficients from the B-value and the Beta (ß) are assessed to determine the relationship between the independent variables and the predicted dependent variable; that is behavioural intentions. All three variables have a positive relationship between the independent variable and dependent variable (see Table 20). Should a causal relationship be sought after, the relationships will have to comply with the parameters for causality as discussed in section 4.5. This research did not seek to determine causality.

Table 21

Hypotheses Testing (n = 168)

Hypothesis	Independent Variable	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta (ß)	Sig.	Relationship
H_1: There is a positive relationship between attitudes and intentions to attend a sporting event	Attitude	0,605	0,133	0,332	0,000	Positive
H_2: There is a positive relationship between subjective norms and intentions to attend a sporting event.	Subj.Norms	0,568	0,137	0,299	0,000	Positive
H_3: There is a positive relationship between perceived behavioural control and intentions to attend a sporting event	Perc.Beh.Control	0,301	0,108	0,178	0,006	Positive
H_4: Attitudes and subjective norms will be more positively related to intentions to attend a sport event, than will perceived behavioural control.	Attitude	0,605	-	0,332	0,000	Positive
	Subj.Norms	0,568	-	0,299	0,000	Positive
	Perc.Beh.Control	0,301	-	0,178	0,006	Positive

a. Dependent Variable: BehaviouralIntention

b. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

From Table 21, it can be deduced that for H_1, a positive relationship exists between attitudes and behavioural intention to attend a live sport event, hence the null hypotheses can be rejected. Similarly, for H_2, a positive relationship exists between subjective norms and behavioural intention to attend a live sport event, and the null hypotheses can be rejected. Hypotheses H_3 displays a positive relationship between perceived behavioural control and behavioural intention to attend a live sport event, and the null hypotheses can be likewise rejected.

For hypotheses H_4, the represented B and ß-values are assessed for all three independent variables. Attitudes and subjective norms do have a greater positive

influence on behavioural intention as compared to the influence of perceived behavioural norms. Therefore, $\boldsymbol{H_4}$ is supported and the null hypothesis can be once again rejected.

5.9. Limitations of Results

The following limitations of the results should be considered when applying the resulting model to other samples of sport consumers within the population:

- The Black race group represented only 14.1% of the sample's respondents, which is not representative of the South African population that contains a Black majority. As an ancillary check, the Indian respondents were assessed in isolation as this race group is considered a minority in South Africa however, represented the majority in the sample.

  A weighted least squares regression was again performed on the sample of 77 that represented Indian respondents. The pertinent results are presented in Appendix H with two observations removed as outliers (meaning that the isolated sample size analysed was 75). The outcomes show that the isolated sample displays similar characteristics to the holistic sample of 168 respondents analysed. Despite these findings, the sample is still to be considered as a limitation and controlling for race was beyond the scope of this research.
- Male respondents represented 73.5% of the sample; 70% of the sample resided in the Gauteng province alone; and 51.8% earned more than R40,001 per month. These characteristics may not be representative of other samples and are not generalizable. Discretion should be considered when directly applying outcomes from the results.
- The spread across the three primary sporting disciplines, and other specified sport, may vary from sample to sample. This should be considered.

5.10. Conclusion to Results

This chapter presented the results of the analysis performed on the data collected. There were 170 valid responses from the distributed survey. This conformed to the sample size requirements to perform a multiple linear regression, which was further improved through the application of a weighted least squares transformation to

satisfy the underlying assumptions for the predictive model. Two indicator constructs were removed due to poor reliability. Having satisfied the assumptions for linearity, independence of errors, normal distribution of errors, normality, homoscedasticity, collinearity, and assessing influential observations; the model could be satisfactorily developed. Two observations were considered outliers and removed from the analysis. Reliability and validity checks were then performed to ensure that the model and the instrument were adequate for testing each of the research hypotheses. Finally, by assessing the regression coefficients, the hypotheses were tested. What follows is a thorough discussion of these results in terms of the hypotheses and the existing literature.

6. CHAPTER 6: DISCUSSION OF RESULTS

6.1. Introduction

The results from the analysis of the data gathered is presented in the preceding chapter. This chapter provides a discussion of the research results in terms of the research hypotheses that were developed through the literature review and in terms of the theory of planned behaviour. The discussion will look to address the research problem to the extent that the research objectives have been met. Prior to discussing the results in terms of the hypotheses, the validity of the results is to be discussed to understand the outcome as it pertains to the field of study.

6.2. Discussion of Validity of Results

In marketing and econometrics literature, the R^2- values are considered substantial, moderate or weak when resulting values are approximately 0.75, 0.50 or 0.25 respectively (Hair, Bush, & Ortinau, 2009). It is generally accepted that the higher the R^2- value and adjusted R^2- values, the better the model fit. However, these values are not definitive in their description of the model fit and validity of the result. If variables are added, the corresponding degrees of freedom and R^2- values will also increase (Hair Jr., Black, Babin, & Anderson, 2014). The correctness of the resulting model fit must be assessed in conjunction with the context and field of study, as well as the reliability analysis of the results.

This research falls within the fields of behavioural psychology and social sciences. Given the vastness of possible behavioural characteristics, as discussed in the critique of the theory of planned behaviour (Sniehotta, Presseau, & Araujo-Soares, 2014), the three observed variables may not entirely encompass the many endogenous latent variables. Further variables could be added to predict behavioural intention, but this research is grounded upon the theory of planned behaviour and the variables were selected accordingly. Again, the use of R values is a simplistic approach to presenting validity and the best measure is to repeat the research with a different sample and reassess the validity – a process that was outside the scope of this research. This would place impetus on the practical significance of the model that should supersede the statistical result (Hair Jr., Black, Babin, & Anderson, 2014). Given the wide spectrum of possible variances within the field(s) for this research,

39.1% (see Table 20) variance of the dependent variable being explained by the three independent variables is considered valid.

6.3. Discussion of Research Hypotheses

A Likert scale from one to seven is utilised in this research. The responses ranged from “strongly disagree” to “strongly agree” with responses being coded as positive as they tended toward seven. Certain indicators have reversed scales to suit this assessment and this scale will be referred to throughout the discussion of the hypotheses.

6.3.1. Hypothesis 1

H_1: There is a positive relationship between attitudes and behavioural intentions to attend a sporting event.

This hypothesis looked to test for a positive relationship between attitudes of sport consumers and the behavioural intention to attend a live sport event. It was hypothesised that attitudes have a positive influence on sport consumers’ intentions to attend a live sport event. The relationship between attitudes and behavioural intention, illustrated in Table 20, has a statistically significant regression coefficient (ß-value) of 0.332 (Sig. = 0.000 illustrating that Sig. < 0.0005). This allows confidence in Hypothesis 1 (H_1) and permits the rejection of the null hypothesis.

As introduced in Chapter 2, the literature posited that a positive attitude toward behaviour is derived from sport consumers' perceived positive outcomes (Ajzen, 1985; Montano & Kasprzyk, 2015; Gucciardi & Jackson, 2015). By assessing the mean scores of the attitude constructs ATT8 to ATT11 as shown in Appendix I, this is clearly evident. These four constructs display mean scores of 5.93, 6.11, 5.55 and 5.96 respectively on the Likert scale used. These show strong positive responses toward perceived positive outcomes when attending a live sporting event. These constructs relate to attending a live event being “pleasant”, “entertaining”, and “exciting”, and these conform to the presiding literature.

Pleasant experiences could be achieved from a combination of factors, such as safety at the event as well as the entertainment provided. From the general

information descriptive statistics, safety was found to be the most important consideration for South African sport consumers (see Table 12). In a country where crime is rife ([b.] Stats SA, 2019), it is understandable that safety is the primary concern for sport consumers. High levels of unemployment in South Africa ([a.] Stats SA, 2019) may directly lead to crime driven by economic desperation, creating safety concerns for sport consumers at, around, or whilst travelling to sport venues. Additional contributors to a pleasant experience could be a sense of achievement by supporting ones favourite sports team and the social gathering aspect of attending live sports events in communal settings. These fall into Kim, Magnusen, Kim and Lee's (2019) "fan-focused factors" that promote positive attitudes of sport consumers. These are but some of the contributing characteristics that illustrate the significantly positive relationship between the attitude variable and behavioural intention to attend a live event. Given the degree of significance, it is imperative for sport organisations, marketing agenices and tourism agencies to give great importance safety which ensures that experiences are pleasant.

ATT9, ATT10, and ATT11 gathered information about the excitement and entertainment value perceived by sport consumers. These variables have mean values of 6.11, 5.55 and 5.96 respectively (see Appedix I). These are moderately high on the Likert scale utilised. Again, given the statistical significance of positive attitudes when predicting behavioural intentions, it is of utmost importance that the percepton of attending remains exciting and enterataining. Entertainment can be derived from the drama associated with live sporting events (Kim, Magnusen, Kim, & Lee, 2019), the anticipation of loss aversion (Humphreys & Perez, 2019), or the social prestige associated with attending a live event (Moital, Bain, & Thomas, 2019). Through similar deductions, excitement is also derived. One could logically expect perceived entertainment and excitement to influence the intention to attend a live sport event.

ATT12 relates to positive attitudes that are derived from the expectation that the sport consumers' favourite team will win. This variable received a mean value of 5.20 (see Appendix I) which is a moderately high on the Likert scale used. This again relates to the "fan-focused factors" by Kim, Magnusen, Kim and Lee (2019) whereby a sense of achievement is satisfied by the perceived positive outcomes. However, the same research indicated that winning was not a significant predictor of attendance, while

Sung and Mills (2018) found that there is a positive relationship between favourite team performance and live event attendance. Humphreys and Perez (2019) further found a significant relationship between winning, or loss aversion as they describe it, and attendance. Similarly, winning was positively related to attendance in the German Bundesliga (Wicker, Whitehead, Johnson, & Mason, 2017). Despite some variation in the literature on the role of winning in driving attitude and intention, the presented results indicate that winning is a driver of positive attitudes in the South African context. Bearing in mind that this is a difficult element to control exogenously, it is still something to be considered. The positive and significant influence of attitudes on behavioural intentions may contradict the meta-analytic review by Kim, Magnusem, Kim and Lee (2019), but it conforms to other stated research when assessing the relationship to team performance.

ATT13R related to participants in the sample having a preference of doing activities other than attending live events. This variable had a mean score of 4.35 on the Likert used. The mean score of 4.35 indicates a somewhat impartial stance from sport consumers pertaining to their preference between attending live events and doing “other things”. “Other things” could be related to participation in fantasy sport (Chan-Olmsted & Xiao, 2019), participation in eSport (Pizzo, et al., 2018), or just any other activity found preferable for consumers. This construct was of interest when setting up the instrument as it sought to identify if attending live sport events is becoming a negligible leisure activity in South Africa. The mean result shows that no significant deduction can be made. This is also illustrated by the lower reliability of this construct by assessing the Cronbach Alpha statistic in Table 6. However, the low mean score is somewhat concerning.

A great threat to live event attendance is the growing popularity of sport consumption through at-home viewership and other formats. This proved slightly true from the mean value of ATT14R. This had little bearing on behavioural intention due to the lower Cronbach Alpha value as illustrated in Table 6. Despite the lower Cronbach Alpha, it would be remiss to ignore the influence of other formats of sport consumption such as at-home viewership. ATT14R relates to sport consumers preferring to consume sport from the comfort of their homes and with access to any consumption platform as desired. ATT14R had a mean score of 3.30 (see Appendix I). The is the lowest mean score of all the constructs included in the research. This

shows that sport consumers would prefer to consume sport from the convenience of their own home where a variety of media types are available for their leisure.

Alternate forms of sport consumption is deemed as a major contributor toward the decline in attendance of live sport events (Larkin, Fink, & Trail, 2015). This relates to the means through which sport is consumed – especially with smartphone consumption becoming ubiquitous at or during live sport events (Chan-Olmsted & Xiao, 2019). However, alternate forms of sport consumption could not be concluded as being directly substitutable for live attendance. Those who strongly identified with their favourite team (Larkin, 2015), even with an uncertain outcome of the event, also created positive attitudes toward behavioural intentions (Wang, Hilsman, Caudill, & Mixon, 2014). In support of this finding, Larkin, Fink and Trail's (2015) find that only a marginal relationship existed between consumers' intentions to substitute live event attendance with other forms of consumption. The mean value of ATT14R shows a slight preference toward non-attendance of live events, suggesting that a greater experience, for example, is required at live sporting events to retain consumers. This conforms to Karg, McDonald and Leckie (2019) who posit that, to engage with media-dominant consumers, the experience at live events would need to improve significantly to compete with the experience gained from improved technology-based consumption mediums.

Importantly, these results demonstrate that attitude toward behaviour can be influenced to improve the behavioural intention to attend live sport events. This satisfies one of the objectives of this research by ascertaining a positive relationship between attitudes and behavioural intentions. Further to this, the meta-analytic review by Kim, Magnusen, Kim and Lee (2019) stated that attitude toward behaviour as being the most important contributor to behavioural intention. This is confirmed by assessment of the ß-value of the "Attitude" variable as illustrated in Table 20.

Assessing to what extent other forms of sport consumption might influence live attendance of sport events, and to delve deeper into what drives attitudes that leads to positive intentions towards behaviour, brings into question the role of subjective norms. This is where the second hypothesis of this research is discussed and derive insights.

6.3.2. Hypothesis 2

H_2: There is a positive relationship between subjective norms and behavioural intentions to attend a sporting event.

Subjective norms consider the influence of referent persons on an individual's behavioural intentions and resulting behaviours (Ajzen, 1985; Cunningham & Kwon, 2003; Montano & Kasprzyk, 2015). From the general information descriptive statisitcs, the most influential refernt person to the sample participants is their spouse, with an overwhelming majority of 70% (see Table 9). Table 20 indicates a regression coefficient (ß-value) of 0.299 (Sig. < 0.0005) for subjective norms, illustrating a statistically positive influence on behavioural intention. This supports Hypothesis 2 (H_2) and permits rejection of the null hypothesis.

SN15 relates to respondents having referent persons who approve of their intention to attend live sport events (see Appendix C). In this instance, it can be safely deduced that the referent person is the spousal figure for the participant. The mean value of SN15 is 5.87 (see Appendix I), indicating a moderately high level of influence of referent persons in the behavioural intentions of the sample participants. This corresponds neatly with SN16, which relates to the sample participants wanting to attend live sport events with referent persons (see Appendix I).

Gender demographics are important to factor in when assessing this construct (SN16), as 73.5% of respondents are male sport consumers (see Table 15). SN16 has a mean score of 6.11, which is highly positive on the set Likert scale. The importance of the referent persons conforms to the "relationship-focused factor" of 'trust' that highlights the importance of referent persons in consumers' attendance of live sport events (Kim, Magnusen, Kim, & Lee, 2019). This significantly contradicts Gucciaardi and Jackson (2015), who found a weak norm-intention relationship between referent person influence on behavioural intention. The positive statistical significance of subjective norms to drive attendance, not only the sport consumers, but also their referent persons (in this case the spousal figures) is an especially imprtant insight for sports marketers.

SN17 relates to the likelihood of referent persons attending live sport events, when attending in a group is preferable (see Appendix C). The mean score for SN17 is

4.69, as shown in Appendix I. This is a moderate indication that referent persons are likely to attend live sports events. It can be deduced that, should the likelihood of spouses and other referent persons attending live sport events increase, the intentions of sport consumers attending will increase. These results align with Kim, Magnusen, Kim and Lee's (2019) findings describing 'social' as a "fan-focused factor" showing attendance at a live event as a means to satisfy the human need for interaction with referent persons, or in a group. As positied by da Silva and Las Casas (2017), it is still imperative to ensure that the referent person forms part of this group in order to satisfy the need for interaction. Given SN17's moderate mean score of 4.69, this is an area that can, and should be, tested further in order to improve behavioural intentions to attend live events by promoting group attendance.

Should group attendance be assessed, it could be deduced that this will increase the number of people talking about a live event. This would increase word-of-mouth influence that may drive sport consumers to attend live events (Swanson, Gwinner, Larson, & Janda, 2003). This will further create a snowball effect to grow the influence on any persons to attend a live sport event by creating hype (Asada & Jae Ko, 2016). This phenomena can grow through bragging about attending live events, given that the experience is pleasant, entertaining, and exciting (Burnett, 2003). These findings considered, creating a positive narrative around the attendance of live sport events would likely be advantageous to sports marketers and other relevant stakeholders, as influence permeates from person to person.

Finally, SN18R relates to the ease with which children, as referent persons, can attend live sport events in South Africa. Although this construct was removed from the study due to its poor Cronbach Alpha statistic (see Table 6), there were some useful insights to be obtained. The sample demographic information needs to be considered before discussing this construct. Table 9 illustrates that children were identified as referent persons for only 6.5% of respondents, as compared to 70% in the case of spouses. Additonally, the age groups of respondents had a majority of 68.2% below the age of 39 (see Table 15) that may be contributory to the lower impetus on children as the referent person. The ommission of SN18R indicates that the ease of children being able to attend live sport events have no significant bearing on behavioural intentions, but this should be reassessed if the research is repeated with a different sample, particularly in a different context.

One of the research objectives has been satisfied by identifying a positive relationship between subjective norms and behavioural intentions. The constructs that influence behavioural intention can be investigated to assess attendance declines, including those ommitted from the study. These should all be considered as acting in concert with safety, which remains a primary concern for event attendees, in any endeavour to increase attendance. To varying degrees, individual, referent persons and group safety will positively influence behavioural intentions of sport consumers.

External factors may align to positively influence intented behaviour, but the amount of control an individual believes themselves to have in acting on their intended behaviour is the next question to address. This question is formulated and addressed in Hypothesis 3.

6.3.3. Hypothesis 3

H_3: There is a positive relationship between perceived behavioural control and behavioural intentions to attend a sporting event.

Perceived behavioural control pertains to the enabling and inhibiting factors that permit or prevent volitional control (Ajzen, 1991; Montano & Kasprzyk, 2015). As Table 20 shows, the regression coefficient (ß-value) for perceived behavioural control is 0.178 (Sig. = 0.006), showing a statistically significant postive relationship with behavioural intentions. This supports Hypothesis 3 (H_3) and the null hypothesis can be rejected. This ß-value does tend toward the lower range when considering that values tending toward one show a stronger relationship, however, the objective was to determine if a positive relationship exists and this has been achieved. In addition, the three factors derived from Table 12 are also considered as contributing elements in this discusson about influences on volitional control. In descending order; safety, time, and costs represented the most important factors influencing a sense of volitional control (see Table 12).

PBC19R relates to the difficulty of attending a live sport event. This construct is omitted from the analysis as it had a poor Cronbach Alpha value (see Table 6). PBC19R is vague hence it is understandable as to why it served as a poor construct of perceived behavioural control. However, making the process of attending a live

sport event as easy as possible is still something for sports marketers and other stakeholders to consider.

Larkin, Fink and Trail (2015) posited that sport consumers will navigate unsafe neighbourhoods and overcome bad weather – inferred as inhibitory factors – in order to attend live events if they are motivated to do so. However, in the context of South Africa, with safety highlighted as a significant influence on attendance, Larkin, Fink and Train (2015) are contradicted. It can be deduced that the ease of overcoming inhibitors will have a positive influence on behavioural intentions. Difficulties could be in the form of perceived safety, time available, and costs associated with attendance. These are discussed with the next few constructs of perceived behavioural control.

PBC20 pertains to time available to attend live events (see Appendix C). It was found to have a positive influence on behavioural intention with a mean score of 4.68 (see Appendix I). This illustrates a moderately positive response to sport consumers having enough time to attend live sport events. This does conform to the result in Table 12, where time was indicated as being the second most important factor when considering attending live sport events. Given that 70% of the sample are from Gauteng, this should not be a problem as infrastructure is spread throughout the province for the various sporting disciplines and this allows for reasonable travel times. However, travel times should be a consideration when assessing different samples across differing geographies in South Africa (and beyond).

PBC21 relates to the posession of financial means to attend a live sporting event (see Appendix C). PBC21 has a mean value of 5.07, indicating a moderately high possession of financial means (see Appendix I). Reference to Table 15 for the demographic data is made here to better understand this result. More than half of the sample's respondents earn more than R40,001 per month. This is not representative of the South African population, especially with unemployment statistics as high as 29% ([a.] Stats SA, 2019). Furthermore, South Africa's level of education is related to the ability to earn an income and the resulting disposable income to spend on attending live sport events (Friedman-Soza, Friedman, Galvez-Silva, & Yevenes, 2017). Table 15 once again shows that 85.3% of respondents have a tertiary level education. It can be deduced that these respondents have the ability

to attain the financial means for leisurely activities such as attending live sport events. Care should be taken when evaluating and applying this construct as the sample may not be representative of the population. As Larkin, Fink and Trail (2015) posited; without financial means, there is no way of negotiating entry to a live event. It is important to understand that, while having financial means will positively influence behavioural intentions to attend live sport events, a lack of financial means will not necessarily preclude an individual from intending to attend a live sport event. They may just not have the means to act on that intention. In the South African context, this may be of relevance when considering pricing strategies for live sport events. From this research's respondents, the availablity of financial means is evident in PBC21, which makes for an easy deduction when assessing PBC22.

PBC22 relates to the affordability of ticket prices (see Appendix C). Given that a large portion of the sample's respondents possess the financial means to afford attending a live sport event, one could logically deduce that ticket prices will not be a problem. This logically relates to PBC22, and care is again advised since the sample may not be representative of the entire popuation. PBC22 has a mean score of 4.66 which is also moderately positive. If the respondents did not possess financial means, or if the majority belonged to a lower earning bracket, a lower mean value for PBC22 could be expected. Kim, Magnusen, Kim and Lee (2019) have indicated that affordability has little influence on behavioural intentions, and this supports the outcomes of this research. Given the contextual setting of South Africa – a nation with high levels of unemployment – Larkin, Fink and Trail's (2015) findings that costs act as inhibiting factors for behavioural intentions are equally supported however, unsupported when assessed against the research sample.

PBC23 pertains to safety at venues hosting live sporting events (see Appendix C). This has a mean score of 3.80 as per Appendix I, indicating that sport consumers feel moderately unsafe when attending live events and negatively impacts behavioural intentions. This contradicts Larkin, Fink and Trail (2015) who positied that consumers will navigate bad neighbourhoods to attend live sport events, making this an important addition to understanding sport consumer behaviour in the South African context. This result corresponds with Table 12 too, where safety is indicated as the most imprtant factor considered when respondents intend on attending live sport events. Given that consumers feel moderately unsafe when considering live

sport event attendance, safety procedures and guarantees should be considered when designing and marketing live events. Given the previously discussed likelihood of attending sport events with referent persons, such as spouses or with groups, safety considerations must be designed with such groups in mind.

PBC24 relates to the convenience of travelling to live sport events (see Appendix C). The mean score for PBC24 is 3.46 per Appendix I which shows that there is a moderate inconvenience felt by respondents when travelling to live events. This could be attributed to poor public transport in South Africa and an increasingly high reliance on private transport (South African Institute of Race Relations, 2017) – which becomes more expensive. Spatial planning is also an impeding factor due to densified areas being scattered around a region, the most dense communities often pushed to the “urban edge” away from main economic activity. This legacy issue stems from the laws of apartheid (South African Institute of Race Relations, 2017) and adds to the frustration of travelling from one’s home to large events for the majority of South Africans. Public transprt systems are also poorly integrated in South Africa, and this may exacerbate travel frustrations, negatively impacting behavioural intentions to attend any live events. This is confirmed through the corollarly: in countries with reliable and safe public transport , travel costs and the ease of travel directly influence event attendance. This is the case in the United States for college football, where attendance was assessed. (Falls & Natke, 2014).

Overall, an assessment of the regression coefficients (ß-values) for perceived behavioural control indicates a statistically significant positive influence on behavioural intention. This result satisfies another key objective of this research, but the limitations created by the demographic profile of the sample’s respondents should be noted when attempting to extend the findings to the broader population and lower income groups. Despite these demographic constraints, some factors outside sport consumers’ volitional control remain inlfuential regardless of their ethnicity, income or education level. Here, safety and travel convenience are signifcant and negative sentiments around present safety and ease of commuting negatively affect behavioural intentions, contributing to declining attendance. It is noted that, to address these considerations constructively, access to sport events should be made as easy as possible. Having the financial means to attend will positively influence behavioural intentions, but that does not preclude events from

implementing creative pricing strategies in order to expand their consumer base. All of the constructs should be considered when assessing the influence of perceived behavioural control on behavioural intentions, with greater importance given to those with weaker mean scores.

This result contradicts the postulations of Kim, Magnusen, Kim and Lee (2019), who suggested a weak relationship between perceived behavioural control and behavioural intentions. The positive nature of this relationship – that of positive influence – conforms to Gucciardi and Jackson (2015) findings, as well as the meta-analytic reviews of the theory of planned behaviour (Armitage & Conner, 2001; Hagger, Chatzisarantis, & Biddle, 2002; McEachan, Conner, & Taylor, 2011). These mixed results affirm the need to consider and assess the South African context, as past research may insufficently inform the theory of planned behaviour when applied to the research problem at hand.

6.3.4. Hypothesis 4

> $\boldsymbol{H_4}$: Attitude and subjective norms will be more positively related to behavioural intentions to attend a sport event, than perceived behavioural control.

Reference is made to Table 20, where the regression coefficient (ß-values) for attitude, subjective norms, and perceived behavioural control are 0.332, 0.299 and 0.178 respectively. All the reported variables have regression coefficients that are statistically significant. The results provide support for Hypothesis 4 ($\boldsymbol{H_4}$) and permits the rejection of the null hypothesis. The results conform to Kim, Magnusen, Kim and Lee (2019), who showed that attitudes were more influential than perceived behavioural control when assessing behavioural intention. Supporting these findings further is the well-documented notion that people's desire to satisfy social affiliations through subjective norms is considered more influential than other elements of the theory of planned behaviour framework – like perceived behavioural control (Cunningham & Kwon, 2003; Swanson, Gwinner, Larson, & Janda, 2003; da Silva & Las Casas, 2017). Although subjective norms prove to have a greater bearing on behavioural intentions than perceived behavioural control, it has a lesser influence than that of attitude. Therefore, Cunningham and Kwon (2003), Swanson, Gwinner, Larson and Janda (2003), and da Silva and Las Casas (2017) are contradicted when

the evaluation is made in the South African context. The case for contextual application of the theory of planned behaviour to address gaps in the literature and to yield relevant insights is also strenghtened through this finding.

6.4. Declining Attendance

By assessing the constructs that have a significant influence on behavioural intention, declining attendance can be explained, albeit not exhaustively. The attention constructs used pertained to consumers having a pleasant experience while expecting excitement at a live sport event. The relevant subjective norms were informed by a significant influence of consumers' spouses' opinions as well as consumers' ability to attend live sporting events with their spouses. Perceived behavioural control that dictates volitional control pertained to the ease of attending a live sport event, conditional on having the financial means to purchase access to the event. All these constructs are to be considered contributory toward declining attendance in South Africa as they have a proven influence on behavioural intention to attend live sport events. Perceptions of safety and ease of travel are additional imperatives influencing consumers' perceived behavioural control, as is indicated by the general information statistics obtained from the sample. With this clearer picture of the specific endogenous and exogenous factors that influence sport consumers' behavioural intentions in South Africa, and likewise attendance of sport events, another important objective of this research has been satisfied.

6.5. Summary of Hypotheses Tests

To distil the many relationships discussed, a summary of the hypotheses tests and results of this research are illustrated in Table 22 below.

Table 22

Summary of Hypotheses Tests

Hypothesis	Result
$\boldsymbol{H_1}$**:** There is a positive relationship between attitudes and behavioural intentions to attend a sporting event.	$\boldsymbol{H_1}$ confirmed; reject the null hypothesis
$\boldsymbol{H_2}$**:** There is a positive relationship between subjective norms and behavioural intentions to attend a sporting event.	$\boldsymbol{H_2}$ confirmed; reject the null hypothesis
$\boldsymbol{H_3}$**:** There is a positive relationship between perceived behavioural control and behavioural intentions to attend a sporting event.	$\boldsymbol{H_3}$ confirmed; reject the null hypothesis
$\boldsymbol{H_4}$: Attitude and subjective norms will be more positively related to behavioural intentions to attend a sport event, than perceived behavioural control.	$\boldsymbol{H_4}$ confirmed; reject the null hypothesis

Source: Researcher's Own

6.5. Conclusion to Results Discussion

This chapter discussed the results obtained and presented in the preceding chapter. The discussion centred around the four hypotheses derived from the literature review, forming an argument that both conformed to, and contradicted, the existing literature through its application in the South African context. The discussion further satisfied four research objectives that were set out in chapter one, which were to: (i) develop insights that pertain to the decline in live event attendance, (ii) determine if a relationship exists between attitudes of sport consumers and their behavioural intentions, (iii) determine if a relationship exists between sport consumers' subjective norms and their behavioural intentions, and (iv) determine if a relationship exists between sport consumers' perceived behavioural control and their behavioural intentions. The fifth objective will be covered in the next chapter, concluding this research, and offering recommendations to improve attendance in South African sport stadia.

Regarding the data collected, the results of the weighted least squares regression illustrates that positive relationships do exist between attitudes toward behaviour, subjective norms, perceived behavioural, and behavioural intention. This conforms to the theory of planned behaviour, but it is noted that the demographic data of the sample obtained may be variable in contrast to different samples from the population. Bearing this limitation in mind, the outcomes are still applicable to sport consumers in the country, and comparable subsets in other countries, or similar contexts, worldwide.

The following, final chapter of this research, will highlight the pertinent findings of this research. By integrating research implications for management and stakeholders, noting its limitations, and presenting opportunities for future research, this final chapter will highlight a few key insights into consumer behaviour. This is contextualised to local conditions and reveal accessible opportunities for market development and growth.

7. CHAPTER 7: CONCLUSION

7.1. Introduction

The previous chapter discussed the findings of the research in terms of the research hypotheses developed in chapter two. The context of South Africa, first introduced in chapter one, helped ground the results in a relevant geography previously under-explored in the literature to date. This chapter concludes the research conducted by highlighting the main findings of the research. Implications for managers, recommendations for stakeholders, limitations pertaining to the research outcomes, and opportunities for future research are all discussed.

The main findings will be highlighted in terms of the research objectives set out in chapter one. To recap, the five key objectives of this research are to: (i) develop insights that pertain to the decline in live event attendance, (ii) determine if a relationship exists between the attitudes of spot consumers and their behavioural intentions, (iii) determine if a relationship exists between sport consumers' subjective norms and their behavioural intentions, (iv) determine if a relationship exists between sport consumers' perceived behavioural control and their behavioural intentions, and (v) provide recommendations to improve stadium attendance in South Africa.

The research included the distribution of a survey to test a behavioural model based on the theory of planned behaviour framework. This yielded data for an analysis of relationships, through a weighted least squares regression, that permitted the prediction of behavioural intentions to attend live sport events. The results obtained indicate that all four tested hypotheses are statistically supported.

7.2. Principal Findings and Theoretical Implications

In pursuit of the research's aims, these research results afford insights into the implementation of the theory of planned behaviour in the South African context. This allows further, more actionable insights to be derived about sport consumers and their intended behaviour in the country. The research confirmed the theory of planned behaviour's hypotheses that: a statistically significant relationship exists between attitude toward behaviour and behavioural intentions ($\boldsymbol{H_1}$), a statistically significant relationship exists between subjective norms and behavioural intentions ($\boldsymbol{H_2}$), and that a statistically significant relationship exists between perceived behavioural

control and behavioural intentions ($\boldsymbol{H_3}$). Finally, attitude and subjective norms have a greater influence on behavioural intentions as compared to perceived behavioural control, supporting the fourth hypothesis ($\boldsymbol{H_4}$). All relationships tested are also positive.

The implications of these positive relationships are approximately linear, allowing sports marketers and other stakeholders to test ways of directly influencing sport consumer behaviour. By influencing their attitude towards live events, for example, South African sport consumers may develop stronger behavioural intentions to attend live sport events. It has already been established that a greater perception of positive outcomes will promote positive attitudes towards a given behaviour, which – in this case – can lead to a greater intention and likely follow-through of attending a live sport event (Ajzen, 1985; Ajzen, 1991; Montano & Kasprzyk, 2015; Gucciardi & Jackson,2015). Despite concerns that the reality of sports attendance differs – that attitudes toward attendng live events are on a negative trajectory – ample research shows that a live sport event is unique in the experience value received. This is evidenced by a weak relation with substitution of live sport events for alternate means of sport consumption, with the two consumption categories not being directly substitutible (Wang, Hilsman, Caudill, & Mixon, 2014; Larkin, Fink, & Trail, 2015; Karg, McDonald, & Leckie, 2019). This, however, cannot be considered as a universal truth. In the South African context, as this research finds, there is a slight preference for alternate means of sport consumption in the home setting using a variety of media platforms (see Appendix C and I). As discussed in the previous chapter, this is not suprising in the South African context, as safety and travel concerns are found to be strong influences on South African sport consumers' decisions. Given that attitude toward bahviour has the strongest influence on behavioural intention (see Table 20), nudging attitudes in a positve direction is bound to have a greater effect on improving stadium attendance.

Within the realm of sport consumers' perceived control, subjective norms proved to be the second most influential variable on behavioural intentions (see Table 20). In determining who or what drives subjective norms, the role and influence of referent persons, or personal figures of authority, on the decision-making of the sport consumer (Ajzen, 1985; Cunningham & Kwon, 2003; Montano & Kasprzyk, 2015) is looked at, and found to be highly influential. This research's results attested to this,

with the spousal figure identified as the most important refernt person to sport consumers (see Table 9), negating Gucciardi and Jackson's (2015) findings of no significant relationship between subjective norms and behavioural intention. Importantly, this influential role of the spouse may fluctuate if other samples are assessed and this should be considered for future implementation.

Spousal influence is not the only driver of subject norms. Both this study and relevant literature found that word-of-mouth influence between referent persons and sport consumers create hype around attendance of sport events, tends to drive positive attitudes and motivates for greater attendance (Burnett, 2003; Asada & Jae Ko, 2016; Koeing-Lewis, Asaad, & Palmer, 2017). The word-of-mouth phenomenon is amplified if the sport consumers are motivated to attend an event in a group, as this satisfies sociopsychological needs for socialisaiton and belonging as described by Swanson, Gwinner, Larson and Janda (2003), and da Silva and Las Casas (2017). These signifcant and positive influences of subjective norms on behavioural intentions further conforms to the meta-analytic review by Kim, Magnusen, Kim and Lee (2019). With a general consensus of the role of referent persons and their word-of-mouth in driving subjective norms and attitudes, it would be advantageous for sports industry stakeholders to consider marketing and incentives aimed at target sport consumers' referent persons, in addition to the target sport consumers themselves, when trying to increase stadium attendance.

Perceived behavioural control illustrates the weakest relationship with behavioural intention of the three independent variables. The relationship, however, is still positive and statistically significant (see Table 20), suggesting that it cannot be ignored as a driver of sport consumer behaviour. Perceived behavioural control considered the enabling and inhibiting factors that create volitional control when performing a behaviour (Hagger, Chatzisarantis, & Biddle, 2002; Ajzen, 2012; Montano & Kasprzyk, 2015). Compared to attitude and subjective norms, perceived behavioural control had a weaker relationship with behavioural intention, and this contradicts the meta-analytic review by Kim, Magnusen, Kim and Lee (2019) that illustrated a non-significant relationship with such factors. This further strengthens the case for contextual research.

Given the context of South Africa, safety, affordability, financial means, and travel convenience were found to be important decision-making factors (see Table 12 and Appendix I). This adds nuance to elements of Larkin, Fink and Trail's (2015) findings that consumers positively intend on attending a live sport event will navigate unsafe conditions, including bad weather, but will be deterred if they do not have the financial means to attend. This research finds that affordability was less of a concern (due largely to the higher-than-average income and education level of the sample's respondents). Safety, on the other hand, was paramount. Thus, this finding negates some of the financial inhibitors found to impede the 'average' sport consumers' behavioural intentions to attend live sport events (Friedman-Soza, Friedman, Galvez-Silva, & Yevenes, 2017). Country-specific context cannot be ignored when making claims about the behaviour of sport consumers. Evidently, not all sport consumers are alike.

Finally, attitude and subjective norms did indeed prove to have a greater influence on behavioural intention when compared to perceived behavioural control (see Table 20). This contradicted Gucciardi and Jackson (2015), who found weak normative-intention relationships but a stronger relationship between perceived behavioural control and behavioural intention. This result also confirms the meta-analytic review by Kim, Magnusen, Kim and Lee (2019), as well as the studies by Cunningham and Kwon (2003), Swanson, Gwinner, Larson and Janda (2003) and da Silva and Las Casas (2017). However, subjective norms have a lesser influence on behavoural intentions than attitude toward bahviour, which then contradicted Cunningham and Kwon (2003), Swanson, Gwinner, Larson and Janda (2003) and da Silva and Las Casas (2017). It can be inferred that in the South African context, sport consumers deferred more to the subjective norms and attitudes, influenced by their referent persons and word-of-mouth, in making the decision to attend live sport events. Knowledge of where decision-making influence lies is a key insight for sports marketers and relevant stakeholders, and it is one of many yielded by this study.

7.3. Implications for Management and Relevant Stakeholders

This research illustrates that there are three antecedent psychological characteristics that have a significant, positive relationship with the behavioural intention to attend a live sport event. The results show that attitude, subjective norms, and perceived behavioural control all have a significant influence on a sport consumer's intention to

attend a live event. Influencing the intention in a positive manner will drive the behaviour to attend a live sport event, as originally posited by the theory of planned behaviour framework (Ajzen, 1991). Driving sport consumers' intentions toward attending live sport events brings with it many benefits to sports venues and the sporting promotion industry at large, including increased revenues that result from improved sport event attendance. These benefits extend beyond immediate revenues too.

Increasing stadium attendance stands to influence the micro-economy in positive ways, which would, in turn, help to eliminate some of the contextual issues experienced in South Africa. This includes high unemployment rates and related levels of crime. Through the economics of demand and supply, greater attendance at sporting events would lead directly to an increase not just in ticket sales, but in delivery of various aspects related to hosting live sport events. These include: on-site security, food and drink vendors, merchandise sales, sporting goods manufacturing, infrastructure development and hospitality packages (Bing, Miao, ZiWen, XueFeng, & Lu, 2015). This suggests that a virtuous cycle of growth that can be stimulated by an increase in consumers' attendance at sport events. More holistically, the upliftment of local communities is desperately needed in South Africa, and the positive spill-over effects of a stimulated sport event economy stand to have wider impacts on the quality of life and work for these communities. This was evidenced during the 2010 World Cup, as discussed in the introduction to this research. Specifically, these improvements come in the form of physical development of infrastructure, job creation from public spending, private investment, and trade and tourism (Scholtz & Slabbert, 2015). These are but some of the value creation opportunities to create a virtuous cycle where local communities, sporting organisations, and the local economy benefits.

While ticket revenues have been declining and the possibility of virtuous cycles of growth created from fuller stadiums diminish year on year, broadcasting revenues have increased significantly as sport becomes a global form of multi-channel, multi-platform entertainment (Shank & Lyberger, 2015). Still there is no evidence to suggest that ticket revenues and broadcasting revenues should be mutually exclusive. If anything, they are symbiotically related.

Fuller stadiums arguably make for better media broadcasts by improving perceptions of a team or a particular event. This may go further in informing word-of-mouth influences of referent person on sport consumers as the events are perceived to be popular and highly in demand. Additionally, with the growth of integrated media technologies, audiences are increasingly able to interact with live events, making it equally desirable to be at an event or to be interacting with it as a viewer; both methods of potentially being featured on a broadcast (Chan-Olmsted & Xiao, 2019). Aside from these potentially positive interrelationships between fuller stadiums and sports broadcasting, it would be considered irresponsible of sports managers in the South African context to ignore the potential to leverage their sports' popularity to benefit surrounding microeconomies. This research's outcomes provide the initial groundwork on just how this can be achieved.

By evaluating the lower scoring constructs as shown in Appendix I, there are immediate areas for improvement that can stimulate improved attendance at sport events. If a mean score of 4.50 is taken as an acceptable cut-off, ATT13R, ATT14R, PBC23 and PBC24 are immediately identified as areas for concern (see Appendix C for coding). Given that attitude toward behaviour has the strongest relationship with behavioural intention, ATT13R and ATT14R would be of great importance to management. ATT13R shows that sport consumers would currently prefer doing other activities over attending a live event, while ATT14R shows that sport consumers enjoy consuming sport from their own homes. Both of these attitudinal responses suggest negative sentiments regarding the overall experience of attending live sporting events. Such sentiments can be improved with more information around exactly what drives negative sentiments. This is offered by PBC23 and PBC24 relating to the safety at venues and ease (or lack thereof) of travel to events as two important drivers of attitude and resulting intentions toward behaviour.

Using knowledge of these drivers, improved safety and security measures at sport events, as well as easier, more integrated and convenient modes of travel to and from events are direct management implications. Going further, and addressing the tendency of sport consumers to opt for alternative digital forms of sport consumption, sport venues can, and should, consider providing free wireless internet since smartphone usage is becoming ubiquitous at stadiums (Chan-Olmsted & Xiao,

2019). This would allow consumers to opt into multiple forms of media and gain from being present both online and offline. This also provides the opportunity for brand partnerships with mobile networks and internet service providers – a potential ancillary revenue stream. To build up the desirability of live events, and stimulate positive attitudes towards attending, relevant celebrity figures or social influencers could also be invited to host or promote the event, creating an opportunity for sport consumers to enhance their overall experience. This will increase word-of-mouth influence and attach prestige to an event, simultaneously improving the sport's brand, its match-day attendance, and its media viewership (Moital, Bain, & Thomas, 2019). Current examples of this in action include the Indian Premier League cricket tournament and the U.S's National Football League Super Bowl – both of which draw sold out crowds, record-breaking televised viewership, and world-trending social media engagement.

To extend this suggested blend of digital media and in-person match day engagement, another way to improve attendance could be to blend digital platforms and direct engagement with the actual sports teams themselves. For example, participation of sport consumers in fantasy league sport has been on the rise whilst sport event attendance has been on the decline. Given the fact that fantasy sport has been found not to be directly substitutable with live sport consumption (Larkin, Fink, & Trail, 2015) – it could be beneficial to link popular fantasy league decision-making by sport consumers with the actual team selection for the day. This would allow direct participation of fans in the management of their favourite team hence strengthening their identification with the actual team. This could, in turn, drive improved event attendance in accordance with Kim, Magnusen, Kim and Lee's (2019) "fan-factor" findings. This can positively influence the attitude of sport consumers and further improve live engagement of media-dominant consumers. Preliminary research into something of this nature has occurred in the United States, but no team has implemented such a strategy to date (Hyatt, Sutton, Foster, & McConnell, 2013).

These are but a few of the potential ways to action the insights yielded from this research's findings. With an understanding of the key drivers of intention to behave, as laid out by the theory of planned behaviour in relation to the South African context, the management implications extend beyond sports managers, to stakeholders

across the value chain – including local economies. For immediate impact, the weaker indicators from the research could be addressed, bearing in mind that all indicators should be tackled for a holistic, longer-term capitalization of the opportunities on offer. The overall impact of sports managers should be promoting positive attitudes, raise awareness to improve the influence of subjective norms, and to make attending live events as easy – and safe – as possible.

7.4. Limitations of the Research

Despite deriving valuable insights into the antecedent behavioural characteristics of South African sport consumers, there are limitations to this research, and caution is advised when interpreting its findings. These limitations include, but are not limited to:

- The research generalised findings to the general sport consumer, defined earlier in this research, in South Africa.
- The desired behaviour of the sport consumer may not materialise just by exercising influence on the antecedent variables.
- The sample itself may not be representative of the sport consumer population with the somewhat skewed demographic data obtained. This is especially true for generalisability across different genders, incomes, and levels of education.
- The referent person general data shows a weak importance of children on decision-making.
- There are several participants that have no interest in attending live sport events who produce influential observations. Using the weighted least squares regression method exacerbates the influence of these observations and may influence the outcomes.
- The rapid evolution of the sport industry, particularly in the digital media sector, should be monitored as it may change to become even more influential than as at the time of this research.

7.5. Suggestions for Future Research

Following from the limitations of the research, future research may be performed to confirm or contradict the caution advised in the limitations. Opportunities for future research lie in:

- Assessment of antecedent behavioural characteristics for a specific sporting discipline.
- Longitudinal studies, along with studies of attendance patterns, to test the outcomes of the research over time, for more useful strategic insights
- Collect additional samples, compare the new sample to that obtained in this research and compare the outcomes using the same methodology. This will prove or disprove the power and validity of the results.
- Conduct research explicitly asking if participants have children and testing the influence of children as referent persons.
- Building on the research's results, evaluate what drives sport consumers to have no intention to attend live sporting events.
- Conduct research in cognisance of the critique of the theory of planned behaviour by including additional variables from social cognitive science and behavioural psychology.
- Test the efficacy of the theory of planned behaviour in South Africa, in social sciences, but specifically in the sporting industry.

These avenues of research are among many possible opportunities to apply and test the theory of planned behaviour in different sporting disciplines or sectors altogether, and to move towards a more useful understanding of the South African sport consumer. Since the reach of sport extends far beyond its home grounds, it is important to broaden and enrich the relevant literature with region-specific research. These suggestions would be useful for sports industry stakeholders and economic decision-makers both locally and abroad.

7.6. Conclusion to the Research

Live sport attendance in South Africa is experiencing a downturn, and it has been for some time. This can be observed almost counterintuitively across the country's three most popular sporting disciplines: cricket, football (soccer), and rugby. There have been many suggestions as to why this downward trend is growing, but these have tended towards generalisations pertaining to the macro-economy of South Africa. Although the macro-economy plays a distinct role in the performance of the microeconomy, it stands to reason that there are factors more unique, or attributable, to the microeconomy in which sport exists. This research aimed to identify some of

these factors by understanding the antecedent behavioural characteristics of sport consumers in South Africa. In doing so, the study endeavoured to provide significant reasons for the increasing emptiness of South African sports stadiums, and to suggest practical ways of filling empty seats, first by filling unmet needs of the South African sport consumer.

The theory of planned behaviour that grounded this research was used to obtain the desired understanding of the antecedent behavioural characteristics that promote behavioural intentions to attend live sport events. This was evaluated by assessing sport consumers' attitude toward behaviour, subjective norms, and perceived behavioural control's relationship with behavioural intentions to attend live events (Ajzen, 1991; Montano & Kasprzyk, 2015). The research showed that attitude, subjective norms, and perceived behavioural control have a positive and statistically significant relationship with behavioural intentions to attend live sport events.

The outcomes outlined in this research provide managers of sport organisations, marketing agencies, tourism operators and other relevant stakeholders valuable insights into what motivates sport consumers' intentions to attend live sport events. There are a variety of levers to be utilised to improve attendance at live events with substantial evidence of derived benefits for the South African economy and affected stakeholders alike. There are great amounts of opportunities that exist along the sport industry value chain that is waiting to be exploited and this research offers a means to commence extracting this value.

This research set out to understand the phenomena of declining attendance at live sport events in South Africa. This understanding was received by first understanding general behavioural drivers and exogenous factors affecting sport consumption worldwide and secondly, by applying global research methodologies to the South African context. This permitted a nuanced picture of the behavioural drivers influencing South African sport consumers in particular. The insights gained informed statistically supported strategies for reversing the downward trend of sport event attendance. The results and recommendations offered contribute to the economic needs of both the sports industry and sporting regions, making it useful for stakeholders in the private and public sectors alike. By applying the globally established theory of planned behaviour to the South African leisure context, a gap

in academic literature has also been partly filled. This study was by no means exhaustive or definitive regarding the South African context, but it has created avenues for future research – particularly in the local context where insights are needed for various economic stakeholders. With the research objectives satisfied and pragmatic recommendations offered, this study can conclude that the decline in sport event attendance is not irreversible. Developing and implementing creative strategies around target marketing, communication, pricing, safety, and event access, seats may fill up again on a more regular basis – to the benefit of the sports industry, local communities, and fans alike.

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9. APPENDICES

9.1. Appendix A: Tabular Summary of Pertinent Literature

Table 23

Pertinent Literature Exploring Antecedent Characteristics of Sport Consumers

Author(s)	Title	Study Description
Ajzen (1991)	The Theory of Planned Behaviour	This was built from the seminal work that looked at the constructs of TPB and brought it into a theoretical framework.
Ajzen (1992)	Application of TPB to Leisure Activities	This tested the TPB efficacy in leisure activities such as fishing, hiking, and running.
Armitage & Conner (2001)	Efficacy of The Theory of Planned Behaviour: A Meta-analytic Review	This tested the efficacy of TPB through meta-analysis and confirmed that the constructs are plausible, despite much critique.
Chan-Olmsted & Xiao (2019)	Smart Sports Fans: Factors Influencing Sport Consumption on Smartphones	The research looked at cognitive motivators that drive sport consumption on mobile devices. This categorised into attitude toward behaviour in the TPB framework.
Conner, Gaston, Sheeran & Germain (2013)	Some Feelings Are More Important: Cognitive Attitudes, Affective Attitudes, Anticipated Affect, and Blood Donation	This looked at cognitive actions and attitudes as applicable factors that motivate behaviour. Although not specific to sport consumption, these attributes are applicable in describing TPB.

Author(s)	Title	Study Description
Cunningham & Kwon (2013)	The Theory of Planned Behaviour and Intentions to Attend a Sports Event	This research tested the efficacy of TPB for the intention to attend an ice-hockey match.
Gucciardi & Jackson (2015)	Understanding Sport Continuation: An Integration of The Theories of Planned Behaviour and Basic Psychological Needs	Utilised TPB to understand antecedent characteristics of participants who failed to participate in sport between adolescence and young adulthood.
Hagger, Chatzisarantis & Biddle (2002)	A Meta-analytic Review of the Theories of Reasoned Action and Planned Behaviour in Physical Activity: Predictive Validity and The Contribution of Additional Variables	This tested the efficacy of TPB through meta-analysis and confirmed that the constructs are plausible.
Humphreys & Perez (2019)	Loss Aversion, Upset Preference, and Sport Television Viewing Audience Size	This research looked at the impact of consumers' affinity for loss aversion and its impact on television viewership, which related to attendance behaviour.
Kim, Magnusen, Kim & Lee (2019)	Meta-Analytic Review of Sport Consumption: Factors Affecting Attendance to Sporting Events	This meta-analytic review categorised predictors of attendance into three factors that could be assimilated into the TPB antecedent characteristics.

Author(s)	Title	Study Description
Larkin (2015)	An Examination of Fantasy Sport Participation Motives and Substitution Versus Attendance Intention	Assessed psychological motivators to substitute attendance with fantasy sport. This differentiated the two types of sport consumers.
McEachan, Conner & Taylor (2011)	Prospective Prediction of Health-related Behaviours with The Theory of Planned Behaviour: A Meta-analysis	This tested the efficacy of TPB through meta-analysis in the field of health research and confirmed that the constructs are plausible.
Montano & Kasprzyk (2015)	Theory of Reasoned Action, Theory of Planned Behaviour, And the Integrated Behavioural Model	This research showed the applicability of TPB and its derivation from TRA. It also showed the efficacy of the TPB application in the field of health research.
Sniehotta, Presseau & Araujo-Soares (2014)	Time to Retire The theory of Planned Behaviour	A critique of TPB pointing out its flaws but offering no holistic approach to replace TPB.
Sung & Mills (2018)	Estimation of Game-level Attendance in Major League Soccer: Outcome Uncertainty and Absolute Quality Consideration	Assessed the level of attendance based on uncertainty and quality of the experience. This was clustered as ‘attitude toward behaviour’ under TPB.

Author(s)	Title	Study Description
Trail & James (2001)	The Motivation Scale for Sport Consumption: Assessment of The Scale's Psychometric Properties	This is a commonly used foundation scale to understand antecedent motives to perform behaviour. However, it is not grounded as a theory to develop hypotheses or research questions.
Wang, Goossens & Vandebroek (2018)	The Impact of The Soccer Schedule on TV Viewership and Stadium Attendance: Evidence from The Belgian Pro League	Assessed the psychological motives to attend a live football match – mediated with the scheduling in Belgium – versus consumption of televised broadcasts. This was classed under 'attitudes toward behaviour' under TPB.
Wang, Hilsman, Caudill & Mixon (2014)	Television Coverage and Outcome Uncertainty in Sport: Empirical Evidence from The NBA and WNBA	Assessed uncertainty of results in a variety of sporting disciplines, in various countries, to draw parallels with the NBA and WNBA in the United States. There was no conclusive evidence found and this was clustered under attitude toward behaviour under TPB.

Source: Researcher's Own

9.2. Appendix B: Measurement Instrument

Dear respondent,

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfilment of an MBA.

I am conducting research on what makes people decide to attend live sporting matches/events. This aims to explore the cricket, football and rugby sporting disciplines in South Africa only. To that end, you are asked to look at a website and complete a survey that will help us understand the motivating factors to attend live sport matches and thereby finding ways to increase attendance.

The questionnaire should take no more than 15 minutes of your time. Your participation is voluntary, and you can withdraw at any time without penalty. Your participation is anonymous and only aggregated data will be reported. By completing the survey, you indicate that you voluntarily participate in this research. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: Kovilen Naicker
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Research Supervisor: Tracey McKay
Email: mckaytjm@unisa.ac.za
Phone: +27 73 264 9496

a. General Information

1. What is your favourite sport?

Cricket	☐
Football	☐
Rugby	☐
Other	_____

2. Who do you consider as a significant other in your life?

Spouse	☐
Brother / Sister	☐
Mother	☐
Father	☐
Children	☐
Friends	☐
Cousins	☐
Work Colleagues	☐
Other	_____

3. How influential are your significant others in your decision making? (Please rank from 1 to 9 with each rank only being assigned once)
(Scale: Least Influence = 1, Most Influence = 9)

Spouse	☐
Brother / Sister	☐
Mother	☐
Father	☐
Children	☐
Friends	☐
Cousins	☐
Work Colleagues	☐
Other	_____

4. Do you trust the advice offered by your significant others?

Strongly Disagree → Strongly Agree

1	2	3	4	5

5. What is the most important thing to have when deciding to attend your favourite sport event? (Please only assign one ranking to each thing. e.g. If costs are the most important, then no other option can also be the most important)
(Scale: Least Important = 1, Most Important = 5)

Costs	☐
Time	☐
Safety	☐
Attending in a group	☐
I do not attend	☐

6. When was the last time that you attended a live match of your favourite sport?

This season	
Within the last year	
Between 1 and 2 years ago	
More than 2 years ago	

7. How many games do you attend per season (on average)?

1	
2 - 4	
5 - 7	
8 - 10	
11+	

b. Attitude (ATT)

		Unpleasant →						Pleasant
8.	For me, attending a live sport event of preference would be...	1	2	3	4	5	6	7

		Dull →						Entertaining
9.	For me, attending a live sport event of preference would be...	1	2	3	4	5	6	7

		Worthless →						Exciting
10.	For me, attending a live sport event of preference would be...	1	2	3	4	5	6	7

		Boring →						Exciting
11.	For me, attending a live sport event of preference would be...	1	2	3	4	5	6	7

		Strongly Agree →						Strongly Disagree
12.	When attending a live match, I believe my team will win:	1	2	3	4	5	6	7
13.	I would prefer doing other things rather than attend a live sport match.	1	2	3	4	5	6	7
14.	I prefer watching games from home where I have choices in the types of media I wish to consume.	1	2	3	4	5	6	7

c. Subjective Norms (SN)

		Strongly Agree			→			Strongly Disagree
15.	People that are important to me will approve of me attending live sporting matches.	1	2	3	4	5	6	7
16.	Attending a live sporting match with people close to me is something I would like to do.	1	2	3	4	5	6	7
17.	People close to me are likely to attend a sporting match this season.	1	2	3	4	5	6	7
18.	I find that it is difficult for children to attend live sporting match in South Africa.	1	2	3	4	5	6	7

d. Perceived Behavioural Control (PBC)

		Strongly Agree			→			Strongly Disagree
19.	It would be difficult for me to attend a live sporting match this season.	1	2	3	4	5	6	7
20.	I have sufficient time to attend a live sporting match this season.	1	2	3	4	5	6	7
21.	I have sufficient money to attend a live sporting match this season.	1	2	3	4	5	6	7
22.	I feel that ticket prices are affordable for me.	1	2	3	4	5	6	7
23.	I feel that the venues are safe when attending live sport matches.	1	2	3	4	5	6	7
24.	I feel that travelling to a live sporting match is convenient.	1	2	3	4	5	6	7

e. Behavioural Intentions (BI)

		Strongly Agree			→			Strongly Disagree
25.	I intend on attending a live sporting match this season.	1	2	3	4	5	6	7
26.	I will try and attend a live sporting match this season.	1	2	3	4	5	6	7
27.	Attending a live sporting match is something I intend on doing this season.	1	2	3	4	5	6	7

f. Demographics

28. What is your age?

- 18 - 29 ☐
- 30 - 39 ☐
- 40 – 49 ☐
- 50 – 59 ☐
- 60 – 69 ☐
- 70+ ☐

29. What is your race?

- Black ☐
- White ☐
- Coloured ☐
- Indian ☐
- Asian ☐
- Other _____

30. What is your gender?

- Male ☐
- Female ☐
- Prefer not to say ☐

31. Please select your region

- Northern Cape ☐
- Western Cape ☐
- Eastern Cape ☐
- North West ☐
- Kwa-Zulu Natal ☐
- Gauteng ☐
- Mpumalanga ☐
- Limpopo ☐

32. What major city do you live in / or close to?

Short Answer: _____

33. Please select your home language.

- Afrikaans ☐
- English ☐
- Zulu ☐
- Xhosa ☐
- Southern Sotho ☐
- Tswana ☐
- Venda ☐

Northern Sotho ☐
Tsonga ☐
Swati ☐
Ndebele ☐

34. Please select what best describes you level of formal education.

None ☐
Primary education (primary school) ☐
Secondary education (secondary school) ☐
University Degree / Technikon Diploma ☐
University Honours / B.Tech ☐
Master's Degree / M.Tech ☐
Ph. D ☐
Post-Doctoral Degree ☐

35. Please classify yourself in terms of your job / occupation.

Professional (e.g. Engineer, Doctor, Accountant, Lawyer) ☐
Manager / Technical (e.g. General Manager, educators, nurse, public services) ☐
Non-manual / Skilled (e.g. Clerk, cashier, sales, secretaries) ☐
Manual / Skilled (e.g. Skilled construction worker, electrician, artisan) ☐
Semi-skilled (e.g. Domestic worker, machine setter, waiter) ☐
Unskilled (e.g. Construction worker, miner, labourer) ☐
Self-employed (e.g. Shop owner, entrepreneur, contractor, piece work) ☐
Unemployed (e.g. Pensioner, stay-at-home parent, seeking employment) ☐

36. Please select your income per month (in Rands).

Less than R 5,000 ☐
R 5,001 - R 10,000 ☐
R 10,001 - R 15,000 ☐
R 15, 001 - R 20,000 ☐
R 20, 001 - R 25,000 ☐
R 25,001 - R30,000 ☐
R 30,001 - R 40,000 ☐
More than R 40,001 ☐

Source: Adapted from Ajzen (2006); Cunningham and Kwon (2003); Kim, Magnusen, Kim and Lee (2019); Montano and Kasprzyk (2015)

9.3. Appendix C: Code Book

Rel. to Scale	Code	Indicator Tested
		a. General Information (GI)
N / A	GI1	1. What is your favourite sport?
N / A	GI2	2. Who do you consider as a significant other in your life?
N / A	GI3	3. How influential are your significant others in your decision making? (Please rank from 1 to 9 with each rank only being assigned once)
N / A	GI4	4. Do you trust the advice offered by your significant others?
N / A	GI5	5. What is the most important thing to have when deciding to attend your favourite sport event? (Please only assign one ranking to each thing, e.g. If costs are the most important, then no other option can also be the most important)
N / A	GI6	6. When was the last time that you attended a live match of your favourite sport?
N / A	GI7	7. How many games do you attend per season (on average)?
		b. Attitude (ATT)
+	ATT8	8. For me, attending a live sport event of preference would be...
+	ATT9	9. For me, attending a live sport event of preference would be...
+	ATT10	10. For me, attending a live sport event of preference would be...
+	ATT11	11. For me, attending a live sport event of preference would be...
+	ATT12	12. When attending a live match, I believe my team will win:
-	ATT13	13. I would prefer doing other things rather than attend a live sport match.
-	ATT14	14. I prefer watching games from home where I have choices in the types of media I wish to consume.
		c. Subjective Norms (SN)
+	SN15	15. People that are important to me will approve of me attending live sporting matches.
+	SN16	16. Attending a live sporting match with people close to me is something I would like to do.
+	SN17	17. People close to me are likely to attend a sporting match this season.
-	SN18	18. I find that it is difficult for children to attend live sporting match in South Africa.

		d. Perceived Behavioural Control (PBC)
-	PBC19	19. It would be difficult for me to attend a live sporting match this season.
+	PBC20	20. I have sufficient time to attend a live sporting match this season.
+	PBC21	21. I have sufficient money to attend a live sporting match this season.
+	PBC22	22. I feel that ticket prices are affordable for me.
+	PBC23	23. I feel that the venues are safe when attending live sport matches.
+	PBC24	24. I feel that travelling to a live sporting match is convenient.
		e. Behavioural Intentions (BI)
+	BI25	25. I intend on attending a live sporting match this season.
+	BI26	26. I will try and attend a live sporting match this season.
+	BI27	27. Attending a live sporting match is something I intend on doing this season.
		f. Demographics
N / A	DEM28	28. What is your age?
N / A	DEM29	29. What is your race?
N / A	DEM30	30. What is your gender?
N / A	DEM31	31. Please select your region.
N / A	DEM32	32. What major city do you live in / or close to?
N / A	DEM33	33. Please select your home language.
N / A	DEM34	34. Please select what best describes your level of formal education.
N / A	DEM35	35. Please classify yourself in terms of your job / occupation.
N / A	DEM36	36. Please select your income per month (in Rands).
		New Variables Created
+	BehaviouralIntention	Mean score for combination of BI25, BI26 and BI27
+	ATT13R	13. I would prefer doing other things rather than attend a live sport match.
+	ATT14R	14. I prefer watching games from home where I have choices in the types of media I wish to consume.
+	SN18R	18. I find that it is difficult for children to attend live sporting match in South Africa.
+	PBC19R	19. It would be difficult for me to attend a live sporting match this season.
+	Attitude	Mean score for all ATT indicators
+	Subj.Norms	Mean score for all SN indicators
+	Perc.Beh.Control	Mean score for all PBC indicators
+	Weight.WLS	Value applied to weighted least squares transformation

9.4. Appendix D: Scatterplots for Linearity and Additivity

By visual inspection of Figure 8 below, there are signs of slight linearity in the regression plots. However, the collective assessment does not display linear characteristics as required in a multiple linear regression.

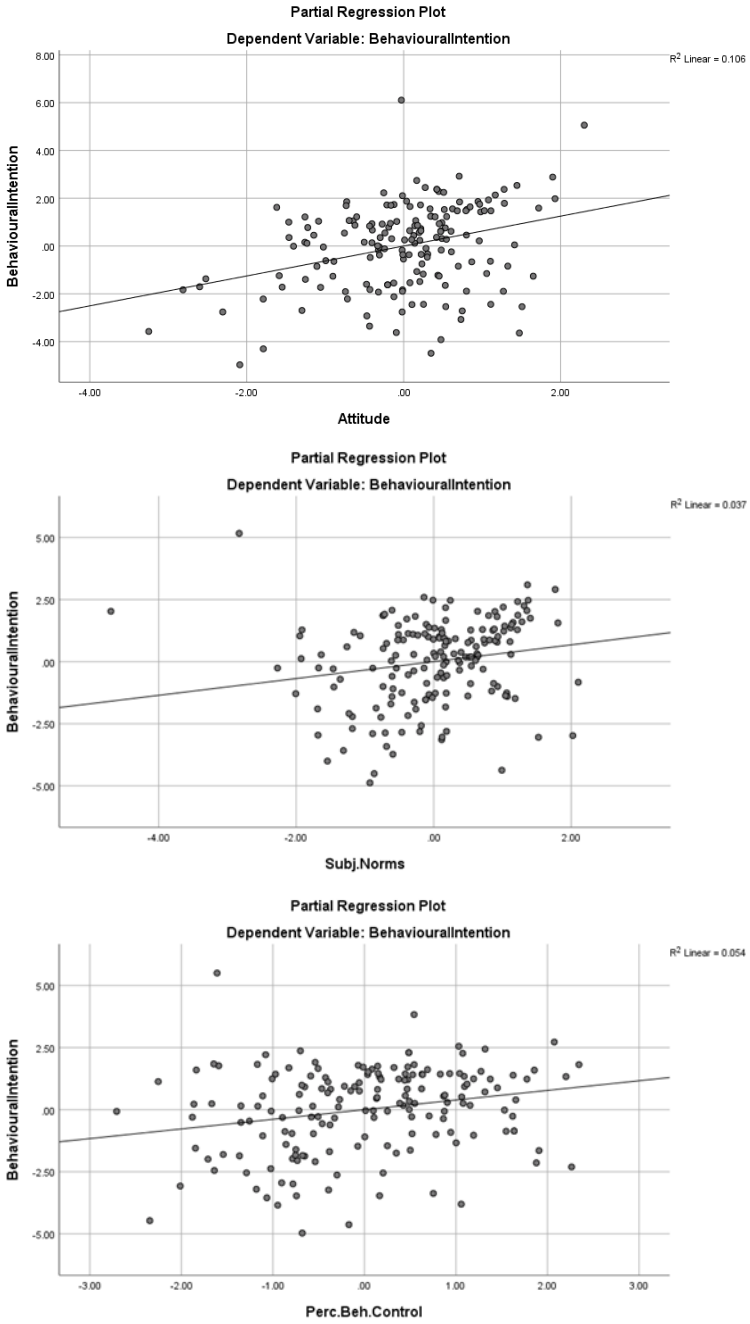

Figure 8 *Partial Regression Scatter Plots*

Source: Researcher's Own

9.5. Appendix E: Variable Transformations

Table 24

Plausible Variable Transformations

Skewness Significance	Transformation	
	Positively Skewed	Negatively Skewed
Moderate	Square Root: SQRT (Variable)	Reflect and Square Root: SQRT $([1 + max.value\ of\ variable] - Variable)$
Strong	Logarithmic: $LOG_{10}\ (Variable)$	Refelect and Logarithmic: $LOG_{10}\ ([1 + max.value\ of\ variable] - Variable)$
Extreme	Inverse: 1 / Variable	Reflect and Inverse: 1 / $([1 + max.value\ of\ variable] - Variable)$
Dependent Variable	Logarithmic: $LOG_{10}\ (Dependent\ Variable)$	$Dependent\ Variable^2$

Source: Researcher's Own

Table 25

Sample Descriptive Data for Normality

	N	Minimum	Maximum	Mean	Skewness		Kurtosis	
Indicators	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ATT8	170	1	7	5,94	-1,823	0,186	3,752	0,370
ATT9	170	1	7	6,12	-2,092	0,186	5,395	0,370
ATT10	170	1	7	5,55	-0,979	0,186	1,071	0,370
ATT11	170	1	7	5,96	-1,790	0,186	3,854	0,370
ATT12	170	1	7	5,20	-0,643	0,186	0,276	0,370
ATT13R	170	1,00	7,00	4,3235	-0,166	0,186	-0,606	0,370
ATT14R	170	1,00	7,00	3,2882	0,122	0,186	-0,714	0,370
SN15	170	1	7	5,88	-1,528	0,186	2,286	0,370
SN16	170	1	7	6,12	-2,116	0,186	5,138	0,370
SN17	170	1	7	4,72	-0,350	0,186	-0,791	0,370
SN18R	170	1,00	7,00	3,3824	0,160	0,186	-1,097	0,370
PBC19R	170	1,00	7,00	4,3294	-0,203	0,186	-1,129	0,370
PBC20	170	1	7	4,68	-0,471	0,186	-0,613	0,370
PBC21	170	1	7	5,07	-0,680	0,186	-0,459	0,370
PBC22	170	1	7	4,67	-0,350	0,186	-0,666	0,370
PBC23	170	1	7	3,80	0,031	0,186	-0,960	0,370
PBC24	170	1	7	3,46	0,152	0,186	-0,805	0,370
Behavioural Intention	170	1,00	7,00	4,7627	-0,604	0,186	-0,888	0,370

Source: Researcher's Own

9.6. Appendix F: Multicollinearity Checks (n = 170)

The table below was assessed for correlation greater than 0.7 and conditional formatting was utilised on Excel to find cells exceeding this cut-off criterion. The variables do not have collinearity as no variables met this criterion.

Table 26

Correlation Table Assessing Multicollinearity (n = 170)

Statistic	Variables	BehaviouralIntention	Attitude	Subj.Norms	Perc.Beh.Control
Pearson Correlation	BehaviouralIntention	1,000	0,545	0,438	0,341
	Attitude	0,545	1,000	0,498	0,290
	Subj.Norms	0,438	0,498	1,000	0,268
	Perc.Beh.Control	0,341	0,290	0,268	1,000
Sig. (1-tailed)	BehaviouralIntention		0,000	0,000	0,000
	Attitude	0,000		0,000	0,000
	Subj.Norms	0,000	0,000		0,000
	Perc.Beh.Control	0,000	0,000	0,000	
N	BehaviouralIntention	170	170	170	170
	Attitude	170	170	170	170
	Subj.Norms	170	170	170	170
	Perc.Beh.Control	170	170	170	170

a. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

Table 27

Regression Table with Multicollinearity Data (n = 170)

	Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Collinearity Statistics	
Variables	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	-2,596	0,838		-3,097	0,002	-4,251	-0,941		
Attitude	0,753	0,137	0,399	5,477	0,000	0,481	1,024	0,726	1,378
Subj.Norms	0,380	0,142	0,193	2,667	0,008	0,099	0,661	0,736	1,359
Perc.Beh.Control	0,308	0,117	0,173	2,644	0,009	0,078	0,538	0,895	1,117

a. Dependent Variable: BehaviouralIntention

b. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

9.7. Appendix G: WLS Assumption Checks Excluding Influential Observations (n = 168)

Table 28

Correlation Table Assessing Collinearity (n = 168)

Statistic	Variables	BehaviouralIntention	Attitude	Subj.Norms	Perc.Beh.Control
Pearson Correlation	BehaviouralIntention	1,000	0,546	0,525	0,361
	Attitude	0,546	1,000	0,534	0,305
	Subj.Norms	0,525	0,534	1,000	0,272
	Perc.Beh.Control	0,361	0,305	0,272	1,000
Sig. (1-tailed)	BehaviouralIntention		0,000	0,000	0,000
	Attitude	0,000		0,000	0,000
	Subj.Norms	0,000	0,000		0,000
	Perc.Beh.Control	0,000	0,000	0,000	
N	BehaviouralIntention	168	168	168	168
	Attitude	168	168	168	168
	Subj.Norms	168	168	168	168
	Perc.Beh.Control	168	168	168	168

a. Weighted Least Squares Regression - Weighted by Weight.WLS (n = 168)

Source: Researcher's Own

Table 29

Model Summary Table with Independence of Error Data (n = 168)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.634[a]	0,402	0,391	2,00845	1,821

a. Predictors: (Constant), Perc.Beh.Control, Subj.Norms, Attitude

b. Dependent Variable: BehaviouralIntention

c. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

Table 30

Regression Table with Collinearity Data (n = 168)

	Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
Attitude	0,605	0,133	0,332	4,554	0,000	0,342	0,867	0,688	1,455
Subj.Norms	0,568	0,137	0,299	4,152	0,000	0,298	0,838	0,702	1,425
Perc.Beh.Control	0,301	0,108	0,178	2,783	0,006	0,088	0,515	0,890	1,123

a. Dependent Variable: BehaviouralIntention

b. Weighted Least Squares Regression - Weighted by Weight.WLS

Source: Researcher's Own

9.8. Appendix H: Pertinent Results from Analysis of Indian Race Group (n = 75)

Table 31

Descriptive Statistics for Indian Race Group

	N	Min.	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
Variables	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Behavioural.Intention	75	1,00	7,00	4,7778	2,03375	-0,649	0,277	-0,847	0,548
Attitude	75	1,29	6,71	5,2419	1,06205	-1,623	0,277	3,253	0,548
Perceived.Behavioural.Control	75	1,80	6,40	4,1813	1,09306	-0,078	0,277	-0,752	0,548
Subjective.Norms	75	1,00	7,00	5,6489	1,24950	-1,408	0,277	2,756	0,548
Valid N (listwise)	75								

Source: Researcher's Own

Table 32

Cronbach Alpha Evaluation for Validity of Indicators (n = 75)

Indicators	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach Alpha
ATT8	30,779	39,464	0,792	0,823	
ATT9	30,507	41,490	0,800	0,827	
ATT10	31,039	40,617	0,771	0,828	
ATT11	30,714	39,049	0,855	0,815	0,864
ATT12	31,156	43,239	0,498	0,865	
ATT13R	32,325	42,354	0,468	0,874	
ATT14R	33,377	46,054	0,389	0,877	
SN15	11,12	7,420	0,584	0,625	
SN16	10,86	7,914	0,592	0,629	0,735
SN17	12,13	5,957	0,540	0,707	
PBC20	16,58	24,114	0,140	0,660	
PBC21	15,86	18,624	0,502	0,477	
PBC22	16,30	19,765	0,419	0,524	0,608
PBC23	17,62	19,080	0,480	0,490	
PBC24	17,43	21,406	0,298	0,587	
BI25	9,52	17,700	0,931	0,963	
BI26	9,23	18,208	0,942	0,955	0,971
BI27	9,32	17,564	0,941	0,955	

Source: Researcher's Own

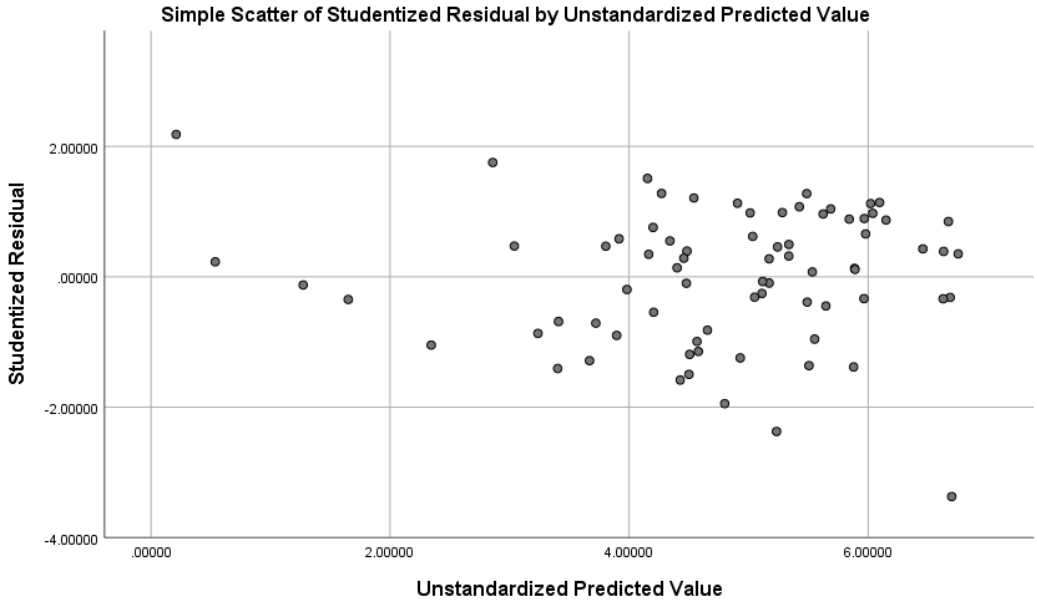

Figure 9 *Scatterplot Assessing Linearity and Homoscedasticity (n = 75)*

Source: Researcher's Own

Table 33

Multicollinearity Check for Indian Race Group (n = 75)

Statistic	Variables	Behavioural.Intention	Attitude	Perceived.Behavioural.Control	Subjective.Norms
Pearson Correlation	Behavioural.Intention	1,000	0,589	0,497	0,518
	Attitude	0,589	1,000	0,472	0,491
	Perceived.Behavioural.Control	0,497	0,472	1,000	0,359
	Subjective.Norms	0,518	0,491	0,359	1,000
Sig. (1-tailed)	Behavioural.Intention		0,000	0,000	0,000
	Attitude	0,000		0,000	0,000
	Perceived.Behavioural.Control	0,000	0,000		0,001
	Subjective.Norms	0,000	0,000	0,001	
N	Behavioural.Intention	75	75	75	75
	Attitude	75	75	75	75
	Perceived.Behavioural.Control	75	75	75	75
	Subjective.Norms	75	75	75	75

a. Weighted Least Squares Regression - Weighted by Weight

Source: Researcher's own

Table 34

Model Summary of Indian Race Group (n = 75)

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.678[a]	0,459	0,437	1,91906	2,185

a. Predictors: (Constant), Subjective.Norms, Perceived.Behavioural.Control, Attitude

b. Dependent Variable: Behavioural.Intention

c. Weighted Least Squares Regression - Weighted by Weight

Source: Researcher's Own

Table 35

Regression Table for Indian Race Group (n = 75)

	Unstandardized Coefficients	Standardized Coefficients				Correlations			Collinearity Statistics	
Variables	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
Attitude	0,713	0,220	0,349	3,241	0,002	0,589	0,359	0,283	0,658	1,519
Perceived.Behavioural.Control	0,373	0,157	0,238	2,370	0,020	0,497	0,271	0,207	0,756	1,324
Subjective.Norms	0,460	0,178	0,262	2,579	0,012	0,518	0,293	0,225	0,738	1,355

a. Dependent Variable: Behavioural.Intention

b. Weighted Least Squares Regression - Weighted by Weight

Source: Researcher's Own

Table 32 illustrates that two constructs are removed from the evaluation of the Indian race group. These conform to the main study whereby poor reliability of these constructs is evident through the evaluation of the Cronbach Alpha values. The removed constructs are namely SN18 and PBC19.

9.9. Appendix I: Mean Scores for Indicators (n = 168)

Table 36

Table of Descriptive Data with Mean Score (n = 168)

		ATT8	ATT9	ATT10	ATT11	ATT12	ATT13R	ATT14R	SN15	SN16	SN17	PBC20	PBC21	PBC22	PBC23	PBC24
N	Valid	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		**5.93**	**6.11**	**5.55**	**5.96**	**5.20**	**4.35**	**3.30**	**5.87**	**6.11**	**4.69**	**4.68**	**5.07**	**4.66**	**3.80**	**3.46**
Median		6.00	6.00	6.00	6.00	5.00	4.0000	3.0000	6.00	7.00	5.00	5.00	5.00	5.00	4.00	3.50
Skewness		-1.829	-2.078	-.994	-1.798	-.653	-.163	.124	-1.515	-2.100	-.340	-.472	-.684	-.351	.026	.152
Std. Error of Skewness		.187	.187	.187	.187	.187	.187	.187	.187	.187	.187	.187	.187	.187	.187	.187
Minimum		1	1	1	1	1	1.00	1.00	1	1	1	1	1	1	1	1
Maximum		7	7	7	7	7	7.00	7.00	7	7	7	7	7	7	7	7

Source: Researcher's Own