

## **VIDEO ASSISTANT REFEREE: SPECTATOR AND FAN PERCEPTIONS AND EXPERIENCES**

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### **Abstract**

*Technology has increasingly disrupted sport matches with the purpose of arriving at fairer and more objective on-field decisions. The introduction and implementation of video assistant referees (VAR) in football are an excellent example of current technological influences in sport. VAR implementation resolves to, inter alia, aid referee decisions regarding invalid fouls and goals scored and has been a burning point of discussion since its introduction. At the beginning of the 2019 English Premier League (EPL), VAR was implemented, which resulted in several controversial decisions that evoked widespread responses from players, fans, spectators and coaches. This study explored spectators and fans' perceptions and experience of the influence of VAR on soccer matches. Data were collected using semi-structured interviews with South African soccer fans who watched at least one EPL match per week. Voice recorded data were analysed using inductive coding during the constant comparative method in ATLAS.TI™, a computer-assisted qualitative data analysis software program. Codes were clustered into categories that described the perceptions and experience of EPL fans and spectators of VAR influence on soccer matches. Four categories were concatenated from the codes, which included: perceived benefits, experience, positive vs. negative and future implications. Findings from the study indicate that soccer fans have a fragmented perception and experience of the influence of VAR technology on matches. Implications of continued VAR disruptions to the soccer fan and spectator base could indicate to league administrators that care should be given to enhance the application of the VAR system with changes in rules, referee decision-making, stoppage time and the availability to view and hear VAR comments in the stadium.*

**Keywords:** Video assistant referee, soccer, fans, spectators, perceptions, experiences

**JEL classification:** Z29

## 1. INTRODUCTION

Globally, the sport industry has undergone a tremendous metamorphosis over the past two decades, with sport experiencing an incredible growth in participation and spectatorship (Ugondo & Tsokwa, 2019). Spectators are deemed in the strictest form as those who merely watch and observe sport matches, whereas fans are the enthusiastic devotees of a given individual, team or league (Trial, Robinsin, Dick & Gillentine, 2003). In this regard, Duan, Liu and He (2019) argue that spectators are an essential resource for sport and contribute to the success of sport events through their involvement as fans and the investment of their time and money. Kruger and Saayman (2012) also identified spectators as an invaluable profitable segment of the sport industry market. It is, therefore, not surprising that research on spectator behaviour and fan satisfaction has experienced increased attention in recent years (Schomburg, 2015). With an estimated number of four billion fans, soccer has been ranked as the most popular sport globally (Kessler, 2018). Including South Africa, where soccer is perhaps the most popular sport (Kubayi & Coopoo, 2018), soccer observes a huge spectatorship in Europe, especially in the English Premier League (EPL). In this regard, almost 70 percent of the United Kingdom population watched the EPL during the 2018/19 season, while the worldwide cumulative audiences for EPL matches rose to 3.2 billion viewers (Carp, 2019). A significant portion of the global audience growth is accredited to new free-to-air (FTA) coverage in several countries, including South Africa (Carp, 2019).

Technological advancements have increased spectatorship around the world, and technology has also been increasingly introduced and applied to on-field happenings during soccer matches (IFAB, 2018; Ugondo & Tsokwa, 2019). In this regard, various technology applications have been presented to assist match officials such as referees and assistant referees to arrive at fairer decisions, since many controversies continuously existed regarding match officials' on-field decisions (René, 2010; Ugondo & Tsokwa, 2019). In this regard, match officials often affected the outcome of matches and various soccer stakeholders turned to technology to provide mechanisms and processes to assist and confirm on-field decisions (Ugondo & Tsokwa, 2019). Most recently, video assistant referee (VAR) was introduced by Fédération Internationale de Football Association (FIFA) for the Football World Cup in Russia during 2018 and in the EPL for the first time during the 2019-2020 season (Flores, 2018; Keogh, 2019).

### **1.1 Video assistant referee (VAR)**

VAR is a live technology support system for referees, which provides the option of changing or influencing decisions (Flores, 2018). This technology enables an off-field video assistant referee (VAR) within a video operation room (VOR), together with an assistant VAR (AVAR) and a replay operator (RO), to review on-field incidents through the use of several TV monitors (IFAB, 2018). The various visuals provide different angles of an incident to assist the on-field referee to make decisions that are difficult to make in real time (Flores, 2018). The new technology was developed to assist referees in improving the quality of refereeing decisions, since incorrect decisions influenced the scoreboard or elements of matches (IFAB, 2018). Before the VAR implementation in the EPL, many trials in various leagues and competitions globally were done using the system (Flores, 2018; McMahon, 2017). The first trial took place in the United Soccer League in the United States during a match between two reserve teams of MLS clubs – New York Red Bulls II and Orlando City B – in August of 2016 (Platt, 2018). From the outset, the purpose of VAR was to review only those situations that were decisive for the outcome of the game (Bacigalupe, 2020). During the initial inception, the use of VAR was not meant for situations that were open to interpretation or debatable, but only for situations with clear referee mistakes (Bacigalupe, 2020). Currently, VAR, as implemented with the EPL, assists in reviewing decisions on goals, penalties, red card offences, fouls and mistaken identity in awarding a card (IFAB, 2018). The impact of VAR usage has increased with the process for reviewing a decision that could work in two ways. The on-field referee can either request a review after making a decision or the VAR team within the VOR can recommend or confirm a decision (IFAB, 2018). The off-field VAR notifies the on-field referee immediately if a clear error has been made, where after the on-field referee can immediately overturn the original decision based on the advice of the VAR (IFAB, 2018). Likewise, on-field referees can also review the incident themselves on a monitor on the touchline or continue with the initial decision. Numerous soccer stakeholders and fans consider the VAR system as the answer to end controversies in refereeing decisions (Flores, 2018).

## **2. PROBLEM STATEMENT**

Technology has been increasingly used in sport matches in order to arrive at fairer and more objective decisions (Flores, 2018). The introduction and implementation of goal line technology and video assisted referee (VAR) in football are prime examples of current technological influences in sport (Paolo Spagnolo, Pier, Massimiliano, Ettore & Arcangelo, 2015; Ugondo & Tsokwa, 2019). VAR implementation purposes to aid referee decision-making regarding, *inter alia*, fouls,

red cards and invalid goals scored, and has been a burning point of discussion since its introduction (Flores, 2018). At the beginning of the 2019 English Premier League (EPL), VAR was implemented, which resulted in several controversial decisions that evoked widespread responses from players, fans, spectators and coaches (Kohli, 2017; Holt, 2019; Sharpe, 2019).

Several concerns have been raised regarding the use of VAR. MacInnes (2018) argued that the use of VAR is not about changing the way the game is played, but should be used only when a clear mistake by the on-field match official is made. Several soccer stakeholders, including coaches, players, spectators and fans, critique the technology as an unnecessary interference (Kohli, 2017; Sunderland, 2020). In this regard, Wilson (2018) opines that VAR is demotivation for the spectator who pays an exorbitant ticket price to experience the match, but who is left oblivious to match decisions in using the VAR system when compared to spectators watching the match on television. Common complaints raised by spectators, players and coaches refer to the interference and abrupt halt in play, confusion on decisions made and the time taken to review decisions (Kohli, 2017; Sharpe, 2019; Sunderland, 2020). The manner in which spectators and fans perceive the use and influence of VAR will have a tremendous influence on their experience of soccer matches. Perception refers to a set of processes used to make sense of situations and are based on the interpretations of stimuli (Cherry, 2020). In this regard, it is important to consider how spectators and fans perceive the abrupt halt in play, confusion and time used to review decisions using the VAR system.

## **2.1 Purpose of the study**

This study explored South African soccer spectators and fans' perceptions and experiences of the influence of VAR on EPL soccer matches.

## **3. METHODOLOGY**

### **3.1 Research design**

This study is conducted from the functional paradigm of social theory and with this pragmatic approach, the enquiry aims to understand a specific phenomenon (Burrell & Morgan, 1979). The functional paradigm approach further purposes to provide clarifications and possible solutions within a certain social setting (Burrell & Morgan, 1979). A qualitative exploratory research approach using semi-structured interviews was deployed for the study. Semi-structured interviews include open-ended questions where the exact wording does not have to be followed in sequence (Cohen, Manion & Morrison, 2011). As VAR is a relatively new and under-researched technology used in the EPL, this approach is deemed highly appropriate

because of its potential to generate new ideas and applications (Crabtree & Miller, 1992), as well as suggest interesting recommendations on a relatively new phenomenon in soccer.

### **3.2 Sampling method**

The sample for the study comprised South African soccer spectators and fans of the EPL. A combination of purposive and snowball sampling was used to identify the participants for the study. The selection criteria for participant inclusion were as follows: a) spectators and fans were required to have watched at least one EPL match per week over the past four months (as participants would have recent memories of situations where VAR was used), and b) spectators and fans had to have a good knowledge of how and why VAR was used in soccer. The primary researcher first identified two participants who fit the selection criteria and requested them to identify others who would be suitable within the set criteria. In this manner, snowball sampling was applied. The identified participants were first contacted via WhatsApp by the primary researcher to request an interview pertaining to VAR in EPL and stating the purpose of the study. Participants who responded positively to the message were then requested to indicate an appropriate time for a telephone interview, after which the primary researcher scheduled an appointment at a convenient time for the participant. Participants who did not respond to the WhatsApp message or indicated that they did not want to be interviewed, were not contacted again.

### **3.3 Data collection**

A semi-structured interview schedule focusing on the participants' perceptions and experiences of VAR in the EPL was developed. The interview schedule was assessed by two experienced qualitative researchers who ascertained the content validity of the interview schedule. Feedback received from them was incorporated in the final schedule. The interview schedule was pilot tested with two sport management students to determine "the most logical and smooth-flowing order of questions, identified issues that needed clarification and to determine the approximate duration of the interview" (Surujlal & Jordaan, 2013). Since the research was conducted during the Coronavirus (COVID-19) lockdown phases experienced globally, telephonic interviews were deemed the most appropriate method to collect data, as it ensured both social distancing and avoidance of face-to-face contact with participants. In addition, it increased access to geographically disparate subjects, permitted greater anonymity, increased interviewer safety and allowed the researcher to take notes and listen to participants without disturbance (Novick, 2008). Carr and Worth (2001) describe telephonic interviews as a versatile

data collection method to collect rich and high quality data. The loudspeaker function was used so that the interview could be recorded with another device, and the interviewer could listen and take notes simultaneously. All interviews were conducted by the primary researcher so that the questioning and probing would be consistent, i.e. the same standard of questioning and accuracy could be maintained throughout. At the outset, each of the participants were again informed of the purpose of the study and that they would remain anonymous at all times (pseudonyms were used). In addition, the topic, intent and type of questions of the interview were communicated to the participants, and they gave verbal consent to proceed with the interview and recording thereof. Participants were aware that their responses would be confidential and they could terminate their interview at any stage without repercussions.

### **3.4 Data analysis**

The voice recorded data were inserted into ATLAS.TI™, a computer-assisted qualitative data analysis software program and analysed by the primary researcher. Inductive coding was performed during the content analysis where codes are seen as labels of assessing units of meaning to the descriptive information during a study (DeCuir-Gunby, 2011). The analysis followed the constant comparative method (CCM) as proposed by Boeije (2002), where the simultaneous comparing and contrasting of data and information during the analysis create codes and categories within the context of the data. Inductive code creation, which was applied during the analysis, refers to the identification of meaning units moving from particular and specific occurrences and observations to the discovery of patterns (Babbie, 2001). To ascertain the validity and reliability of the coding and CCM process, the researcher provided the created codes with a short description and an example to a research peer, who agreed on the application thereof (De Vos, Strydom, Fouche & Delpont, 2005). The coding process continued until no new codes were created, which is an indication of data saturation (Guest, Bunce & Johnson, 2006), which was reached after ten participants. Interviews with a homogeneous group of participants may render data saturation at as few as six participants (Fusch & Ness, 2015). Codes were clustered into categories, which described the perceptions and experience of EPL spectators towards VAR's influence on soccer matches. Ethical clearance was obtained as part of a larger study on the use of technology in decision-making in sport. Ethical issues such as respect, honesty, confidentiality and anonymity were adhered to during the course of the study.

#### 4. RESULTS AND DISCUSSION

Nine telephonic interviews were conducted at which point data saturation was achieved. However, to ensure full data saturation, the researcher performed an additional interview and confirmed the data saturation with no new codes being created during the tenth interview analysis. The average age of participants was 20.8 years ( $\pm 2.49$ ). They followed the EPL for an average of 8.4 years ( $\pm 5.7$ ). From the total participants, nine were male and one female.

The narratives of participants are depicted in Tables 1 to 4 and linked to the created codes. The inductive codes were clustered into categories that were labelled according to the overarching meaning of the codes. The different categories that were created from the interview data include the following: *perceived benefits, experience, positive vs. negative* and *future implications*. The findings from the *perceived benefits, experience* and *positive vs. negative* categories were clustered into a data network to indicate the relatedness and interaction between the different categories (Figure 1). The narrative and codes of the *future implications* category are depicted in Table 4.

**Table 1: Narratives and codes for the *perceived benefits* category**

<b>Narrative</b>	<b>Code</b>
Benefits are there won't be match fixing, referees won't be bought to make wrong decisions (P1) It reduces match fixing on a high level (P5)	Match fixing
Benefits of VAR is that decisions are accurate (P2) More accurate penalty decisions (P9)	Accurate decisions
The VAR system is good, it makes the matches fairer, because referees are people and they can make mistakes, VAR can help to see the extra things (P4)	Fair matches
Previously, if referees' back was turned to something that happened, he couldn't make a decision, and it created conflict, but now with VAR all things can be seen to make it fair (P4) Everything can be seen very clearly (P5)	All things can be visible
Watching soccer with VAR, you understand more about the game, you learn as you watch (P4)	Learning rules
It has reduced the number of players going offside because they will be caught (P5)	Rule adherence
VAR makes it clear if a true goal has been scored or not (P5)	Fair goals scored
When goals are checked, it is clear that it should not be a goal and it is ruled off (P1)	
Red card decisions which the referee didn't see could be given after VAR (P6)	Red cards
We are entering more technologically advanced time and referees cannot see everything on the pitch, so technology should come in and show referees mistakes and guide them (P7)	Technology influence

(Participant indicated as P followed by the allocated number)

Indicated in Table 1, participants identified the likelihood of lower levels of match fixing, more accurate decisions and fairer matches as a few of the benefits derived from the VAR system in soccer. The Council of Southern Africa Football Associations (COSAFA) (2019) supports the view that VAR can play a pivotal role in removing moral flaws such as match-fixing in soccer. In addition, since all things can be visible through VAR, spectators can learn the rules and players will have to adhere to the rules in a more stringent manner since red cards can be awarded after VAR informed the on-field referee. The details of decisions made are more visible and provide enhanced transparency on referee verdicts. In support, Morgan (2019) argues that screening footage of VAR decisions immediately after they have been made would lead to greater transparency and a better understanding for fans around controversial decisions. VAR ensures that fair goals are scored and since technology is influential in all parts of life, participants are of the opinion that it should show referees’ mistakes made to guide them to enhanced decision-making.

**Table 2: Narratives and codes for the *experience* category**

<b>Narrative</b>	<b>Code</b>
The games are very slow, the momentum of players are going down, it slows the game down (P1) VAR made it much slower and it kills the momentum (P9)	Slowing down matches
When you watch a match, you don’t enjoy it as much, because you know, when something happens it will first go to VAR and the decision may change (P2)	Less enjoyment
VAR introduction was not good – at first we could watch soccer and small offside weren’t noticed, now even if smallest portion of player is offside, it influences game (P3)	Small mistakes picked up
I really don’t like VAR because of the VAR, the inconsistent decisions – it ruins the tradition of soccer (P3)	Tradition of soccer
I enjoy the VAR, because then I can watch with the VAR and conclude if I also agree with the decision or not (P4)	Detail of decision seen
VAR steals away the element of surprise of the game (P5)	Negative influence
Soccer now is not as dramatic as it was before, with VAR certain goals are not allowed (P6)	
In the case where spectators cannot hear the VAR, then there is no transparency about the decision and as fan you don’t understand (P5)	Transparency
The game becomes complex, whereby it is seen if only your toe was offside (P6)	Complex
Joy or celebrations can be revoked at any given moment (P10)	Belated reactions
VAR use can stop, I don’t really like it. It ruins the spirit of the game, the intensity because the game has to stop and I don’t like that (P6)	Ruins spirit of the game

(Participant indicated as P followed by the allocated number)



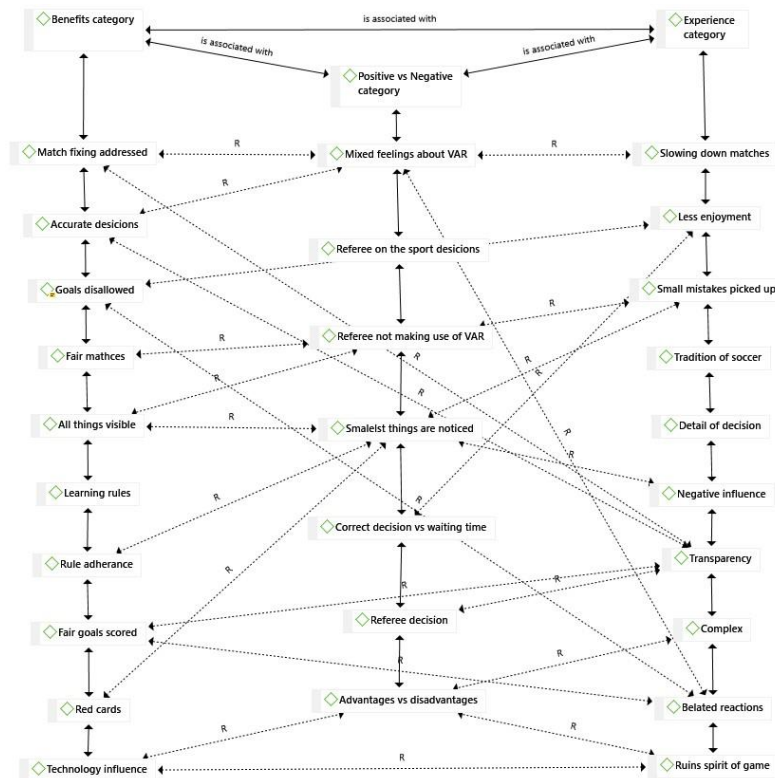
Table 2 indicates participants’ experience of VAR, where VAR slowed matches down considerably. The match stoppages contribute to less enjoyment since small mistakes are picked up and the match is subsequently stopped to investigate it through VAR. Caw (2019), in agreement, commented that the introduction of VAR “sucked the enjoyment out of the game” in one of most exciting and unpredictable leagues in the world. In this manner, the tradition of soccer is lost and the element of surprise stolen, which has a negative influence on the match experience. Fans and spectators indicated that they now have a delayed reaction to happenings, which ruins the spirit of the game. The results in Table 3 indicate that participants had positive and negative perceptions and experiences of the VAR implementation in the EPL. In this manner, participants had mixed feelings about VAR in general as well as on the sport decisions and the usage of VAR by referees. Although the smallest mistakes are picked up, the increased waiting time to arrive at a correct decision is a negative experience, and even in using the VAR, it does not mean that the on-field referee makes the correct decision. Participants are of the opinion that VAR implementation has advantages and disadvantages, dependent on the outcome of decisions influenced by VAR.

**Table 3. Narratives and codes for *positive vs. negative* category**

<b>Narrative</b>	<b>Code</b>
Some people feel it is a good thing, some feel it is a bad thing (P2) VAR is good sometimes, not all of the times. VAR takes away the drama, but it also adds to the drama, decisions being changed (P6)	Mixed feelings about VAR
There are always two sides to the coin, because as fans we understand it, and others don’t. And some teams don’t like because their team did not benefit from decision, and others who benefitted like it (P7)	
Making a decision if the ball was over the line or not – VAR can do that, were the referee had to make that decision previously in an instant (P4)	Referee on the spot decisions
The on-filed referee does not work hand in hand with VAR and does not make use of it, then VAR cannot do what it is supposed to do (P5)	Referee not making use of VAR
The function of VAR and its implementation should not change, however, soccer cannot be perfect and the game should be enjoyed without the smallest mistakes being shown (P5)	Smallest mistakes picked up
A lot of the decisions went our teams’ way, rightfully so, although many people feel aggrieved because of these decisions, but all were consistent with the laws. The issue is only the waiting times (P10)	Correct decision vs waiting time
Most of the time the decisions made by the referee is correct when using VAR, but sometimes it is not (p6)	Referee decisions
VAR has advantages and disadvantages, it depends on which side you are on (P7)	Advantages vs disadvantages

(Participant indicated as P followed by the allocated number)

The data network in Figure 1 presented hereafter is indicative of the multi-faceted perception and experience of participants regarding VAR. Participants identified clear benefits for soccer matches using VAR, but also indicated specific experiences that could be interpreted as both positive and negative. In this manner, an aspect, such as accurate decisions made, could result in more fair matches, lower match fixing occurrences and goals disallowed, which is positive to the sport. However, the time taken to arrive at accurate decisions is also experienced as influencing the tradition of the game negatively through belated reactions and the slowing down of matches, which takes away the flow, momentum of the game and excitement experienced.



**Figure 1: Data network for *perceived benefits, experience and positive vs. negative categories (R= related)***

The aforementioned assertions are corroborated by Birchall (2020), who identified shortcomings of VAR among which are its contribution to the slowing of the natural

flow of the game, and halting or slowing down the excitement of goals and player celebrations. In a similar manner, with all things and the smallest things visible, rule adherence and correct decisions are enforced, but at the cost of a longer waiting period, which results in less enjoyment. Even though referee decisions are more transparent when viewing matches on television, participants still experience the process of VAR involvement as complex with advantages and disadvantages. The aspect of referee on-the-spot decisions, and not making use of VAR, has positive and negative connotations, where fair goals scored are accepted and seemingly fair goals are disallowed after VAR revision. According to Birchall (2020), contrary to reducing the number of disputes by managers and ensuring standardisation of the rules of the game, an overwhelming list of limitations including a reduction in the referees' powers was revealed. The implementation of technology in soccer, according to spectators and fans, has its advantages and disadvantages.

**Table 4: Narratives and codes for the *future implications* category**

<b>Narrative</b>	<b>Code</b>
Maybe they should implement new rules that is more clear next season (P3)	Clearer rules
Referee in future to not make so many own decisions, VAR to let the on-field referee know if something happened (P4)	Referee on the sport decisions
It can only be positive, because what you see with VAR is interesting and you learn the game and rules better, especially for people who don't understand the rules (P4)	Learning rules
We may not need referees in future anymore (P5)	No on-field referee needed
Possibly making an adjustment to the offside rule.	Rule adjustment
VAR having more impact on decisions outside the penalty box (P8)	Decision time faster
Getting decision times lower to about 30seconds.	
I would cancel the future implementation of VAR since it consumes unnecessary checks and kills the momentum (P9)	Discontinue use
Improvements won't make a difference, because at the end of the day it's a decision from a human's perspective, still human error (P10)	Human error present
They should let the VAR make the final decision (P6)	VAR final decision

(Participant indicated as P followed by the allocated number)

Participants indicated negative experiences of VAR's influence on soccer matches, and called for the discontinuation of the system when prompted for future implementations. On the contrary, participants viewed the VAR influence as a positive learning experience that should be used by officials and FIFA to educate new spectators to the intricate rules of the game. The perception also exists that the VAR system works so well that the on-field referee may become redundant in

future. The wide ranges of future implications suggested in Table 4 for VAR use in EPL by fans and spectators are indicative of the positive vs. negative perceptions and experiences also expressed. The variance of participant experiences can be explained by the cognitive dissonance theory by Festinger (1957), since participants are perceiving the VAR implementation with conflicting attitudes and beliefs. The varying positive vs. negative perceptions of VAR's influence on soccer matches produce feelings of mental discomfort for participants, which could be caused through forced compliance (Festinger, 1957). In this regard, soccer fans and spectators are forced to accept and conform to the implementation of VAR. Forced compliance occurs when individuals have to perform an action that is inconsistent with their beliefs or known experiences. With the VAR implementation, fans and spectators are forced to wait for VAR decisions to be made, while having no idea about the details of the incident since none of the visuals or audio are available for stadium attendance. This experience is inconsistent with their beliefs of watching and experiencing a free flowing and exciting soccer match, and therefore causes discomfort and negative perceptions. Likewise, participants try to reason the positive influence of VAR implementation, such as correct decisions made and less match fixing; however, these positives are conflicting with the negative experience of waiting for long periods of time and being disengaged from the decision-making action. The dissonance, seen as the discomfort experienced when holding two or more conflicting cognitions, is prevalent with fans and spectators from this study (Harmon-Jones & Mills, 1999). Dissonance often results in the alteration of attitudes or behaviour, and in this regard, football administrators should be wary not to enhance the dissonance and discomfort of fans and spectators to such an extent that they do not want to attend live soccer matches in stadiums anymore.

## **5. CONCLUSION**

The purpose of this study was to explore South African soccer spectators and fans' perceptions and experiences of the influence of VAR on EPL soccer matches. While the study did not find conclusive evidence on whether spectators and fans embraced the introduction of this new technology in soccer, a few noteworthy conclusions can be drawn from the results. One may conclude that despite less than a complete season's exposure to VAR, fans and spectators are able to differentiate between its advantages and disadvantages. Interestingly, their perceptions of VAR coincide with the primary objective of VAR's implementation in the EPL, i.e. fairer and more objective decisions. Despite the positives associated with VAR, participants also experienced the negative side to its implementation, versus the loss of natural flow of the match, the lack of excitement and debatable decisions. It is therefore

evident that much improvement is needed regarding the rules associated with VAR before fans and spectators embrace the technology fully.

### **Acknowledgement**

The authors would like to acknowledge the assistance and advice of Prof Manilall Dhurup.

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