

# THE ROLE OF SOCIAL MEDIA IN PROMOTING SPORTS FANATICISM

The Role of Social media in promoting Sports Fanaticism: A Case Study of Twitter in Saudi Arabia  
Central Michigan University 2019

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**Abstract**--Social media is increasingly popular in Saudi Arabia, and most Saudis use it in many aspects of their life, business and career. Twitter is a social media platform that was created for users to share information and news, and users can be in different places around the world. In sports, the benefits of Twitter are enormous, and one of these is the sharing of information, such as activities, programs and news about sports teams. Sports broadcasters and fans get important information from Twitter. In fact through Twitter, careers of broadcasters, professionals, team players and fans are enhanced. Competition and rivalry have become intense among sports teams, fans and stakeholders. This research focused on the impact of Twitter on sports fanaticism. It assessed Twitter's impact on sports, the many aspects of sports fans' interaction, broadcasters' live chat with fans, and the negative and positive impact of social media in Saudi life. Statistics reveal that in Saudi Arabia there are more than 25 million active social media accounts and more than 18 million active mobile social accounts. Traditionally, sports broadcasting was done through radio, television and newspaper. It is different in the age of information technology, where even the youngest of sports fans can access sports news through one's mobile phone, iPhone, or iPad, and possibly interact with their favorite teams. This research project studied Twitter accounts of sports fans and focused on those accounts to determine the different perspectives of Twitter use and its impact. Some Twitter accounts of sports fans were analyzed, drawing from them the different perspectives of Twitter use and its impact. The theory in this research focused on uses and gratifications theory which was used to explain why people use Twitter and how Twitter impacts sports fanaticism in Saudi Arabia.

**Keywords**—Social media, promoting, Sports, Fanaticism

## I INTRODUCTION

The sports world is obsessed with Twitter as this social media platform has become a primary source of information about sports activities in Saudi Arabia. College coaches use it to announce to the world their recruitment programs. Niche leagues use it to create audiences. Cash-strapped teams use it to engage fans (Thomases, 2010). Saudi Trend ([www.sauditrend.net](http://www.sauditrend.net)) has 13,000 followers and promotes sports traditions that were created by fans. One of the fans is Jenna Marbles, who is described as someone who “sings new rules.” Nooritelli account has 13,000 followers that promote sports fanaticism, particularly football. Center of

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International Communication Saudi Arabia (CIC Saudi Arabia) provides a new perspective on sports fanaticism for Saudi youth and women (CIC Saudi Arabia, 2018). 'Sports Interaction' has a large following as it promotes sports fanaticism, and it does it in a positive way – to create sports-minded individuals (@SIASport).

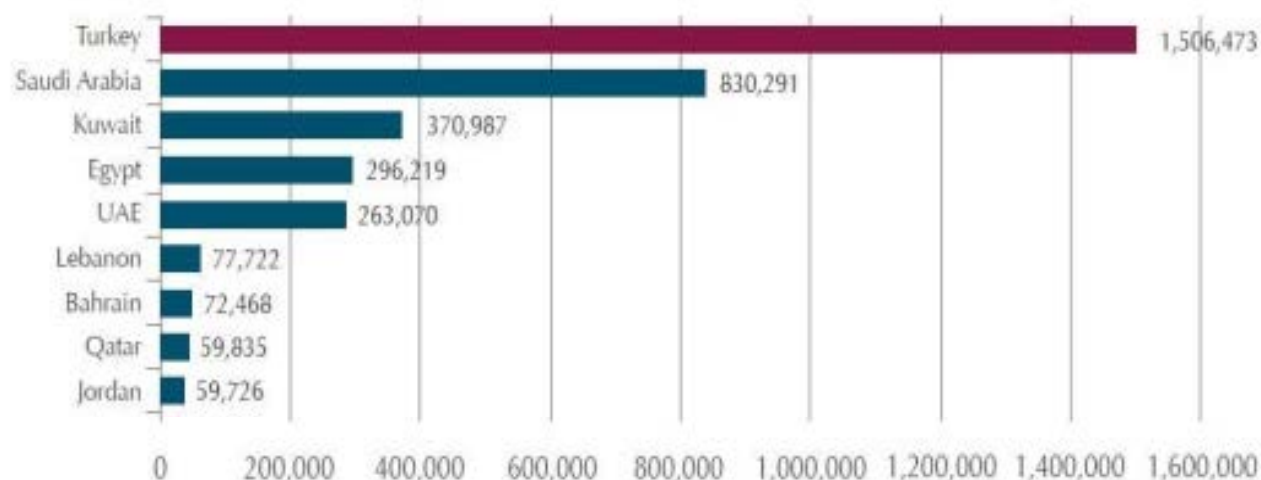
Almriseul (2018) has more than a million followers, with most of his tweets about sports fanaticism and continual interaction with sports fans and governmental and non-governmental organizations promoting sports programs. Tariqalnofal (2018) has more than one million and a half followers in his account on Twitter. He is sought after for interviews and his views are influential in the field of sports and public service. He uses Twitter in interacting with fans and promoting his sports programs. Followers get to know his opinion and important suggestions for sports enhancement through Twitter. Turki Alalshikh (2018) from Riyadh has more than 200 followers, but his tweets are retweeted by sports fans because of the sports values promoted via Twitter.

Twitter is a social media platform with a worldwide recognition for its connectivity. Twitter has impacted sports fanaticism in Saudi Arabia, affecting how Saudi youth broadcastsports and promote their favorite sports teams. Sports fanaticism in Saudi Arabia has taken a different course as people experience more than just sport outcomes in the comfort of their homes. Sports experiences improved through live interactions between teams, players and the fans. Information about team listing, league tables, player anticipations and previous game outcomes is accessible through social media (Alshehri, 2016). Therefore, team interaction, support and engagement by fans results from satisfactory experiences achieved through an integration of sports platform and Twitter.

Twitter was created to share real-time information and news. By sharing or drawing information with other users, one follows friends and acquaintances, or whoever has important piece of information. As a communication medium, Twitter is basically different than traditional media. The user can create content (also known as user generated content or UGC). With limited space (140 character updates), the sender can send free messages or tweets but can also receive tweets in an instance. Journalists and ordinary citizens use Twitter to receive messages or important information related to their job, family or schooling. A user can follow other users, and the number of followers of a Twitter account can be used to indicate readership – following is similar to subscribing (Price, Farrington, & Hall, 2013).

Social media has changed the way Saudis communicate, particularly youth, who use Twitter in relaying real-time news and information and current trend in sports. The youth's interest and fanaticism are facilitated by social media with the use of mobile phones, iPhones and iPads. Twitter has also played a significant role in providing social dynamics and has become an important tool in linking sports governmental agencies and the people (Fatany as cited in Alothman, 2013). In Saudi Arabia, there are currently 25 million active social media accounts and 18 million active mobile social accounts (gmi\_blogger, 2016). This means almost the same number of users are connected with Twitter, who can access the many user applications and sports programs available via this social media platform.

Twitter makes users learn new perspectives and share their views, including religion. Saudi youth demand more personal independence in choosing what they study at universities, and what courses to pursue. In short, they want to be free in everything they do and in their personal life (Murphy, 2013). Twitter is used by young users for social interaction and promotion of sports fanaticism. Values and opinion are affected because Twitter posts spawn commentary, shape views, and stimulate action (Coulson, 2013). In a recent study on social media, especially Twitter, the Saudis are the most active in the gulf region, with an estimated 393,000 users (Arab Social Media Report as cited in Alothman, 2013). This is shown in figure 1.



**Figure 1:**Number of active Twitter users in the Middle East in 2012

SOURCE: Arab Social Media Report (as cited in Alothman, 2013)

Youth in Saudi Arabia use Twitter for social, political, and sports promotion. Twitter users prefer it to other media platforms because of its immediacy – everything is given or delivered in real time through iPhones or smartphones. This means Twitter gives users instant access to the most current and relevant information about sports, what the players think and what the fans can do to promote their teams. Saudi users are a talkative group given that Twitter is for user interaction – one feels an almost absolute freedom in talking and interacting with peers and people of the same social group or function. This is significant for sports teams because it can provide market research functions, or figure out what sports people, enthusiasts and fans want, think and feel about their team (Schäferhoff, 2016).

## II Literature Review

Promotion of sports fanaticism in Saudi Arabia via Twitter is popular among the youth given that Saudi youth, between the ages 15 and 29, use Twitter like a basic personal need (Schäferhoff, 2016). Between 2005 and 2011, internet access in the Middle East and North Africa grew from 13 percent to 40 percent of the population. In 2016, Twitter had 313 million active monthly subscribers and has marked as the 9th largest social media platform worldwide, next only to *Instagram* (Schäferhoff, 2016).

Twitter has heavily affected sports fanatics as they find it an opportunity to promote their favorite team and players. Twitter messages are passed on from the youth's mobile phones as "tweets". The youth feel empowered

and motivated by the social media platform to engage in the fields they want to pursue. Saudi Arabia is now number 7 in terms of individual accounts using the different social media platforms, which means, according to official statistics, an individual has at least 7 accounts (3 are currently active) and the number of tweets has surpassed at least 500,000. The Twitter head of sales revealed that there is a growing number of Twitter users in Saudi Arabia, and its number is one of the largest in the region, with Jeddah as the most active and effective (Arab News, 2015).

Sports programs gave the Saudi youth a chance to participate via Twitter. Through live TV programs of favorite sports, fans can watch their favorite players live in action. But it is different using Twitter and mobile phones. It is a “360 degree sporting experience” (Polese, 2014), because through Twitter, it is not only watching a game, a fan can also get into the thinking of their favorite players. Saudi Twitter users can watch live sports programs, get instant commentaries and interact with the broadcasters. Interaction between team members and fans is a lively activity in the Twitter world. Fans can also get the latest schedule of games, activities and relevant information through Twitter.

Twitter is a very useful instrument for sports writers and journalists as it permits them to send their messages and follow their programs, as well as facilitate interaction with sports enthusiasts and fanatics. Waleedalfaraj (@Waleedalfaraj) is a journalist and TV host who has 1,986 followers, so far. He uses Twitter to promote sports fanaticism and his TV program, both of which are being used by sports fans to interact, exchange views and promote their favorite teams.

Twitter has also influenced organizations in promoting sports programs. Governmental and non-governmental organizations use Twitter for their youth sports programs. General Sports Authority (@gsaksa\_en) uses Twitter to broadcast their continuing sports programs. Youth can get important news and information through Twitter in their iPhones and iPads. The organization’s recent youth activity was the 21-kilometer Riyadh International Marathon attended by the youth and the older generation from different countries. The race winner was an Ethiopian runner, Tamira Mola, who received the first prize of one million riyals (General Sports Authority, 2018). The activities, including the preparation, the registration and arrival of athletes were all posted on Twitter.

The General Sports Authority posted another activity on Twitter which was well received by the Saudi youth and the general public: this was the establishment of three bowling and billiards halls in Riyadh, Jeddah and Dammam, attended by the Chairman of the Board of Al Jawhara Al Wusta Company, Prince Abdul Hakim bin Mousaad. Another important event posted on Twitter was the ‘Race of Champions 2018’, attended by international racers and won by David Coulthard (General Sports Authority, 2018). This international race was viewed by millions of Twitter accounts in Saudi Arabia and the Middle East. Sports News (2018) posted on Twitter football news for fans ahead of the Iraq-Saudi class, a friendly match between Iraq and Saudi Arabia that marked the return of international football in Basra, Iraq, and also a renewed friendship between the two countries.

### ***Sports Fanaticism***

Sports fanaticism is defined as severe negative or positive emotion towards a certain group or social classification (Castelo as cited in Alshehri, 2016). Fanaticism causes people to prejudge, negatively or positively, about others without being logical or even objective about it. With technology that enhances real-time information, sports fanaticism is considered a serious social problem. It can cause social disparity and disturb basic social functions or trigger offensive behavior that is against moral and cultural standards. What the fans, especially youth, would like of their teams is to win in every game and they intensively use Twitter to influence other fans (Alshehri, 2016).

### **III RESEARCH THEORY**

Sports fanaticism can produce positive or negative interaction among sports fans, the general public, and the sports authorities and organizations. One of the reasons why sports fanaticism is enhanced is because of the popularity of social media, such as Twitter, Facebook, YouTube, etc. In this study, Twitter takes the front seat, which means the discussion focused on how Twitter has affected sports fanaticism in Saudi Arabia. Sports activities and sports teams have influenced many of the sports programs in government and the private sector. Twitter has a large role to play in this phenomenon.

Uses and gratification theory was applied to this research to determine how Twitter impacts sports fanaticism in Saudi Arabia. Uses and gratifications theory (UGT) is defined as “audience-based theoretical framework,” which assumes that users choose media and content to satisfy their needs and wants (Strahler, 2014, p. 3). UGT has become popular in examining motives for using mass media; it originated as far back as the 1930s when radio broadcasting was the norm in communication (Cantril & Allport as cited in Strahler, 2014).

With the internet, uses and gratifications theory has become more useful in examining the importance of media communications to people’s lives. Uses and gratifications theory has also been a useful framework for mass communication researchers in understanding motivations and communication behaviors of social media users (Johnson, 2004). Using meta-analysis of research papers of internet communication, a number of studies found that internet uses and perceptions studies were one of the most studied topics, and the theory “uses and gratifications” was the most commonly used theory (Johnson, 2004).

The internet was first considered a single mass medium. Motivations in using social media include social interaction, information seeking, entertainment, and other similar inspirations. The internet has found its place in the communication genre and its most important use is instant messaging and social media. Uses and gratifications theory has been used to study comparisons of gratifications pursued and those obtained by people wanting it. “Gratifications sought” refer to the different needs or motivations for media and individual usage and communication behavior. “Gratifications obtained” are the apparent individual outcomes of media use (Rubin et al. as cited in Johnson, 2004).

Uses and gratifications theory provides a user-centered view to determine the social and psychological factors that motivate individuals’ use of social media (Leung & Wei as cited in Gan & Wang, 2015). It examines why users use one media over substitutes to satisfy users’ needs. The uses and gratifications theory states that people are active participants and meet their basic needs by using a particular social media. Individual needs

trigger desires that affect media use, which leads to their intellectual, emotional and behavior outcomes (Katz et al. as cited in Gan & Wang, 2015).

The increased use of Twitter as an instrument for professional development leads to a need to determine the features of this learning tool. According to Tomei (as cited in Strahler, 2014), learning in the new millennium relies more on new communication and information technologies, providing greater learner activity and investigation. Further, public participation is key when using media, thereby sports brands use Twitter to source information about demands of the society through live chats with fans. Through Twitter, sports brands choose strategies that foster a sustainable balance between sports ecosystems, society, environment and the economy. With Twitter having a great impact on sports fanaticism, this phenomenon will increase but how positive is the impact has yet to be investigated (Strahler, 2014).

One of the highlights for this research is the application of uses and gratifications theory in determining usage of Twitter, a micro-blogging platform of the internet and a kind of social media that incorporates aspects of both mass media and interpersonal communication. "Micro-blog" is a platform for broadcasting and sharing blogs or messages as short as 140 characters on one's computer, with other users in the social network. A micro-blog is just the same as a "blog" or weblog (a combination of web and log) that provides short messages in "reverse chronological order" (Johnson, 2004, p. 4). Microblog is free and enables users to send messages in real time; *WeChat*, on the other hand, also applies uses and gratifications approach, and it provides text messaging and voice messaging services (Gan & Wang, 2015).

Twitter competes with Facebook in popularity as a social medium, but Twitter is popular with youth as a social media platform because of simplicity and accessibility (Middlebrook as cited in Johnson, 2004). Twitter is easily accessible with the use of iPhones and iPads, which are popular among youth and students. Twitter can be accessed from anywhere. Sports fans and broadcasters can send updates and important messages using a web browser, a cellular phone, or from a desktop (Johnson, 2004). The audience has a more active role in the selection of a mass medium for communication, one reason why uses and gratification theory has become the standard theoretical framework in this type of research (Katz, Blumler, & Gurevitch as cited in Strahler, 2014).

In another study, other gratifications, aside from the ones mentioned in Gan and Wang's (2015) study, include: 1.) communicatory utility – which refers to communication facilitation to provide information to share with others; this kind of usage was part of research by Palmgreen and Rayburn (as cited in Gan & Wang, 2015), which focused on television viewing: 2.) convenience utility – this refers to providing convenience or usefulness to individuals for interactive advertising. Interactive advertising usually occurs in social media, where users talk about their product or service. This is very effective for starting businesses. However, uses and gratifications in this study focus on Twitter and its impact on sports fanaticism in Saudi Arabia (Whiting & Williams, 2013).

### ***Hypotheses***

Twitter has impacted sports fanaticism in Saudi Arabia given that sports is being talked about via Twitter and other social media platforms (Alshehri, 2016). This research aimed at addressing the gaps experienced during

Twitter interactions brought about by different fanatic affiliation. This gap was addressed using the uses and gratifications theory. More specifically, this research study guided by the following hypotheses:

Hypothesis 1: Twitter is a popular social media platform that impacts sports fanaticism, sport programs, and behavior of sports fans in Saudi Arabia.

Hypothesis 2: Fan's participation via twitter in the hashtag during broadcasting sports programs is considered negatively.

Hypothesis 3: Without Twitter and other social media accessible through the internet, sports fanaticism in Saudi Arabia will decreased among fans and their teams.

## IV RESEARCH QUESTIONS

In the case of Sun and Shadows football teams of Saudi Arabia, environmental pollution occurs in terms of noise, dust, littering and depletion of green grass. However, these concerns are neutralized by the team's efforts to support local talents and the mounting of a better infrastructure. Twitter, however, can be a medium for biasness. Broadcasters with fanatic affiliation to a certain team may tend to spread propaganda of the opponent teams with the intent to lure more fans to support their team (Alshehri, 2016). Sometimes broadcasters find it hard to moderate sport-related programs due to fanatic differences from the audience, and the youth participation via Twitter during the broadcast of these programs for various purposes and one of these is to broadcast sports issues and promote their favorite team. These issues will affect on the development of infrastructure.

This study attempted to address the following questions:

RQ1: Does Twitter affect sports fanaticism in Saudi Arabia?

RQ2: How do sports fans interact and use Twitter to promote their favorite sports teams?

RQ3: What are the advantages and disadvantages of using Twitter for sports fanaticism?

## V METHODOLOGY

### *Survey*

This research used a quantitative study using a sample of Saudi youth who use their iPhones and iPads in accessing their favorite teams. This study focused on Twitter's impact on sports fanaticism in Saudi Arabia. The data were obtained from the survey that included 19 questions. The first four questions aimed to obtain the brief user's profile, and the rest asked about use of social media (including Twitter) for sport interests. The survey included 771 respondents. The questions were answered using Likert scale. The results were summarized on one Excel sheet and converted to numeric scale for convenience of the analysis.

### *Statistical Processing of Survey Results*

The main aim of the statistical analysis was to find if there are certain regularities in patients' answers. For this, the contingency tables for answers to the questions of interest (namely, questions 10, 12, 15) were composed. The first stage of the analysis was visualization of the answers and primary analysis. Then, the contingency tables were used to find if the distribution of answers differs significantly from the random. The null hypothesis in this case stated that the distribution of the answers between the answers does not significantly

differ from the random. This means that there is no certain trend in the answers, and the figures in the contingency table do not reveal any specific pattern. The alternative hypothesis is opposite to the null, and it suggests the presence of a certain trend.

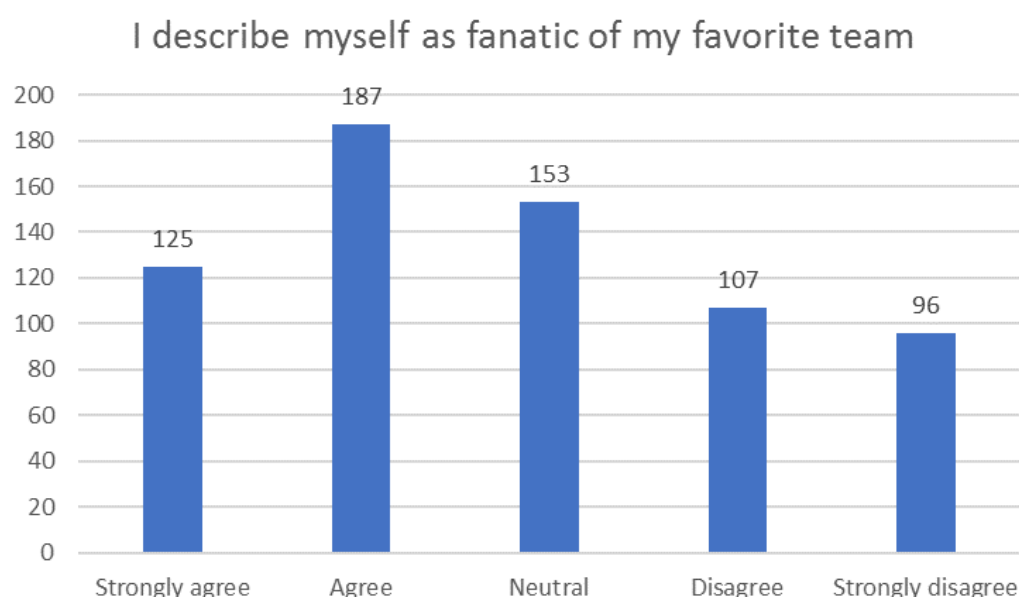
The hypothesis was tested with Pearson's chi-square, and the significance level to reject the null hypothesis was 0.05 (which is the common cut-off level for social sciences research). The association between the variables was studied by measures of ordinal association (Somer's D, Goodman Kruskal's gamma, and Kendall's Tau-b). The values of these measures indicated the strength of association, and the closer the value is to 1 (or -1), the stronger is the association. The zero value indicates no association.

## VI RESULTS

The survey included 771 respondents, and their answers were analyzed to test the hypotheses. The graphical analysis and statistical analysis of association were applied.

### *Hypothesis 1*

Figure 1 and Table 1 present the results of Twitter popularity for search of the news about the favorite team.



**Figure 1:** The distribution of the fanaticism degree.

**Table 1:** Association between the Degree of Fanaticism and Tweeter Use

	I describe myself as fanatic of your favorite team?					Total
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
No	8	18	24	21	32	103
Yes	125	187	153	107	96	668
Total	133	205	177	128	128	771

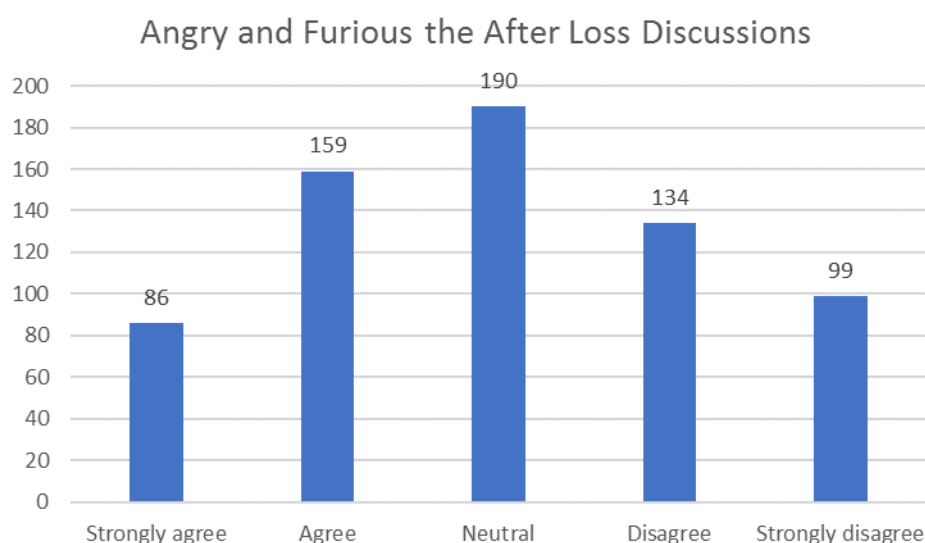
The statistics for the association between the degree of fanaticism and Tweeter Use are Pearson Chi-Square = 25.929 ( $p < 0.01$ ).

DOI: 10.37200/IJPR/V24I4/PR201040

Received: 22 Oct 2019 | Revised: 13 Sep 2019 | Accepted: 15 Jan 2020



Figure 2 and Table 2 present the analysis of anger after the loss of the discussion.



**Figure 2:** The distribution of answers on anger after loss discussion.

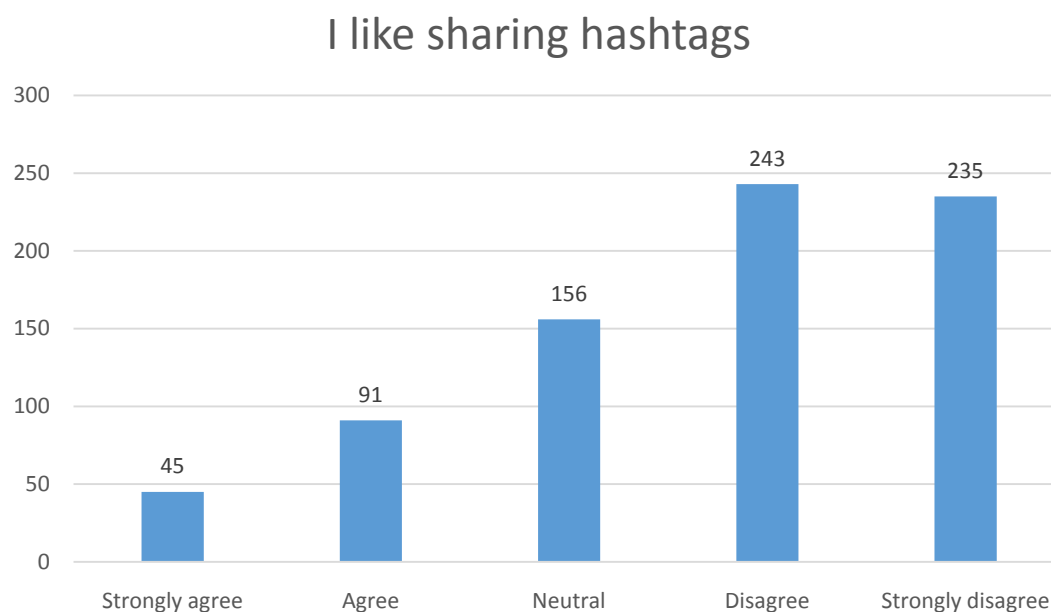
**Table 2:** Association between Answers on Anger after Loss Discussion

	Angry and Furious After Loss Discussions					Total
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
No	7	14	22	24	36	103
Yes	86	159	190	134	99	668
Total	93	173	212	158	135	771

The statistics for the association between the answers on anger after loss discussion are Pearson Chi-Square = 29.62 ( $p < 0.01$ ).

### ***Hypothesis 2***

Figure 3 and Table 3 present the analysis of sharing hashtags.



**Figure 3:** The distribution of answers on sharing hashtags.

**Table 3:** Association between Sharing Hashtags Answers

	I like sharing hashtags					
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
No	2	10	12	34	45	103
Yes	43	81	144	209	191	668
Total	45	91	156	233	236	771

The statistics for the association between the answers on sharing hashtags are Pearson Chi-Square = 15.59 ( $p < 0.01$ ).

The measure of association was tested with Somer's D, Goodman and Kruskal's gamma, and Kendall's Tau-b (Table 4).

**Table 4:** Association between Degree of Sharing Hashtags

Statistic	Measure of association
Somer's D, Goodman	0.21
Kruskal's gamma	0.29
Kendall's Tau-b	0.12

### **Hypothesis 3**

The measure of association was tested with Somer's D, Goodman and Kruskal's gamma, and Kendall's Tau-b (Table 5).

**Table 5:** Measures of Concordance for Ordinal Categories

Statistic	Measure of concordance
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Somer's D	Twitter user dependent	- 0.08
Somer's D	Angry and furious in the after loss discussions	- 0.29
Goodman and Kruskal's Gamma	-	- 0.36
Kendall's Tau-b	-	0.15

## VII DISCUSSION

### *Hypothesis 1*

The respondents answered the question about using Twitter, and the majority of the respondents agree or strongly agree, which indicates that Twitter is important for fans (Figure 1). The number of the respondents that are neutral is significantly less, similarly as those who disagree or strongly disagree. In this case, we can see a clear trend that Twitter is used for finding information about teams. Although the prevalent number of users admitted the fact of Twitter use, we need the statistical foundation of the prevalent usage. For this, we performed the association analysis (Table 1) with the Pearson chi-square test. The test is performed to confirm (or reject) the null hypothesis about the random distribution of answer to the question about the use of Twitter for the news about the team. The value of Pearson's criteria indicates that the null hypothesis can be rejected. This means that the distribution of answers significantly differs from the random one, and this means that the prevalence of agree answer is statistically proven. We can state at 0.01 significance level that there is an association between Tweeter use and degree of fanaticism.

When we analyze the anger and furiousness after loss discussion, we test the hypothesis that the distribution of answers is equal for "yes" and "no" questions. If the null hypothesis is confirmed, then this would mean that there are no trends in anger and furiousness after loss discussion among the respondents, and all the answers are caused by respondents' personalities.

The primary analysis of answers indicates that there are significantly more "yes" answers, compared to "no". The statistical analysis indicated that the p-value for association test is less than 0.01, and thus we have enough evidence to reject the null hypothesis. In this case, the distribution of answers is not random, and there is a certain tendency in the answers. Thus, we can analyze the trend. Although the majority of the respondents are neutral, there are also numerous respondents (about 250) who confirm they have strong negative feelings after loss discussion. Hence, there is an association about fan's behavior and Twitter use. We conclude that there is enough evidence (at 0.01 level), for the association between Twitter use and the behavior of the fans, represented here by their display of anger.

### *Hypothesis 2*

The question about sharing hashtags is related to fans' wish to share the news and their impression about the news, discussion, or event. The null hypothesis states that the answers distribution is random, and there is no relationship between the answers. The alternative hypothesis is opposite to the null. As we analyze the answers (Figure 3), we can see that the proportion of disagreeing and strongly disagree answers to sharing hashtags questions is prevalent, and the proportion of neutral answer is also large. The statistical analysis shows that the

null hypothesis can be rejected, and thus we accept the alternative hypothesis. This means that the distribution is not random, and the respondents tend to deny the fact that they like sharing hashtags. The respondents tend to use Twitter to get the news about their favorite teams, participate in the discussions about the loss of their teams, and react negatively. From the other side, they do not tend to share the news on Twitter, which indicates the specific type of activity on Twitter. Namely, the fans consume content and participate in the discussions, but they do not tend to actively contribute to information spread. Therefore, the sport fans are rather consumers of Twitter content, rather than creators and spreaders.

The analysis of numeric values for sharing hashtags associations (Table 4) shows that the association is positive (the positive values in Table 4) but remains weak (as the magnitude of values indicates). Thus, we can assume that the association of answers is weak.

### ***Hypothesis 3***

The concordance analysis revealed that Somer's value of twitter user dependent is close to zero, and thus we can assume that there is no concordance to ordinal categories. On the contrary, the association to strong negative feelings after loss discussion is negative and weak (Somer's D is -0.29), therefore it is present.

## **VIII CONCLUSION**

The present study aims to compare fanaticism, behavior, and programs among different groups that include twitter users and non-users. The questions tested measured the degree of fanaticism, fan's negative behavior, and the question on Twitter preference for sharing the news was tested.

The statistical analysis of answers has been performed, and the prevalence of positive answers to the preference of getting news about the favorite team on Twitter has been proved at 0.01 significance level. The fans also tend to feel angry and furious after loss discussions on Twitter, and this is proved statistically. These data indicate that Twitter stimulates fans' interest to news about the favorite team and that they get negative emotions, and thus the negative contribution of Twitter on fans' behavior is proved. In this study, we also analyzed the associations numerically; the analysis showed that all relationships are weak. In this case, we should state that although the trend is observed, it is not prevalent.

## **IX LIMITATIONS AND FUTURE STUDIES EXPECTATIONS**

The reliability of the results is provided by a large number of respondents and by the high level of confidence. The study has been performed in the highly homogenous population, and thus we should expect that the results reveal the trends in this group. The interpretation of the results should consider this limitation, and future studies should extend the study to include the wider population. Potentially, the results for non-fans, but people who are moderately interested in sport should be analyzed.

The survey included only questions related to Twitter use for sport, but there is no information about the respondents. The relationships might be significantly different for people with different demographics, e.g. for

different age groups, education levels, employment, and marital status. This means that in the future studies the respective questions should be included so that the researcher could compile the respondent's profile.

The study does not consider the use of Twitter by these users in other areas. Namely, if the respondents generally use Twitter (for other reasons), or they use it only for sport news, discussions and events. This fact might change the results, as the concern of people who use Twitter only for sport news and discussions might reveal higher association, compared to the users who use Twitter for many other areas. Hence, future studies should also include questions regarding the use of Twitter for other topics, unrelated to sport.

In this study, we should rely on the honesty of the respondent's answers, and there are no confirmation answers. Potentially, the questions should be composed so that some questions are repeated to check the respondents' consistency. This should improve the reliability of the research.

The survey was performed at a certain period, and thus the results are related to this period. The situation might change, and the respondents' attitudes might change. For example, if the survey is performed during the important sport game (World Cup). In this case, we suggest that similar research is performed in other periods when no specific events take place. As these data are obtained, the results should be compared, and the trends analyzed. Preferably, several periods should be analyzed.

Despite the indicated limitations, the study presents valuable information about the association between fans' behavior and their use of non-electronic sports media in Saudi Arabia.

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