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Exploring Sport Related Sexual Assault on Twitter

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Abstract

Sport related sexual assault has been prevalent in society. For the victims, there are limited avenues to cope with the issues they have faced in the aftermath of sexual assault. At collegiate sport organizations, there seems to be a disconnect between what is right and wrong, especially regarding sexual assault. This study navigates the rough waters of sexual assault and provides institutions with information regarding social media once there is a sexual assault case. Using Twitter, this study will search to find variables that are beneficial to victims and sport institutions alike that will help their story reach the maximum audience that it can. This research provides insight into Twitter variables and how the presence of certain variables in a tweet will have a different result in terms of reach and media attention. The information will be helpful to victims as well as institutions affected by sexual assault.

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Abstract

Sport related sexual assault has been in society. For the victims, there are limited avenues to cope with the issues they have faced in the aftermath of sexual assault. At collegiate sport organizations, there seems to be a disconnect between what is right and wrong, especially regarding sexual assault. This study navigates the rough waters of sexual assault and provides institutions with information regarding social media once there is a sexual assault case. Using Twitter, this study will search to find variables that are beneficial to victims and sport institutions alike that will help their story reach the maximum audience that it can. This research provides insight into Twitter variables and how the presence of certain variables in a tweet will have a different result in terms of reach and media attention. The information will be helpful to victims as well as institutions affected by sexual assault.

Exploring Sport Related Sexual Assault on Twitter

The United States of America has a total population of about 328 million people as of 2018 (U.S. Census Bureau, 2018). Picture 328 million people who can all communicate with each other within seconds and can post their opinions without face to face interaction.

Twitter.com has 336 million users thus far in 2018, which, if joined together, would become the third largest country in the world trailing only China and India. Now imagine all of the accessibility these people hold, as they are able to communicate with each other at the click of a button. The sheer volume of users on a platform so accessible creates an environment of constant discussion, both positive and negative. Social media, specifically Twitter, has launched itself to the forefront of news and communication worldwide. This gives the people of the world more power than ever before, as they have been granted the ability to share their own opinions with 336 million users worldwide within seconds of pressing “send.”

The researcher has conducted a study exploring the depths of Twitter within sexual assault in the sports community and how the sample population of the study has reacted when sport related sexual assault is the topic of discussion. Sexual assault in sport has been prevalent for many years, yet there has been a big movement in the sport community to bring sexual assault to an end. The cases of Dr. Larry Nassar, Jerry Sandusky, and the culture of cover-up present at Baylor University were not contained to the sporting news, but became prevalent in the national media. Using those cases as a foundation, this study sought to explore how social media was used to both spread the news and react to facts of the stories. It also benefits the

individuals who are affected by sexual assault by better preparing and predicting how Twitter users will react to a sport related sexual assault case breaking the news. It is unclear as to what aspects of a tweet generate more buzz and helps certain tweets reach a larger audience. The research helps the larger social media pages and companies generate a larger audience for the tweet and spread more awareness about sexual assault in sport. The victims of sexual assault need more media coverage of their cases, as the voices of the 336 million people need to be heard by the perpetrators to help reduce the amount of sexual assault cases (Weidlein-Crist, 2008). News outlets will be provided with more information that they may not already have, which may lead to a different course of action once these stories are broken to news outlets. A larger reach generates more views, and views spreads awareness. Awareness is needed in the case of sport related sexual assault, as there is a definitive lack of ethical conduct between perpetrators and institutions and the victims of sexual assault. The more awareness that is spread about sexual assault, the more knowledge will be passed on and effectively decrease sexual assault as a whole, not just in sport (Daigneault, Hébert, McDuff, Michaud, Vézina-Gagnon, Henry, & Porter-Vignola, 2015).

Literature Review

What is sexual assault?

Sexual assault is a worrisome issue in our society, as reports state that up to 30% of females have been sexually assaulted (Harbottle, 2014). There is no one thing that can be claimed purely as sexual assault, because the phrase “sexual assault” is an umbrella which many crimes fall under (Broach & Petretic, 2006). Sexual assault can be rape, sexual harassment at

work, or any other action that could be considered coercive (Broach & Petretic, 2006). Sexual assault is tough to talk about with many people, as it is a personal subject as well as a traumatizing experience. Often times, it is an experience that is suppressed by the victim as they try to force the experience away (Broach & Petretic, 2006). No one person believes they can be thrust into this situation until they are there. There is no typical demographic for victims of sexual assault, as it can happen to any individual no matter their age, gender, race, wealth, or level of stardom (Barnes, 2015).

Although there may not be a specific demographic of people who are assaulted, there are many factors that may increase one's risk of sexual assault. However, students at a College or University are at a heightened risk (Limegrover, 2011). One way that students are at a heightened risk for sexual assault is when they consume alcohol or drugs. It has been determined that the more alcohol you consume as a student, the more likely you are of becoming a victim of sexual assault (Limegrover, 2011). There are many situations where a student may be consuming alcohol off campus, as there are bars that many underage students illegally enter, as well as house parties or fraternity parties. As long as these places provide alcohol, they will be considered a location of interest for those trying to prevent sexual assault. One in every five female college students will be sexually assaulted (Limegrover, 2011) so there is a clear need and desire for change.

Examples of Sexual Assault

There are often times a gray area in what is considered sexual assault, and something that is just inappropriate or coercive sexual interactions. There are often times sexual assault comes down to consent and whether permission was granted by both parties involved in the sexual

experience (Broach, 2006). Sexual assault is not defined by penetration, like the term “rape” is defined, but rather is a broader definition under which many different sexual interactions can fall (Broach, 2006). There is an argument that engaging in coercive sexual behavior should be considered sexual assault, as they experience similar reactions when exposed to high-stress situations that are also experienced by sexual assault victims (Broach, 2006). This result should relate that coercive sexual actions and the reactions are similar to those who have experienced sexual assault, and therefore it should be considered as such.

Recently, Larry Nassar was convicted of sexually assaulting many female Olympic athletes while being their medical doctor (Dyer, 2017). These women are in the light of the Olympics, yet every time they are injured they must endure an experience with Nassar that can be considered dangerous. Recently, Aly Raisman (a victim of Nassar’s,) took to social media to tell her story, as well as encourage other young females to not hide from their attacker, but to face them head on (Hobson, 2017). She set an example for many young girls and boys who have been abused and assaulted by someone they know.

Another instance that made headlines was the case that erupted from Pennsylvania State University and its football program. Assistant coach Jerry Sandusky was accused of having sexual relations with underage children in the showers at the athletic facilities (Coble, 2017). Penn State is a powerhouse in collegiate football, and this came as a shock and disappointment to many fans and alumni of Penn State. This case has been analyzed by using tweets later on in this study, as it played a large role in changing the landscape of sexual assault in sport.

Lastly, multiple examples of sexual assault can be identified by looking into the Baylor University football team and the repeated sexual assault cases that come out of their program

(Price & Keith, 2016). In a report done by a Philadelphia Law firm called Pepper Hamilton, the firm used the word “fail” (Price & Keith, 2016, para. 9) or some variance of the word 22 times in a 13 page brief when describing Baylor’s administration. The report claimed that although Baylor received a warning from the Department of Education, there were multiple cases between 2012- 2015 where school administration reportedly discouraged victims from making claims of sexual assault or pressing charges (Price & Keith, 2016). The school claimed that there wasn’t enough evidence to move forward with the case or that they couldn’t perform any actions against the accused without a court conviction (Price & Keith, 2016). These cases that occur on college campuses need to stop, along with all other sexual assault cases, as there needs to be more support for the victims, regardless of the stardom level of the accused.

Victims

The ability to face the perpetrator in a sexual assault case is generally difficult for all involved. Unfortunately, a term called “myth-rape” (Barnes, 2015) makes it even more difficult for victims when they come forward. Myth-rape is when there is an accusation made falsely accusing a person of performing an unwanted sexual act (Barnes, 2015), and the prevalence of this behavior has introduced doubt as to whether the victim is being truthful or not. Myth-rape has become more widespread due to many high profile celebrities that have been accused of sexual assault or rape, and the accuser has come back and said that it never really happened. This creates a doubt in the public's mind when there is a sexual assault case, which makes it all the more difficult for victims to come out and confront their attacker. There are stigmas attached to many things that are controversial, and sexual assault is no exception.

There is a gender role expectancy when discussing sexual assault; that the perpetrator is always male and the victim is a female (Davies, Pollard, & Archer, 2006). In Hindi screenplay, there is an obvious sexual assault script that is employed by screenwriters (Manohar & Kline, 2014). This has helped create an image of what sexual assault resembles by those who view these films, as the perpetrator is typically an unmarried young male, while the victim is a helpless female who have assumed traditional gender roles (Manohar & Kline, 2014). The aftermath of the sexual assaults typically depict the female sufferer falling victim to injury or death after the assault has taken place (Manohar & Kline, 2014). This has set the standard in the minds of those who watch the film of what sexual assault is and what is expected of the victims. The Feminist researchers claim that the reason for victim blaming stems from traditionally negative views about women and their participation in rape, myth rape and other sexual acts (Davies, et al, 2006). This has contributed to the victim blaming seen in cases involving prominent stars or athletes in college (Barnes, 2015). These stars or athletes are in a position of power because they are viewed in a different light than others due to their wealth or popularity, which creates a difficult obstacle for the victims to overcome when accusing said star or athlete of a possible crime. It is often times very difficult to face a perpetrator when the case doesn't receive news coverage, so victims are much less likely to make an accusation or press charges against someone who is a star at their respective organization or a celebrity in the sports world.

Athletes & Stars Involved

Data supports that being a student athlete at a college can be one of the factors that increase your likelihood of being involved in a sexual assault or similar situation. Student athletes make up 4% of the population on college campuses across the United States, yet they are

involved in 19% of all sexual assault cases on their own campus' (Van Milligen, 2015). Breaking down this data reveals that there is an increased risk to be involved in a sexual assault if you are a collegiate athlete. At The University of Tennessee, there was an 80% increase in sexual assaults on campus from 2014 to 2015 (Van Milligen, 2015), which demonstrates an increase in the reported number of sexual assaults. This can possibly be attributed to a lack of awareness about sexual assault.

Again looking at stars in the sport world which was mentioned in the previous paragraph, sexual assault is one sided in favor of the athlete (Barnes, 2015). If the superstar is not the victim, it is often times very difficult to convict the superstar if they are the perpetrator. There is a recurring theme with athletes and superstars where they are awarded special treatment in relation to punishment. However, according to a recent study, there is no difference between athlete and non-athlete, race, or fame level when it comes to perceived guilt while accused of sexual assault or similar coercive actions (Barnes, 2015). This debunks the theory that athletes or superstars are never perceived as guilty, as these findings show that although people may jump to conclusions, those conclusions are just as likely to believe an athlete or a non-athlete. Regardless of the notoriety, star level, or ethnicity of the alleged perpetrator, this shows that anyone can be perceived to be guilty regardless of personal attributes.

There is an increasing issue with sexual assault cases around college campuses and sport organizations. At college campuses, it is known that there is a problem with under reporting of sexual assaults, so finding true numbers are difficult and the numbers represented are skewed to look better than they truly are (Flaws with "one in five" sexual assault statistic, 2015). It is very rare that victims will press charges or even tell authorities about the coercive event or action

(Flaws with "one in five" sexual assault statistic, 2015). This is one reason the numbers are inaccurate and are made to look like less of an issue than sexual assault truly is (Flaws with "one in five" sexual assault statistic, 2015). The misreporting of sexual assaults is a result of many cultural issues, such as assuming the accuser is lying (myth rape) as well as the high profile cases that are unresolved although the evidence is often times clearly present (Ensign, 1996). Accusing a high profile perpetrator such as a celebrity or star athlete acts as a major deterrent for the men and women who are sexually assaulted, because why would they come out and tell anyone knowing there is a possibility of nothing will be done by campus officials? It isn't that the players aren't held accountable for their actions, it's that the deterrent of victims accusing a star athlete seems to justify an athletes thinking that they are on a pedestal, and are impossible to be knocked off said pedestal (Price & Keith, 2016). The athletes are held less accountable because they are often times the face of a school or athletic department, so it would reflect poorly on the University or sport program if an athlete was convicted of sexual assault. So, rather than doing their due diligence on sexual assault issues, it is often times swept under the rug to avoid the negative publicity (Price & Keith, 2016).

One step being taken to decrease the amount of sexual assaults amongst different institutions is to increase the amount of knowledge that the attendee's have on sexual assault. One of the ways used to increase knowledge on sexual assault is to set up risk management, gendered education and education classes for diverse groups of people (Parrot & Cummings, 1994). By utilizing these classes, the college can help itself by generating more awareness for students and staff while at the same time decreasing the amount of sexual assaults on campus, making it more appealing to attend. The University of Delaware has started to adopt these

actions only after they saw a steady increase in their sexual assault cases across campus (Schiffman, 2010). Like many institutions of higher education across the country, doing this after the fact is significantly less effective than being proactive (Schiffman, 2010).

Sexual assault is a serious issue across college campuses in the United States, as well as around the world (Barnes, 2015). There are many different methods to help educate the public about sexual assault and what it constitutes. There are also many ways for victims to reach out and receive the help they need through social media and the twitterverse. Twitter is a powerful place that can be an outlet for many people's voices to be heard and appreciated, while at the same time giving people without a voice a comforting place for other people to share similar situations. It lets victims know that they are not alone, and that there is hope for the future after such a terrifying and damaging event.

Purpose Paragraph

This study has explored how Twitter has been used in sport related sexual assaults. The research that was gathered can be used by marketing firms, public relations teams or different organizations that find themselves in the middle of a sexual assault scandal. The study has analyzed 135 different tweets from the Penn State sexual assault case involving Jerry Sandusky, the Michigan State sexual assault that involved Larry Nassar and lastly, the Baylor University sexual assault that involved multiple people in and around the football team. The research that has been gathered can successfully answer the three following research questions:

1. How are tweets about sexual assault cases in sport constructed?
2. How has the Twitterverse engaged with high profile cases of sexual assault?
3. What variables are more effective in generating interactions from the Twitterverse?

Method

Description of Research

This study was done using secondary data (Jones, 2015), which are the tweets related to high notoriety sexual assault cases in sport. This study will focus on the Larry Nassar case, the Jerry Sandusky case and lastly, the Baylor football scandal. Using Twitter and a data analysis plan, this study aimed to uncover how sexual assault in sport has been portrayed on the website and how different variables that exist within a tweet generate different amounts of interactions.

Using a content analysis of tweets (Jones, 2015) regarding the previous high-profile sexual assault cases in sport, the study has used a mix of quantitative and qualitative data within the tweet itself. This study closely followed the Interpretivist paradigm (Jones, 2015), as this information is very unique to the individual person as well as being mostly qualitative. The data is personal and specific to each person's individual experience, falling under the criteria to meet the Interpretivist paradigm (Jones, 2015).

Sample Selection

The selection process for the Twitter analysis has been done using purposive sampling (Jones, 2015). The researcher believes that the information was collected using purposive sampling due to all the common characteristics each tweet shared with one another. Purposive sampling is when you choose the sample based off of similar traits and characteristics, and each tweet had the topic in common with one another. Each tweet was picked within four months of the "start date" for each case, and had to contain content discussing the case selected. The specific population size for the study was generated using a population calculator that would

result in a confidence level of 90%. 90% is a generally accepted level of confidence when doing research, and 135 tweets was the specific number that resulted in that confidence level (Wang and Lu, 2017). There is a narrowing of topics by searching for specific words or phrases relating to a specific sexual assault case, whether it is names of people or schools. The criteria to be met is that the tweet must be within four months of the start dates to each case which are April 13th, 2016 for Baylor, Penn State had a start date of November 1st, 2011, and Michigan State's data collection start date was January 1st, 2018.

Variables

The variables are the aspects of the tweets themselves in addition to the engagement patterns in reaction to the original tweet. The independent variables are as follows: time of day the tweet was posted, how many followers the account has, the focus of the tweet, the type of account the tweet was posted from, as well as the amount of retweets, favorites, and comments the individual tweet has. For account type, the accounts are broken down into "general news", "sport news", "institution", or "public". These are categorized using numbers (1, 2, 3, etc) to simplify the results. For "photo type", the photos have been categorized into an "infographic," a "snapshot," a "meme," a "cartoon," or "no photo." These have also been categorized using numbers (1, 2, 3, etc) to simplify the results. For "video type," the videos are broken down into "victim," "institution/administrator," "perpetrator," "legal" and "no video." These have also been categorized using numbers (1, 2, 3, etc) for simplifying the results. For the "link type" section, the categories are broken down into "general news site," "sport news site," "social media," "organization," and "no link." These have been categorized using numbers (1, 2, 3, etc) for simplifying the results. In addition, the dependent variable is the amount of interactions the tweet

has received. These variables have been collected using the instrument talked about in the following section.

Data Collection Instrument

All of the secondary data that has been collected from Twitter has been input into an Excel spreadsheet. Along the horizontal axis are the different descriptors from left to right as follows: favorites, retweets, time of the day, number of followers, type of tweet, account type, photo type, video type, and link type. The vertical axis consists of the person tweeting (see Appendix A.) This is believed to be the most efficient data recording process due to the different variables that are contained within each tweet and the simplicity of Excel. The researcher has decided to use this process to collect data due to a classmate's research process that appeared to cover every topic needed during the current study. Ultimately, the research process was a hybrid of fellow classmate Kevin Magee's collection process and the researcher's choice (K. Magee, personal communication, September 25th, 2018).

Data Collection Process

The data collection process has been done using Twitter.com. This is a social media site where users from around the world can voice their opinions in 280 characters or less. The process as follows:

1. Insert the search terms "Baylor football sexual assault," "Penn State sexual assault" or "Larry Nassar sexual assault" into the Twitter search bar
2. Go back to when the initial case broke news and search for tweets from beginning of case (Baylor Apr 13, 2016, PSU early Nov 2011 and MSU January 1st, 2018)

3. Determine if tweet meets criteria for analyzing. This includes a minimum of 10 retweets and 10 favorites. Each case has 48 tweets dedicated to it with 12 tweets from the following 4 types of Twitter accounts:

- A. News/General Twitter accounts (ABC, NBC, FOX, CNN, USA Today)
- B. News/Sport Twitter accounts (most popular, ESPN)
- C. Institution (PSU, MSU and Baylor Twitter handles)
- D. Public Twitter accounts (general search)

4. Each tweet was analyzed by reading it carefully, recording the data for each variable into the spreadsheet, while also recording a screenshot of said tweet, storing it within a file along with every other tweet analyzed.

5. This process has been repeated until the researcher reached the sample size of 48 tweets per case for a grand total of 135 tweets analyzed. The process has been repeated for the 3 cases of Michigan State, Penn State and Baylor University.

6. All of the data was examined by the researcher and there has been inferences drawn from analyzing the Excel sheet. The tweets were selected from the suggested population size of 135 tweets, and using the parameters set for tweet analysis, tweets were selected via twitter search and analyzed.

Data Analysis Plan

The researcher used the data recording instrument to prepare an SPSS spreadsheet for data transferral and analysis. The data was input into the aforementioned SPSS Statistics and has been run through different regressions, comparisons, Chi-square tests and one way Anova tests between two or more variables. To make the data easier to work with in SPSS, the researcher

first broke down their variables into different scales (ratio, nominal, etc.). The number of comments, favorites, retweets, the time of day the tweet was posted and number of followers of the account that posted the tweet were all broken down using the ratio scale. After determining the scale, the researcher broke down what information was needed from the variable. For the number of comments, number of favorites, number of retweets within one tweet, and the number of followers from the account, the researcher determined they wanted to know the mean, mode and frequency of the data collected. The remaining variable from the ratio scale was time of day, and the researcher found it necessary to only find the mode and frequency regarding the time of day.

The remaining data was scaled as nominal data. The variables scaled as nominal are the type of account, the focus of the tweet, what kind of photo was present if there was one, whether there was a video present, and if there was a link, where it brought you to. The variables scaled as nominal were analyzed and then the researcher decided what information was necessary from each variable. The decision included for each was that the most important information needed from the data was the frequency.

Lastly, to make information easier when input into SPSS and allow the researcher to run different tests, the researcher broke retweets and favorites down into “CategoryRetweets” and “CategoryFavorites.” The ranges were labeled in sequential order from no sharing to trending sharing. The different labels were as follows in order from least amount of interactions to most: no sharing, minimal sharing, sporadic sharing, frequent sharing, and trending sharing. Trending sharing was in reference to a tweet that was being shared the most per case, while minimal sharing was the least amount of interactions in the case. The ranges for Penn State’s favorites

included zero favorites equaled no sharing, 1-5 favorites equaled minimal sharing, 6-11 favorites equaled sporadic sharing, 12-20 favorites equaled frequent sharing and 21 favorites or more equaled trending sharing. For Penn State's retweets, they were broken down into the same labeled ranges, yet ranges differed in number. Zero favorites still equaled no sharing, as it did for every case. However, for retweets, 1-50 retweets equaled minimal sharing, 51-100 retweets equaled sporadic sharing, 101-199 equaled frequent sharing and 200+ retweets equaled trending sharing. For the Michigan State case involving Larry Nassar, the ranges grew even more. Zero meant there was no sharing, 1-376 favorites was minimal, 377-845 was sporadic, 846-1,902 was frequent sharing and then anything over 1,903 favorites was considered trending. In relation to the retweets, zero was no sharing, 1-100 was minimal sharing, 101-300 was sporadic sharing, 301-1,768 was frequent sharing, and anything over 1,769 was considered trending sharing. For the Baylor University case involving the football team, again, the ranges changed but labels remained constant. Zero favorites meant no sharing, while 1-80 favorites was minimal, 81-274 was sporadic, 275-527 was frequent and anything over 528 was trending sharing. For the retweets, zero was no sharing, 1-20 retweets was minimal, 21-107 was sporadic, 108-334 was frequent sharing and anything over 335 retweets was trending sharing. These different ranges per case were labeled as "CategoryFavorite" for the favorites and "CategoryRetweet" for the retweets.

Results

Using SPSS through IBM, there were multiple different Chi- Square tests, One way Anova and other comparisons run through the program. As a reminder, the first research question reads as follows: How has the Twittersverse engaged with high profile cases of sexual assault?

The second research question that has been answered reads as: What variables are more effective in generating interactions from the Twitterverse? The researcher wants these questions to be answered so they can provide useful information to both sexual assault victims as well as institutions to help prevent sexual assault from occurring in the future.

The researcher ran calculations to find the mean, median, mode and range of data collected on the frequencies of different variables and the interactions associated with them. Data was collected on the mean, median and mode for the amount of comments, favorites, retweets and the time of the day that the post was posted to Twitter. The range between the minimum and maximum number of favorites between tweets included in the case. For further information on the tests run, the reader can reference table #7 in the appendix, following the citations portion of the paper.

Next, the researcher proceeded to the different Anova tests that were run. These were simplified into a chart to help the researcher understand the information gained by the tests. To scratch the surface of this test, the variable listed as “video” describes if there was or was not a video present, and according to the table that can be found in the appendix under “Table #8”, the videos all have significant levels that were significant at the .01 level. The remaining chart and values can again be found under table #8 in the appendix. Chi-square analysis was run to assess any significant differences between the frequencies of follower interactions and the content of the original tweet. For the comparison between account type and CF, the value was 90.897 and the significance level was .000. Next we compared the Focus of the tweet to CF and the data showed a value of 11.987. The comparison also was made between the same variables and the CategoryRetweet variable, which was all input into a table at the end of the paper. This table can

be found under “Table #6” in the appendix section of the paper. If you are interested, the researcher highly suggests viewing the appendix section to see the full table of data for many different types of tests.

Next, the researcher looked at a cross tabulation between the assault case and the variable labeled CategoryFavorite. The cases were all broken down by how many favorites each case had. For Penn State, there were a total of seven tweets that were considered trending and seven that were considered to have had frequent interaction. The remaining cases also had the same analyzation done with the categoryretweet variable, all of which can be found in the appendix under table #9. A similar cross tabulation was performed only instead of having the variable be CategoryFavorite, it was broken down by CategoryRetweet. For this, the calculations found that Penn State had a combined 21 tweets fall under the range of frequent interaction and trending interaction with their tweets, while Michigan State and Baylor had 15 and 11 respectively. For the remaining information on CategoryRetweet table, it too can be found in the appendix under the title “Table #10”.

Discussion

Twitter has engaged with different cases of sport related sexual assault through the Twitter accounts with a larger following. Looking at the data, it is clear that there is a definable difference between the amount of interactions between the general and sport news social media and the amount of interactions between the institution affiliated and public accounts.

In understanding how individuals have engaged with Twitter posts, it was uncovered that there were no significant differences between the sport case mentioned in the post and the number of favorites or retweets that it received. For parties who fear that a specific type of sexual

assault case will receive less attention on social media, they can learn that this isn't likely the case. Twitter users were not more likely to share information relating to a rape case and less likely to share information when child molestation was involved. Regardless of type of assault being discussed, the millions of Twitter users are reading and reacting. This means that there was no relationship between retweets and case, which is beneficial to my study as the victim doesn't need to worry about their case getting any more or less interactions. The cases all received comparable retweets and favorites, so the reach was relatively the same. This benefits the victim as they know that as long as their case becomes public, news coverage will promote the story, regardless of dates in the case. Penn State happened in 2011 and Michigan State didn't really pick up until 2017. Although it is only a six year difference, social media has dramatically changed over the course of those six years, and news is now spread differently via social media. This information offers an encouraging sight to victims, as if they do decide to face their confronter, their case will not be disregarded.

However, there were significant differences when comparing the number of retweets based on the type of account initiating the post. More interactions were garnered when general news or sporting news account posted information. This information is beneficial to answering the second research question, as it shows that the account type is a variable that affects the amount of retweets the tweet has from the public. This means that victims should try and push to target these types of accounts to spread the story of their assault. Between the two types of accounts, they held 80% of the frequent retweets and 88% of the trending retweets indicating those sources are most often presenting the information that people want to share with others. These results show if a victim of sexual assault can have their case tweeted out by these

accounts, the reach generated by the accounts will result in a greater awareness of the case, and of sexual assault in general.

The statistics drawn from the mean, median, and mode can also help increase the reach from tweets regarding sexual assault. The information gained by looking at table #7 offers an interesting insight to how different the reach of a tweet can be depending on the variables used in the tweet. One tweet may have only received one comment, but another tweet about the same case received a total number of comments of 2,301. It is interesting to view what the difference within tweets was, whether it was just the number of followers that the different accounts had, or if it was something more subtle, such as the presence of a video or a mixture of different variables that created a perfect storm of sorts. It can be inferred that accounts with more followers generate a higher reach, and the research supports this theory as well. This is crucial as victims and institutions should drive to the channels with the highest number of followers to generate the largest reach.

The time of day variable is interesting and insightful as well. The mean, median and mode for the time of day the post can be found on table #7 as well. This is an interesting data set, as it shows that the average number of tweets appear just before 10:00 in the morning. This specific time is interesting, as the average is after people have shown up to work on the east coast and people are just getting ready for work on the west coast. However, the data that is most beneficial to this study is believed to be the mode. The most frequently posted time all throughout the day is at 6:35 in the morning east coast time. This is intriguing as this time gives people something to read when they awake r and scroll through social media before starting their day. The time also gives the west coast people enough time to see it as it gets trending, as they

typically won't be up for another three to four hours, this gives the tweet plenty of time to mature and start reaching more and more people. This information is useful for the large institutions trying to maximize the reach on a tweet with a large number of followers. When you post at a time when more people are likely to read it, then you are more likely to generate a large reach for said tweet. This can be inferred, as it is assumed that as the number of readers increases, the number of comments, retweets and favorites will increase as well.

The Anova Test that was explained above yielded an incredible amount of information regarding relationships between variables. The tests showed what was and what was not significant, and the results shown were surprising. In total, there were seven different relationships that were found to be significant, leaving eleven relationships insignificant. The significant relationships were between the amount of retweets and account type, the number of comments and case number, the amount of favorites and case number, the number of comments and the focus of the tweet, and the presence of a video in the tweet. These relationships had a 100% significance level across the board between comments, retweets and favorites. The significant relationships that stand out to the researcher are the ones with the presence of a video in the tweet, and the number of comments when compared to the focus of the tweet. The focus of the tweet refers to if the tweet is about the victim, the perpetrator, the institution or the legal aspect of the case. The significance level of the comparison between comments and focus of the tweet was .042 with the $F= 2.807$. This means that there was a relationship between who the tweet was about and the number of comments coming from it. There was a higher number of comments when the tweet was discussing the institution compared to any other focus. These results were surprising, as comments generally mean that there was enough emotion or opinion

provoked from the tweet to make the reader want to take time to respond. The emotion was expected to come from the victim, yet this study reveals the emotion actually came when discussing the institution. The researcher believes that this may be something specific to sport related sexual assault cases, as there is an emotional tie between fan and sport team. When the sport team is the suspect of a sexual assault accusation, then the fan becomes emotional and responds via comment on Twitter. This is the explanation by the researcher as to why this resulted in the unexpected way it did.

When discussing the similarities between a video being present in the tweet and number of interactions the tweet containing the video receives, this can also be attributed to emotion. It is common knowledge that when there is a comment, like, favorite, retweet, etc. on social media, this means that the content of the tweet aroused an emotional reaction from the reader. Whether it is an emotional comment, or a favorite that evokes laughter, the responses indicate that the reader felt emotion. When discussing the topic of sexual assault, the emotions are heightened due to the sensitivity of the subject. When there is a video present, this evokes emotion as well, as the videos in this study showed the victim as well as the institution 57% of the time when a video was present. This means that either the victim or the sport institution is being shown, both of which will generate an emotional response. The video shows insight into the case that words simply cannot. That is why the researcher believes that the heightened response level to comments, favorites and retweets is related to the presence of a video in the tweet. This information can be used by victims and institutions alike to generate reach, as videos regarding sexual assault are expected to be emotional. Emotions evoke responses, and the more emotion,

the more interactions with the tweet. The more interactions to the tweet, the more reach the tweet will receive.

Limitations

The results from the study provided information that the researcher did not know before the study, yet there were gaps in the research that the researcher was unable to avoid. For the data collection process, once the researcher was looking for Baylor tweets on the general news twitter account, the number of tweets were limited to under the required 12 tweets per source. This lack of data resulted in possibly incomplete or unsatisfactory information for the Baylor University assault case. Although the total tweets missing were only nine, these tweets were important as they came from the largest twitter account used in the study with the largest number of followers. This may have misconstrued the information collected for the Baylor case, offering different insights to the case that may have been present if the tweets were present from CNN.

Another limitation for the study was the time constraints on this project. If there were more time, the researcher would have looked deeper into issues that were intriguing instead of only scraping the surface of these issues. There were different variables that the researcher would have liked to collect, such as the tone of the tweet, so the reader would know if the scope of the tweets were generally supportive or negative. This would have provided more in depth detail about the perception of the tweets and attitudes associated toward the sexual assault cases. Unfortunately, with only one month to run different tests and enter them into the paper, the researcher did not have enough time due to other class work, their job and time constraints.

The last major limitation that the researcher had was not being able to access other people's Twitter accounts. If the researcher were able to contact the original posters or have

access to their twitter accounts, the actual number of interactions would be known regarding the tweet instead of using the combination of comments, favorites and retweets as the number of interactions. This way, the researcher can look at the actual number of interactions and compare tweets based off of this information as opposed to limited knowledge about the actual tweet itself. If the researcher were to post from their own personal Twitter account, they could see the number of interactions from a Twitter tab called “View Tweet Activity” that shows the number of impressions and total engagements. According to Twitter, impressions are the number of times that people saw the tweet on their timeline, whereas total engagements are the number of times people interacted with the tweet. This is defined as clicking on the tweet itself, liking, commenting or favoriting. In the research done in this study, the researcher was unable to find either of these numbers.

Future Research

To expand on the possible future research, the researcher would like to expand on different variables that were not collected within the original study. The researcher previously stated how they wish the time constraints were a non factor, so they could expand on a new variable concerning the tone of a tweet, taking into account if the tweet was supportive or derogatory, positive or negative, etc. To expand on the idea of broadening the variables used within the study, the researcher also wishes that they could have expanded variables that assessed the purpose of the tweet. This is not necessarily the focus of the tweet, which was already researched within the original study, but the topic of the tweet and dissecting what its purpose was. The researcher is interested in dissecting why the tweet was constructed and whether it was meant to be informative, persuasive, or argumentative based on how they posed

their side of the story and defended it. These variables would provide background information as to why these larger institutions use Twitter in the first place, and why they specifically use social media to relay news to their followers.

Something that the researcher also wishes they could have done is held personal interviews or sent out surveys to student athletes at their own institution. In surveys, the respondents would be completely anonymous and would ask questions that may be sensitive, but the anonymity of it would possibly make the respondent feel more comfortable and in turn, more likely to answer the questions. The researcher is very passionate about their college, and if there is sexual assault among athletes present, they want to know and possible steps can be taken from the future research. The researcher also wants to interview higher ups in the athletic department, such as the athletic director to discuss the different programs and sessions related to sexual assault that athletes must attend. If there is already a plan in place to enlighten athletes about sexual assault, then the survey responses would dictate how beneficial the current procedures are and if they aren't effective, how the plan can be improved.

Conclusion

Now picture this: 336 million individuals of various backgrounds, ethnicities, and religions all coming together in support of sexual assault awareness and victims. Remember, this number would be the third largest country in the world if it actually existed. This number represents the 336 million active Twitter users around the world, and these people do have a voice via social media, one that can be heard. Imagine that they all use Twitter to engage and discuss troubling issues such as sexual assault, where different viewpoints and perspectives can be discussed and different experiences and ideas about the topic. People like Aly Raisman have

already started this movement, and more people every day are encouraged to come forward and face their accuser. With the information gathered from this study, victims can use the knowledge gained to produce effective tweets containing the variables that have success in promoting an increased reach to impact a larger audience. Institutions can use this information to help increase awareness of sexual assault and in turn, decrease the number of sexual assaults worldwide. This information matters to many people, as anyone can be affected by these types of events. The previous research conducted shows victims and perpetrators alike that there are people who care about sexual assault and the prevention of it. As a result, the awareness of sexual assault will increase and will ideally decrease the amount of cases perpetrated. This powerful movement can and should start with people like you.

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Appendix

Table #1

Data Collection/ Analysis Instrument

A	B	C	D	E	F	G	H	I	J	K	L	
Tweet #	# of comments	Favorites	Category	Favorite Retweets	Category	Retweet Time of day	# of followers	Type of account	Focus of Tweet	Photo	Video	Link
								1= General news	1= Victim	1= no photo	1= No video	1= No link
								2= Sport news	2= Institution/ administration	2= Infographic	2= Victim	2= General
								3= Institution	3= Perpetrator	3= Snapshot	3= Institution/ administration	3= Sport
								4= Public	4= Legal	4= Meme	4= Perpetrator	4= Social
										5= Cartoon	5= Legal	5= Organ
1	10	10		53			852	40,800,000	1	2	1	1
2	12	16		71			2021	40,800,000	1	2	1	1
3	35	17		318			541	40,800,000	1	3	1	1
4	17	11		171			2106	40,800,000	1	2	1	1
5	16	15		106			742	40,800,000	1	3	1	1
6	59	11		171			800	40,800,000	1	3	1	1
7	26	17		588			817	40,800,000	1	2	1	1
8	11	11		129			1353	40,800,000	1	2	1	1
9	13	11		59			1649	40,800,000	1	1	1	1
10	11	15		153			1116	40,800,000	1	2	1	1
11	42	18		795			1928	40,800,000	1	2	1	1
12	6	10		53			822	40,800,000	1	3	1	1
13	19	3		114			854	35,400,000	2	2	1	1
14	63	40		1700			928	35,400,000	2	2	1	1
15	28	57		140			1006	35,400,000	2	2	1	1
16	30	9		209			1010	35,400,000	2	2	1	1
17	11	4		20			1358	35,400,000	2	2	1	1
18	17	34		178			824	35,400,000	2	2	1	1
19	14	11		96			1942	35,400,000	2	2	3	1

+ [Menu] Penn State MSU/Nassar Baylor University pilot test [Refresh]

Table #2

Content of Tweets Regarding Sexual Assault from Various Sources

	General News	Sporting News	Organization / Institution	Public	Total
Focus of the Tweet					
Victim	6	0	8	4	18
Perpetrator	6	3	0	17	26
Institution	14	31	28	15	88
Legal	1	2	0	0	3
Photo Inclusion in the Tweet					
No photo	15	18	20	24	77
Infographic	0	0	5	0	5
Snapshot	12	18	10	12	52
Meme	0	0	0	0	0
Cartoon	0	0	1	0	1
Video Inclusion in the Tweet					

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No video	24	33	36	35	128
Victim	2	0	0	0	2
Institution/Administration	0	2	0	0	2
Perpetrator	0	0	0	1	1
Legal	1	1	0	0	2
Link Inclusion in the Tweet					
No link	0	13	13	25	51
Link to General news site	27	0	0	7	34
Link to Sport News Site	0	21	0	3	24
Link to social media	0	1	0	1	2
Link to organization website	0	1	23	0	24

Note. Table values indicate the frequency of values for each combination of variables.

Table #3

Public Interactions with Tweets about Sexual Assault

	Number of Favorites	Number of Comments	Number of Retweets	Total Number of Posts
Penn State University Case	13	20	263	48
Michigan State Case	2588	119	947	48
Baylor University Case	311	18	212	39
Totals for all Sexual Assault Cases	1015	53	491	135

Note. Table values represent mean scores rounded to the nearest whole number for each of the variable combinations.

Table #4

Correlation Analysis of Content and Interactions

	Favorite Interactions	Comment Interactions	Retweet Interactions
Original source type	-.173*	-.204*	-.194*
Sexual assault case	.483**	-.056	-.149
Focus of the tweet	-.173*	-.008	.081
Usage of photo/s	.536**	.212*	.114
Usage of video/s	.302**	.201*	.238**
Usage of link	-.076	.044	-.042

Table values indicate correlation calculation. * $p < .05$; ** $p < .01$

Table #5

Chi-Square Analysis of Content and Interactions

	Favorite Interactions	Retweet Interaction
Original source type	90.897**	90.012**
Focus of the tweet	11.987	8.355
Usage of photo/s	24.563*	19.012
Usage of video/s	23.427	21.167
Table values indicate chi-square calculation. * p<. 05; **p<.01		

Table #6

Chi-square Analysis of content and CategoryFavorites and CategoryRetweets

	Category Favorite	Category Retweet
Original source type	90.897**	90.012**
Focus of the tweet	11.987	8.355
Usage of photo/s	24.563*	19.012
Usage of video/s	23.427	21.167
Table values indicate chi-square calculation. * p<. 05; **p<.01		

Table #7

Frequency Variables

	Mean	Median	Mode	Range
Comments	52.85	13.00	1.00	2,300.00
Favorites	1,014.83	40.00	11.00	45,544.00
Retweets	491.47	88.00	5.00	15,344.00
Time of Day	974.76	915.00	635.00	1991.00

Table #8

Correlation Analysis of Multiple Variables and Interactions

	Comments	Favorites	Retweets
Acct. Type	1.941	1.584	2.855*
Case #	3.384*	4.055*	2.128
Focus of Tweets	2.807*	2.369	1.448
Photo	.828	.124	.130
Video	44.399**	39.524**	16.192**
Link	.666	.475	.872

Table values indicate correlation calculation. * p<. 05; **p<.01

Table #9

Cross Tabulation between AssaultCase and CategoryFavorite

	No interaction	Minimal interaction	Sporadic Interaction	Frequent Interaction	Trending	Total
Penn State	2	20	12	7	7	48
MSU	0	18	16	8	6	48
Baylor	1	19	7	8	4	39
Total	3	57	35	23	17	135

Table #10

Cross Tabulation between AssaultCase and CategoryRetweet

	No interaction	Minimal interaction	Sporadic Interaction	Frequent Interaction	Trending	Total
Penn State	0	17	10	11	10	48
MSU	0	21	12	12	3	48
Baylor	1	18	9	8	3	39
Total	1	56	31	31	16	135