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An excellent study of social media and its positive and negative effects on human being's mental health

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AN EXCELLENT STUDY OF SOCIAL MEDIA AND ITS POSITIVE AND NEGATIVE EFFECTS ON HUMAN BEING'S MENTAL HEALTH

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ABSTRACT

Social media is quickly becoming one of the most popular topics worldwide due to both the positive and negative impacts that it can have in all different aspects of a person's life. Mental health being one of them since these platforms can either be a safe place for individuals to express their feelings and emotions, or a dangerous one where their mental illnesses can only elevate more. Guided by social media, the development of technology and the advancement of learning machine, this creative component investigates how mental health can be either positively or negatively impacted. I executed a literature review, using keywords to search articles in data mining of social media and technology in the perspective of mental health conditions. Results suggest that social media can be used as a tool to predict mental health issues and therefore prevent fatal actions taken by mental ill individuals.

INTRODUCTION

Information and communication technology have transformed quickly over the past decades with a crucial development in social media. Nowadays, our society would pay more attention to information they see on social media than even their own thoughts and beliefs; which is how I realized the influence that social media possess. It is important to understand that this influence can be either positive or negative depending on a lot of aspects, and it is what this synthesis might find. Additionally, social media apps' algorithms will be studied and compared in order to understand how the interactions of human beings take place through this communication method.

The purpose of this creative component is to examine the positive and negative effects that social media has on human beings and their mental health. To accomplish this goal, I review and synthesize existing research studies concerning social media, and mental health including depression, anxiety, cyberbullying and self-harm. Moreover, I review the usage of machine learning on this topic, and the advantages of these platforms for health care and mental health. Taking into account the new reality with the worldwide pandemic and how the usage of social media might have increased, as well as mental health issues due to isolation and social distancing. While research findings identify an increase in mental health issues over the past year, it is uncertain how social media usage might be linked to these fluctuations.

Social Media: A Review

Social media is defined as "forms of electronic communication as websites for social networking and microblogging through which users create online communities to share information, ideas, personal messages and other content as videos according Merriam-Webster (2014). (A.Vannucci & s. Gagnon, 2019). Bogdan Batrinca & Philip Treleaven also explained that social media data is evidently the major, strongest and active proof of human behavior, bringing new chances to figure out people in our community (2014). While this term was created years ago, the importance of social media in our lives today has increased in recent years. Social media is an important aspect of people lives nowadays, especially in emerging adults' lives. On average, they spend around 6 hours a day, and usually use several platforms at the same time. (A.Vannucci & s. Gagnon, 2019).

According to a research study conducted by Andrew Perrin at the Pew Research Center (2015), around two-thirds of American adults (65%) use social networking sites, up from 7% when Pew Research Center began systematically tracking social media usage in 2005. Moreover, they found out that age is strongly associated with social media usage; for example, ages 18 to 29 have always been the ones who would use social media the most. However, it was also found recently that 90% of young adults are active in social media, while in 2005 used to be only 12% giving us an increase of 78 percent. Instantaneously, there has been a 69- point bump among those ages 30-49, from 8% in 2005 to 77% today. This shows how serious the increase of social media usage in a decade can be which gives us an idea of the future that social media importance holds.

Social Media Algorithms

In order for me to understand how each social media platform would affect or help people's mental health, I realized I had to study and understand how all the different algorithms worked as well. A social media algorithm is an automated calculation that decides which social media posts make it to the top of your feed and which don't (D. Mayfield, 2021). New studies have taken place in order to understand the algorithms used in social media in the past years. These studies have found that social media algorithms are designed to "reduce complexity brought about by information and interaction overload in social media" (Coretti and Picca, 2018: 73).

Social media algorithms can either be beneficial for our society or damaging for some social problems like mental health (S. Chancellor, M.L Birnbaum, E. D. Caine, V. M. B. Silenzio & M. De Choudhury, 2019). Algorithms are made for people to be more and more active on the different social media platforms. They give you suggestions to the content that, according to your information provided, you should pay more attention to (Leonardi and Vaast, 2017). However, it is important to take into account that algorithmic operations of social media are usually hidden (Coretti and Pica, 2018); which is one of the topics I will discuss further in this research.

Another important aspect of the social media algorithm is the awareness of the community since this would be essential in order to avoid negative effects in social media. Some recent research suggests that users tend to find hard the change of social media algorithms. One of the main issues is the user's expectation, in fact some results have shown how user resistance to algorithmic change is initially based on the possible rejection of users' expectations (M. A. DeVito, D. Gergle & J. Birnholtz, 2017).

Most Common Social Media Apps and their Algorithms

LinkedIn had a slower start compared to other social medias. Reid Hoffman recruited a team and launched the app in 2003. Even though it wasn't the easiest time for them at the beginning of their launch, the company finally reached profitability in 2006, as well as core features like "Recommendations and People You Might Know". They were able to launch internationally in 2008, as well as the achievement of 50 million users. After changes, updates and new ideas, Microsoft obtained a large share of LinkedIn at a value of $26 billion which put LinkedIn as one of the major achievements for the company (Gizelle, 2020).

LinkedIn algorithm's major goals are to prioritize relevant content and to promote engagement. They really focus on trying to find the most accurate relevancy for each person to grow professionally. The most network connections people have, the better opportunities the future would hold for them since more options might open for them. Their top three features on their rankings are ranked as follows: (1) Personal Connections, (2) Interest Relevance and (3) Engagement Probability. (Sehl, 2019).

Facebook is one of the biggest social networks worldwide with around 2.8 billion monthly active users. Facebook was founded in 2004 by Mark Zuckerberg and his four roommates who were students at Harvard at the time. Facebook has faced multiple privacy issues because of the way their algorithm was built. Therefore, the founders of the company have been forced to adjust it numerous times in the past years (A. Newcomb, 2018). Understanding how the computer algorithm works is key for all the users

The Facebook algorithm has been changed many times in the past years because of many reasons according to Mark Zuckerberg. However, one of the most recent changes is that the Facebook algorithm controls the ordering and presentation of posts, so users see what is most relevant to them (Barnhart, 2020). The goal of Facebook's algorithm is to "show stories that matter to users," according to Adam Mosseri, VP of Facebook's News Feed Management. There are four factors that work together with Facebook's algorithm in order to determine user's relevance. These four factors are inventory, signals, predictions and relevancy score (Shannon Mullery, 2021).

Reddit was created by Steve Huffman and Alexis Ohanian, two university students who wanted to build an app in order for users to be able to order sandwiches online. Therefore, they decided that their opportunity would lay on getting Y Combinator to back them. This happened very fast since they met with Y Combinator Dr. Paul Graham. However, things did not go as planned and Graham turned them down. All of this was back in 2005 when social media platforms were still not as popular. Dr. Graham had a more suitable idea for Steve and Alexis which was to build a bulletin board-like platform for news (Wiredelta, 2020). Paul's idea intrigued the two young entrepreneurs, and so Reddit (which is a play on the words "Read It") became a reality. The new platform gained so much traction that only 16 months after in around October of 2006, it was bought by Condé Nast. Steve and Alexei kept working with Reddit until 2009 as part of their contract but then went on different paths after that. (Wiredelta, 2020).

Reddit's algorithm is called hot ranking which takes into account the number of votes and submission time of a link have the largest effect on where a story will rank. This algorithm takes

the first votes on a link as the more valuable than the later votes on a link (Datadial Blog, 2014). Moreover, for the comments algorithm they do not use the hot ranking algorithm; instead, they use a more logical algorithm to list the best rated comments prominently (Datadial Blog, 2014).

Twitter began as an idea that the co-founder Jack Dorsey had. Dorsey had proposed a SMS-based platform to Odeo's co-founder Evan Williams (A. MacArthur, 2020). Dorsey had this idea of a concept he called "status" where people could just post or "tweet" what they were doing at the moment. The Odeo board really liked this idea which is why they supported it and decided to build and launch Twitter in 2006. (Meyer, 2019). Twitter has now up to 320 million active users a month who send out around 500 million tweets a day (Meyer, 2019). Additionally, Twitter has now become a useful source of social media data; users can use the Twitter API (Application Programming Interface that provides structured access to communication in standardized formats) which can be very useful for researches to collect multiple archives of public tweets about a specific topic (J. Burgess & A. Bruns, 2012).

Twitter's algorithm is all about personalization; and as all social algorithm use machine to sort content based on different ranking signals. The four ranking signals that the twitter takes into account are freshness, engagement, content and activity (Riley, 2020). Twitter engineer Nicolas Koumchatzky expressed, "Right after gathering all Tweets [based on who you follow], each is scored by a relevance model. The model's score predicts how interesting and engaging a Tweet would be specifically to you. A set of highest-scoring Tweets is then shown at the top of your timeline, with the remainder shown directly below" (Hutchinson, 2021).

Instagram was launched about 8 years ago; when it came to the Apple app store it had as a proposal to make mobile photographs "simple and beautiful". The app went from only a couple of users to then become the number one photography app with more than 100,000 users in a week and increasing to one million in two months (Eudamonia, 2017). This social media platform only took eight weeks for software engineers to develop before they launched it on Apple's mobile operating system in October of 2010 (Blystone, 2020). Additionally, in less than two years, Facebook acquired the company for $1 billion in cash and stock (Blystone, 2020). Nowadays, the app has over 1 billion users across the world (M. Iqbal, 2021) and the photo editing options that the app provide has been adopted by countless important people and celebrities (G. Sangwani, 2018).

Instagram's algorithm is a logical and systematic arrangement of big data-based with the aim to answer user needs. The way Instagram's algorithm categorizes some points like post exposure, shadow banned, interaction, Instagram stories, hashtag, edit caption as well as repost (N. Agung & G. Darma, 2019). Instagram has come out with new and different features over the past few years like Instagram Stories and IGTV or Reels videos. The Instagram algorithm determines which Instagram Stories appear first in a user's feed based on the accounts the user interacts with the most. Things like comments, likes, DMs or even locations contribute to a user's engaging aspect of the algorithm (Saraco, 2020). Additionally, the algorithm for the video side of Instagram like Reels and IGTV is very similar to the algorithm for the feed discussed previously, which would show you content for people who would interact with your account the most (Saraco, 2020).

Snapchat is a picture and video messaging app created originally by three Stanford university students back in 2011. The idea came out of a conversation with Reggie Brown and Evan Spiegel about wishing the pictures he was sending to this girl he was talking to would disappear. Along with Bobby Murphy they started a company first called "Picaboo", however after a year, Spiegel and Murphy decided it was time to remove Brown for their company and have a new start. This was a successful move for them since later that year they decided to relaunch the company but now with the name Snapchat. The growth of Snapchat was very fast, to the point that around a year after the relaunch Snapchat was valued at $10 billion; increasing their value in 2017 to $25 billion with rumors of launching a stock market.

The snapchat algorithm has evolved and changed in recent years. Even though at the beginning of its creation the algorithm was similar to most social medias meaning the most popular posts or stories in this case would be on the top of people feeds. Now the CEO of Snapchat Evan Spiegel, has decided to make people relationships a priority rather than who posted first or how popular they are. He explained how the new algorithm for the app now would show the story of the people you interact with the most at the top of your feed. This new design is meant to make individuals' relationship stronger since Spiegel believes that is something very important for our society.

TikTok was created in September of 2016 by Alex Zhu and Luyu Yang in Shanghai, China. The creators had the initial idea of an educational app, however, they then found out that the idea was not going to be profitable. This was probably one of the best decisions they made since TikTok is currently one of the most successful and popular social media platforms

(C.Gayton, 2020). Today, TikTok has been downloaded 2 billion times worldwide and skyrocketed thousands of people (C.Gayton, 2020). Nowadays, TikTok has become a platform for artists to promote their music, movies, work or for people to promote their business. Montero Hill is one of the many examples of the power of TikTok when last February he uploaded a song called "Old Town Road" to the app. Everything started as a joke but ended up going viral which resulted in record labels taking notice. Eventually, country music legend, Billy Ray Cyrus, found his way on to a remix of the song. "Old Town Road," then became the longest-running number-one hit on the Billboard Hot 100 and held steady for 19 weeks, dethroning Mariah Carey, before Billie Eilish dethroned him (Rocque, 2019).

TikTok's algorithm is not very different from other social media apps according to TikTok, "The system recommend content by ranking videos based on a combination of factors, starting from interests you express as a new user and adjusting for things you indicate you're not interested in, too". Some of the factors include "user interactions", "video information" and "device and account settings" (M.McGlew, 2020). The feed is called "For You" and the factors mentioned previously are individually weighted by the TikTok's For You recommendation system; which means that each For You is entirely unique to a user and their levels of interest (M.McGlew, 2020).

Negative Effects of Social Media in Mental Health

Social media has become so relevant for our society that its usage is now one of their main activities. This means that social media can play a big role in individuals' mental health. Recent studies have shown that the use of mobile devices and videogames are increasing in

characters with mental disorders (Firth et al. 2015). The time spent using social media is one of

the most important aspects while studying the negative effect that it can cause. One of the most

common daily activities for the present generation is the excessive usage of social media (Bhat,

2016). This disproportion has become a concern due to serious consequences, especially for

those dealing with mental health problems.

The four negative effects of social media use on an individual that I focused on include:

(1) Anxiety; (2) Depression; (3) Self-harm; (4) Cyberbullying.

Social Media & Anxiety

Anxiety is considered an affective, physiological, cognitive, and behavioral state; it can

occur as a result of the perception of threat. (K.Dobson, 2002). "Threats to future happiness,

threats to self-esteem, and threats to the individual's ability to make sense of the data of his

experience" (Spielberg, 1975g; Beck, Laude & Bohnert, 1974). Anxiety is one of the most

common mental disorders in the U.S. and the relationship it has with social media is not well

known. In a study made in Norway with adolescents and adults in ages between 16 and 88, those

who showed more signs of addictive social media use, showed more anxiety symptoms as well

(Schou Andreassen et al., 2016).

According to a study conducted by Anna Vannucci, M.Flannery and Christine McCauley

they studied the hypothesis that social media might be a main source of stress which elevated

anxiety symptoms (2016). Certainly, Facebook use has been associated with stimulation of the

physiological stress response (Mauri et al., 2011). Social media apps can be platforms where

people want to show a "life" that is not always completely transparent or realistic. It has been

proven that users would photoshop their pictures for social medias like Instagram in order to obtain some "acceptance" from the public. This is not only bad for the individual posting these "fake" pictures, but also for the other users looking at the content. Moreover, it has been shown that when social media users do not achieve the reactions expected from their followers (likes, comments, etc.), this can also elevate their anxiety levels (A. Vannucci, M. Flannery & C. McCauley, 2016).

Social Media & Depression

Depression is defined as a complicated state (Gaighead, 1980) that can occur as a result of a perception of an important threat (K.Dobson, 2002). Social anxiety is a psychiatric illness characterized by fear of embarrassment or humiliation, leading to the avoidance of social situations. The disorder interferes with social and occupational functioning and Internet use in general and the specific experience of being a victim of cyberbullying are both associated with more suicidal thoughts and self-injurious behaviors (E. Hoge, D. Bickham & J.Cantor, 2017). Depression is one of the most common mental disorder in the U.S in adolescents and young adults. According to Single Care Team, 17.3 million adults which is 7.1% of the adult population in the United States have had at least one major depressive episode (National Institute of Mental Health, 2017).

Even though anxiety and depression usually occur together because of their similar symptoms, while studying the use of social media, the findings were a little different. Some studies have shown "a correlation, but not a causation". However, there are many contradictions on the topic and the association does not seem to be clear according to an article called Social

Media and Depression written by Thapa, R and Subedi, S. Moreover, even though some studies have shown how depression and Facebook usage can be related, others have shown how positive interactions with the app might also help with the mental disorder. According to Kalpidou et al (2011), some college students who testified having higher numbers of online friends on Facebook, have as well reported having lower emotional alteration to college life (A. Strickland, 2017). However, this same research study discovered that those college students who would spend a higher time on this social media app, would as well show lower self-esteem (A. Strickland, 2017).

Social Media & Cyberbullying

Cyberbullying is defined by Smith *et al.* (2008) as an "aggressive intentional act carried out by a group of individuals using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend himself or herself". (S. Rao, D. Bansal & S. Chandran, 2018). Cyberbullying, a growing problem associated with social media use, has become a significant public health concern that can lead to mental and behavioral health issues and an increased risk of suicide (R. Garett, L. R. Lord & S.D. Young, 2016). Recent studies have reported cyberbullying organizes a growing problem among the young population. In fact, some studies have shown how some online apps are constantly being used as platforms for bullying which is big concern. Cambridge Core shows in an article how cyberbullying can affect the individual's self-esteem, academic achievement and emotional well-being (2018).

Moreover, another article made in Australia and written by M. Price and J. Dalgleish explains how cyberbullying can really affect young people's grades in school in a negative way

as well as feelings of sadness, anger, fear and depression (2010). On the other hand, something found in a research study called "Automatic detection of Cyberbullying in Social Media Text", is that while the "regular" bullying would be compounded by only the bully and the victim; cyberbullying counts with the harasser or bully and the victim as well as the bystander defender and the bystander assistant (2018). These two people play a big role on the cyberbullying conflict since one is the person who would help the victim while the other would be the person would help or encourage the harasser (2018). Cyberbullying usually consists on threat or blackmail, insults, curse or execution, defamation and sexual talk (C. L. Nixon, 2014).

Social Media & Self-Harm

Self-Harm can be defined as when an individual hurt his or her own body on purpose. The injuries can be either minor or fatal. These injuries are usually visible on the victim's body and therefore they can cause complicated health problems in the future (Medline Plus). Some of the most common injures include cutting, punching or burning yourself, as well as pulling out your hair, poking objects through body openings and breaking bones. The two most common causes for self-harm are poor coping mechanisms or trouble managing emotions (Mayo Clinic). Self-Harm is a public health challenge not only in the U.S, but also in the rest of the world. It is common to find non-fatal repetition; however, it could be a good indicator of future successful suicide (N. Shanahan, C. Brennan & A. House, 2019).

Self-Harm is one of the most concerning consequences of cyberbullying through social media. In fact, according to a research study where they reviewed five articles about the impact of cyberbullying related to the suicidal risk on young individuals; two out of these articles stated,

"cyberbullying victimization as a mediating factor in the relationship between heavy use of social media and suicidal ideation and behavior" (S. Sampasa-Kanying & H.A. Hamilton, 2015). On the other hand, social media can also be a great tool to identify those who are planning on injuring themselves. In a study conducted by Brown, they reported a content analysis of pictures posted on Instagram. These pictures allowed the understanding of how communication can be found on networking platforms nowadays (F. Arendt, S. Scherr & D. Romer, 2019).

COVID-19, Social Distancing & Social Media Usage

The COVID-19 pandemic and all its consequences have been very difficult for many people and their mental health, it has created new barriers for people already suffering from mental illness and substance use disorders (C. Muñana & P. Chidambaram, 2020). According to a KFF Tracking Poll conducted in mid-July, 53% of adults in the United States reported that their mental health has been negatively impacted due to worry and stress over the coronavirus (C. Muñana & P. Chidambaram, 2020). Additionally, more than 42% of people surveyed by the US Census Bureau in December reported symptoms of anxiety or depression in December, and increase from 11% the previous year (A. Abbott, 2021).

Quarantine is often an unpleasant experience for those who are not use to it (S. Brooks, R. Webster, L. Smith, L. Woodland, S. Wessely, N. Greenbberg & G. Rubin, 2020). The distress in the pandemic probably stems from people's limited social interactions, tensions among family in lockdown together and fear of illness, says psychiatrist Marcella Rietschel at the Central Institute for Mental Health in Mannheim, Germany (A. Abbott, 2021). A recent study found evidence that the COVID-19 pandemic might be damaging mental health in the general

population (Gao et al., 2020; Tull et al.,2020) and spread them to a broader range of mental health outcomes (B. Marroquín, V. Vine & R. Morgan, 2020).

Social media use resulted in psychological problems such as fear of missing out, sensitivity related to the number of likes received, public vulnerability due to expression of mood and anxiety of losing social media accounts (T. Kaya & H. Bicen, 2016). People are using their technological devices widely because of the quarantine and lockdowns (D. Roy, 2020). When the recent research related to COVID-19 was examined, Moghanibashi-Mansouriehab expressed that anxiety levels related to COVID-19 are higher within the people who follow more news (A. Moghanibashi-Mansouriehab, 2020).

Positive Effects of Social Media and Mental Health.

Recent studies have found that social media can be a helpful platform for people with mental illness. By learning from peers online, these individuals can gain insight about important health care decisions, which could promote mental health care seeking behaviors (J.A. Naslund, K. A. Aschbrenner, L. A. Marsch & S.J. Bartels, 2016). Additionally, other recent researches express how social support network benefits mental and physical health (Cohen & Uchino, 204). Social support network indicates the emotional quality of relationships that include the people that care about them, love them and listen to them to; this is often delivered by a network of family or friends (Gonzalez et. Al., 2004).

Finding support online has been something beneficial for those suffering from mental disorders. While talking about the most common mental health problems related to social media previously, I mentioned depression and anxiety which are usually related to feelings of sadness or loneliness. Recent studies have found that social media can give mentally ill people some sort of comfort since they can see that there are other people struggling with the same problems. In fact, some social media platforms like Facebook have allowed some space in their sites for support groups (J. A. Naslund, S.W. Grande, K. A. Aschbrenner & G.Elwyn, 2014). Social media is giving mental ill individuals a new voice to express their feelings and emotions since it is an easier way to do so (J.A. Naslund, K. A. Aschbrenner, L. A. Marsch & S.J. Bartels, 2016).

Social media brings a new dimension to health care as it offers a medium to be used by the public, patients, and health professionals to communicate about health issues with the possibility of potentially improving health outcomes. (A. Moorhead, 2013). A recent study

conducted by George Gkotsis, Anika Oelrich, Tim JP Hubbard, Richar JB Dobson, Maria Liakata, Sumithra Valepillai and Rina Dutta from the University of Warwick (2017) shows four different linguistic features. These methods and materials were social media data from Reddit, determining linguistic features, word-based classification to assess subreddit uniqueness and detecting sentiment and happiness in posts. As a result, they obtained that there are discriminatory linguistic features among subreddits, such as sentence complicity or vocabulary usage. In addition, they found out that even though most of the sentiment was negative, that they also found some positive sentiment and happiness in posts.

Machine Learning and Mental Health

Machine Learning (ML) is a form of artificial intelligence which is placed to transform the twenty-first century (J. Nichols, H. Herbert & M. Baker, 2019). It is a discipline of AI, where computer programs (algorithms) learn associations of predictive power from example in data. Machine learning uses a broader set of statistical techniques than those typically used in medicine (T. Panch, P. Szolovits & R. Atun, 2018). Machine learning has become a "General Purpose Technology", in that it is universal, can be improved over time and has the potential to create complementary innovations (E. Helpman, 1996). Additionally, interpretable machine learning would be an effective tool to mitigate some behavior issues that machine learning sometimes faces like the lack of transparency that can really frustrate most customers. It gives machine learning models the ability to explain or to present their behaviors in understandable terms to humans (F. Doshi-Velez & B. Kim, 2017).

There are some studied pointers that can be associated with the development of mental health problems. Including psychopathological characters at the beginning of individuals' childhood can make the changes of mental health problems higher (Ashley E. Tate, 2020). Tendencies on their neurodevelopment can as well be found in order to predict some other disorders like autism and ADHD, giving individuals diagnosis and recommendations.

A recent study directed by Kim, Lee, Park and Han (Kim et al., 2020), researcher from Sungkyunkwan University and Carnegie Mellon University showed how machine learning can identify a person's mental state just based on their posted data (A. Quan, 2020). Moreover, Joseph Simpson (2017) seems to agree with this statement since he expresses how machine learning algorithms are perfect to predict accurate possibility of suicides. The particular reason for the circumstance is the analysis of hundreds of factors including race, gender, age, socio-economic status, physical and metal medical history, and other information which may be deemed relevant (C. Walsh, 2017).

Having machine learning on our side in order to combat mental health has been a key element on this topic. Being able to predict possible trends in mental health has made a difference for mentally ill people when trying to harm themselves. Using machine learning as a tool has allowed for the possibility to provide the impediment of suicides in young adults. These machines can interpret the world as humans do, understand language and learn from real-world examples (L. D. Jones, 2013).

METHODOLOGY

This research was conducted with the intention of providing a literature review on the importance of social media in our society. A literature review is often defined as a survey of scholarly sources on a specific topic (McComber, 2020). It delivers a synopsis of current knowledge, letting you recognize significant theories and methods in the prevailing research. I focused on the positive and negative effects of social media on mental health. Social media algorithms, trends and people's behaviors related to these topics were studied in order to obtain better results. Over 65 research papers were read in order to collect the accurate data for the topic. These articles gave me enough information to understand the different factors that can influence mental health when using social media. Moreover, while collecting the data I found more information than expected which made the quality of this literature review higher.

DISCUSSION AND CONCLUSION

Social media has been one of the highly debated topics for the last decade because of the relevancy it has in people's lives on a daily basis. Along with technology, social media has been evolving extremely fast in recent years and more platforms have been invented with different purposes. Some of these apps or platforms give us the opportunity to communicate with distant loved ones (Instagram, Facebook or Snapchat) while others lead with an entertainment aspect (Reddit or TikTok), or even for professional grow (LinkedIn). Even though these can have different purposes with the audience, they all have something in common; social media is the most common way of communication nowadays. According to a research conducted by students from the University of Warwick, social media, such as Twitter, Facebook and Reddit, have become an accepted platform to communicate about life circumstances and experiences (2016).

The idea of this research was to find out the positive and negative effects of social media in mental health. While not having the knowledge expected before my research, it was surprising to me that social media had a more positive effect on mental health than I could have ever imagined. Because of the improvement of technology, platforms can be used as a support system for mentally ill people if using them the right way. However, I believe that the understanding and knowledge of the different social media platforms and the way they work is key in order to use them for our advantage. We cannot control the way the algorithms for these apps are built, however, if we learn about their features and rankings, we can trick them for our benefit and make social media a better and safer place. I also found it interesting that social media can be a place for people to find sympathy and therefore support from other people that are going through the same thing.

Moreover, because of the sympathy and support mentally ill individuals have found on social media, they now feel more confident expressing their feelings and emotions on these platforms. While it is not only beneficial for them in order to just express how they feel and not feel alone throughout their journey, it has also been discovered to be useful in identifying users with depression, anxiety and even suicidal thoughts and potential attempts (Gkotsis, 2016). Additionally, machine learning plays a big role on this topic since it has been the tool that has allowed most of these discoveries. The improvement of machine learning was definitely something that stood out in my research since it is getting more involved in the health care environment. Nowadays, doctors and professionals are able to have access and use machine learning as a tool to get valuable information about the people. In this way, professionals can identify patients in need and provide their services to them so that their situation becomes better.

On the other hand, even though positive effects of social media in mental health were discovered, some negatives were found as well. Social media seemed to cause negative effects mostly towards individuals with depression and anxiety which were two of my main subtopics that were researched. Studies found that even though receiving a text message, like or comment can make individuals' brains produce both dopamine and oxytocin; if those text messages, likes or comments are absent, the effect can be very negative for people with mental illness (Naslund, 2020). That is why it is important to understand both the benefits and risk of social media usage, as well as the time consumed on them. It was found that excessive time spent on social media can elevate anxiety levels. Therefore, it is recommended for people with mental health issues to

be aware of the daily time spent on social media and restrict themselves of the time they find healthy and appropriate for their specific cases (Hoge, Bickham & Cantor, 2017).

Additionally, another important aspect of this research that was found to be one of the negative effects of social media in mental health was cyberbullying. Even though bullying has been a topic that people would talk more about in the past, cyberbullying is still not known as much as it should. Cyberbullying is a very common type of bullying nowadays due to the access kids and teenagers have to smartphones and therefore social media. Cyberbullying has been identified as a reason for kids, teenagers and young adults to isolate themselves, have anxiety and depression and even harm themselves.

Throughout my research I have realized how important the time spent on social media is for people's mental health. Even though there can be benefits and positive effects while navigating through the different apps, it is still hard to predict whether the experience will be positive or negative. Therefore, I believe that mentally ill individuals and people around them should be careful and smart when going onto social media so that they reduce the possibilities of having a negative experience as much as they can.

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