Social Media and Millennials

Technology was once associated with simply manufacturing and equipment for production, but since the development of social technologies such as social media, the benefits of simply technology improving businesses profits and productivity, might not readily apply to human productivity (Skaržauskienė, Tamošiūnaitė & Žalėnienė, 2013). Instead, social technology such as social media must be viewed from the perspective of not necessarily achieving results on a manufacturing product line, but rather as a communication technology (Skaržauskienė, Tamošiūnaitė & Žalėnienė, 2013). Davies, Musango & Brent (2016) suggest that social media addictions can alter the quality of interpersonal communication implying that resources and time with social media and face-to-face interactions must be appropriately managed.

Social media will be reviewed in the Millennial cohort. The potential benefits and risks of social media use will be discussed through the perspective of Nicholas Carr's (2011) Shallowing Hypothesis, and based upon the findings potential intervention programs will be discussed that can be developed to help Millennials manage their time and resources between social media and face-to-face interactions along with mitigating the deleterious effects of addictive social media use. Future research and considerations will be suggested through the perspective of addictive intervention programs, similar to that of alcoholism as the emergence of social media is relatively new and consideration of intervention programs is lacking in the literature.

Social Media Correlations

Social media is any service online that allows individual users to create and share content (Bolton et al, 2013). Programmers continually design the Internet use to be more efficient and

convenient (Carr, 2011). Millennials, born from 1982 to 2004, are the first generation to have

grown up with this social media technology (Belhadjali, Abbasi & Whaley, 2016). This cohort

will be the first generation to have their entire lives in a digital environment (Bolton et al, 2013).

As can be seen in Figure 1, relative resources and time devoted to either Facebook

communication or that of interpersonal face-to-face communication exhibits an inverse type

relation. The more time and resources spent with using online platforms such as Facebook, the

less time and resources are spent with engagement of face-to-face communication and relations

(Davies, Musango & Brent, 2016). Depending on the relative success of either form of

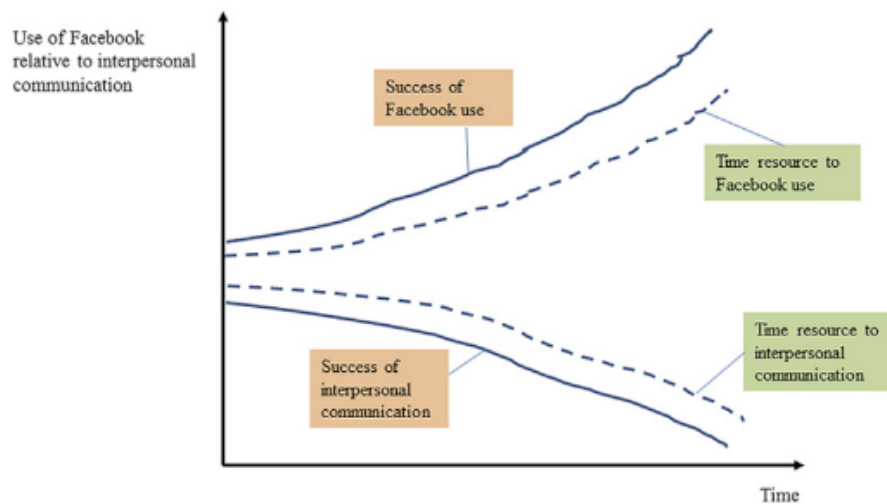communication reinforces continual use (Davies, Musango & Brent, 2016).

Figure 1. Investment of time resources toward interpersonal communication and associated
Facebook use. Image from Davies, Musango & Brent (2016)

This relationship is of potential concern as online communication is suggested to be a

weaker form of communication (Best, Manktelow & Taylor, 2014). This is because online

communication might provide a false sense of security resulting in depression and social

isolation (Best, Manktelow & Taylor, 2014). This concern and consequential effect can be

understood through three problems relating to efficient communication. The first problem is that

of the accurate transmission of symbols, the second problem is that of semantics in how these symbols actually convey meaning, and the third is that of effectiveness of the symbols and how the received meaning affects behavior (Best, Manktelow & Taylor, 2014). Online communication can distort or leave absent specific information potentially exacerbating these problems decreasing the overall quality and effectiveness of the communication (Best, Manktelow & Taylor, 2014).

Verbal and nonverbal messages have different characteristics that can be perceived easier than others (Argyle, Alkema & Gilmour, 1971). However, when there are inconsistent nonverbal and verbal messages, a receiver of information will not only be confused as to the message, but associate the sender of the message to be insincere (Argyle, Alkema & Gilmour, 1971). It was also observed in this study that nonverbal messages if perceived as hostile, were associated with being negative (Argyle, Alkema & Gilmour, 1971). The context of a given message can also distort the meaning of the message (Barrett, Lindquist & Gendron, 2007). Examples of conflicting nonverbal and verbal messages and the potential consequences within the context of being online will be discussed later in this paper.

Social media studies have also shown correlations of addictive social media use with increased levels of narcissism and depression, along with a decreased tendency for critical thinking. These will be further reviewed.

Decline of critical thinking

In 2011, Nicholas Carr wrote a book called *The Shallows: What the Internet is doing to Our Brains.* In this book, Carr (2011) makes the suggestion that the Internet being based on algorithms in which users must follow prescribed scripts, that this preprogramming is changing

how people think and express themselves today. Similar to what the invention of the printing press did years ago in allowing individuals to selectively print words on paper and distribute these to other individuals, the invention of social media is not only allowing for selection and distribution of content to be shared, but also forcing individuals to incorporate this preprogramed logic into their own logical schemas for critical thinking (Carr, 2011).

Carr (2011) makes the suggestion this adaptation forcing individuals to incorporate the use of social technologies into our lives, is numbing the individual's ability to critically think. Carr (2011) further suggests that a calm and attentive mind is required for deeper thinking and that the Internet is more like a "mesmerizing buzz of the urban street" (p. 220). Carr (2011) calls this the Shallowing Hypothesis where social media, designed based on rapid and shallow thought, results in both moral and cognitive shallowness.

Annisette, Pallesen, and Griffiths (2017) in their work decided to test the claim presented by Carr's (2011) Shallowing Hypothesis. They hypothesized that increases in text messaging and social media use, would be negatively associated with reflective thought and life goals, similar to the postulation of the Shallowing Hypothesis. In this particular study of Canadian university students, it was indeed found that social media can compromise the ability for moral judgment and decline in reflective thinking (Annisette, Pallesen & Griffiths, 2017).

Examples of shallowness in reflective thinking and moral judgment online, can be observed in the case study review by Pendergrass, Payne and Buretz (2016). Shown in Figure 2, Lindsay Stone is standing beside a sign in Arlington Cemetery, a National monument honoring military soldiers that were killed in action. In this picture that was posted on Facebook, Lindsay is shown appearing to mock the sign that states visitors need to be silent and respectful when

visiting. Instead, Lindsay is appearing to be loud and disrespectful with flipping the middle finger.

Lindsay initially found amusement amongst her online friends contradicting the sign's rules for the cemetery. However, not thinking about the potential repercussions of such a post to her online audience, Lindsay's post eventually went viral beyond her relatively small online network of friends as a result of unethical and immoral claims by other online users outside of her network (Pendergrass, Payne & Buretz, 2016). This undesirable publicity eventually led her to being fired from her job despite her job being unrelated to her post, and further created issues in her applications for future employment opportunities (Pendergrass, Payne & Buretz, 2016).

Figure 2. Lindsay Stone Facebook picture at Arlington Cemetery. Image from Pendergrass, Payne & Buretz (2016).

Another example in the case study work of Pendergrass, Payne and Buretz (2016) is shown in Figure 3 where Justine Sacco made a tweet on Twitter about a trip to Africa. This tweet was posted prior to her departure into Africa and after the 11-hour flight, her relatively small amount of followers in the magnitude of hundreds went into tens of thousands (Pendergrass, Payne & Buretz, 2016). Similar to Lindsay, Justine did not think critically about the repercussions of such a post to her online audience and these thousands of other online users

outside of her network, denounced Justine's post as immoral and unethical based on racial

stereotypes (Pendergrass, Payne & Buretz, 2016).

Figure 3. Justine Sacco tweet that went viral as a result of cybershaming. Image from
Pendergrass, Payne & Buretz (2016).

Increased narcissism

Levels of narcissism have been reported to be higher in college students today than

previous generations (Bolton et al, 2013). Narcissism is related to fantasies of unlimited success,

a feeling of special importance, lacking in empathy, arrogance, and envy, whereas self-esteem is

more about core beliefs and self-evaluations (Andreassen, Pallesen & Griffiths, 2017). It was

found that narcissism was positively correlated with addictive social media use and self-esteem

was negatively correlated (Andreassen, Pallesen & Griffiths, 2017).

Further, it has been shown that people have a tendency to present themselves in a biased

and favorable way on Facebook (Chou & Edge, 2012). Based upon the design of social media,

individual users are able to control the way in which posts are publicly visible. These users have

a tendency to manage more favorable impressions of themselves through editing of messages,

selection of certain photos, highlighting specific positive attributes, or presenting one's ideal self

(Chou & Edge, 2012).

Increased depression

It has been suggested that social media users exposed to happy related posts, can actually lead to becoming depressed as it invokes a social comparison effect (Kramer, Guillory & Hancock, 2014). This social comparison effect is where online users feel that they are alone, but by posting in a public type forum all together, creates the perception that makes it acceptable to feel alone (Kramer, Guillory & Hancock, 2014). From Figure 4 it can be seen the likelihood of depression with respect to increases in frequency of social media. The x-axis is the total time in minutes per day where Q4 represents 121 min or more (Sidani et al, 2016). From social media use per day, per week, and even on a larger global scale, depression increases with increased social media use (Sidani et al, 2016).
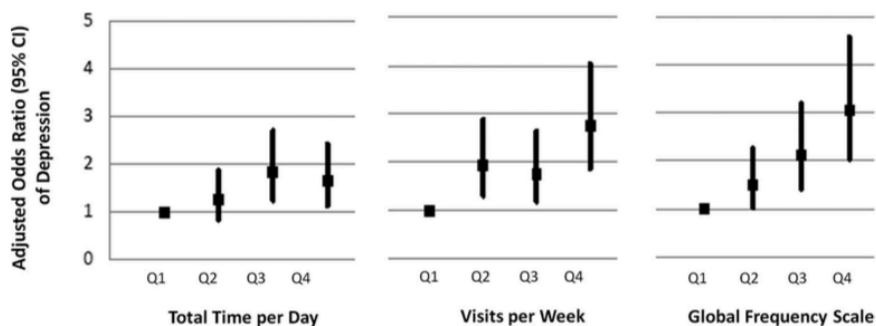

Figure 4. Odds of depression as a function of social media frequency. Image from Sidani et al (2016)

Other work on adolescents demonstrated similar results of increased anxiety and depression with higher social media (Barry, Sidoti, Briggs, Reiter & Lindsey, 2017). Signs of depression found in ages up to 18, have been found to eventually result in risky behavior and result in long-term consequences throughout that individual's life (Werner-Seidler, Perry, Calear, Newby & Christensen, 2017), making the study of depression in Millennials of potential concern with long-term consequences.

Life Stage or New Phenomena for Millennials?

It has been suggested that there has been a tendency to study students who are undergoing life stage cycle changes and that this could be affecting the social media research studies and relative conclusions draw from such studies (Bolton et al, 2013). In young adulthood, depression often begins as a result of natural life stages (Sidani et al, 2016). Therefore, the creation and maintenance of friendships during adolescence is a significant process (Best, Manktelow & Taylor, 2014). There have been strong correlations demonstrated with social support and that of individual subjective well-being (Best, Manktelow & Taylor, 2014).

Adolescents must overcome specific markers in becoming adults through identity exploration in finding stability in work, love, and education (Santrock, 2009). Millennials are said to be the "Peter Pan" generation where there is a tendency to delay the entering of adulthood through postponing of marriage and buying own homes as a result of fear from their parents' own personal experiences suggesting to delay these because of their own relative lack of success or regret in such decisions at that age (Bolton et al, 2013; Santrock, 2009). Santrock (2009) suggests that there is "more adolescence" to be experienced in Millennials today and maturity must be continually developed even after the period of adolescence in these individuals today (p. 403).

Social Media and Personality

Personality

Despite the overlap of research sample selection of Millennials undergoing a transitional life stage for the purposes of studying the phenomena of social media communication, the two concepts can be further differentiated through possible consideration of personality

characteristics and motivations of individual online users and their respective social media use. Personality through the Big 5 model, gender, and age considerations will be reviewed along with motivations for social media benefits and associated risks with individual use. Social media related to happiness will also be reviewed.

Big Five

The Big Five personality model is a widely accepted personality theory that measures aspects of traits such as neuroticism, extraversion, openness, agreeableness, and conscientiousness (Burger, 2014). Stability of the five-factor trait model across time has been shown to be both stable and not stable amongst individuals as there is a situation vs. trait controversy (Burger, 2014). In adolescents specifically, there is a lack of evidence to support the complex relationship amongst genetic, biological, and environmental factors of traits remaining stable across time (Shiner, 2015) and that specific situations might alter these traits depending on where individuals are at in their lives (Burger, 2014). However, much work has been performed utilizing this personality model to study social media use as a key assumption in the Big Five model is that the model assumes the identification of an average person and their likelihood to act in situations exhibiting these specific five traits (Burger, 2014).

Higher levels of extraversion were found to have a positive correlation with that of social media and texting frequency (Annisette, Pallesen & Griffiths, 2017). Extroverts also had a tendency to have more friends on Facebook and belong to many more groups (Kim, Sin & Tsai, 2014). Other aspects of the Big Five model such as agreeableness has been shown to link to competitiveness and critical analysis of information online; higher levels of conscientiousness were associated with higher online searches and online involvement; higher levels of openness to

experience were more likely to blog; and high levels of neuroticism high levels utilized more social services, and preferred internet more than face-to-face (Kim, Sin & Tsai, 2014).

Due to the preprogrammed design of Facebook, there are continual social comparisons being made amongst users as individuals scroll through their home feeds reviewing the carefully selected photos and posts of other individual users. Some researchers suggested that the Big Five lacked the appropriate perspective in understanding individual characteristic use online (Gerson, Plagnol & Corr, 2016). Through the perspective of the Reinforcement Sensitivity Theory, it was found that individual impulsivity online was negatively correlated with eudemonic well-being, but overall Facebook use was positively correlated with subjective well-being (Gerson, Plagnol & Corr, 2016). Compulsive use of social media was also shown in a different study to negatively correlate with learning outcomes in a study of Kuwait students (Aladwani & Almarzouq, 2016).

The Reinforcement Sensitivity personality theory is suggested to extend itself beyond the Big Five in that it is based on psychological and biological processes such as the behavioral approach, behavioral inhibition, and fight-flight-freeze (Gerson, Plagnol & Corr, 2016). The behavioral inhibition system (BIS) is concerned with the future and is activated when there is conflict within internal and external systems (Gerson, Plagnol & Corr, 2016). When levels of BIS are high, individuals are likely to make comparisons that are negative amongst other users (Gerson, Plagnol & Corr, 2016). Higher levels of BIS were also found to have a negative correlation with that of subjective well-being (Gerson, Plagnol & Corr, 2016).

Gender, age and other demographics

In consideration of gender and respective online use, men have been shown to have a tendency to discuss topics related to more about objects and personal things, whereas women

engaged more with social and psychological topics on social media (Park et al, 2016). It was

shown that being female and younger, individuals were more at risk for excessive Facebook use

(Przepiorka, Blachnio & Diaz-Morales, 2016) and that women are more likely to use social

networking sites overall, where as men were more likely to utilize task oriented content on the

internet (Sin, 2016; Kim, Sin & Tsai, 2014).

Women were also suggested to have more friends and spend more time than men who

use online for task and less interpersonal purposes (Kim, Sin & Tsai, 2014). However, both

female and male were found no significant difference with assertiveness in relation to the Big

Five personality model (Park et al, 2016).

It was also found that there was a tendency for higher addiction levels in social media in

younger online users than older (Andreassen, Pallesen & Griffiths, 2017; Przepiorka, Blachnio &

Diaz-Morales, 2016). This addictive social media use was found to be not only in lower age, but

also when individuals were not in a relationship, had lower education and income (Andreassen,

Pallesen & Griffiths, 2017).

Motivations

In review of Figure 1, Davies, Musango, and Brent (2016) suggest that the more relative

success of either Facebook use or face-to-face communication will result in continual use of

either medium for interpersonal relations. People have a tendency to fight emotional and social

loneliness through searching for positive emotions (Lima, Marques, Muinos & Camilo, 2017).

Since Facebook has allowed people to share and connect with others all around the world

(Davies, Musango & Brent, 2016) there is great potential in satisfying these positive emotions

through Facebook likes and comments as it has been shown that higher levels of self esteem

were positively correlated with greater number of comments on social media platforms (Aladwani & Amarzouq, 2016).

Other motivations can be seen through the Social Compensation Hypothesis, where introverts are likely to utilize social media to compensate for the relatively poor levels of social interaction (Lima, Marques, Muinos & Camilo, 2017). Through the Enhancement Hypothesis, individual users can grow their social status through the relative popularity of their number of Facebook likes and comments growing (Lima, Marques, Muinos & Camilo, 2017).

Benefits

Facebook is a potential platform and medium to help individuals fulfill their need for social connection as a basic human need (Kross et al, 2016; Davies, Musango & Brent, 2016). There have been positive correlations between social relations and the impact on overall health (Lima, Marques, Muinos & Camilo, 2017). Thus Facebook can have the potential to improve an individual's overall health.

These perceived online social benefits and control individual users have, allow anxious individuals to socialize and interact easier online (Aladwani & Almarzouq, 2016). Individuals are likely to use social media to obtain higher levels of self-esteem or to escape from their relatively low levels of self-esteem (Andreassen, Pallesen & Griffiths, 2017).

Other benefits have been found in academic settings where Facebook has been shown to improve teaching and assessment strategies through the use of closed Facebook groups that incorporated monthly face-to-face meetings (Daniels & Billingsley, 2014). Social media can provide access to information regarding mental health to improve both individual and larger

populations (Conway & O'Connor, 2016) and also be of benefit in seeking out information, passing of time, and self-education (Popescul & Georgescu, 2016).

Risks

Social capital has two aspects of both bonding and bridging relations, where bonding is more related to family relationships and bridging is more related to the causal relations across group boundaries (Lima, Marques, Muinos & Camilo, 2017). However, online researchers make a clear distinction in how they describe social capital and social relations, by using the word "perceived" social capital (Best, Manktelow & Taylor, 2014). Utilizing this word in the context of social capital, it seems that social media is bridging individuals, but not necessarily bonding them together as effectively as face-to-face relations in the example of developed family relations. That Facebook is actually undermining the perception of social connection rather than enhancing it (Kross et al, 2016) and that the individual's perspective on the development of close and supportive intimate relations can be jeopardized from the use of Facebook (Lima, Marques, Muinos & Camilo, 2017).

Other risks based upon misguided perceptions of social media use can lead to cyber bullying, social isolation, and exploitation (Best, Manktelow & Taylor, 2014). Recall both Figure 2 and Figure 3 with the cases of Lindsay Stone and Justine Sacco being cybershamed and exploited for their unethical and racist social media posts. This resultant cybershaming has been suggested to be both a form of social justice and sport (Pendergrass, Payne & Buretz, 2016).

However, there is concern for the growth of cybershaming in that it is a product of instant gratification that it is decreasing empathy amongst online individuals and is ironically not improving moral and ethical standards, but rather exploiting them (Pendergrass, Payne & Buretz,

2016). There are potential long-term consequences of increased cybercrime as it can be a bad

influence on adolescents and also decrease participation in offline activities and civic

engagement (Popescul & Georgescu, 2016; Hoffman, 2017). Civic engagement is implied to be

beyond not simply sitting at home implementing social justice.

Despite some research claiming benefits of integrating social media into academic

curriculums, an obsession with social media can evolve into compulsive behaviors in university

students (Aladwani & Almarzouq, 2016). That negative relationships have been demonstrated

where increased use of Facebook has resulted in a decrease in academic performance (Gupta &

Irwin, 2016). Facebook also has been linked to procrastination in students (Przepiorka, Blachnio

& Diaz-Morales, 2016).

Happiness and subjective well-being in relation to social media

Benefits of online use imply a correlation with that of overall happiness and subjective

well-being as users seek to satisfy their respective needs of everyday life information or forms of

social capital. Steptoe, Deaton and Stone (2015) suggest that subjective well-being can be

viewed from an overall life evaluation, hedonic well-being, and eudemonic well-being. That life

evaluation consists of thoughts of the quality of life, hedonism as the day-to-day feelings or

moods, and eudemonia on the purpose and meaning of life (Steptoe, Deaton & Stone, 2015).

This sort of deeper level of thinking about life-evaluation though, was shown to have decreased

as a result of increased social media use (Annisette & Lafreniere, 2017).

Happiness has been also associated with both having what one wants and wanting what

one already has (Larsen & McKibban, 2008). It has been found that online users spending more

time on Facebook per week, will form a perception that other online users have happier and

better lives than themselves (Chou & Edge, 2012). Online users who spend more time on social

media want what other people are posting about. However, by simply recognizing that through

hanging out with friends they already have, this desire for wanting what others have can be

mitigated with face-to-face interaction (Chou & Edge, 2012).

Happiness is also a combination of both self-centeredness and selflessness (Dambrun et

al, 2012). Annisette & Lafreniere (2017) have demonstrated increased levels of narcissism, a

form of self-centeredness, to increase with social media use.

In achieving levels of happiness, quality over quantity is has been demonstrated to be

more important (Larsen & McKibban, 2008). Online users are continually challenged to sort

through a large quantity of information everyday and that after a specific threshold of online

friends, quality of social relations tends to decrease.

Moderating and Managing Social Media Use

Efficacy of Research Results

One of the challenges in social media studies is the ethical questioning of how to conduct

proper research. The first realization of this was back in 2012, when Facebook information was

utilized for research. This study that was the catalyst for debate as Facebook users and their

respective information was utilized without proper consent in an academic study (Albergotti &

Dwoskin, 2014). The concern was that individuals were lab rats for market and academic

research and felt their respective privacy was breached despite the public information shared on

Facebook (Albergotti & Dwoskin, 2014). Since 2012, research has been guiding its way

carefully through ethical considerations.

Social media studies have included Norwegian cross sectional samples (Andreassen,

Pallesen & Griffiths, 2017) to undergraduate students in Utah (Chou & Edge, 2012). However,

there is concern with the over representation of cross sectional research designs which are

relatively weak (Best, Manktelow & Taylor, 2014). That also, most of the social media research

has been focused on US sampling and reliance on self-reports (Bolton et al, 2013). Self-reports

can be biased as participants can answer questions to appear a certain way, but research has

suggested despite management of profiles being biased, that social media users do indeed

accurately present themselves to their respective networks (Park et al, 2016).

Of the existent research, there are studies demonstrating mixed or no effects, but

researchers suggest that consideration of a wider composition of social networks is needed to

possibly remove the confounding variable of single vs. multiple social media platforms being

utilized (Best, Manktelow & Taylor, 2014; Aladwani & Almarzouq, 2016). There is also concern

that effect sizes aren't significant enough for generalized conclusions with the research (Kross et

al, 2013).

Since the majority of research designs have implemented correlational approaches, lack

causality with the variables being tested can be inferred (Annisette & Lafreniere, 2017). Even

with larger sample sizes that could prove to have statistical strength, large sample sizes have

actually been suggested to limit the "gold standard" for social media measures as it introduces

too many uncontrollable variables (Sidani et al, 2016).

Managing Social Media

There are nearly 500 million individual users that interact daily on Facebook (Kross et al,

2013). Millennials having grown up with social technologies are utilizing more and more online

web searches for everyday life information, which is replacing the more traditional forms of print

and mass media (Sin, 2017; Sin, 2015). With the abundance of information available to online

users, there is growing concern as to how the information is being sorted (Sin, 2016). That there

is irrelevant, outdated, conflicting, and non-credible information to be managed (Sin, 2016),

making the Internet rules of engagement and the real world rules different (Popescul &

Georgescu, 2016).

Most online users will consume information through observation and lurking rather than

contribution through posting on social media (Bolton et al, 2013). Through their respective

online use, one form of information gained is the development of ambient awareness. This

typically emerges as the result of picking up on non-verbal messages in face-to-face interactions,

but has been shown to be present with social media use despite the passive nature of online use

(Levordashka & Utz, 2016). This development of ambient awareness type information has been

demonstrated amongst Twitter users where users were able to report on specific knowledge of

others from simple online activity and never have met them face-to-face (Levordashka & Utz,

2016).

However, there is a suggested threshold called the Dunbar number, in online networks for

people to connect and have quality relations, being around 150 online users (Davies, Musango &

Brent, 2016). One way to possibly realize the validity of this threshold is through a study on

tourism where residents were more inviting towards domestic tourism than outside tourists

visiting as up to a certain threshold domestic residents were able to remain relatively happy

(Okulicz-Kozaryn & Strzelecka, 2017). This suggests that the more people one has to seemingly

manage in their environments up to a certain threshold, the less likely the quality of reactions can

be maintained. Tourists or unrecognizable online users, can begin make others unhappy and result in less quality type relations.

This is where individual users must recognize the resources allotted for online and face-to-face relations. Recall from Figure 1, that the more use of Facebook, the lesser effort of resources and time goes into face-to-face interpersonal communication (Davies, Musango & Brent, 2016). Time on social media is stealing from time for actual relations (Lima, Marques, Muinos & Camilo, 2017). Creating a second life online should not replace the face-to-face friends (Lima, Marques, Muinos & Camilo, 2017). However, based upon the relative success, individuals will either continue to use more of Facebook or build interpersonal relations as can be seen in Figure 1 (Davies, Musango & Brent, 2016).

From an academic perspective, it has been suggested that social media can be further utilized as an argumentation and discussion platform (Kirschner, 2015). That a feeling of connectedness can be established through this type of controlled discourse, but the study revealed that narcissistic tendencies could emerge (Kirschner, 2015). In another academic study, the design of high interest level type lectures promoted more focused students than less engaging lectures where students tended to be distracted by Facebook (Gupta & Irwin, 2016).

Social media use is not always intended for maintenance of social relations or academic supplements, but can be used while waiting in line or when engaged with mundane activities (Barry, Sidoti, Briggs, Reiter & Lindsey, 2017). However, a more active compared to passive consumption and utilization of social media has been shown to increase bonding amongst individuals and decrease loneliness (Sidani et al, 2016).

Intervention Programs?

There is a growing fear that there is an irreversible damage in young people's brains as a result of their social media use that could potentially cause future psychological disorders (Popescul & Georgescu, 2016). It has been shown that certain emotional expressions posted on Facebook can actually reappear days later (Kramer, Giullory & Hancock, 2014). Mental health in general, is expected to double in economic resources from 2010 to 2030 in the United States (Conway & O'Connor, 2016). The cause for this was not stated in the article, but may suggest it to be the result of growing concern with that of social media.

Intervention programs for social media were not readily found in this assignment during the literature review. This could be based upon the relatively new emergence of the phenomena still attempting to determine the short and long term effects of social media use. However, social media addiction and intervention will be reviewed through the perspective of depression as an already established mental disorder and alcohol addiction recovery programs to possibly determine a viable intervention program for social media.

The use of negative emotion language on Twitter has been correlated to suicide statistics in the United States (Conway & O'Connor, 2016) and also in Japan (Gruebner, Sykora, Lowe, Shankardass, Galea & Subramanian, 2017). From the perspective of depression being a mental disorder that could lead to instances such as suicide, the Substance Abuse and Mental Health Services Administration (2017) suggests that intervention be simply becoming more involved with physical activity, being thankful for one's life, supporting social and family relations, recognizing purpose in life, and connection with community. However referring back to Figure 1, it might be difficult for individual users to break away from their energy of resources and time towards social media.

If Millennials are still in an academic environment, the program such as the Play it Smart Program focuses on utilizing football and academic goals to help students who have symptoms of depression (Chung, 2017). There are also more universal programs, not specific to student-athletes, which develop higher levels of self-esteem (Rivet-Duval, Heriot & Hunt, 2011). These programs are designed as part of recognizing depression during adolescence can result in further episodes later on in adulthood (Rivet-Duval, Heriot & Hunt, 2017; Werner, Perry, Calear, Newby & Christensen, 2017). However, drawbacks to these types of programs are if Millennials are out of school and are not football athletes.

There are however, different types of intervention including individual, group, computer, interpersonal, mindfulness, and wellbeing therapy (Werner, Perry, Calear, Newby & Christensen, 2017). Different types of intervention would need to be considered, as there are different addiction tendencies in social media that are related to cybersexual, social media, net compulsions such as shopping and gambling, information overload, and gaming (Andreassen, Pallesen & Griffiths, 2017). That one form of intervention might not readily apply or practically work in one social media addiction compared to that of another.

Regardless of the type of addiction, the guidance from Johnson (1980) in recovering alcoholic addiction may be a perspective in developing an intervention program with that of social media addiction. Johnson (1980) suggests that alcoholics are on a continuum of pain and that of euphoria with respect to their dependency on alcohol. That intervention needs to recognize the fine line of crossing over from being in a state of normal to that of pain along that spectrum (Johnson, 1980).

There are multiple ways to make aware an alcoholic of where they are along the spectrum. Alcoholics have a tendency to project their alcoholic addiction on something else in

their lives (Johnson, 1980). For example, one might be complaining about the poor sales of the company they work at when really the underlying message is this person is getting drunk every weekend. Johnson (1980) suggests that simply allowing a person to vent is simply their way of expressing their far cry for help and with careful consideration the conversation can be directed towards that individual receiving the appropriate intervention needed to successfully cross the threshold of pain back into feeling normal.

In the case of social media, users seem to have a tendency to utilize social media as a far cry for help in their respective posts and addictive behaviors lurking along social media platforms. This can be seen in the context of American culture, as there is a desire to become a celebrity associating number of likes and comments with increased popularity and social status (Twenge, 2014). That the increased levels of depression with social media use, are the result of the lack of results in the form of number of likes and comments in the fantasized track towards becoming an online celebrity. That the effect of becoming narcissistic is the result of placement of the locus of control on the individual as there is a continual management of how to present oneself in a positive way to methodically calculate one's probable success of becoming a celebrity. However, due to the nature of the fast paced communication style and the postulation of the Shallowing Hypothesis, the decrease in critical thinking of life long goals misplaces the actual reality of that individual's world and the instant gratification consumes the online user into a continual addiction of wanting more and more likes and comments.

Possible programs could be developed to allow online users to vent about the frustrations in their life and directed towards involvement of physical activities that are offline. This potential concept of an intervention program has already been demonstrated in the development of maturity in adolescents, where if they are allowed opportunities for meaningful contributions,

where feedback and positive support was given, adolescents be capable of developing their respective maturity (Santrock, 2009).

Another method of intervention suggested by Johnson (1980) is group intervention. Group interventions have been found to be helpful in that other members of the group can help identify and create definitions to distinguish the potential misguided and negative characteristic traits that are keeping individuals from being on the pain side of addiction to that of the normal along the spectrum. Group interventions that are face-to-face, could also be developed for social media users that are suffering from addiction and experiencing negative effects in their lives as a result of their addiction.

However, there seems to be a potential challenge in getting individuals to attend such meetings. No alcoholic will immediately admit to being addicted and with online users, this might be the case as well where individual users will not openly admit their addictive tendencies with online use. Alcoholics may be required to attend such group interventions as the result of exceeding the government set alcohol levels in one's system or drinking age. However there may be some circumstances where alcoholics consciously attend on their own accord. The government intervention might need to one day create social media levels and ages, similarly to alcohol in regulation of addiction and responsibility of users.

The issue of crossing the threshold from pain to that of normal is that the emotions can distort an individual's present reality from the fantasized world they immerse themselves as a result of their addiction (Johnson, 1980). It has been shown that emotions can bias the memory of the past to reconstruct more present and positive interests in individuals (Levine & Safer, 2002). Those who are more anxious and score higher on neuroticism have a tendency to overestimate their negative emotional states (Levine & Safer, 2002).

What needs to be developed, as the result of any intervention program for social media is the mindset to separate the emotions and thinking behind the social media use. There is a need to help individuals develop these mindsets and learn to be present with activities that are in front of them and not be focused on fear of missing out (FOMO) (Watson & Slawson, 2017). Online users could be made aware that they have FOMO by recognition of the number of social media accounts and their anxiety levels (Barry, Sidoti, Briggs, Reiter & Lindsey, 2017).

Despite the parents suggesting to their children to postpone marriage and can stay at home after college as a result of their past negative experiences, the work of Barber, Optiz, Martins, Sakaki & Mather (2016) demonstrating that older adults have more of a preference towards positive information than negative can have a potential positive impact in an intervention program. This positivity effect of focusing on more positive information can be helpful where older adults can help younger adults focus on more positive information rather than negative information in their lives.

Part of the mind set that needs to be developed in a social media intervention program would need to incorporate problem solving skills to help build back the skill of critical thinking that is being lost as a result of increased social media use. Sin (2016) suggests two styles for problem solving, problem focused and emotional focused. Problem focused is the objective of resolving the problem whereas emotion focused is managing the emotions that are induced by the problem (Sin, 2016). Learning to differentiate depression levels as a result of possibly the American celebrity cultural effect of online use can prove to be beneficial in improving overall happiness in a Millennial's life.

Summary and Conclusions

Summary of Research

If there is one concept to take from the emergence of social media and the respective research associated with that of Millennials, is that it has generated more questions than answers (Bolton et al, 2013). That social media has allowed the poor to get richer through the Social Compensation Hypothesis and also the rich to get richer through the Social Enhancement Hypothesis in terms of perceived social capital (Lima, Marques, Muinos & Camilo, 2017). That social media has enabled introverts to engage in social interactions that are relatively comfortable. That extroverts can gain grow their perceived social capital as the result of increased social media use. Social media has been demonstrated to increase levels of depression and narcissism in online users and also decreased critical thinking skills. But social media has also been linked to improvement in specific academic contexts and social contexts.

Technology has been and will be continually developed to improve the productivity of manufacturing and equipment capabilities, but the improvement and continual development of social technology might not be similar in comparison with that of human productivity. Rather, social media use must be carefully considered for the potential benefits and risks for online users. A certain type of mindset is required for online users to separate their emotions and have clarity in their overall thinking schemas.

Intervention programs need to be considered to mitigate long-term consequences of depression, narcissism, and decreased critical thinking skills. This will help users manage their online relations with that of face-to-face relations. Programs could be developed for individual and groups similarly to how recovering alcoholic programs have been developed that incorporate both young and older adults. However, there might be difficulty in getting online users today to

openly admit their addictions and to see the negative effects of online use in their lives.

Government intervention in the form of laws may need to one day intervene to help regulate the

addictive tendencies similar to that of alcohol.

Future Programs and Areas of Research

Social media is certainly here to stay with that of human interactions. Everyone today can

be seen having some sort of smart phone. Similar to how words in a dictionary can be created

and eventually be stripped from everyday use in language (Curzan, 2014), social media has been

stripping away how individuals interact and redefining a new way of social interactions.

There is opportunity in social media to provide helpful information for social behavioral

and health science (Gruebner, Sykora, Lowe, Shankardass, Galea & Subramanian, 2017). That

the overall picture of social media does not have be so bleak on the horizon of human

development as postulated by the Shallowing Hypothesis. Future research might consider how

government laws such as drinking age and drinking limits affect addiction to alcohol, to help

understand if laws are eventually needed to moderate social media.

Millennials are the first generation to experience social technologies in their entire life.

As early as 2 years old children can begin to decipher emotions on the faces that they see in their

immediate environments (Barrett, Lindquist & Gendron). That if the content of online activity is

not monitored at an early age, individuals can begin to have their thinking programmed and

shaped in accordance to social media. Research will need to be performed on the short and long

term effects of social technology use in children.

Another research approach that can be possibly utilized is that of phenomenological

research to help rethink the direction of social media research. Moustakas (1994) proposed three

steps in understanding phenomena from a qualitative perspective that could be possibly used to design quantitative research studies. The first is that of Epoche in which what phenomena is being viewed is to be seen in a perspective that is unbiased and freshly revisited from everyday thought. That social media seen to be helping and aiding connection all around the world, might need to be revisited as a result of depressive behavioral tendencies.

The second is that of Transcendental-Phenomenological Reduction in which the results from the Epoche step are now broken down into the most basic constituents that derive the phenomena. Maybe the elements will be that of narcissism, depression, perceived social capital, and decrease in critical thinking. Or maybe there will be different elements that have not yet been considered.

The third step is that of Imaginative Variation is to then synthesize these elements and see the phenomena in a new way. That despite the seemingly negative portrayal of social media throughout this paper, a more positive effort can be made in teaching users to manage it more appropriately with their face-to-face and online relations.

The Belmont report can also be of guidance in future research designs as it specifically states the need to maximize the potential benefits while minimizing the harms (US Department of Health and Human Services, 1979). That research is focused on maximizing the benefits of social media instead of exploiting the relatively negative correlations being demonstrated.

In a national study across the United States, it was found that the major ethnic group of White Americans was significantly happier than the other ethnic groups (Kanazawa & Li, 2015). It was also demonstrated in a correlational study that happiness levels of age were associated with respect to place as younger generations valued accessible amenities, whereas older generations valued more quality of services (Hogan, Leyden, Conway, Goldberg, Walsh &

McKenna-Plumley, 2016). Other investigative research with social media would need to

consider more demographic variables and their respective relations to that of social media. Do

major and minor ethnic groups differ with their respective use in social media? Also, more

specific contexts of when social media is utilized with respect to what is valued in old and young

would need to be considered as young and older individuals value different aspects in their lives

as a result of the needs possibly arising from life stage cycles.

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