Many college students are active users of social media during their college career, but the relationship between their usage of social media and their happiness is unknown. Each sex is known to have differences in the way they behave, think, and perceive things, so it assumed their happiness may differ as well. The given hypothesis was that men are happier than women with the use of social media. This study sought to discover this difference by means of a researcher-designed, self-report questionnaire in which sixty-eight male and female college students evaluated themselves. Through a series of questions, a score was given to each person on a scale from 0-65 based upon their answers on a Likert-scale. From the results, the data demonstrated that there is no significant different between the happiness of males and females with the use of social media, the data thus not supporting the hypothesis.

THE RELATIONSHIP BETWEEN BIOLOGICAL SEX

AND HAPPINESS WITH THE USE OF SOCIAL MEDIA

A Questionnaire Study

Bonni Brown and Samantha Jambor

Slippery Rock University

        An interactive platform creator in which individuals from anywhere and everywhere can come together to create and discuss content: this is social media (Kietzmann, Hermkens, McCarthy, 2011). It is no wonder that in an advanced, fast-paced world that social media is becoming one of the most popular forms of media in our society. Social media, like any other type of outside source of communication, has an effect on us mentally and emotionally. On this web of communication, people are able to share their varying emotions through posts, pictures, statuses, and many other mediums. It has been shown that this form of communication can have just as many emotional effects on us as traditional face-to-face interactions (Coviello, Kramer, Hawlow, Franceschetti, et al., 2014). Not only that, social media and the interactions that come along with it can have an effect on our happiness (Helliwell, Huang, 2013).

Many studies have been done to understand and evaluate how social media has an effect on our happiness, but one trait that has not really been understood is how social media affects the happiness among each sex. The purpose of this study is to analyze whether there is a difference in happiness between males and females with the use of social media. This information will be beneficial to the communication community because it will illustrate how sex in an important factor to consider when looking at various effects an outside source may cause.

EMOTIONS AND EFFECTS OF SOCIAL MEDIA

        Fowler and Christakin (2008) did an extended 20-year study on the spread of happiness on social media and discovered that niches of happiness do indeed exist. Spread of happiness has even been shown to be effective even up to the point of the six degrees of separation. The study did an excellent job at explaining that happiness is something that is very much present in the online world and can operate in ways similar to real-life relationships. For our purposes, it is important to know that emotions do indeed spread and derive from specific social media relationships and activities. A study done specifically on the geography of happiness (Mitchell, Frank, Harris, Dodds, Danforth, 2013) was conducted to see varying levels of happiness in different states. This study was done by means of analyzing specific words that were included in Tweets of those in different cities. These words analyzed in different Tweets acted as indicators of happiness of the author of the Tweet. This study focused on an “outside source” of happiness as it analyzed a person’s language as opposed to getting a first-person opinion from each individual.

Geography has had a huge influence on happiness, but is it merely physical location than can affect happiness on social media? Coviello, et al. (2014) studied the emotional contagion in massive social networks and showed how emotional expressiveness can transcend physical barriers. The ways in which people express themselves and portray their emotions online can have a direct impact on those in their social circle. You can assume then that your emotions can easily be influenced by specific friends, followers, etc. you have on social media. This study did not analyze the specific impact of emotional contagion on social media amongst the two sexes, but it very well could be elaborated upon.

        It has been shown through much of the literature that social media plays a big factor in the spread of emotions through networks, but what about the personal effects it has on individuals? A study done by Pang (2013) discusses how social media can be addicting. Social media can be similar to a drug addiction and steps must be taken in order to effectively get away from it. It can be assumed, as it is with most addictions, that the effects it gives are euphoric, but temporary, and can lead to many psychological problems. Stress is a prevalent feeling caused by social media as well as social anxiety and happiness, which can often be derived from FOMO (fear of missing out). Although FOMO will not be studied in depth, it is definitely a factor that has an effect on happiness that needs to be considered. Whiteman (2014) also describes the type of effect social media has on our health and well-being. This study is similar to Pang’s in the aspect of the discussion of the many effects social media has. Depression, miserable moods, and social insecurity can all be caused by social media, but social media can also be used as a tool in identifying these same issues.

MALE AND FEMALE DIFFERENCES IN HAPPINESS

        Social media can aid in the spread emotions as well as harm them, but how does this relate (and differ) between those of the male and female populations? Vaidya (2014) conducted a study in which a basis of happiness between men and women was discussed. The study was conducted among college students and results were obtained through surveys that measured personality and happiness. A noticeable difference did indeed exist between men and women on levels of happiness during the time of college. Women, in this case, were happier than men in regards to happiness during college. This, however, did not imply that social media had an effect on happiness, for social media as a factor was not taken into account. It is to be noted, however, that men seem to be less happy than women during college due to the high stress level of balancing work and schoolwork. Hao, et al., (2014) conducted a study in which the subjective well-being of a person was analyzed. Similar to the Mitchell study on the geography of happiness, this study involved a method in which the content of social media posts were analyzed in order to tally significant emotion indicating words. This study did involve sex as a factor in its demographic study, but specific differences between the two were not measured.

        Related to these studies, men and women also differ in the way they *express* their emotional states on social media. Parkins (2012) discusses how it is evident that there are differences between men and women and how emotionally expressive they are (past research conducted has shown women to be more expressive). This particular study sought out to go further and analyze the difference between sexes in regards to social networking. Women were shown to also be more emotionally expressive on social media than men. However, the author explains that the assumption that women are happier and more fearful while men are angry is merely a stereotype. Burke, Marlow, and Lento (2010) showed that, within the context of social media, men seem to be lonelier and less socially bonded than women. Fujita, Sandvik, an d Diener (1991), however, discovered something different through their study on well-being and intensity amongst the sexes. They discovered that women are just as happy as men and also more intense than them, as their four measurement methods revealed. It is apparent that there are a few differences in emotional expressiveness and happiness between sexes, but it is still unclear on whether or not social media has an effect on happiness and if there is a significant difference between the males and females.

        In this study, we will examine the relationship between a person’s sex and their happiness with the use of social media. It is proposed in this instance that men will demonstrate higher levels of happiness than women with the use of social media. Sex can be objectively defined as the biological sex of a person, which is strictly male or female. Happiness can be objectively defined as what makes one happy. Happiness cannot easily be defined, as it is by definition a subjective term, which is why in this study the subjects determine what *they* believe happiness is. Women are shown to be much more emotionally expressive with the use of social media so it will more likely be that they will be more expressive within this study. That being said, men do experience lower levels of happiness in college overall, but when it comes down to happiness with regard to social media, it is proposed men will be happier. Happiness in social media may be affected by two factors 1) The number of social media websites used and 2) The amount of time spent on social media. These two factors will not serve as independent variables but will aid in future understanding of a possible connection between the happiness of men and women on social media. The hypothesis is simply that men are happier than women when using social media.

**METHOD**

SUBJECTS

        Sixty-eight students (30 males, 38 females) participated in the questionnaire. The subjects were selected through a convenience sample from the 100-level Visual Literacy class at Slippery Rock University. The results from this particular convenience sample are expected to generalize to the projected population of college students. This class is open to all majors at Slippery Rock University, so there were a great variety of different learning styles, majors, and demographics for the participants. Also, with 45% of the participants being male and 55% of the participants being female, the results from the study should be very generalizable to the college population.

PROCEDURE

        At the beginning of their class time, students were given the researcher-developed questionnaire. A research assistant was employed in order to help distribute the questionnaires and also collect them upon completion. Each participant sat in a lecture-style classroom with adequate spacing in between each person to prevent possible “cheating.” The participants were asked to read each question/statement carefully, answer as honestly as possible, and raise their hand upon completion so the researcher/assistant could retrieve their questionnaire. After each participant had completed and handed in their questionnaire, they were thanked and debriefed. The class went on as usual after the data collection portion of the research study was completed.

DESIGN

        Sex is the independent variable and is represented by two factors: male and female, making this a single factor, two group design. This variable will influence the dependent variable, which is happiness. Both these variables and the relationship between them are set within the context of social media. It is assumed that outside variables may have an effect on the answers given by each participant. Examples of outside variables that may skew the participants’ responses could include the state of mind of the person on that particular day, laziness, and general happiness of the participant. Other intervening variables could include the following: researcher personal attribute effect and inter-participant bias. Participants could have been influenced by the sex/race of those who administered the questionnaire. This was avoided as much as possible by employing two female administers (one being the researcher) both of different races. Also, participants may have been influenced by each other as they answered the questionnaire. This was avoided by encouraging silence during the time the participants filled out the questionnaire.

Instructions were given prior to distribution of the questionnaire to inform participants on the nature and anonymity of the questionnaire. The participants were given this information prior to completing the questionnaire to avoid any fears they had about their identity (or their answers) being revealed to the public. No information on the purpose of the study was revealed to the sample at anytime before the study.

DATA AND INSTRUMENTATION

        Happiness in each participant was assessed from their responses from a 5-point Likert Scale. The scale included 15 statements (2 of which were distractor statements, and therefore not added into the data set) that assessed happiness within different aspects of social media. The scale included the following 5 choices: strongly disagree, disagree, neutral, agree, and strongly agree. Each choice was assigned a specific point value based upon the wording of the statement (whether they were a positive or negative statement). For example, question 6, which read “I am happy with the amount friends I have on social media”, would receive 4 points if the choice was “agree.” Question 9, “I feel unhappy when no one/few people like my status update,” would receive 2 points if the choice was “agree.” The purpose in this was to develop a scale in which the points from each statement could be added up to one single score. There are 13 statements, with 5 possible points for each, which would mean that the highest possible score would be 65 points. With this scoring system, happiness is assessed; the higher the score, the happier the participant is with the use of social media.

The scale was created with the objective definition of happiness in mind and was created with simple language describing unhappiness and happiness. Therefore, synonyms for happiness/unhappiness were avoided in order to prevent confusion of the language. Also, this questionnaire was not derived from any previous questionnaires that have been used and was created by the researchers from their knowledge of social media and happiness. There was risk in using a questionnaire that has never been tried before, but the researchers are confident that the questions were very relevant and accurate.

**RESULTS**

To determine if the hypothesis was supported, a Likert scale was used in a single blind study. From the convenience sample, the research participants were given a score between 0-65 which was determined by calculating the sum of the scores from each individual question. The higher the score on the range of 0 -65, the happier the person is with the use of social media.

In Table #1, thirty scores for male participants were recorded. This table displays the overall total of the thirty scores along with the mean, standard deviation, and variance. Data for all three of these measurements were given with the exact amount (rounded to .00) and the amount rounded to a whole number. The same format was followed in Table #2 as in Table #1, but the results represent the thirty-eight female participants. With the data from both of these tables, an inferential analysis via a t-test was used to retrieve the results displayed in Table #3.With the use of this statistical analysis, the level of significance was determined. From the results, a .05 level of significance for a one-tailed hypothesis was used, along with a degrees of freedom score of 66 which yielded a critical value of 1.676. Table #4 displays other measures of central tendency, which included range, median, and mode.

Table #5 and #6 display percentages from the self-report questionnaire. Table #5 represents percentages of usage (of male and female) of the top eight social media mediums. Table #6 represents the percentage of hourly usage of social media between males and females.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table #1 - Male Happiness Scores** | | | | |
| Score | Deviation  (score – mean) | Deviation  (rounded) | Squared Deviation | Squared Deviation  (rounded) |
| 44 | 0.27 | 0 | 0.07 | 0 |
| 51 | 7.27 | 7 | 52.85 | 49 |
| 46 | 2.27 | 2 | 5.15 | 4 |
| 48 | 4.27 | 4 | 18.23 | 16 |
| 50 | 6.27 | 6 | 39.31 | 36 |
| 42 | -1.73 | -2 | 2.99 | 4 |
| 47 | 3.27 | 3 | 10.69 | 9 |
| 39 | -4.73 | -5 | 22.37 | 25 |
| 45 | -0.73 | -1 | 0.53 | 1 |
| 44 | 0.27 | 0 | 0.07 | 0 |
| 38 | -5.73 | -6 | 32.83 | 36 |
| 45 | -0.73 | -1 | 0.53 | 1 |
| 42 | -1.73 | -2 | 2.99 | 4 |
| 39 | -4.73 | -5 | 22.37 | 25 |
| 45 | -0.73 | -1 | 0.53 | 1 |
| 49 | 5.27 | 5 | 27.77 | 25 |
| 40 | -3.73 | -4 | 13.91 | 16 |
| 38 | -5.73 | -6 | 32.83 | 36 |
| 39 | -4.73 | -5 | 22.37 | 25 |
| 43 | -0.73 | -1 | 0.53 | 1 |
| 39 | -4.73 | -5 | 22.37 | 25 |
| 41 | -2.73 | -3 | 7.45 | 9 |
| 40 | -3.73 | -4 | 13.91 | 16 |
| 44 | 0.27 | 0 | 0.07 | 0 |
| 54 | 10.27 | 10 | 105.47 | 100 |
| 39 | -4.73 | -5 | 22.37 | 25 |
| 51 | 7.27 | 7 | 52.85 | 49 |
| 42 | -1.73 | -2 | 2.99 | 4 |
| 41 | -2.73 | -3 | 7.45 | 9 |
| 47 | 3.27 | 3 | 10.69 | 9 |
| Total =  1312 |  |  | Total =  554.54 | Total =  560 |
| Mean =  1312/30  = 43.73  Rounded = 44 |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table #2 - Female Happiness Scores** | | | | |
| Score | Deviation  (score – mean) | Deviation (rounded) | Squared Deviation | Squared Deviation  (rounded) |
| 35 | -8.55 | -9 | 73.10 | 81 |
| 40 | -3.55 | -4 | 12.60 | 16 |
| 39 | -4.55 | -5 | 20.70 | 25 |
| 46 | 2.45 | 2 | 6.00 | 4 |
| 42 | -1.55 | -3 | 2.40 | 9 |
| 48 | 4.45 | 4 | 19.80 | 16 |
| 48 | 4.45 | 4 | 19.80 | 16 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 41 | -2.55 | -3 | 6.50 | 16 |
| 51 | 7.45 | 7 | 55.50 | 49 |
| 45 | 1.45 | 1 | 2.10 | 1 |
| 41 | -2.55 | -3 | 6.50 | 9 |
| 42 | -1.55 | -2 | 2.40 | 4 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 49 | 5.45 | 5 | 29.70 | 25 |
| 39 | -4.55 | -5 | 20.70 | 25 |
| 46 | 2.45 | 2 | 6.00 | 4 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 30 | -13.55 | -14 | 183.60 | 196 |
| 41 | -2.55 | -3 | 6.50 | 9 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 39 | -4.55 | -5 | 20.70 | 25 |
| 42 | -1.55 | -3 | 2.40 | 9 |
| 49 | 5.45 | 5 | 29.70 | 25 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 39 | -4.55 | -5 | 20.70 | 25 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 46 | 2.45 | 2 | 6.00 | 4 |
| 48 | 4.45 | 4 | 19.80 | 16 |
| 53 | 9.45 | 9 | 89.30 | 81 |
| 53 | 9.45 | 9 | 89.30 | 81 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 44 | 0.45 | 0 | 0.20 | 0 |
| 33 | -10.55 | -11 | 111.30 | 121 |
| 39 | -4.55 | -5 | 20.70 | 25 |
| 46 | 2.45 | 2 | 6.00 | 4 |
| 49 | 5.45 | 5 | 29.70 | 25 |
| Total =  1655 |  |  | Total =  921.30 | Total=  946 |
| Mean =  1655/38  = 43.55  Rounded = 44 |  |  |  |  |

|  |  |
| --- | --- |
| **Table #3 – T-Test of Significance** | |
| Not rounded | Rounded |
| T = 0.13  Degrees of Freedom = 66  Critical Value = 1.676 (one-tailed)  P > .05, NS | T = 0  Degrees of Freedom = 66  Critical Value =1.676 (one-tailed)  P > .05, NS |

|  |  |  |
| --- | --- | --- |
| **Table #4 - Other Measures of Central Tendency** | | |
| Men | Women | Together |
| Range = 16 | Range = 23 | Range = 24 |
| Median = 43.5 | Median = 44 | Median = 44 |
| Mode = 39 | Mode = 44 | Mode = 44 |

|  |  |
| --- | --- |
| **Table #5 - Percentage Use of Different Mediums of Social Media** | |
| Men | Women |
| Facebook: 80%  Twitter: 70%  Instagram: 70%  Google +: 10%  LinkedIn: 10%  Pinterest: 3%  Tumblr: 10%  YouTube: 77% | Facebook: 82%  Twitter: 84%  Instagram: 89%  Google +: 37%  LinkedIn: 20%  Pinterest: 66%  Tumblr: 26%  YouTube: 80% |

|  |  |
| --- | --- |
| **Table #6 - Percentage of Hourly Usage of Social Media** | |
| Men | Women |
| 0-2: 60%  3-4: 23%  5-6: 13%  7-8: 3%  9-10: 3% | 0-2: 24%  3-4: 47%  5-6: 18%  7-8: 3%  9-10: 3% |

**DISCUSSION**

The results derived from the researcher designed, self- report questionnaire show that the hypothesis, men are happier than women with the use of social media, is not supported. Our hypothesis was not supported as apparent through the results of the t- test which determined that the level of significance was less than the critical value derived from the degrees of freedom score. Although the mean of the male scores was slightly greater than the mean of the female scores, the data (as proved by the t-test) were not shown to give a significant difference between the two. The 1991 study done by Fujita, Diener, and Sandvik on the Gender differences in negative affect and well-being: The case for emotional intensity seems to be most consistent with our results concluding that women are just as happy as men.

Possible limitations of the design include: errors in the researcher designed questionnaire, participant error in general, inadequate representation of population, and time constraints. The first possible limitation is that there could have been errors in the researcher-deigned questionnaire due to it being put to use for the first time. Although steps were taken to make it a uni-dimensional scale, some questions may have not been completely related to happiness with social media usage. For example, questions 3 and 4 in the Likert scale were not included in the data due to no relation to the goals of the research. Also, a semantic differential scale was included, but was ultimately not used due to it not being relevant to the purposes of the instrument. The purpose of the semantic differential scale was to use it as a distracting tool for the participants as to not reveal the intent of the study.

The second possible limitation of the research is participant error in general. Throughout our results, many participants displayed a tendency to only choose the middle portion of the scales, causing a slight shift in the data. Also, honesty or an unmotivated attitude of the participants during the study could have caused error. Another possible limitation could be that the sample of the participants was not an adequate enough representative of the college population or of the sub-categories (males and females). One last possible limitation of the design would be the time constraint of the overall study. Although everything was done to do everything as efficient and accurately as possible, an increased amount of time could have been beneficial in providing the ability to obtain a more representative or large sample.

There are several suggestions for future research and researchers regarding this study on the relationship between male and females and their happiness with the use of social media. One suggestion for future research could be for the researcher to focus on the relationship between frequency of social media usage (hours, types of medium, etc.) and the happiness of each sex. This would mean collecting data on the amount of time spent on social media (daily, weekly, monthly, etc.) and also collecting data on just which social mediums are used, when they are used, where, etc. Although much of that data was acquired during this study, it was not the main focus. Therefore, researchers could focus solely on those as independent variables.

Another suggestion would be elaborating on the effect of FOMO mentioned in the review of literature by relating the effects of it to happiness. Not enough information about FOMO was acquired during this study in order to do an in-depth analysis of it; however, there very well may be a significant relationship between FOMO and happiness. Suggestions for revision for this research study could include implicating an instrument that has been used various times before in previous studies. Also, if the prospective researcher wanted to create their own instrument, a suggestion would be to carefully create a questionnaire that is completely uni-dimensional as to not skew results. Lastly, future researchers should do an in-depth review of literature about happiness as to fully understand what happiness is and how it is involved in human life.

**REFERENCES**

Burke, M., Marlow, C., & Lento, T. (2010, April). Social network activity and social well-being. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 1909-1912). ACM.

Coviello, L., Sohn, Y., Kramer, A.D.I., Marlow, C., Franceschetti, M., et al. (2014) Detecting Emotional Contagion in Massive Social Networks. PLoS ONE 9(3): e90315. doi:10.1371/journal.pone.0090315

Fowler, J. H., Christakis, N. A. (2008) Dynamic spread of happiness in a large social network: longitudinal analysis over 20 years in the Framingham Heart Study. BMJ 2008;337:a2338. doi:10.1136/bmj.a2338

Fujita, Frank; Diener, Ed; Sandvik, Ed. (1991) Gender differences in negative affect and well-being: The case for emotional intensity. *Journal of Personality and Social Psychology*, Vol 61(3), Sep 1991, 427-434. http://dx.doi.org/10.1037/0022-3514.61.3.427

Hao, B., Li, L., Gao, R., Li, A., Zhu, T. (2014) Sensing Subjective Well-being from Social Media. Retrieved from http://arxiv.org/pdf/1403.3807v2.pdf

Helliwell, J.F., Huang, H. (2013) Comparing the Happiness Effects of Real and On-Line Friends. PLoS ONE 8(9): e72754. doi:10.1371/journal.pone.0072754

Mitchell, L., Frank, M. R., Harris, K. D., Dodds, P. S., & Danforth, C. M. (2013). The Geography of Happiness: Connecting Twitter Sentiment and Expression, Demographics, and Objective Characteristics of Place. *Plos ONE*, *8*(5), 1-15. doi:10.1371/journal.pone.0064417

Kietzmann, J. H., Hermkens, K., McCarthy I. P. (2011). Social media? Get serious! Understanding the functional building blocks of social media. Retrieved from http://busandadmin.uwinnipeg.ca/silvestrepdfs/PDF06.pdf

Pang, P. S. (2013). PICTURE YOURSELF HAPPIER. *Health*, *27*(7), 18.

Parkins, R. (2012). Gender and Emotional Expressiveness: An Analysis of Prosodic Features in Emotional Expression. *Gender and Prosodic Features in Emotional Expression,* *5*(1), 46-54.

Vaidya, A. (2014). Happiness Correlates of Personality among College Students. *International Journal of Innovative Research and Development*.

Whiteman, H. (2014, April 16). "Social media: how does it really affect our mental health and well-being?." *Medical News Today*. Retrieved from http://www.medicalnewstoday.com/articles/275361.php.