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The differential association of social media on mental health by gender in the United States for young adults in 2019

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Abstract

This paper aims to investigate the differential association of social media on mental health by gender in the United States for young adults in 2019. A data analysis is done with the use of the Transition into Adulthood Supplement (TAS) of the Panel Study of Income Dynamics (PSID) from the Institute for Social Research of the University of Michigan. The data has been analysed with the use of a linear probability model. The model was done multiple times with emotional wellbeing and depression as two outcome variables. The results from the linear probability models show that there is not enough evidence to suggest a partial association of social media on mental health by gender. However, it does show a positive association between using social media often and emotional wellbeing. Also, a positive association has been found between being female and depression. Future studies could look at the long-term effects of social media on mental health by gender, another age group and people who are not cis male or cis female.

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Introduction

Social media[1] has become an essential part of our contemporary society with billions of people using Instagram, Snapchat, and Facebook every day. Research done by Dixon (2022) has shown that worldwide the average daily use of social media in 2022 is almost 2.5 hours, and this has only gone up over the years. Social media has created a new way to communicate with each other and has therefore changed a part of our society. It has become more and more important with more users and apps every year. Along with the increased use of social media, mental health[2] issues are also on the rise. Between 2010 and 2015, depression and suicide rates have increased and especially those who spend more time on social media were more likely to report mental health issues in the United States (Twenge et al., 2018). Suicide is one of the main causes of deaths for young adults in the United Stated and it is important to understand where this high number of suicides comes from in order to prevent it. Interestingly, there is a gender difference in the numbers of suicide and depression. In 2017, 27.1 per 100 000 males committed suicide compared to 6.2 per 100 000 females (Miron et al., 2019). However, when looking at the rates of depression it is the opposite. Females are reporting depression at a higher rate compared to their male peers (Kuehner, 2003). Social media could trigger negative self-thoughts as it encourages social comparisons and the need for external validation as well as the fear of missing out (FOMO) and exclusion (Magner, 2018).

This paper aims to advance the existing literature by examining the intersection of gender and social media on mental health. Previous literature has tried to find an association between social media use and depressive symptoms by looking at different ways social media could influence depression like poor sleep and body image. According to Kelly et al. (2018), women had a stronger association between social media use and depressive symptoms than men did. Additionally, a study done in Germany also tried to find a relationship between social media use and mental health. The results suggest that it leads to poor mental health for females, especially those between the ages of 17 and 30. However, this result was not found for males and this difference is therefore creating a gender gap in mental health (Golin, 2022).

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[1] Platforms with three distinct features, in which the platform 1) allows users to create unique profiles and content to share with other users, 2) creates a visible network connection between users that can be navigated by other users, and 3) provides users with a space to broadcast content, consume information, and interact with others in a continuous stream of information (Ellison & Boyd, 2013).

[2] A state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community (WHO, 2022).

This paper focusses on the relationship of social media on mental health in specifically the US. Also, it will look at the heterogeneity by gender of social media on mental health. Furthermore, this paper adds a specific look at young adults between the ages of 18 and 28 because this could be one of the groups with the most social media usage. Finally, this paper could advance existing knowledge because the number of social media users is growing every day and we also begin to know more and more about mental health. Therefore, up-to-date research about the relationship of social media use on mental health could give new insights.

Good mental health is extremely important, not only for the individual itself but also for society as a whole. We want to avoid mental health issues because it has a negative association with the productivity of a person (Curran, 2007). This can have negative economic effects on both the individual and society. For the individual itself, it can lead to a decrease in salary and possibly unemployment. Butterworth et al (2012) found that mental health was a good predictor of unemployment and the duration of unemployment. Those with poor mental health had a greater chance of being unemployed and were longer out of a job compared to those without mental health issues. From a societal perspective, it can lead to a decrease in economic output and increased healthcare costs (Layard, 2017). This paper will specifically look at young adults. Therefore, the impact of mental health on educational attainment is very important. Research has found a negative association between poor mental health and the chance of completing upper secondary education (Brännlund et al., 2017). Not only are higher dop out rates more prevalent for people with poor mental health, also the academic performance decreases. Hysenbegasi et al. (2005) finds a significant association with depression and academic performance. On average, those diagnosed with depression have a 0.49-point lower GPA. However, treatment was found to be associated with a 0.44-point increase in their grade, which almost makes the drop of depression disappear. The lower grades could be the result of missing more classes and not being engaged as much as other students. Another paper investigated the attendance of students and found that people with a mental disorder had lower attendance compared to other students without a mental disorder (Lawrence et al., 2019). Additionally, research done in Norway tried to find a relationship between depression and school engagement by looking at different indicators for engagement such as motivation, absence, and the intention to quit school. The strongest association was found with depression and the intention to quit school, but the results showed an association of depression with all indicators. Meaning that those

who were depressed are more likely to quit school, be less motivated, and were more absent (Garvik et al., 2014). Interestingly, Fletcher (2008) found this relationship between depression and academic disengagement for females only.

Social media can be a fun way to share your life with all your friends no matter where they are. However, the mental health aspect is a growing concern among experts. Different researchers have found a correlation between the use of social media and poor mental health. For example, an association between social media use and an increased sense of depression and anxiety among young adults has been found by Primack and Escobar-Viera (2017). A study among adolescents has shown that they identified social media as a risk to their mental wellbeing because it was thought to be linked with mental disorders, it was seen as a place for cyberbullying, and frequently described as addictive (O'reilly et al.,2018). Furthermore, Braghieri et al. (2022) wrote a convincing paper that found a causal relationship between the rise of Facebook and poor mental health. This paper used a quasi-natural experiment that took place across the United States. In 2004, when Facebook was created, it got introduced to colleges at different times. This was not randomly done, but the more prestigious colleges were the first to gain access to it. This information got then connected with a dataset that uses surveys to obtain insights of mental and physical wellbeing of college students. They used a difference-in-difference analysis where they look at a time where one college has Facebook and another one does not. Those colleges did not differ that much from each other and therefore a difference in mental health could be explained by the introduction of Facebook. They showed that the initial increase in popularity of Facebook had a bad impact on the mental health of students. Especially, conditions related to depression and anxiety rose. They even showed that about 24 percent of the rise in severe depression over the past 20 years can be blamed by the introduction of Facebook.

However, besides the negative effects social media might have, a couple papers wrote that social media could potentially also be a platform to discuss mental health issues and so may offer opportunities to improve mental health. Sadagheyani and Tatari (2021) found several negative associations with mental health like depression, anxiety, and thoughts of self-harm and suicide. On the other hand, they also found that social media can help with depressive symptoms by emotional and social support from a community all around the world. Also, it can be helpful reading other people's experiences and there is a lot of information about mental health available on social media which can help inform people

better. Furthermore, Burns et al. (2009) find that social media could be used as a resource for people with mental health disorders. It can lower sigma on mental health and encourage people to reach out for help when they need it. Although these papers found some positive associations, the overall conclusion by research so far is that it mostly has negative effects on mental health. Even though there could be positive associations, the negative effects could outweigh the positive ones and therefore still create a negative overall effect. Additionally, the papers that found a positive influence of social media are associations, whereas the negative influence is based on causal literature. This makes an overall negative influence more convincing.

Since social media can have an influence on mental health and good mental health is extremely important, it would be valuable to understand the relationship with social media better by looking at the gender difference. This leads to the main research question: *'Is there is a differential association of social media on mental health by gender in the United States for young adults?'*. There has been found a gender difference for depression where females are at a higher risk of getting it compared to males (Kuehner, 2003; Salk et al., 2017). However, Parker and Brotchie (2010) write that there are also artificial factors that contribute to this difference. For example, women are more likely to seek help and reply differently to depression assessments. Also, research has shown that females have a higher risk of fear and anxiety disorders and participate in more social comparison (McLean & Anderson, 2009). The perfect image that they are seeing from influencers is detrimental for the mental health of girls. Research has demonstrated a direct link between exposure to modified Instagram photographs and a negative body image. In the study, the photos that had been photoshopped were seen as prettier than the unaltered photos. Furthermore, the use of filters and effects could be seen, but the bodies' reshaping was not as clear. Therefore, all girls in the experiment said they thought the images were realistic (Kleemans et al,. 2016). A negative body image that could come from this is associated with different mental health issues such as depression (Noles et al., 1985). It is expected that women experience a greater negative relationship of social media usage on their mental health compared to males since previous research has already shown a negative correlation and females are more likely to compare themselves to others. Comparing themselves will worsen the negative influence social media usage has on mental health. In other words, we expect that for the same level of social media use, women are more likely to make social comparisons between them and

what they see online. Therefore, the hypothesis is that the negative association of social media usage on mental health is larger for females than males. This research will specifically look at young adults since these people are more vulnerable to mental illnesses. Young people are in a time of a lot of changes, psychological as well as physical, while also making important life decisions and certain social conditions such as social media use can therefore increase the risk of mental health issues and suicide (Bilson, 2018). Young adults are also the group who uses social media the most out of all age groups. About 90 percent of people between 18 and 29 used social media in 2015 (Perrin, 2015). Compared to 77 percent for people between the ages of 30 and 49 and who are the second largest group of social media users.

This research is socially important because a greater knowledge of the potential contributing factors of bad mental health can help improving the care provided to those who struggle with mental health concerns. As written in the beginning, a bad mental health has a lot of negative effects for both the individual and society that we want to avoid. Knowing whether there is a differential relationship by gender is essential for policymakers to create effective interventions. With a better understanding of a potential gender difference, policy makers can develop more specialized and successful programs to improve mental wellbeing. Given the growing influence of social media in daily life and its very probable negative effects on mental health, this is crucial.

To examine the possible interaction effect, an empirical approach will be taken by analysing existing data. In the next section, the data will be discussed. Then, the methodology and after that the results. Finally, a discussion and conclusion will be given.

Data

Dataset

The dataset is Panel Study of Income Dynamics (PSID) from the Institute for Social Research from the University of Michigan. Their data collection is done by a survey in the United Sates. This research will focus on the Transition into Adulthood Supplement (TAS) from the year 2019. The focus on this specific year is because this is the most recent complete dataset. The interviews are taken between November 2019 and September 2020. Certain interviews took place during the Covid-19 pandemic so this will be taken into account which will be explained

below. The sample consists of people who are born between 1991 and 2001, are a member of the PSID Sample, and whose parents participated in the Core PSID interview in 2019. The sample form the PSID is a nationally representative and therefore we can assume that the sample of the TAS is also representative of the US. The sample size is 2595, these people all completed the interview with an eligible TAS-2019 sample individual.

Variables

The independent variable social media usage is measured by asking how often in the last 30 days someone has followed topics or people that interests them on websites, blogs, or social media sites. This does not include interacting with family and friends through these sites. The variable is categorical with a value of a whole number from one through five, which each represents an answer option. These are as follow: every day (1), a few times a week (2), once a week (3), less than once a week (4), or never (5). This paper will use a dummy variable for when you use social media often. This holds the value 1 when they use social media every day (1) and 0 when they use social media less than that. This is a good measure because it describes well how often these people are exposed to social media. Even if the person is only a few minutes on social media every day, they get a daily reminder by how other people are looking and what they are doing. An interaction term will be used with social media usage and sex. Sex is defined as either male or female with the value 1 responding to female and 0 to male.

The first dependent variable for mental health is emotional wellbeing and this is based on how often the respondents felt happy, satisfied, and interested in life in the last month. This is a categorical variable that can hold a value from one to six with six being the best and one being the worst. In the survey the respondents could pick: never (1), once or twice (2), about once a week (3), two or three times a week (4), almost every day (5) and every day (6). This paper will use a dummy variable for poor emotional wellbeing which will hold the value 1 if someone is less than two or three times happy, satisfied and interested in life in a week and 0 when it is more than that. The second dependent variable is depression. This is measured by if the respondent ever felt sad, empty, or depressed for most of the day for at least two weeks in the last twelve months. It is not about a diagnosis, but the way that they felt. This makes the variable more reliable because not everyone with mental health issues

reaches out to a doctor and gets a diagnosis. It is also a dummy variable which holds a value of 1 if the respondent is depressed and 0 if not.

Other variables included in the analysis are control variables. These are variables that influence both the dependent and independent variables. Therefore, they will create a bias in the estimator. These control variables are age, race, and the completed education of the mother. Age is defined as age in years at the time of the TAS 2019 interview. Research has shown that age can influence both mental health and social media usage. Young adults have the highest rates of depression and anxiety out of all age groups. About one in five young adults experienced depression in 2019 (Adams et al., 2022). Furthermore, a study has shown that older generations spend less time on the main social media platforms compared to the younger generations. For example, about 54% of people between the ages 18 and 28 use Instagram several times a day compared to only 10% of people over 59 years old (Hruska & Maresova, 2020). There could also be a lot of differences in time spend on social media within generations. The next control variable is race and this is measured by asking the respondent which race best describes them. This paper will have the categories White (1), Black or African American (2), and other (3). The last category will have ethnic groups like Hispanics and Asians. Minority groups experience a greater level of discrimination and an association between discrimination and poor mental health has been found by Pascoe & Smart Richman (2009). Race is also associated with social media use and which specific social media platform they use. Howard et al. (2017) found that white women use more Facebook compared to black women. Finally, the completed education of mother. This is measured as years of education ranging from 0 to 17. This can be an indication of the socio-economic status of the family. Socio-economic status is correlated with mental health. A higher socio-economic status has been found to be positively correlated with less mental health issues (Baum, 1999; Vukojević et al., 2017). Socio-economic status is also correlated with social media use. The time exposed to social media is negatively correlated with parental education and household income (Roberts & Foehr, 2008). Kids from parents with only a high school diploma were subjected to more screen time than their peers did with parents who had completed more education.

In order to rule out that the Covid-19 pandemic has an influence on the outcomes, a Covid dummy will be included in the model. Also, one model will only use the interviews up until March 2020. March 2020 is chosen because this is the month that it was officially

declared a pandemic and the first lockdowns started to take place in the USA. It has been shown that these lockdowns have had a negative effect on mental health (Onyeaka et al., 2021). Therefore, these interviews during the pandemic will not be used or a dummy will be included since it would otherwise create a bias in the estimator.

Descriptive statistics

Table 1 shows the descriptive statistics of the variables. What is interesting to see is that the mean of social media is about 0.7. This implies that about 70 percent of the people in the sample use social media every day or almost every day. Another interesting thing to point out is that the mean of the dummy variable for poor emotional wellbeing is about 0.32. This implies that, on average, 32 percent of people in the dataset are more than half of the week not happy, satisfied and interested in life. Furthermore, the mean for the education of the mother is about 13 years which would indicate that on average most moms completed high school and a little bit of college. Also, the covid dummy shows that about 25 percent of the interviews has been done during the pandemic. Lastly, with a mean of 0.555, there are slightly more females in the dataset than males. However, this difference is not any reason for concern.

Table 1: Descriptive Statistics

Variables	N	Mean	Std.dev.	Min	Max
Social Media	2258	.7165633		0	1
Depressed	2258	.2373782		0	1
Emotional Wellbeing	2258	.3153233		0	1
Female	2258	.5554217		0	1
Age	2258	22.76218	3.04546	18	28
Race					

White	960	.425155		0	1
Black	975	.4317981		0	1
Other	323	.1430469		0	1
Education Mom	2258	13.16829	3.143591	0	17
Covid	2258	.2648361		0	1

Methodology

To test the hypothesis that females experience a larger negative association from social media on their mental health compared to men, a linear probability model will be used. There are two models, one with the outcome variable poor emotional wellbeing and one with depression. Each model will be done three times. Once without the interaction term but with a covid variable to account for the effect it could have. Another time with the interaction term and the covid variable. Finally, the model will be done with the interaction term but only with the data until March 2020.

The model looks like this:

$$Y = \beta_0 + \beta_1 * Female + \beta_2 * Social\ Media + \beta_3 * (Female * Social\ Media) + X + \varepsilon$$

where β_0 is the constant, X is a vector of all the control variables which are: age, race, the completed education of the mother, and the covid dummy. Finally, ε represents the error term. The outcome variable Y is either poor emotional wellbeing or depression.

This regression will try to measure a partial relationship of using social media on poor emotional wellbeing and depression by gender. Therefore, it is important to look at the coefficient (β_3) of the interaction term of X1 and X2. The p value will assess the statistical significance. This paper will use a significance level of 0.05. If the coefficient β_3 is significant, the partial association between social media use and mental health is stronger for females for this sample.

Results

Emotional wellbeing results

Table 2 shows the regression results of the interaction term with female and social media use on poor emotional wellbeing. According to table 2 both interaction terms are not significant. Therefore, there is not enough evidence to suggest a heterogeneous treatment effect of social media use on poor emotional wellbeing between men and women according to these results. Also, the dummy variable for female is not significant. Interestingly, the dummy variable for using social media often is significant for both the first and the second model. This would imply that using social media every day in model 1 is associated with a decrease in poor emotional wellbeing by 29 percentage points on average at a 1 percent significance level. In model 2, using social media every day is associated with a decrease of poor emotional wellbeing by 27 percentage points on average at a 5 percent significance level. A decrease in the dummy variable of poor emotional wellbeing means that people are more likely to be happy, interested and satisfied in life more often. Therefore, social media use and emotional wellbeing are positively correlated. Given the direction of the coefficient of the interaction term, the negative association of social media and poor emotional wellbeing would be even greater for females. However, the estimated coefficient is not significant. These results are different than what previous literature found and will be discussed in the discussion section.

Both dummies of social media use seem to be economically significant as well. They lead to a decrease of around 0.27. It indicates that they have an important and considerable influence on the dependent variable.

Although columns 2 and 3 only differ in the number of observations, the results differ quite a lot from each other. Especially for the social media dummy where column 3 does not show a significant coefficient of social media and column 2 does. There might not be enough observations to establish a relationship.

Table 2: Emotional wellbeing dummy output

	(1) Emotional Wellbeing	(2) Emotional Wellbeing	(3) Emotional Wellbeing
Female	-0.087	-0.074	-0.022
	(0.092)	(0.119)	(0.140)

Social Media	-0.286**	-0.270*	-0.313
	(0.093)	(0.137)	(0.163)
Social Media * Female		-0.031	-0.061
		(0.186)	(0.217)
Age	-0.054***	-0.054***	-0.061***
	(0.015)	(0.015)	(0.018)
Education mom	0.003	0.003	-0.008
	(0.016)	(0.016)	(0.019)
Race			
Black or African American	0.094	0.094	0.185
	(0.101)	(0.101)	(0.117)
Other	0.234	0.234	0.398*
	(0.146)	(0.146)	(0.170)
Covid	-0.142	-0.142	
	(0.106)	(0.106)	
Constant	0.548	0.543	0.786
	(0.430)	(0.432)	(0.507)
N	2258	2258	1660

Note: Column 1 shows the linear probability model without the interaction term but with a covid variable. Column 2 refers to the model with the dummy for often using social media and a variable for covid. Finally, the third column is with the interaction term but only uses data from before March 2020. Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Depression results

Table 3 shows the results of the linear probability model with the interaction term of using social media often and female on depression. According to table 3 both interaction terms are not significant. Therefore, there is not enough evidence to suggest a heterogeneous treatment effect of social media use on being depressed between men and women according to these results. Although the interaction term is insignificant, it would suggest that the positive coefficient of using social media often on depression would be smaller for females. However, the estimated coefficient is insignificant. Also, the dummy variables for using social media often are not significant but the estimated coefficients are all positive. Interestingly,

the variable female is for all three models highly significant on a 0.1 percent significance level. In model 1, a girl is on average 56 percentage points more likely to be depressed compared to boys. In model 2, girls are on average 51 percentage points more likely to be depressed and in model 3 this is 64 percentage points. In conclusion, these results would suggest that there is an association of girls and depression where girls are more likely to experience depression than boys.

Compared to table 2, the results of columns 2 and 3 are more similar. The coefficients of most variables are pretty close to each other.

Table 3: Depression output

	(1) Depressed	(2) Depressed	(3) Depressed
Female	0.511***	0.557***	0.642***
	(0.103)	(0.137)	(0.164)
Social Media	0.0949	0.157	0.194
	(0.101)	(0.160)	(0.193)
Social Media * Female		-0.102	-0.125
		(0.206)	(0.241)
Age	-0.0582***	-0.0583***	-0.0485*
	(0.0163)	(0.0163)	(0.0191)
Education Mom	-0.00800	-0.00834	-0.00554
	(0.0172)	(0.0172)	(0.0200)
Race			
Black and African American	-0.227*	-0.227*	-0.299*
	(0.111)	(0.111)	(0.129)
Other	-0.172	-0.173	-0.0957
	(0.166)	(0.166)	(0.192)
Covid	-0.0369	-0.0351	
	(0.115)	(0.115)	
Constant	0.0542	0.0337	-0.272
	(0.469)	(0.471)	(0.555)

| N | 2258 | 2258 | 1660 |

Discussion and Conclusion

This paper tried to investigate the differential association of social media usage and mental health between men and women in 2019 in the US for young adults. Social media use and mental health issues have been on the rise for the last decade, and it is important to have a better understanding of the possible contributing factors of poor mental health. This knowledge could help those who need it to get better care. This paper will add specific knowledge about the US, young adults, and on the difference between men and women.

First, a linear probability with poor emotional wellbeing as the outcome variable has been used to assess the relationship with social media usage. The results show that there is a negative relationship between using social media often and poor emotional wellbeing. However, there is not enough evidence to suggest that the relationship between social media and poor emotional wellbeing is different for men and women. Secondly, again with the use of a linear probability model, an association between depression and social media usage was assessed. The coefficient of the interaction term was not significant again. In this model, the coefficient for female was significant, meaning that there is a positive relationship of being a girl and feeling depressed.

This is a surprising result when looking at what previous literature suggested. Most literature suggested a negative relationship between social media and mental health. However, these results suggest that spending time on social media every day is associated with an increase in your emotional wellbeing. An explanation of this surprising result could be that people miss out on a lot of social interaction that they need on social media. It is a way to stay in contact with friends and these friendships could improve your emotional wellbeing. People who do not use it might get disconnected from the people around them and especially if those friends do use social media. This might lead to isolation and could result in worse mental health compared to their peers. Another explanation could be that social

media is a place for self-expression for people. It can be a place to show your emotions, feelings, opinions, but also talents and artistic work. Maybe social media is an outlet that they need and do not already have. The results that show a gender difference where girls are more likely to be depressed than boys are similar to what previous research had found. Also, the results of a positive coefficient of social media use on depression is what was expected according to previous literature.

However, the estimates do not give a causal impact since there could be reverse causality. For example, when someone is depressed or in a bad mental health state, they might use social media more excessively. Instead of social media influencing your mental health, this would be your mental health influencing your use of social media. This will influence the results from the linear probability model. Additionally, there could be omitted variable bias. It is almost impossible to find all the variables that influence both the dependent variable, mental health, and independent variable, social media, and it therefore creates a bias in the estimators by making the estimator either too large or too small.

Also, the linear probability model is not perfect. The main problem of this model is that it can generate chances that have a negative value or a value above 1. This is obviously not possible, and it is a fundamental problem of the model that cannot be fixed. Logit would give a more reliable result and could therefore be a better option since it can only generate chances between 0 and 1. However, in many cases the results do not differ that much from each other, and the linear probability model is easier to work with.

According to this research, using social media is negatively associated with poor emotional wellbeing. This would suggest to encourage social media usage to improve emotional wellbeing. However, although not significant, the results also showed a positive coefficient for social media use on depression. This would imply to decrease the use of social media. Maybe policymakers could focus on stimulating responsible and positive use of social media. For example, encouraging to only follow your friends and have a private account on Instagram. They could also create more awareness about mental health issues on social media and showcase a helpline number that that people could call when they feel bad. Also, according to this research, there is a positive association of being a girl and being depressed. Policymakers should focus on making help more accessible for girls or create more awareness about this gender difference. Since we cannot conclude a causal impact of social media on

mental health and being a girl on depression policymakers should be careful with policy implications because policies should be based on causal results.

This paper has a couple limitations. First of all, the data available about mental health is very limited, especially mental health together with social media. It also made it hard to have a lot of control variables. A lack of control variables could have added a bias in the results because there might be a variable missing that influences both the dependent and independent variable but was not included in the dataset. Another limitation of this study is the sample. It should be a representative dataset for the US. However, in this data there are more Black and African American people than white people, and this is not the same proportion as the population in the US. Because of this, Black people are overrepresented in this sample. This could lead to problems for external validity since the sample is not representative of the population. Finally, the data is obtained by self-report of the responders. This could lead to a reliability problem since people can give a more socially desirable answer. Also, mental health is still a taboo for some people, and they might not be willing to speak the truth about this.

Future research could investigate the partial association of social media on mental health by gender in the long-term. Social media has only been a big part of our life for a relatively short time, therefore the long-term effects for girls and boys of this are still unknown. This paper connects mental health outcomes with social media use of the same year. However, it might need time to affect your mental health. Therefore, a study that investigates the long-term effects could be interesting. Furthermore, maybe another age group could be interesting to investigate like younger teenagers. This group has had social media since they were really young and grew up with it. It could be interesting to see what having social media at a young age does to the possible effect of social media on mental health. Finally, new research could specifically focus on people who are not cis male or cis female like transgender or gender fluid. They are already more likely to experience mental health issues. However, maybe social media could be a place where they can find more people like them, and this could be a positive influence. Since mental health risks and the use of social media are different for these people it could be interesting to investigate it.

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