

**Is the correlation between social media and narcissism stronger within  
GenZ or Millennials?**

## **Abstract**

This study examines the relationship between social media usage and narcissism among Generation Z and Millennials. By utilizing the Narcissistic Personality Inventory (NPI), we sought to determine whether there is a generational difference in narcissistic tendencies as influenced by social media. The results indicated no statistically significant difference between the narcissism scores of the two generations, challenging Twenge's (2009) assertion that younger generations exhibit higher levels of narcissism. Both generations had an average score of 16/24 on the NPI test, which leans toward narcissistic tendencies. However, this study identified several limitations that may have influenced the findings, including the homogeneity of the sample population and the limitations of the NPI as a measurement tool.

## **Introduction**

In an era marked by technological advancements, social connections, and the desire for individuality, the human mind has undergone a profound transformation. One remarkable phenomenon that has grown rapidly is narcissistic tendencies throughout various aspects of modern life. The idea of "self-love" and "self-confidence" has been praised, and phrases such as "I am the best" or "My success is inevitable" are promoted through it. TV shows such as "My Super Sweet 16" follow spoiled brats who believe they are entitled to the best sweet 16 party. People are willing to hurt themselves or others just to "go viral" and get likes, followers, and comments on social media. Jean M. Twenge, Ph.D and professor of psychology at San Diego State University, calls this the narcissism epidemic.

In America, the rate of narcissism has increased, as seen through the emphasis on material wealth, physical appearance, celebrity worship, and attention. In fact, in a study with 37,000 college students, Twenge found that narcissism grew as fast as obesity from the 1980s to 2009 (Twenge). To support this, a 2010 study in the journal, "Social Psychological and

Personality Science”, a peer-reviewed academic journal, found that the percentage of college students who displayed narcissistic personality traits doubled from the early 1980s to 2010 (Brooks). Similar results were shown through individuals of other ages. For instance, 1 out of 10 Americans in their twenties and 1 out of 16 of all ages experienced symptoms of Narcissistic Personality Disorder (Twenge). This epidemic was caused by multiple factors, however, a main contributor was the introduction of social media.

The first social media site, Six Degrees, was created in 1997, and it allowed users to upload a profile to become friends with other users. Since then there have been numerous more sites such as Instagram, Facebook, Tiktok, etc. Social media has become so popular in the current society, and it’s often used as the main source of communication and entertainment.

As Tomas Chamorro professor of business psychology at University College London explained, social media has normalized narcissism by allowing people to publicly display themselves. Narcissists thrive on likes and shares, as they feel a sense of superiority and validation (Chamorro). Sumayya Awad, a social media specialist, explains the psychology behind getting likes. All the likes, comments, or shares release dopamine in our brains, giving us a sense of satisfaction and pleasure. This essentially creates a reward-based system in our brains to keep us hooked on social media. Additionally, likes and positive comments can help boost our self-esteem and make us feel seen and appreciated. Social media has allowed narcissists to gain validation from the whole world instead of just their family/friends (Awad).

Similar to these narcissists, we are influenced to do the same- posting glamorous selfies, doing challenges, etc. As explained by psychologists Henri Tajfel and John Turner, this is due to an in-group and an out-group in one’s social identity. People desire to be in the “in”, because these people are seen as “us”, while the out-group is seen as “others”. In society, celebrities are glamorized and often seen at the center of the in-group, because they are liked widely and seen as superior through their success defined by likes and shares. Naturally, people will desire to be

more like these celebrities, and engage in similar trends (“The Psychology Behind Viral Trends...”).

The most prevalent type of narcissism associated with social media is grandiose narcissism. Grandiose narcissists often have feelings of self superiority, entitlement, and they crave attention. As seen through Twenge, Chamorro and Ramani, there have been various studies on the effects of social media on narcissism and the idea of generational narcissism. Generational narcissism, as Twenge explains, is a phenomenon where recent generations are more narcissistic than past generations. However, there are no studies on whether social media causes higher rates of narcissism in millennials or GenZ. Since social media was introduced in 1997, this means all of GenZ has never known a world without social media. Would this mean the younger generation is more likely to obtain narcissist traits because they have known social media all their lives? Or are they actually better than the millennials who had social media introduced to them?

## **Literature Review**

Various studies have looked into the relationship between social media use and narcissism levels. One study was conducted in 2021 by Kolbrun Kristindottir and Rannveig Sigurvinsdottir, members of the department of Psychology at Reykjavik University, and Haukur Freyr Gylfason, member of the department of business at Reykjavik University. They wanted to examine the relationships between social media use and narcissism. These researchers hypothesized that narcissism would relate to sharing content on social media, and motives for social media such as wanting admiration and wanting followers were also seen to have a strong relationship with narcissism. To test this hypothesis, they conducted a survey on Reddit, Instagram, and Twitter. They choose these social media sites because Instagram provides a visual social media platform, Reddit is a text-based social media site, and twitter is a mix of both. There were 334 participants, 66.7% male and 32.3% female, and the age ranged from 18

to 74. The participants were asked demographic questions such as sex and age, and they were also asked which social media platform(s) they use (Reddit, Instagram, or Twitter). Based on how they answered, they were then asked a second set of questions. Such as “How often do you share opinions, pictures, posts?”, “How important is it for you to earn karma-points, likes, retweets?”, “Rate the quality of your content.”. They wanted to measure three types of narcissism: agentic, communal and vulnerable. However, this study focuses on grandiose narcissism, which is the broader sector of agentic narcissism. To measure agentic, they used the NPI-13, a tool adapted from NPI-40 where participants are asked to choose between a (A) narcissistic or (B) non-narcissistic statement, such as “*I insist upon getting the respect that is due to me*” or “*I usually get the respect I deserve*”. After collecting the data, the researchers calculated Pearson correlation coefficients in order to analyze the correlation between social media use and narcissism. The results showed that all three types of narcissism had a medium to strong positive relationship with sharing behavior, importance of feedback and rating quality of their own posts for Reddit, Instagram, and Twitter. In addition, narcissism was positively associated with use and frequency of use of Instagram and Twitter. However, this correlation was not seen on Reddit (Kristindottir et al.).

Similar to Kristindottir and Sigurvinsdottir’s research, Phil Reed, a member of the department of psychology at Swansea University, also found a positive relationship between social media use and narcissism level. In fact, Reed’s study provided a causation relationship between the two. Reed wanted to know whether social media addiction/obsession caused higher narcissism or if high narcissism caused more social media addiction/obsession. In 2018 Reed published his experiment. He recruited 74 volunteers from a Psychology Department at a University in the UK. The participants ranged from 18-34 years old, with a mean age of 23.09. This age was selected because Reed believed younger people were more affected by social media. The participants were asked for their age, gender, and estimated average hours of internet use per day (excluding hours used for work). They were also asked to list the specific

platforms that they used. The personal usage ranged from 1-8 hours per day, and the mean usage was 2.92 hours per day. In addition, 98% of participants stated their personal internet use consisted of social networking, with Facebook as the top platform. The participants were then asked to complete a Narcissism Personality Inventory test (NPI) and Problematic Internet Use Questionnaire (PUI). The PUI measures the degree with which internet use disrupts an individual's life, aka their internet obsession. Four months later, they were sent the same surveys to see whether increased problematic internet use would correlate with increased narcissism. The results showed problematic internet use at baseline was positively related to narcissism in the 4 month timespan. In fact, Reed determined that excessive use of social media, particularly posting images and selfies, was associated with a 25% increase in narcissism. However, this relationship was not as strong when narcissism was the baseline. Additionally, this relationship was only true for users who had primarily visual forms of internet use (Reed).

Although most research conducted supports the idea that social media and narcissism have a correlation, and possibly even a causation, the study by Frederick and Zhang refutes this claim. Christina Frederick and Tianxin Zhang, members in the department of Human Factors at Embry-Riddle Aeronautical University, wanted to determine how narcissism is linked with social media activities (such as number of posts or followers), how narcissism and social media were correlated, and also how narcissism and self-consciousness can predict social media usage. Since this study only looks into narcissism, only the narcissism aspect of his research was looked at. To test his hypothesis, Frederick and Zhang published a survey in 2020 that assesses self-reported narcissism using the Narcissistic Personality Inventory (NPI). He tested the hypothesis: Will narcissism be positively correlated with the number of posts and followers/friends on social media. The survey was posted on Amazon MTurk and opened to participants over 18 years old. 397 people replied (236 females and 158 males), the average participant age was 29.44 years. The participants answered demographic questions such as

age, gender, education level, and years of social media use. They also completed a Social Media Usage Survey which asked questions such as number of posts per week and number of followers on the social media site. To assess the participants' narcissism level, the researchers used the NPI. Their results showed that there was a correlation between narcissism and self-consciousness variables, but there was not a correlation between narcissism and social media usage (Frederick and Zhang). These findings contradicted previous research, because Frederick and Zhang found no correlation between narcissism and the number of posts or friends on social media.

## **Methods**

### **I. Survey Description**

In order to analyze if the correlation between narcissism and social media is stronger between GenZ or Millennials, a survey was distributed. The survey incorporated a series of questions that anonymous students and adults were asked to complete at their own time.

The surveys distributed incorporated a variety of questions. First they were asked demographic questions, including age, gender, and hours of social media use. The non-demographic questions measured their behavior/attitude towards social media. For instance, the frequency of posting, how much they care about likes/comments, or how they present themselves on social media. These questions were implemented to see whether or not different generations are more narcissistic in their use of social media. There were 7 non-demographic questions, and the majority of the questions had 4-5 answer choices.

The second series of questions were adapted from the Narcissist Personality Inventory test. The original test consists of 40 pairs of statements, each pair has one narcissistic answer and one non-narcissist answer. However, for this study, only 4 sub-categories of narcissism were measured: superiority, exhibitionism, vanity, and entitlement. Only these 4 were chosen because the rest don't have much relation to a person's interaction with social media. Thus, the

students were only given 24 pairs of statements. For each pair, they selected the one that they felt best reflects their personality/actions. To measure superiority, the individual chose between “I am more capable than other people. There is a lot that I can learn from other people.” Statements such as I don’t particularly like to show off my body. I like to show off my body.” measured exhibitionism. Vanity was measured through statements like “I like to look at myself in the mirror. I am not particularly interested in looking at myself in the mirror.”, and “ I insist upon getting the respect that is due me. I usually get the respect that I deserve.” measured entitlement.

The QR code of the surveys were printed out and taped throughout a suburban secondary school after receiving consent from school officials that participants would not be at legal risk. Additionally, the link of the survey was also forwarded to individuals outside of the school, both adults and high school students. Each individual was asked to complete a series of 34 questions and sign a consent release form, which was separated from the survey immediately to ensure confidentiality. Data was then collected and analyzed through the Statistical Package for the Social Sciences computation program, aka SPSS.

## **II. Defense of Methods**

The main tool used to measure narcissism was the NPI test. This test was developed by two psychologists, Raskin and Hall. As stated by Bjarne Schmalbach, a member of the department of psychosomatic medicine, “The NPI is the most widely-applied measure for the assessment of narcissistic personality traits” (Schmalbach). The surveys were all anonymous to reduce response bias, since this could skew results. Additionally this study was a correlation test not causation. Due to the limited time frame for collecting data, it would’ve been unrealistic to conduct a causational study, because this would mean that participants had to take an NPI test before and after months of controlled social media use. This would’ve been hard to accomplish since there’s no way of ensuring the participants are using the correct amount of

social media per day, and there's not enough time in the school year to complete a causal study.

# Results

## I. Findings

100 people participated in this study. 57 were GenZ (57%) and 43 were millennials (43%). 59 were female (59%) and 41 were male (41%). The average age of the group was 27. The average screen time was 175 min per day.

The 100 participants were categorized into four groups. According to Joanthan Rothwell, an economist at Gallup, average screen time for GenZ was 240 minutes, so the GenZ group was divided into low screen time use (under 240 minutes) and high screen time use (over 240 minutes) (Rothwell). Likewise, Gitnux, a market research firm, reported average millennial screen time to be 120 minutes, so the millennial group was divided into low screen time use (under 120 minutes) and high screen time use (over 120 minutes) (Lindner).

Between the two generations, correlation between screen time and narcissism was compared with the use of the modified NPI test and questions relating to narcissistic social media behavior.

The NPI test consisted of 24 questions, each question had a narcissist choice and non-narcissistic choice. Using the NPI's own scoring system, the narcissist choice was worth one point, while the non-narcissist choice was worth zero, meaning the max score an individual could receive from the test was a 24 and the minimum was a 12. To see if the correlation between narcissism and social media was stronger within GenZ or Millennials, a t-test was used to compare the means of:

GenZ and Millennials

GenZ high social media use and GenZ low social media use

Millennial high social media use and Millennial low social media use

overall high social media use and overall low social media use

Generation	Mean	Number (sample	Std. Deviation
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		size)	
GenZ	16.5351	57	1.60318
Mill+	16.3953	43	1.47017

The difference between the mean GenZ narcissism score and Millennial narcissism score was 0.1398. This was not statistically significant, as  $p=0.656$ .

Generation x Screen	Mean	Number (sample size)	Std. Deviation
GenZLow	16.5	37	1.63724
GenZHigh	16.6	20	1.57781

The difference between the mean GenZ Low Screentime narcissism score and GenZ High Screentime narcissism score was 0.1. This was/was not statistically significant, as  $p=0.82$ .

NOTE: Screen time signifies daily screen time for social media apps only. GenZ low screen time was 0 to 4 hours, and high was 4+ hours. Millennial low screen time was 0 to 2 hours, and high was 2+ hours.

Generation x Screen	Mean	Number (sample size)	Std. Deviation
Mill+Low	16.387	31	1.48722
Mill+High	16.455	12	1.55651

The difference between the mean Millennial+ Low Screentime narcissism score and Millennial+ High Screentime narcissism score was 0.1. This was/was not statistically significant, as  $p=0.90$ .

Screen Time	Mean	Number (sample	Std. Deviation
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		size)	
Low	16.4546	55	1.5494
High	16.5114	44	1.5645

The difference between the mean Low Screentime narcissism score and High Screentime narcissism score was 0.0568. This was not statistically significant, as  $p=0.43$ . Since previous research showed average social media screen time was different depending on generation, the overall average social media screen time was found. According to Simon Kemp, a professor of Psychology at the University of Canterbury, the average daily social media use is 2 hours and 23 minutes (for all ages). So anything below 143 minutes was considered low screen time and anything above was high screentime.

All of the p values above were greater than 5%, meaning the results happened by chance more than 5% of the time. This shows that the results are not statistically significant.

There were also a set of 7 non-demographic questions that measured the individuals behavior/attitude towards social media. These questions consisted of narcissistic and non-narcissistic answer choices. Only 2 questions had statistically significant answers between the different generations.

**How frequently do you post content about your achievements or positive aspects of your life on social media? ( $p= 0.144$ )**

Generation	Never	Rarely	Occasionally	Often	Always
GenZ	17.5%	38.6%	33.3%	10.5%	0%
Mill+	11.9%	59.5%	26.2%	2.4%	0%

NOTE: The percentages show % within the generation sample.

**To what extent do you agree with the statement: "I enjoy it when people notice and praise my accomplishments or appearance on social media"? (p = 0.556)**

Generation	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
GenZ	17.2%	46.6%	29.3%	3.4%	3.4%
Mill+	7.1%	45.2%	40.5%	4.8%	2.4%

**How often do you compare your social media presence (e.g., number of followers, likes, comments) with that of others? (p = 0.292)**

Generation	Never	Rarely	Occasionally	Often	Always
GenZ	31%	39.7%	19%	10.3%	0%
Mill+	45.2%	40.5%	9.5%	4.8%	0%

**When you share something on social media, how much do you care about the number of likes, comments, or shares it receives? (p = 0.574)**

Generation	Not at all	A little	Moderately	Very Much
GenZ	22.4%	39.7%	32.8%	5.2%
Mill+	34.1%	36.6%	26.8%	2.4%

**How would you describe your interactions with others on social media? (p = 0.003)**

Generation	Mainly supportive and empathetic	Mainly self-promotional	Mostly observing without active participation	A mix of all
GenZ	39.7%	0%	37.9%	22.4%
Mill+	23.3%	2.3%	18.6%	55.8%

**To what extent do you believe that your self-esteem is influenced by the feedback you receive on social media? (p = 0.161)**

Generation	Not at all	A little	Moderately	Very Much
GenZ	31%	34.5%	32.8%	1.7%
Mill+	47.6%	35.7%	14.3%	2.4%

**Do you see social media as a platform for expressing your true self, or do you present a curated version of yourself? (p = 0.049)**

Generation	Express True Self	Present Curated Version
GenZ	29.3%	70.7%
Mill+	48.8%	51.2%

## II. Analysis

For the majority of the 7 social media use questions the most narcissist choice was not the most frequently selected answer. This demonstrates that people are aware of the toxic effects of social media, and most people have a healthy relationship with social media. The younger and older generations had very similar responses, which shows how the younger generations are already knowledgeable and wary of the harmful/narcissistic tendencies and effects of social media.

Although this data showed no significant difference between narcissism scores and social media use, this doesn't mean there are no harms of using social media. Excessive social media can still be detrimental because it could cause less productivity, lower self-esteem, or social media addiction. Teens, especially girls are very prone to the hate received on social media. It can be detrimental to one's mental health, and cause body dysmorphia and depression. In addition, social media also can pose dangers to middle schoolers where social status is very important to them. Since a lot of social media apps have tracking devices, kids who are left out can feel bad about themselves. Thus, people should still be encouraged to use less social media and screen time, even if it has no contributions towards narcissism. Also, the average narcissism score was 16 out of 24, which is 67%. According to Sukhvinder S. Obhi, a

member of the Department of Psychology at McMaster University, anything over 52% is considered narcissism (Obhi). Although there wasn't a difference between the generations, the average being over 52% is concerning. This is bad for both millennials and GenZ, because it can lead to immense self-importance and arrogance. As explained by Mayo Clinic, a nonprofit American academic medical center, people with narcissism may have trouble understanding or caring about the feelings of others. On the outside, they may portray a high sense of self-importance and confidence, however on the inside they're unsure of their self-worth and are easily upset by criticism. Narcissism can create problems within relationships, work and school, and these people will generally get upset when they aren't given special favors/attention that they think they deserve. As a result, they are often unsatisfied with their relationships, and may cause others to avoid them ("Narcissistic Personality Disorder").

The 7 social media use questions consisted of narcissistic and non-narcissistic answer choices. Only 2 questions had statistically significant answers between the different generations. The first asked how individuals interact with others on social media. Plurality of GenZ chose "observing without participation" or "mainly supportive and empathetic". While Millennials mostly chose a mix of all. This difference could be due to the fact that many adults use social media for job purposes. For example, they could be promoting a product or their business. Thus, this would explain why more millennials choose "mainly self promotional" compared to the younger generation which was mostly made up of students who probably don't have jobs yet.

The other question that showed a significant difference was how the individual presents themselves on social media. 70% of GenZ said they present a curated version, while for Millennials it was pretty much even between expressing their true self vs a curated version. This could be due to the fact that younger people are often more self conscious and insecure about themselves. In fact, Emily Henderson, a Bachelor in Science, states that nearly two-thirds of parents say their child is insecure about some aspect of their appearance (Henderson). Younger

individuals, especially teens, care more about others' opinions, and want others to think they're fun or cool. Stephanie Wong, a research fellow in psychology, and Hannah Keage, an associate professor of psychology, support this statement. They stated that adults are less self-conscious and report fewer experiences of emotions such as shame, guilt, and embarrassment compared to younger individuals (Wong and Keage). Thus it makes sense why GenZ was more likely to present a curated version.

These results contradicted Twenge's study, which found significant correlation between generation and narcissism. In fact, Twenge reported a 30% increase in NPI scores for American college students between 1979 and 2006 (Twenge). However, her study was published in 2009, meaning it's been 15 years, thus it's very possible that her results are outdated, and now there's actually no difference between generations now that everybody has social media. Her research was conducted a few years after the first social media was created. Facebook, which is one of the largest social media platforms, was created in 2004, and Twenge's research only went up to 2009. Thus, social media was relatively new, and this could explain why she saw a difference between generations. However, social media has now become the norm, and both Millennials and GenZ have had it for all or majority of their life. As a result, social media is not as powerful and doesn't have as much influence on narcissism as it did 20 years ago. This study found high NPI that signified narcissism for all ages. Twenge's study placed a spotlight on the narcissism phenomenon, and her results signified this coming wave of narcissism.

### **III. Limitations**

One limitation is the tool this study used to measure narcissism. The questions asked by the NPI may have been too broad or poorly worded, thus resulting in the lack of results that showed a difference. For example, the results of the set "I am going to be a great person, versus, I hope I am going to be successful" were pretty much even, which makes sense because the wording can be confusing. Being a great person doesn't mean one won't be successful, thus it doesn't make sense for these two phrases to be contradicting each other.

The narcissistic choice was “I am going to be a great person”, because the words “I am” are more narcissistic than “I hope I am”. However, one can also argue that wanting to be “successful” is more narcissistic than wanting to be “a great person”. This is just one example of how the NPI may be confusing. Instead, the Five Factor Narcissism Inventory (FFNI) would’ve been a better way to measure narcissism. This questionnaire was created in 2011 by Natalie Glover and 4 fellow psychologists, and it tests traits associated with grandiose and vulnerable narcissism. The questionnaire contains 148 questions, and each question was answered on a scale from 1 to 5, 1 being strongly disagree and 5 being strongly agree. One example of a question is “I like being noticed by others” (Glover et al.). This is similar to the NPI pair “I get upset when people don’t notice how I look when I go out in public, versus, I don’t mind blending into the crowd when I go out in public.” However, the FFNI has 5 answer choices, while the NPI only has two. Thus, the FFNI could be more accurate, because it allows the respondent to be more precise with their answer.

Another limitation is that the sample size was too homogenous. Since the majority of the GenZ population were students from the same suburban high school, it’s possible that location caused similar scores despite the varying social media hours. Thus, the data may be biased, because it could’ve just been that people from the same town just have similar NPI scores. The town is relatively affluent and there’s not much racial diversity. These are outside factors that can cause the lack of difference between the data. Additionally, this also limits the scope of its relevance. Meaning, the results are not representative of the entire GenZ population, because most of the GenZ in this sample were high school students from the same town.

#### **IV. Future Research**

As explained earlier, this study found no difference between the two generations. Not only did these results suggest that Twenge’s study is outdated, but it also provided data that showed people who grew up with social media are equally narcissistic. Twenge compared

college students from 1980s vs 2000, which is equivalent to Baby Boomers vs Millennials. Since this study compares GenZ and Millennials, a future study in Millennials vs. Baby Boomers would be a better way to test whether or not Twenge's study is outdated. Since both GenZ and Millennials grew up with social media for most if not all of their entire lives, this could've caused the similar narcissism scores. Both generations had an average score of 16/24 on the NPI test, which is on the narcissistic side. Thus, future research can be run on Gen Alpha. If they have similar narcissism scores to GenZ/Millennials, one can suggest that people who grew up their entire lives with social media are equally narcissistic.

Aside from narcissism, there are many other generational differences that can also be studied. One example is generational differences in the work field. As explained by Danielle Abril, a writer for the Washington Post, GenZ has a harder time taking harsh/direct criticism. Instead, they prefer to have discussions with their superiors and have their feelings acknowledged. In fact many Gen Zers felt short, quick critiques without explanation often leave them with feelings of self doubt and can induce anxiety. This could be due to the fact that GenZ grew up with the media. Whenever there's an inconvenience, they can look anything up and have access to instant information. However, in work life, this is not how problems are solved. Information about the workplace is often harder to access, and may require real life experiences. Thus, it's harder for GenZ to adapt to these circumstances leading to stress when receiving criticism (Abril). Future research can look further into generational differences on anxiety due to criticism in work places and ways to ameliorate this possible issue. This study can be achieved through a questionnaire with phrases such as "Hey, you did this wrong vs I'd like to have a conversation on where your thought process was and where you went wrong". One choice would be more abrupt criticism, while the other is more understanding of the workers feelings. The participants could choose the phrase they prefer, and this would help companies understand how to improve communications with GenZ workers.

## **V. Conclusion**

The ultimate goal was to see if the correlation between social media and narcissism was stronger in GenZ or Millennials. Evidence showed no statistically significant difference between the two generations. However, due to the limitations, there could've been inaccuracy in the results. Thus, future studies with less homogenous sample sizes and the use of FFNI can be tested to yield different and possibly significant results.





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## Appendix

[https://docs.google.com/forms/d/e/1FAIpQLSdw6r2SwMEQCluk16o7Unh8QSrngDICXU1Rcrsn\\_oV\\_T-hA6uA/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSdw6r2SwMEQCluk16o7Unh8QSrngDICXU1Rcrsn_oV_T-hA6uA/viewform?usp=sf_link)

### I. Demographic/social media use questions

How old are you?

What's your biological gender?

- a. Female
- b. Male

What's your average screen time per day for social media apps only? (messages or apps for texting don't count)

How frequently do you post content about your achievements or positive aspects of your life on social media?

- a. Never
- b. Rarely
- c. Occasionally
- d. Often
- e. Always

To what extent do you agree with the statement: "I enjoy it when people notice and praise my accomplishments or appearance on social media"?

- a. Strongly Agree
- b. Agree

- c. Neutral
- d. Disagree
- e. Strongly Disagree

How often do you compare your social media presence (e.g., number of followers, likes, comments) with that of others?

- a. Never
- b. Rarely
- c. Occasionally
- d. Often
- e. Always

When you share something on social media, how much do you care about the number of likes, comments, or shares it receives?

- a. Not at all
- b. A little
- c. Moderately
- d. Very Much

How would you describe your interactions with others on social media?

- a. Mainly Supportive and empathetic
- b. Mainly self-promotional
- c. A mix of both
- d. Mostly observing without active participation

To what extent do you believe that your self-esteem is influenced by the feedback you receive on social media?

- a. Not at all
- b. A little
- c. Moderately
- d. Very much

Do you see social media as a platform for expressing your true self, or do you present a curated version of yourself?

- a. Express True self
- b. Present curated version

## **II. NPI Test**

Select the statement you most agree with

- a. I have a natural talent for influencing people.
- b. I am not good at influencing people.

Select the statement you most agree with

- a. When people compliment me I sometimes get embarrassed.
- b. I know that I am good because everybody keeps telling me so.

Select the statement you most agree with

- a. I prefer to blend in with the crowd.
- b. I like to be the center of attention.

Select the statement you most agree with

- a. I will be a success
- b. I am not too concerned about success

Select the statement you most agree with

- a. I am no better or worse than most people.
- b. I think I am a special person.

Select the statement you most agree with

- a. I insist upon getting the respect that is due me.
- b. I usually get the respect that I deserve.

Select the statement you most agree with

- a. I prefer to dress modestly.
- b. I prefer to show off.

Select the statement you most agree with

- a. I just want to be reasonably happy.
- b. I want to amount to something in the eyes of the world.

Select the statement you most agree with

- a. My figure is nothing special.
- b. I am proud of the way I look.

Select the statement you most agree with

- a. I try not to be a show off.
- b. I will usually show off if I get the chance.

Select the statement you most agree with

- a. I always know what I am doing.
- b. Sometimes I am not sure of what I am doing.

Select the statement you most agree with

- a. I sometimes depend on people to get things done.
- b. I rarely depend on anyone else to get things done.

Select the statement you most agree with

- a. Sometimes I tell good stories.
- b. Everybody likes to hear my stories.

Select the statement you most agree with

- a. I expect a great deal from other people.
- b. I like to do things for other people.

Select the statement you most agree with

- a. I will never be satisfied until I get all that I deserve.
- b. I take my satisfactions as they come.

Select the statement you most agree with

- a. Compliments embarrass me.
- b. I like to be complimented.

Select the statement you most agree with

- a. I don't care about new fads and fashions.
- b. I like to start new fads and fashions.

Select the statement you most agree with

- a. I like to look at myself in the mirror.
- b. I am not particularly interested in looking at myself in the mirror.

Select the statement you most agree with

- a. I really like to be the center of attention.
- b. It makes me uncomfortable to be the center of attention.

Select the statement you most agree with

- a. I am going to be a great person.
- b. I hope I am going to be successful.

Select the statement you most agree with

- a. I wish somebody would someday write my biography.
- b. I don't like people to pry into my life for any reason.

Select the statement you most agree with

- a. I get upset when people don't notice how I look when I go out in public.
- b. I don't mind blending into the crowd when I go out in public.

Select the statement you most agree with

- a. I am more capable than other people.
- b. There is a lot that I can learn from other people.

Select the statement you most agree with

- a. I am much like everybody else.
- b. I am an extraordinary person.