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## Prevalence Rates of Antisocial Behaviors in Generation Z

Adrianna J. Valencia  
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# PREVALENCE RATES OF ANTISOCIAL BEHAVIORS IN GENERATION Z

by

ADRIANNA J. VALENCIA

An undergraduate thesis submitted in partial fulfillment of the requirements  
for the Honors in the Major Program in Psychology  
in the College of Sciences  
and in The Burnett Honors College  
at the University of Central Florida  
Orlando, Florida

Spring Term 2021

Thesis Chair: Dr. W. Steven Saunders

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## ABSTRACT

A review of the scholarly literature suggests that mental health struggles in Generation Z have escalated in recent years. However, there is a lack of psychological research that examines antisocial behaviors in Generation Z. This study aims to determine the prevalence rates of antisocial behaviors in Generation Z. It was hypothesized that our sample of Generation Z students would show higher prevalence rates of antisocial behaviors than previous generations. We examined the data collected from our survey, which was composed of demographic and antisocial personality disorder questions. A one-way ANOVA, revealed significant differences in the categories of age, gender, school year, and race compared to the antisocial score. A Tukey post hoc analysis revealed statistically significant differences for antisocial behaviors in Generation Z when compared to the 41-50+ age group. Significant differences between students were not found when examining the categories of sexual orientations and political affiliations.

*Keywords:* Antisocial, Generation Z, Personality Disorder

## ACKNOWLEDGEMENTS

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## CHAPTER 1: INTRODUCTION

Generation Z is among the most ethnically diverse, highly educated, and misunderstood new generation in recent history (Parker & Igielnik, 2020). Generation Z is defined as anyone born from 1997-2010, sometimes referred to as iGeneration, due to the significant influence of technology (Dimock, 2020). The association between Generation Z and mental health concerns has become a prevalent phenomenon (Bethune, 2019). Previous literature suggests an increase of mental health challenges in recent years, particularly found in younger generations (American Psychological Association, 2019). However, little is known about the correlation between Generation Z and antisocial behavior (Parker & Igielnik, 2020). The objective of this study is to determine the prevalence rates of antisocial behaviors in Generation Z.

### What is Antisocial Personality Disorder?

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) describes the criteria for antisocial personality disorder (ASPD) as being “a pervasive pattern of disregard for and violation of the rights of others, occurring since the age of 15, as indicated by three or more of the following: (American Psychiatric Association, 2013, p. 986).” The failure to conform to social norms with persistent behaviors that will contribute to the likelihood of an arrest (American Psychiatric Association, 2013, p. 986). Other symptoms include deceitfulness with frequent lying or conning others for personal gain or pleasure (American Psychiatric Association, 2013, p. 986). As well as, impulsivity, irritability, and aggressiveness with a reckless disregard for the safety of themselves and others (American Psychiatric Association, 2013, p. 986). In addition, ASPD includes consistent irresponsibility that involves persistent failure to sustain consistent work (American Psychiatric Association, 2013, p. 986). Individuals with

antisocial personality disorder exhibit a lack of remorse and empathy (American Psychiatric Association, 2013, p. 986). They tend to justify the hurt, mistreatment, or theft from another (American Psychiatric Association, 2013, p. 986). To be diagnosed with ASPD, an individual must also be at least 18 years of age, with evidence of conduct disorder before the age of 15 (American Psychiatric Association, 2013, p. 986). Antisocial behavior cannot exclusively occur during an episode of schizophrenia or bipolar disorder (American Psychiatric Association, 2013, p. 986). Blackburn, R., & Fawcett, D. (1999) developed the “The Antisocial Personality Questionnaire (APQ)” that helps to identify antisocial behavior and personality traits. “The APQ provides comprehensive coverage of the deviant traits implicated in personality disorder and antisocial behavior and appears to tap 3 of the Big Five personality dimensions (Neuroticism, Extraversion, and Agreeableness)” (Blackburn et al. 1999). Blackburn, R., & Fawcett, D. (1999) determined that the APQ is a reliable and valid measure of antisocial personality traits.

### Generation Z and Mental Health

In comparison to other generations, Generation Z is significantly more likely to rate their mental health as being “fair” or “poor” (Schroth, 2019). In 2017, statistics reflected antisocial behaviors among Generation Z college students (U.S. Department of Education, National Center of Education Statistics, 2019). Data confirmed a two percent increase from 2016 regarding 28,400 criminal incidents on college campuses (U.S. Department of Education, National Center of Education Statistics, 2019). A rise of on-campus crimes were reported per 10,000 full-time students (U.S. Department of Education, National Center of Education Statistics, 2019). The data incorporates crimes such as unlawful entry to commit a felony or theft, grand theft auto, and any solicited sexual act (U.S. Department of Education, National Center of Education Statistics, 2019)

According to a study that compares college students with “type 2 personality disorder” or “psychopathic traits” to their risk-taking behaviors, those with psychopathic characteristics are more likely to partake in risk-taking behavior than those with type 2 personality disorders (Hartzler & Fromme, 2003). Risk-taking behaviors include but are not limited to drinking, drug use, or unprotected sex without being under the influence (Hartzler & Fromme, 2003). Furthermore, a meta-analysis study measured dispositional empathy among American college students, and it was revealed that there was a significant decline in empathic concern (Konrath, O'brien, & Hsing, 2010). Besides empathetic concern, Generation Z students have also exhibited an increase in deceitful behavior (Gentina, Tang, & Dancoine, 2018). Literature suggests that Generation Z students utilize their cellphones inappropriately during academic settings, known as iCheating (Gentina, Tang, & Dancoine, 2018). The inappropriate use of cellphones is an essential factor to acknowledge since deceit and manipulation are the main distinguishing features of antisocial personality disorder (American Psychiatric Association, 2013, p. 986).

### Social and Cultural Influences

Additionally, data suggest that cultural trends in the last ten years may have had a more impactful effect on Generation Z than other generations (Twenge et al., 2019). According to a social media survey study, “88% of 18 to 29-year-olds use some form of social media” (Smith & Anderson, 2020). It’s important to acknowledge a positive correlation between social media and various personality disorders (Akça et al., 2020). According to a study that analyzes social media use and personality disorders, university students with “higher social media disorder components” exhibited elevated levels of personality disorder traits (Akça et al., 2020). Compared to those who had lower components of social media disorder (Akça et al., 2020).

Consequently, family structures and peer association may also contribute to the development of antisocial personality disorder. Environmental factors, such as physical, sexual abuse, and neglect also affect ASPD's progression (Fisher, 2020). Furthermore, studies suggest a correlation between adverse childhood experiences and individuals diagnosed with antisocial personality disorder (DeLisi et al., 2019). Various parenting styles, such as inadequate supervision, intolerant discipline, and unemotional parenting also constitute risk factors for ASPD (Glenn & Raine, 2014). For instance, according to a study that examined sexual abuse and antisocial personality disorder, individuals from the age range of 18–21 and 21–25 contained a two to four times greater prevalence rate with a past of sexual abuse than those who did not experience sexual abuse (DeLisi, Drury, & Elbert, 2019). Although environmental factors have been shown to contribute to antisocial personality disorder, biological factors also significantly impact the disorder.

### Biological Contributions in Antisocial Personality Disorder

Uniquely, the minds of Generation Z have become “hardwired differently due to exposure of digital devices early in life” (Crist, 2017). There is an evident biological component in the contribution of antisocial personality disorder. A meta-analysis of behavioral genetic studies reveals that 56% of individuals with antisocial personality disorder can be associated with genetic influences (Ferguson, 2010). The role of genetics and antisocial personality disorder have been studied among monozygotic and dizygotic twins (Baker, Bezdjian, & Raine, 2006). As a result, monozygotic twins who share 100% of their DNA show higher criminal activity rates, versus dizygotic twins who share 50% of their DNA (Baker, Bezdjian, & Raine, 2006). Studies suggest a heritable biological component in ASPD (Baker, Bezdjian, & Raine, 2006). Antisocial personality disorder rates are higher in individuals related to someone

with the disorder than the average population (Baker, Bezdjian, & Raine, 2006).

Correspondingly, brain and gene abnormalities are associated with antisocial personality disorder (Rain, 2008). Polymorphism has been shown to occur in the Monoamine Oxidase A (MAOA) gene, which reduces the area of the amygdala and the prefrontal cortex of the brain (Rain, 2008). When individuals with ASPD had their brains scanned using magnetic resonance imaging (MRI), there was a significant 11% reduction of prefrontal gray matter (Rain, 2008).

### Gender Differences

In addition, gender differences have been examined in individuals with antisocial personality disorder (Fisher, 2020). Males are three to five times more likely to be diagnosed with ASPD than females (Fisher, 2020). In the general population, 6% of men and 2% of women have an antisocial personality disorder (Fisher, 2020). According to the DSM-5, women may be underrepresented when diagnosing antisocial personality disorder due to the emphasis on aggressive qualities (American Psychiatric Association, 2013, p. 986). However, women with ASPD tend to exhibit less violent behaviors but show higher levels of aggressiveness and irritability than their male counterparts (Alegria et al., 2013). By contrast, men are more likely to participate in violent behaviors such as physical fights, using weapons, harming animals, and setting fires (Alegria et al., 2013).

### Prevalence Rates of Antisocial Personality Disorder

The prevalence rates of individuals with antisocial personality disorder peak between the ages of 24 and 44, with a decline in the age range of 45 to 64 (Black, 2015). In contrast, the prevalence rate of antisocial personality disorder in the general population is 1%- 4% (Werner,

Few, & Bucholz, 2015). The first symptom of ASPD begins as conduct disorder and appears before the age of 11 for 80% of individuals (Black, 2015). Prevalence rates are higher in criminal populations, representing 80% of the population (Black, 2015). In outpatient environments, the rate of antisocial personality disorder may be from 3% to 30% (Busari, 2015). Furthermore, prevalence rates for personality disorders in substance abusers make up 34.8% to 73.0% of individuals who receive treatments for addictions (Parmar & Kaloiya, 2018). According to a study of intravenous drug users, drug users with ASPD are more likely to participate in HIV risk-taking behavior such as sharing needles than drug users who do not have ASPD (Brooner, Bigelow, Strain, & Schmidt, 1990). Data proposed that 18% of drug users and 9.1% who abuse alcohol also meet the criteria of antisocial personality disorder (Werner, Few, & Bucholz, 2015). Similarly, in another study that examined individuals at the average age of 15 who experienced conduct disorder and substance abuse, 61% developed antisocial personality disorder criteria with a decline in life functioning (Myers, Stewart, & Brown, 1998).

The following chart represents the estimated number of arrests by offenses in 2018. The data is composed of the age group 0-25 with no particular gender (OPPD, 2019). These statistics are developed by the Bureau of Justice Statistics and the National Center for Juvenile Justice (OPPD, 2019). The table can be found in Table 1.

### Generation Z Contributions

Despite the rise in mental health issues of Generation Z, there are positive contributions from the generation. Gen Z has been conscious of environmental and ecological systems (Mathur & Hameed, 2016). Climate change and energy production is a large focus among a substantial amount of the generation (Funk & Tyson, 2020). Comparatively, 91% of Generation Z believe that everyone should be created equal and entitled to equal treatment (Schroth, 2019). Generation

Z has exhibited great distinction when it involves societal views and change (Parker & Igielnik, 2020). This generation is currently on the track to becoming the “most well-educated generation yet” (Parker, Graf, & Igielnik, 2020). Statistics show that Gen Zers are more likely to enroll in college and least likely to drop out of high school and are more likely to have a college-educated parent (Parker & Igielnik). Gen Z is unlike the other generations and has been described as “unique” (Mathur & Hameed, 2016).

## CHAPTER 2: METHOD

### Participants and Procedures

Approval for this study was granted by the University of Central Florida's Institutional Review Board. Participants were recruited from the University of Central Florida undergraduate population through the SONA system. This study was conducted on an online-based platform and data was collected from the Qualtrics software. The study excluded anyone under the age of 18 from taking this survey. The participants were provided with an informed consent form before beginning the study. Compensation of extra credit was granted to those who completed the survey. An option of another SONA study was available for those who did not want to participate in the study. The survey was composed of demographic and antisocial personality disorder questions. The sample was originally composed of 580 participants. However, 10 participants were removed for not completing all of the questions in the survey. An additional 266 participants were removed from the study for finishing the survey in under 4 minutes because this likely indicated that they did not meaningfully read and then answer the questions. Participants included in analysis included 304, female ( $n = 248$ , 82.1%), and male ( $n = 52$ , 17.2%) college students. Two additional participants (0.7%) did not specify their gender. The academic year of the participants were represented in freshman ( $n = 15$ , 4.9%), sophomore ( $n = 43$ , 14.1%), junior ( $n = 117$ , 38.5%), and senior ( $n = 129$ , 42.4%). To represent multiple generations, the age range of participants was composed of 18-24 ( $n = 220$ , 72.4%), 25-30 ( $n = 22$ , 13.8%), 31-40 ( $n = 42$ , 7.2%), 41-50+ ( $n = 19$ , 6.6%). Racial and ethnic demographics include: White ( $n = 187$ , 61.5%), Black or African American ( $n = 51$ , 16.8%), American Indian or Alaska Native ( $n = 2$ , .7%), Asian ( $n = 20$ , 6.6%), other ( $n = 44$ , 14.5%).

## Measures

### *Demographic Scale*

Participants answered 8 questions to assess their age, gender, academic major, race, grade level, political affiliation, and sexual orientation. The complete questionnaire can be found in Appendix C.

### *Antisocial Personality Disorder Questionnaire*

The questionnaire is based on the DSM-5 criteria for Antisocial Personality Disorder based on the work of Blackburn, R., & Fawcett, D. (1999). The ASPD questionnaire is composed of 32 questions to analyze antisocial behaviors ( $\alpha = .87$ ), (e.g., “I have repeatedly pretended to have emotions I really didn’t have in order to get my way,” and “my own pleasure is of supreme importance.”) Questions are on a 5-point Likert scale with 1 being *never*, and 5 being *always*. The complete questionnaire can be found in Appendix D.

## CHAPTER 3: RESULTS

### Preliminary Analyses

Preliminary analyses indicated that the missing data for the current study was less than 1%. Therefore, a simple mean substitution imputation method was used (Kline, 2005). This method involves replacing the missing data with the overall mean value for the variable. There is the possibility that replacing missing data in this manner can distort the distribution of the data, although it had no detectable effect on this dataset. The distribution of the data was the same before and after the imputation. Results for the main analyses conducted relative to each research question are described below.

### Main Analyses

A series of analyses of variances (ANOVAs) were performed to determine if there was a significant difference in antisocial behaviors of participants based on their age. Seven one-way ANOVA's were completed using each demographic variable (e.g., age, gender, academic year, and race) as the independent variable and antisocial score as the dependent variable.

An analysis of variance (ANOVA) to determine if there were differences in antisocial behaviors based on participant age. Results indicated a statistically significant difference between groups,  $F(3, 300) = 4.018, p = 0.008$ . A Tukey's post hoc test revealed statistical significance differences for antisocial behaviors between age groups 18-24 and 41-50+. No statistical differences for antisocial behaviors were indicated for age groups 25-30 and 31-40. Descriptive statistics for age and antisocial behaviors can be found in Table 2.

A second ANOVA was conducted to determine if there were differences in antisocial behaviors based on participant reported gender. Results indicated a statistically significant differences between groups,  $F(2, 299) = 5.518, p = .004$ . A Tukey's post hoc test revealed statistically significant differences for antisocial behaviors between females and males. Descriptive statistics for gender and antisocial behaviors can be found in Table 3.

A one-way ANOVA was conducted to determine if there were differences in antisocial behaviors based on participants' academic year. Results indicated a statistically significant difference between groups,  $F(3, 300) = 7.665, p = .000$ . A Tukey's post hoc revealed statistically significant differences for antisocial behaviors between First-year students, Juniors, and Seniors. Descriptive statistics for antisocial behaviors and academic year can be found in Table 4.

A one-way ANOVA was conducted to determine if there were differences in antisocial behaviors based on participants' reported race. Results indicated a statistically significant difference between groups,  $F(4, 299) = 2.596, p = .037$ . A Tukey's post hoc revealed statistically significant differences for antisocial behaviors between Asian, White, and Black or African American participants. No statistical differences for antisocial behaviors were indicated for American Indian or Alaska Native, Native Hawaiian or another Pacific Islander, and participants who identified as "Other." Descriptive statistics for antisocial behaviors and race can be found in Table 5.

Two additional one-way ANOVA's were also completed using each demographic (e.g., sexual orientation and political affiliation) as the independent variable and antisocial behavior as the dependent variable. No significant differences for antisocial behaviors were indicated for sexual orientation or political affiliation.

## CHAPTER 4: DISCUSSION

### Significance of the Study

To our knowledge, this is the first study to examine antisocial behaviors among Generation Z. The major objective of this study was to determine the prevalence rates of antisocial behaviors in Generation Z. It was hypothesized that Generation Z would have higher prevalence rates than previous generations. This study provided new insight into the relationship between generations and antisocial behaviors. The results indicated that there was a statistically significant difference between Generation Z and previous generations. In addition, according to the data from The Office of Juvenile Justice and Delinquency Prevention Statistical Briefing Book, ages 18 to 20 represent 8%, while ages 21-24 account for 12%, and ages 25 and older constitute 73% of all offenses. The OJJDP statistics suggests a similar pattern related to our data when age was compared to the antisocial score. In our data Generation Z or age group (18-24) revealed statistically significant differences when compared to ages (40-50+). It is suggested that Generation Z in both data sets show a significant difference compared to previous generations.

### Limitations

It is worth noting that though prevalence rates of Generation Z are statistically significant, there are limitations in this study that could be addressed in future research. Despite being a random selection of students, the sample of participants were all derived from the University of Central Florida. If this were a national survey, there is a significantly higher possibility that the results would vary. Secondly, the current study lacks an equal number of participants in the age group due to the location of the study. Since this study was conducted on

an online platform, we could not control the amount of time that a participant took to complete the survey.

### Future Research

The current study revealed significant prevalence rates of Generation Z when compared to previous generations. This study has set the foundation for research of the relationship between Generations and antisocial behaviors. Moving forward, future research on the correlation of higher prevalence rates and generations may be examined. If a correlation is determined, there is a possibility of new preventative measures and treatments for antisocial behaviors. Further questions could be explored, such as “Are there more functioning people in society that fall on the antisocial personality disorder spectrum?”

## Appendix A: Approval of Exemption



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board  
FWA00000351  
IRB00001138, IRB00012110  
Office of Research  
12201 Research Parkway  
Orlando, FL 32826-3246

EXEMPTION DETERMINATION

October 13, 2020

Dear W. Steven Saunders:

On 10/13/2020, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study
Title:	Prevalence Rates of Antisocial Behaviors in Generation Z
Investigator:	W. Steven Saunders
IRB ID:	STUDY00002220
Funding:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> <li>• Antisocial Behavior Questionnaire, Category: Survey / Questionnaire;</li> <li>• Demographics Scale, Category: Survey / Questionnaire;</li> <li>• Explanation of Research, Category: Consent Form;</li> <li>• Request for Exemption , Category: IRB Protocol;</li> <li>• Survey Email , Category: Recruitment Materials;</li> </ul>

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please submit a modification request to the IRB. Guidance on submitting Modifications and Administrative Check-in are detailed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

**Due to current COVID-19 restrictions, in-person research is not permitted to begin unless you are able to follow the COVID-19 Human Subject Research (HSR) Standard Safety Plan with permission from your Dean of Research or submitted your Study-Specific Safety Plan and received IRB and EH&S approval. Be sure to monitor correspondence from the Office of Research, as they will communicate when restrictions are lifted, and all in-person research can resume.**

If you have any questions, please contact the UCF IRB at 407-823-2901 or [irb@ucf.edu](mailto:irb@ucf.edu). Please include your project title and IRB number in all correspondence with this office.

Sincerely,

*Kamille C. Birkbeck*

Kamille Birkbeck  
Designated Reviewer

## APPENDIX B. Informed Consent



## **Prevalence Rates of Antisocial Behaviors in Generation Z**

### **Informed Consent**

Principal Investigators: Dr. Steven Saunders  
Faculty Advisor: W. Steven Saunders, Psy.D  
Sponsor: University of Central Florida

Introduction: Researchers at the University of Central Florida (UCF) study many topics. To do this, we need the help of people who agree to take part in a research study. You are being invited to take part in a research study which will include approximately 150 people. You have been asked to take part in this research study because you are a UCF student involved in a particular psychology course. You must be 18 years of age or older to be included in this research study.

The group doing this research consists of Psychology undergraduates and graduates at the University of Central Florida's Psychology Department. Since the researchers are undergraduate students, they are being guided by W. Steven Saunders, a UCF faculty advisor in the Psychology Department at the University of Central Florida.

#### **What you should know about a research study:**

- You will receive detailed instructions electronically from the research team on how to participate.
- A research study is something you volunteer for.
- Whether or not you take part in this study is your choice.
- You should take part in this study because you want to.
- You can agree to take part in the study now and change your mind later, requesting an alternate assignment.
- Whatever you decide will not be held against you.
- Feel free to ask any questions you want before you make your decision.

**Purpose of the research study:** To study prevalence rates of Antisocial behaviors among Generation Z sampled in the college age.

**What you will be asked to do in the study:** You will be asked to complete an online survey which includes a demographic scale and a ASPD Questionnaire.

**Location:** University of Central Florida.

**Time required:** 25-35 minutes

**Risks:** There are no reasonably foreseeable risks or discomforts involved in taking part in this study.

**Study contact for questions about the study:** If you have questions, concerns, or complaints, or think the research has hurt you, please email the researcher at [wstevensaunders@ucf.edu](mailto:wstevensaunders@ucf.edu).

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.

**Withdrawing from the study:** If you decide to leave the study, contact the investigator so that the investigator can provide you with the appropriate forms to terminate your release. The person in charge of the research study or the sponsor can remove you from the research study without your approval. Possible reasons for removal include falsification of surveys. The sponsor can also end the research study early. We will tell you about any new information that may affect your health, welfare, or choice to stay in the research.

**Results of the research:** Study results will be public, however, specific participation will not be identifiable to the public. If you are interested in receiving the results of this research, please email your professor.

You will electronically denote consent at the beginning of the survey. By doing so, you are denoting the information in the consent document and any other written information was accurately explained to, and apparently understood by, the participant or the participant's legally authorized representative, and that informed consent was freely given by the participant or the legally authorized representative.

## Appendix C. Demographic Questionnaire

## Demographic Scale

What is your Age? \_\_\_

What is your Gender?

Male

Female

Other

What is your Sexual Orientation?

Heterosexual or straight

LGBTQ+

Prefer not to answer

What is your Major? \_\_\_\_

Which year in school are you?

Freshman

Sophomore

Junior

Senior

Are you of Hispanic, Latino or Spanish origin?

Yes

No

What race do you best Identify with?

White

Black or African American

American Indian or Alaska Native

Asian

Native Hawaiian or another Pacific Islander

Other

What do you consider your political affiliation?

Republican

Democrat

Independent

Other

## Appendix D. Antisocial Personality Disorder Questionnaire

# ASPD Questionnaire

Instructions: Read each statement below. Rate whether this applies to you from a scale of 1-5 as shown below. Put your answer to the left of each statement in the space provided.

Always = 5    Often = 4    Sometimes = 3    Rarely = 2    Never = 1

1.	1. I have repeatedly pretended to have emotions I really didn't have in order to get my way.
2.	2. I tell other things that aren't really true if it will help me get what I want.
3.	3. My own advantage in life is more important than what other people want, especially those that I don't know.
4.	4. My own pleasure is of supreme importance.
5.	5. I don't mind telling my family a half-truth if it will get them off my back.
6.	6. Being able to go out with friends is more important than staying home with family, even if someone there needs me.
7.	7. I often act in an impulsive manner.
8.	8. I don't plan ahead in my life, rather I just like going with the flow.
9.	9. Working for money is for suckers.
10.	10. Being late to work is not a problem if no one knows.
11.	11. It's ok to do a job only half-way as long as I don't get into trouble.
12.	12. I don't care about what my boss or co-workers want, I just need my paycheck and go home.
13.	13. It's ok to take stuff from work, after all they're a big corporation and can afford it.
14.	14. I sometimes don't pay an important bill in order to buy something I want but don't need.
15.	15. Electricity and water are important, but not as important as a latte.
16.	16. I don't mind keeping something I borrowed from a friend if they don't really need it.

17.	17. Taking things from family or friends is ok if they don't know about it.
18.	18. Sometimes I will walk out of a store with something I didn't pay for if it's from a big corporation that has billions of dollars.
19.	19. It's ok to slap or hit a lover if they make you mad.
20.	20. I know they say it's important to feel sorry for someone, but honestly, I just don't care about their feelings.
21.	21. Other people's difficult life situations is not my issue or my problem.
22.	22. I don't care about strangers, especially if there is no way for me to get anything out of helping them.
23.	23. If I hurt other people's feelings, that's just life and they'll have to get over it.
24.	24. I am ok with being aggressive toward others if it gets them to back off.
25.	25. It's perfectly fine to throw something during an agreement if it gets your point across.
26.	26. I don't mind cutting someone off in traffic if I can, even if they don't like it.
27.	27. It's ok be a little dangerous if it gets me to where I need to be faster.
28.	28. "No risk, no reward" is my motto.
29.	29. To tell the truth, I'm a little bit better than most other people.
30.	30. I'll be friends if I can get something out of the relationship.
31.	31. It's ok to manipulate others if I can get something amazing out of it.
32.	32. Putting on a smile and talking nice often gets me my way.

Total: 160-128---- Likely Dx, 96-127—Likely Many Traits evident, 64-96----Some traits evident, 32-63— Only mild or no traits evident.

## Appendix E. Tables

Table 1. Office of Juvenile Justice and Delinquency Prevention Statistical Briefing Book Data

Offenses	All ages	0 to 17	18 & older	10 to 17	0 to 14	15 to 17	18 to 20	21 to 24	25 & older
All offenses	100%	7%	93%	7%	2%	5%	8%	12%	73%
Murder and nonnegligent manslaughter	100%	8%	92%	8%	1%	7%	16%	17%	60%
Rape	NA	NA	NA	NA	NA	NA	NA	NA	NA
Robbery	100%	22%	78%	22%	5%	17%	17%	14%	48%
Aggravated assault	100%	7%	93%	7%	2%	5%	7%	12%	74%
Burglary	100%	12%	88%	12%	4%	8%	9%	11%	67%
Larceny-theft	100%	10%	90%	10%	3%	7%	9%	11%	70%
Motor vehicle theft	100%	17%	83%	17%	5%	12%	9%	12%	62%
Arson	100%	20%	80%	19%	11%	9%	6%	8%	66%
Simple assault	100%	12%	88%	12%	5%	7%	7%	11%	70%
Forgery and counterfeiting	100%	2%	98%	2%	0%	2%	10%	11%	77%
Fraud	100%	3%	97%	3%	1%	2%	7%	11%	78%
Embezzlement	100%	4%	96%	4%	0%	4%	14%	15%	67%
Stolen property (buying, receiving, possessing)	100%	10%	90%	10%	2%	8%	10%	12%	67%
Vandalism	100%	18%	82%	17%	8%	10%	10%	12%	60%
Weapons (carrying, possessing, etc.)	100%	10%	90%	10%	3%	7%	12%	15%	63%
Prostitution and commercialized vice	100%	1%	99%	1%	0%	1%	11%	17%	71%

Offenses	All ages	0 to 17	18 & older	10 to 17	0 to 14	15 to 17	18 to 20	21 to 24	25 & older
Sex offenses (except rape & prostitution)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Drug abuse violations	100%	5%	95%	5%	1%	4%	11%	14%	70%
Gambling	100%	8%	92%	8%	1%	6%	8%	8%	76%
Offenses against the family and children	100%	4%	96%	4%	1%	2%	4%	8%	85%
Driving under the influence	100%	1%	99%	1%	0%	1%	5%	14%	81%
Liquor laws	100%	15%	85%	15%	2%	13%	39%	7%	39%
Drunkenness	100%	1%	99%	1%	0%	1%	5%	11%	83%
Disorderly conduct	100%	17%	83%	17%	8%	10%	8%	11%	64%
Vagrancy	100%	2%	98%	2%	0%	1%	5%	6%	87%
All other offenses (except traffic)	100%	4%	96%	4%	1%	3%	6%	11%	79%
Curfew and loitering	100%	100%	0%	100%	34%	66%	0%	0%	0%
Violent Crime Index	NA	NA	NA	NA	NA	NA	NA	NA	NA
Property Crime Index	100%	11%	89%	11%	3%	8%	9%	11%	69%
Violent crimes*	100%	9%	91%	9%	3%	7%	9%	12%	69%

OJJDP Statistical Briefing Book. Estimated number of arrests by offense and age group, 2019.

Available: [https://www.ojjdp.gov/ojstatbb/crime/ucr.asp?table\\_in=1](https://www.ojjdp.gov/ojstatbb/crime/ucr.asp?table_in=1). Released on November 16, 2020.

Table 2. Descriptives for Antisocial Score and Age

<i>Age</i>	<i>M</i>	<i>SD</i>
18-24	134.54	12.39
24-30	136.59	11.54
31-40	140.59	10.58
41-50	142.20	6.7

Table 3. Descriptives for Antisocial Score and Gender

<i>Gender</i>	<i>M</i>	<i>SD</i>
Male	131.06	11.27
Female	136.79	12.052

Table 4. Descriptives for Antisocial Score and Academic Year

<i>Academic Year</i>	<i>M</i>	<i>SD</i>
Freshman	124.45	14.78
Sophomore	133.07	11.16
Junior	135.81	12.81
Senior	138.38	10.05

Table 5. Descriptives for Antisocial Score and Race

<i>Race</i>	<i>M</i>	<i>SD</i>
White	136.14	12.37
Black or African American	137.47	10.66
American Indian or Alaska Native	135.00	2.12
Asian	127.70	14.63
Other	135.77	9.99

## References

- Akça, Ö. F., Bilgiç, A., Karagöz, H., Çikili, Y., Koçak, F., & Sharp, C. (2020). Social media use and personality disorders. *Anadolu Psikiyatri Dergisi*, 21(3).
- Alegria, A., Blanco, C., Petry, N., Skodol, A., Liu, S., Grant, B., & Hasin, D. (2013, July). Sex differences in antisocial personality disorder: Results from the National Epidemiological Survey on Alcohol and Related Conditions. Retrieved August 12, 2020, from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3767421/>.
- American Psychiatric Association. “*Personality Disorders Cluster B Personality Disorders.*” Diagnostic and Statistical Manual of Mental Disorders: DSM-5, 5th ed., American Psychiatric Association, 2017, (pp. 986–990).
- American Psychological Association. (2019, March 15). Mental health issues increased significantly in young adults over last decade: Shift may be due in part to rise of digital media, study suggests. *ScienceDaily*. Retrieved August 11, 2020 from [www.sciencedaily.com/releases/2019/03/190315110908.htm](http://www.sciencedaily.com/releases/2019/03/190315110908.htm)
- Baker, L., Bezdjian, S., & Raine, A. (2006). Behavioral Genetics: The Science of Antisocial Behavior. *Law and Contemporary Problems*, 69(1/2), 7-46. Retrieved July 15, 2020, from [www.jstor.org/stable/27592122](http://www.jstor.org/stable/27592122)
- Bethune, S. (2019, January). Gen Z more likely to report mental health concerns. Retrieved August 12, 2020, from <https://www.apa.org/monitor/2019/01/gen-z>
- Black, D. W. (2015, July). The Natural History of Antisocial Personality Disorder. Retrieved August 12, 2020, from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4500180>

- Blackburn, R., & Fawcett, D. (1999). The Antisocial Personality Questionnaire: An inventory for assessing personality deviation in offender populations. *European Journal of Psychological Assessment, 15*(1), 14–24.
- Brooner, R. K., Bigelow, G. E., Strain, E., & Schmidt, C. W. (1990). Intravenous drug abusers with antisocial personality disorder: Increased HIV risk behavior. *Drug and Alcohol Dependence, 26*(1), 39-44. doi:10.1016/0376-8716(90)90081-o
- Busari, A. O. (2015). Antisocial Personality Disorder among Prison Inmates: The Mediating Role of Schema-Focused Therapy. Retrieved August 12, 2020, from <http://www.omicsonline.org/open-access/antisocial-personality-disorder-among-prison-inmates-the-mediating-role-of-schemafocused-therapy-1522-4821-17-166.php?aid=37928>
- Crist, C. (2017, April 10). On the Mind: What Science Says About Digital Natives. Retrieved November 30, 2020, from <https://www.semel.ucla.edu/longevity/news/mind-what-science-says-about-digital-natives>
- DeLisi, M., Drury, A. J., & Elbert, M. J. (2019, April 30). The etiology of antisocial personality disorder: The differential roles of adverse childhood experiences and childhood psychopathology. Retrieved August 12, 2020, from <http://www.sciencedirect.com/science/article/pii/S0010440X19300215>

- Dimock, M. (2020, July 28). Defining generations: Where Millennials end and Generation Z begins. Retrieved August 12, 2020, from <https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/>
- Ferguson, C. J. (2010). Genetic Contributions to Antisocial Personality and Behavior: A Meta-Analytic Review From an Evolutionary Perspective. *The Journal of Social Psychology, 150*(2), 160-180. doi:10.1080/00224540903366503
- Fisher, K. A. (2020, June 24). Antisocial Personality Disorder. Retrieved August 12, 2020, from <http://www.ncbi.nlm.nih.gov/books/NBK546673/>
- Funk, C., & Tyson, A. (2020, July 27). Millennial and Gen Z Republicans stand out from their elders on climate and energy issues. Retrieved August 25, 2020, from <https://www.pewresearch.org/fact-tank/2020/06/24/millennial-and-gen-z-republicans-stand-out-from-their-elders-on-climate-and-energy-issues/>
- Gentina, E., Tang, T. L., & Dancoine, P. (2018). Does Gen Z's emotional intelligence promote iCheating (cheating with iPhone) yet curb iCheating through reduced nomophobia? *Computers & Education, 126*, 231-247. doi:10.1016/j.compedu.2018.07.011
- Glenn, A. L., & Raine, A. (2014). Biosocial and Environmental Influences. *Psychopathy, 131-147*. doi:10.18574/nyu/9780814777053.003.0007
- Hartzler, B., & Fromme, K. (2003). Cognitive-behavioral profiles of college risk-takers with Type II and psychopathic personality traits. *Addictive Behaviors, 28*(2), 315-326. doi:10.1016/s0306-4603(01)00230-1

- Konrath, S. H., O'brien, E. H., & Hsing, C. (2010). Changes in Dispositional Empathy in American College Students Over Time: A Meta-Analysis. *Personality and Social Psychology Review, 15*(2), 180-198. doi:10.1177/1088868310377395
- Mathur, M., & Hameed, S. (2016, September 23). A Study on Behavioural Competencies of the Z Generation. Retrieved 2020, from [https://www.researchgate.net/profile/Shiheema\\_Hameed/publication/338501421\\_A\\_Study\\_on\\_Behavioural\\_Competencies\\_of\\_the\\_Z\\_Generation/links/5ecc80fc458515626ccc6189/A-Study-on-Behavioural-Competencies-of-the-Z-Generation.pdf](https://www.researchgate.net/profile/Shiheema_Hameed/publication/338501421_A_Study_on_Behavioural_Competencies_of_the_Z_Generation/links/5ecc80fc458515626ccc6189/A-Study-on-Behavioural-Competencies-of-the-Z-Generation.pdf)
- Myers, M. G., Stewart, D. G., & Brown, S. A. (1998, April 1). Progression from Conduct Disorder to Antisocial Personality Disorder Following Treatment for Adolescent Substance Abuse. *American Journal of Psychiatry, 155*(4), 479-485. doi:10.1176/ajp.155.4.479
- OJJDP Statistical Briefing Book. *Estimated number of arrests by offense and age group, 2019*. Available: [https://www.ojjdp.gov/ojstatbb/crime/ucr.asp?table\\_in=1](https://www.ojjdp.gov/ojstatbb/crime/ucr.asp?table_in=1). Released on October 31, 2019.
- Parker, K., Graf, N., & Igielnik, R. (2020, May 30). Generation Z Looks a Lot Like Millennials on Key Social and Political Issues. Retrieved August 25, 2020, from <https://www.pewsocialtrends.org/2019/01/17/generation-z-looks-a-lot-like-millennials-on-key-social-and-political-issues/>
- Parker, K., & Igielnik, R. (2020, May 15). What We Know About Gen Z So Far. Retrieved August 25, 2020, from <https://www.pewsocialtrends.org/essay/on-the-cusp-of-adulthood-and-facing-an-uncertain-future-what-we-know-about-gen-z-so-far/>

- Parmar, A., & Kaloiya, G. (2018). Comorbidity of Personality Disorder among Substance Use Disorder Patients: A Narrative Review. *Indian Journal of Psychological Medicine*, 40(6), 517–527. [https://doi.org/10.4103/IJPSYM.IJPSYM\\_164\\_18](https://doi.org/10.4103/IJPSYM.IJPSYM_164_18)
- Raine, A. (2008). From Genes to Brain to Antisocial Behavior. *Current Directions in Psychological Science*, 17(5), 323-328. Retrieved July 18, 2020, from [www.jstor.org/stable/20183312](http://www.jstor.org/stable/20183312)
- Schroth, H. (2019). Are You Ready for Gen Z in the Workplace? *California Management Review*, 61(3), 5–18. <https://doi.org/10.1177/0008125619841006>
- Smith, A., & Anderson, M. (2020, July 31). Social Media Use 2018: Demographics and Statistics. Retrieved August 12, 2020, from <http://www.pewresearch.org/internet/2018/03/01/social-media-use-in-2018/>
- Twenge, J. M., Cooper, A. B., Joiner, T. E., Duffy, M. E., & Binau, S. G. (2019). Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005–2017. *Journal of Abnormal Psychology*, 128(3), 185-199. doi:10.1037/abn0000410
- U.S. Department of Education, National Center of Education Statistics. (2019) “The NCES Fast Facts Tool Provides Quick Answers to Many Education Questions (National Center for Education Statistics).” *National Center for Education Statistics (NCES) Home Page, a Part of the U.S. Department of Education*, 2019, <https://nces.ed.gov/fastfacts/display.asp?id=804>.

Werner, K. B., Few, L. R., & Bucholz, K. K. (2015). Epidemiology, Comorbidity, and Behavioral Genetics of Antisocial Personality Disorder and Psychopathy. *Psychiatric annals*, 45(4), 195–199. <https://doi.org/10.3928/00485713-20150401-08>