

Assessing Relational Patterns and Attitudes of Generation Z:
How the Internet Has Shaped their Adolescence and
their Prospects for Religious Participation.

Paolo Puccini, CSP

TRS 681C Nones and Disaffiliates

Dr. William Dinges

December 4, 2019

I. Introduction

Two years into his pontificate, Pope Francis declared “One could say that today we are not living an epoch of change so much as an epochal change. The situations that we are living in today therefore pose new challenges which, at times, are also difficult for us to understand.”¹ Pope Francis did not venture to describe the specifics of this epochal change and instead reflected on the theological principles and pastoral practices that should guide Catholics in today’s world. Such provocative yet undefined papal statements leave the interpretive work to the faithful to discern their often-multivalent significance. This paper is a partial attempt to do just that. I contend that we are living through an extraordinary epochal change defined principally by the rise of the internet, which has drastically altered how people perceive the world and relate with one another.

I focus my analysis in this paper on the emerging generational cohort following the Millennials known as Generation Z. Generational cohorts are helpful to study how macro factors influence the prevailing behaviors and attitudes of cohorts at different phases of their lives. The attitudes and behaviors of generational cohorts are in part shaped by the way they were socialized by their parents, but they are also shaped by the way they engage with their unique cultural milieu and challenges. The terrorist attacks of September 11, 2001 and the Great Recession of 2008 brought fear and insecurity to the parents of Generation Z, which in turn shaped how they socialized their children. Likewise, the rapid evolution of the internet as it spread from computers to smartphones influences how Generation Z now communicates and relates to one another.

¹ Francis, “Meeting with the Participants in the Fifth Convention of the Italian Church: Address of the Holy Father,” Libreria Editrice Vaticana, November 10, 2015, http://w2.vatican.va/content/francesco/en/speeches/2015/november/documents/papa-francesco_20151110_firenze-convegno-chiesa-italiana.html.

II. Defining Generation Z

Generation Z broadly includes those in high-school during the mid-to-late 2010s, but there is not yet a consensus as to the range of birth years. Jean Twenge advocates for including those born in 1995 or later within Generation Z. This cut-off follows the 15 year spans that she uses to define the birth years of Generation X ('65-'79) and Millennials ('80-'94). More importantly, she notes that the internet as we know it was born in 1995, Facebook opened to non-college students in 2006 and the iPhone was released in 2007. Social media and smartphones have played a major role during the adolescence of those born after 1995, so it is fitting that Generation Z includes those who began high school around 2009.² The Pew Research Center defines Generation Z as those born in 1997 or later because they use 16 year spans for Generation X ('65-'80) and Millennials ('81-'96).³ The Barna Group defines Generation Z as those born in 1999 through 2015.⁴ No reasons are given, but I suspect their tighter band reflects their research methodology of conducting proprietary surveys of teenagers 17 and under in the fall of 2016 and teenagers 18 and under in the summer of 2017. A more expansive view of Generation Z would have required Barna to mix their survey population between those over and under 18 years old. The profiles of Generation Z that emerge from these three research groups remain largely consistent despite their variations in starting birth years.

I rely most heavily on Jean Twenge's analysis, so I adopt her standard of including those born in 1995 for this paper. Twenge also proposes using the term iGen to describe Generation Z, arguing that "hardly anyone uses *Generation Y* now that the term *Millennials* has won out. That

² Twenge, *iGen*, 5.

³ Michael Dimcock, "Defining generations: Where Millennials end and Generation Z begins," Pew Research Center, January 17, 2019, <https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/>.

⁴ Barna Group and Impact 360 Institute, *Gen Z* (2018), 10, 111.

makes *Generation Z* dead on arrival. Not to mention that young people do not want to be named after the generation older than themselves” (italics original).⁵ The title *iGen* evokes the pervasive influence of the iPhone and similar devices, but Twenge also explains that the “i” can signify other defining traits of this generation including insecure, irreligious, insulated, individualistic, indefinite, inclusive, and independent politically.⁶ Despite the merits of Twenge’s proposal, the Pew Research Center decisively opts for Generation Z on the basis that Google search trends show “Generation Z” to be 21 times more commonly used than “iGen.”⁷

Despite their different methods, both the Pew Research Center the Barna Group find that Generation Z is the largest cohort of the American population yet. Census estimates in 2018 find that over 99 million Americans are aged 23 and under, which accounts for 30.3% of the total US population of 327 million. It is unlikely that infants and toddlers will remain in Generation Z, but even bounding Generation Z as those born between 1995 and 2012 yields a population of 75 million, which is 8 million people larger than the Millennials, 15 million people larger than Generation X, and 3 million people larger than the Baby Boomers.⁸ Generation Z is also the most diverse cohort in the nation’s history. The size and diversity of Generation Z suggest that they will have an enormous influence on the prevailing attitudes and behaviors of our nation in the decades ahead, especially as births have been declining since 2015.

⁵ Jean Twenge, *iGen: Why Today’s Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy, and Completely Unprepared for Adulthood* (NY: Atria, 2017), 7.

⁶ Twenge, *iGen*, 3.

⁷ Dimcock, “Defining generations...”

⁸ United States Census Bureau, “Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States: April 1, 2010 to July 1, 2018,” last revised July 30, 2019, <https://www.census.gov/data/tables/time-series/demo/popest/2010s-national-detail.html>.

III. Behavioral Patterns of Generation Z

I rely primarily on the annual Monitoring the Future (MtF) and biannual General Social Survey (GSS) to characterize the defining traits of Generation Z in relation to Millennials, drawing heavily from trends first identified by Jean Twenge in her 2017 monograph *iGen*. Twenge has decades of experience analyzing data from social surveys in combination with ethnographic interviews to characterize generational cohorts going back to Gen X, so she is an expert at locating discontinuities and other salient factors in the datasets. Yet given the pace of social change, the trends culminating in the 2015 datasets that she consulted for her 2017 book may have changed amid the ongoing transformation of American politics and culture following the election of President Trump. Below I present updated figures to account for the most recent survey data available.

High school students in Generation Z generally have far fewer in-person social interactions than did previous generations. Figure 1 shows that the number of 12th grade students who report going to parties or going on dates at least once a month has declined by over 15 percentage points from 2007 to 2018. Obtaining a driver's license often opens up new opportunities for high schoolers to have social interactions free from parental involvement. Prior to 2005 at least 80% of high school seniors reported having a driver's license, but in 2013 when the oldest Generation Z students were seniors, 73% had a license. In 2018 just 68% of seniors had a license.⁹ Although ride sharing applications like Uber and Lyft may provide an alternative to driving a personal car, their terms of use prohibit minors from riding alone, so these cannot alone account for the falling number of student drivers.

⁹ MtF 2007 and 2018 question 01160.

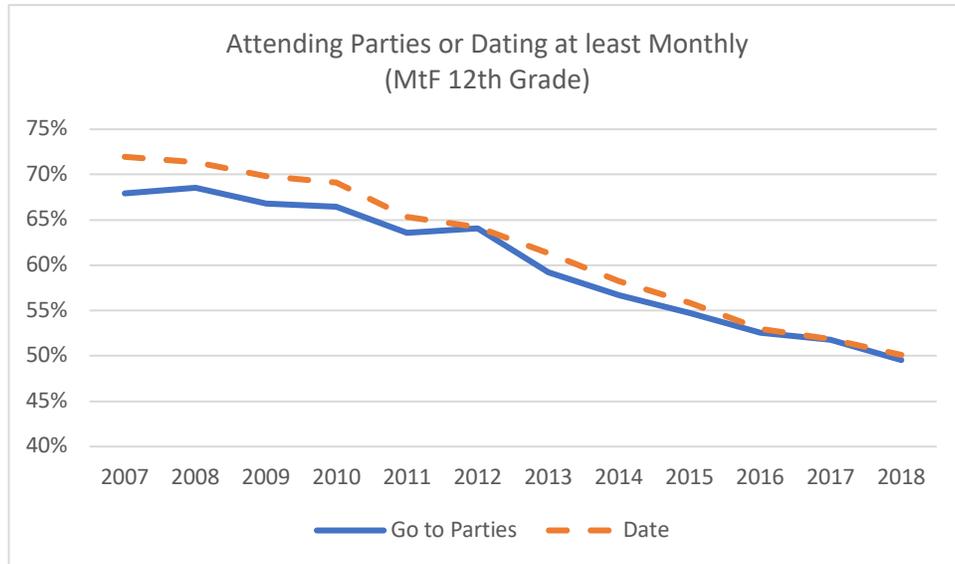


Figure 1: 12th Graders who go on dates or to parties at least monthly (MtF questions 05870 and 00630)

Concomitant with fewer in-person social interactions, fewer teens are experimenting with prohibited substances. In 2007 only 29% of high school seniors had never tried an alcoholic beverage, but in 2018 that percentage rose to 41.4%. The percentages of high school seniors who never smoked a cigarette rose from 53% in 2007 to 72% in 2018. This could reflect greater education and social awareness about the dangers of smoking.¹⁰ Marijuana, on the other hand, has become much more culturally accepted over the past decade with many states decriminalizing and regulating the sale of marijuana, even though it remains prohibited for minors. The percentage of teens who have never tried marijuana fell slightly from 58% in 2007 to 55.6% in 2018.¹¹ The number of high school students who reported having had sex dropped to the lowest levels ever seen in the datasets at 39.5% in 2017, which is down from 47.5% in

¹⁰ The recent phenomenon of vaping somewhat complicates this picture. In 2018, 58% of seniors had never vaped (MtF question 34240), which still exceeds the percentage of seniors who never smoked cigarettes in 2007 (question 00760) and represents a generally risk-averse and more cautious population. As more information is known becomes known about vaping's dangers and/or relative safety, it will be interesting to see how this trend will change.

¹¹ MtF 2007 and 2018 question 00860.

2008.¹² The teen birth rate plummeted from 41.5 per 1,000 females in 2008 to 11.7 per 1,000 females in 2018.¹³

There are a variety of explanations for these behavioral changes among by teens over the past decade, but in general, these changes represent a decrease in casual socializing and an increased concern for security. Experimenting with drinking, smoking, and sexual activity are generally diversions that young people do as they discover the freedom that comes with adulthood away from the oversight of their parents. These activities are often done in part due to peer pressure rather than intentionally thought-through and sought-out. The decline in dating and socializing at parties likely explains at least part of the decline in these other behaviors.

As with the decline in in-person socializing and dating, there has also been a decline in religious services attendance among high school seniors. Figure 2 shows that trends appear to be rather flat until 2016, at which point there was a sharp drop in percentage of weekly or more attendees and a sharp rise in those who never attend. Although teenage behaviors reflect some combination of parental and the adolescent values, religious services attendance is likely more reflective of parental values and practices. Still, the rising rates of seniors who seldom or never attend religious services reflects the broader trend of diminishing in-person interactions.

¹² Centers for Disease Control and Prevention (CDC), 1991-2017 High School Youth Risk Behavior Survey Data, <https://nccd.cdc.gov/youthonline/App/>.

¹³ Gretchen Livingston and Deja Thomas, "Why is the teen birth rate falling?" Pew Research Center, August 2, 2019, <https://www.pewresearch.org/fact-tank/2019/08/02/why-is-the-teen-birth-rate-falling/>.

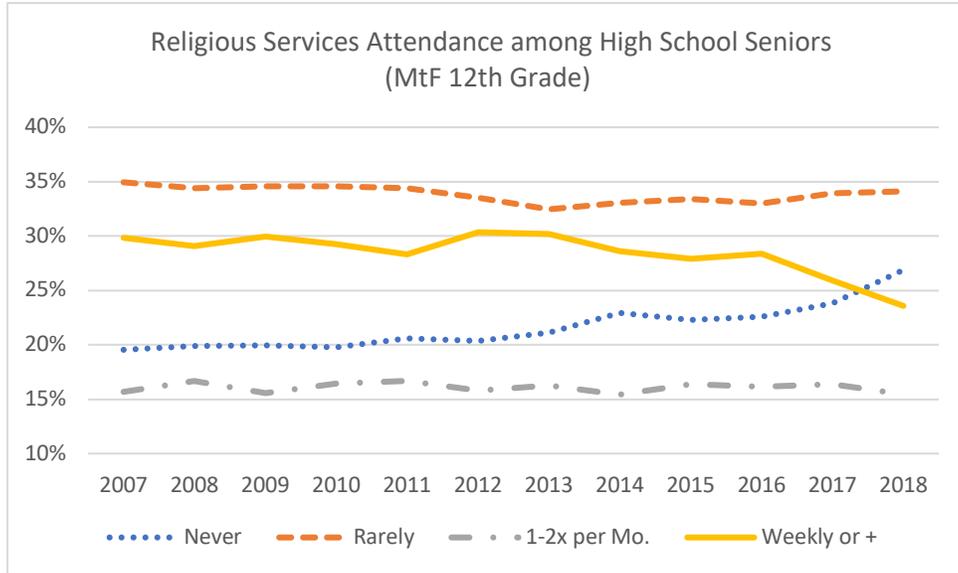


Figure 2: Religious Services Attendance (MtF question 00370)

Figure 3 offers another perspective on the same phenomena of declining church attendance with a wider band of young people aged 18 to 24. The decline is not as pronounced because it represents the average patterns of young adults spanning seven years of age rather than a single population of high school seniors. This represents the change from cohorts that are exclusively Millennials to cohorts that are primarily Generation Z.

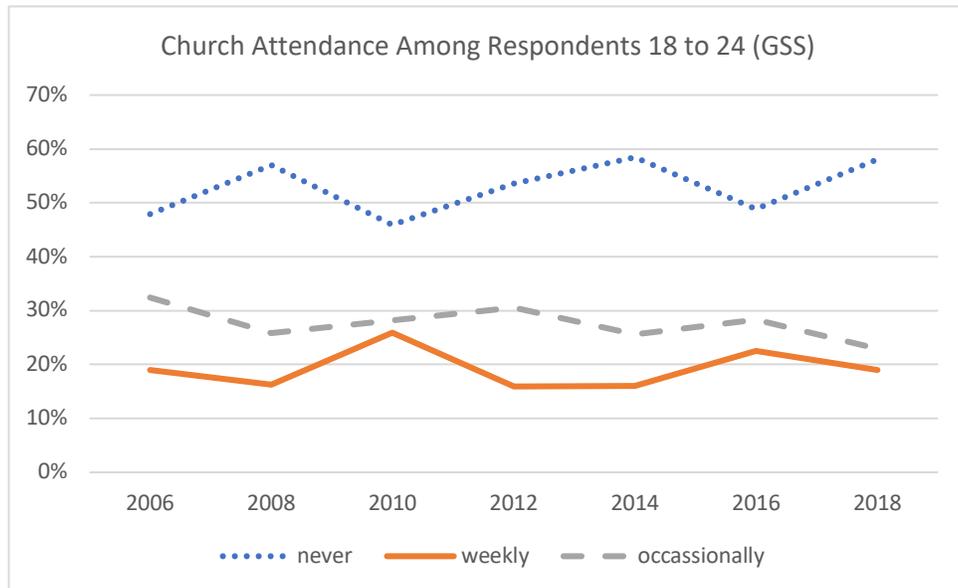


Figure 3: Church Attendance Among Respondents 18-24 (GSS)

Surveys show that the Generation Z teenagers have been spending far more time online and communicating with one another via text messages and social media than did Millennials teenagers. The percentage of high school seniors who check social media almost every day rose from about 50% in 2007 to 80% in 2017.¹⁴ The amount of time spent reading, going to movies, watching TV, and sleeping all declined among seniors over the past decade, leaving time on the internet to fill the difference.¹⁵ Social media has come to play a major, if not central, role in the lives of high school students. Figure 4 shows that 72% of high school seniors reported spending at least one hour a day on social media and 38% spent at least three or more hours per day on social media in 2018. Prominent social media platforms like Facebook or Instagram have been around for less than two decades, so the effects of spending so much time on them are only just now coming into view.

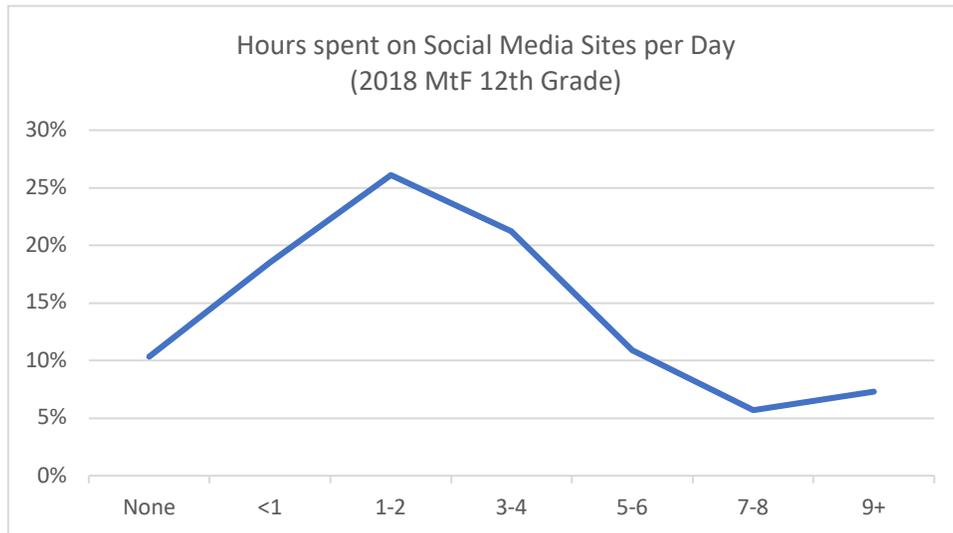


Figure 4: Hours per day on Social Media (2018 MtF 12th Grade question 34730)

¹⁴ In 2018 the MtF survey question was changed to ask how many hours a day do you use social media (question 34730) rather than how many times a week do you check social media (question 29625).

¹⁵ See Twenge, *iGen*, 61-2, 66-7, 113-4 citing MtF and American Freshman surveys.

IV. Attitudes and Beliefs of Generation Z

It is difficult to measure behavioral changes over the course of decades because new technologies necessitate periodic changes to survey questions. Attitudes and values likewise change, but the core set of questions that capture these beliefs were unchanged. Figure 5 shows that the percentages of high school seniors who either agree or mostly agree with the statements “I’m satisfied with myself” and “I’m satisfied with my life” have been trending downward since 2007. Surprisingly, recent years have seen a much more precipitous drop than the years following the Great Recession.

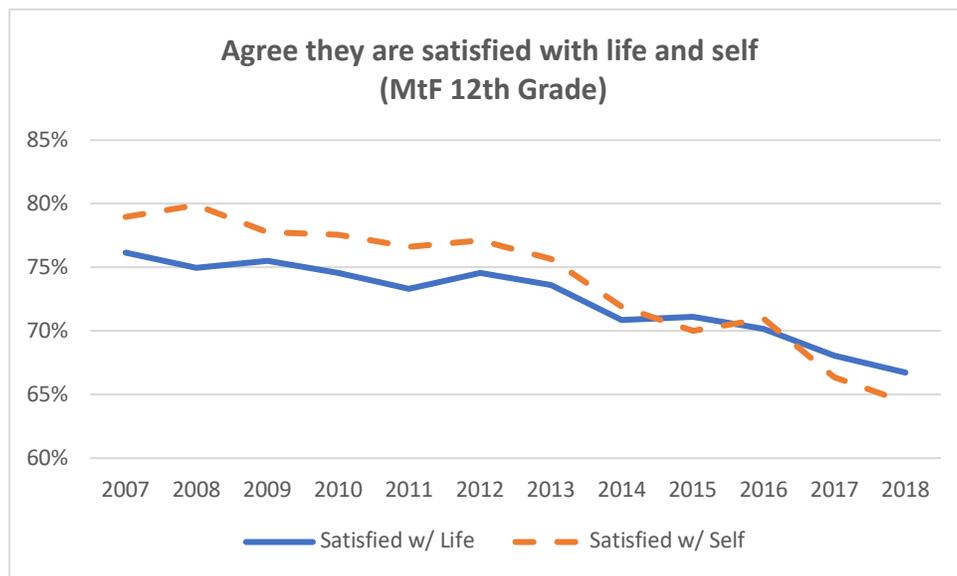


Figure 5: Satisfaction with Life and Self (MtF 12th Grade questions 12620 and 06840)

Generation Z high school seniors also report greater feelings of loneliness and being left out than did Millennial seniors, as shown by Figure 6. Studying these and several other markers of depression across the social surveys, Twenge concludes “iGen is on the verge of the most severe mental health crisis for young people in decades.”¹⁶

¹⁶ Twenge, *iGen*, 95.

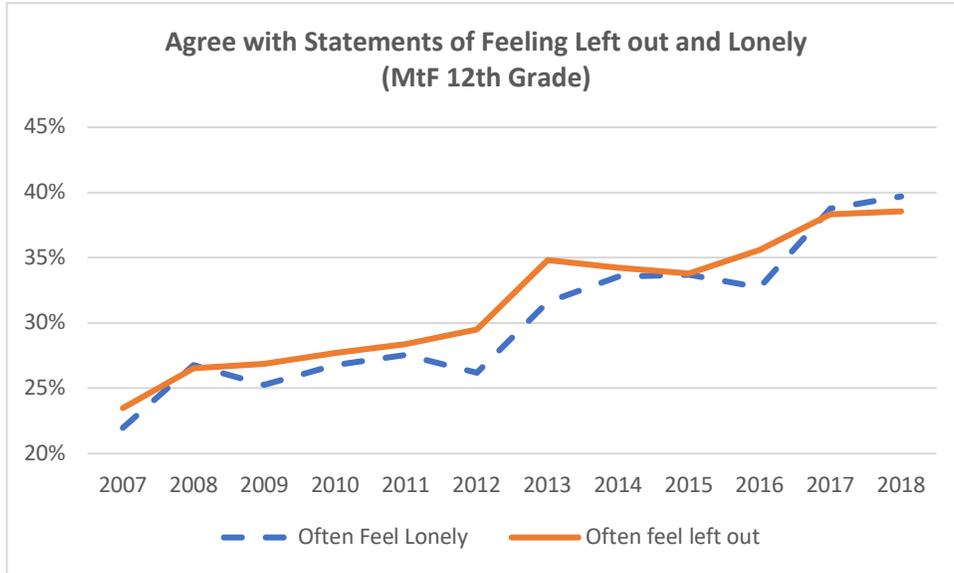


Figure 6: 12th Graders who report feeling lonely or left out (MtF 12th Grade questions 12690 and 12650)

The rising rate of teen suicides corroborates this need for alarm. Figure 7 shows that the suicide rate among adolescents 15-19 increased from 8 per 100,000 in 2008 to 11.8 per 100,000 in 2017, an increase of nearly 50%.¹⁷ The suicide rate among young adults aged 18 to 24 has likewise increased. After 2013 there is a noticeable increase in the rate of suicides, which is around the time period when the oldest members of Generation Z graduated from high school.

Figure 1. Trends in Suicide Death Rates at Ages 15-19 Years

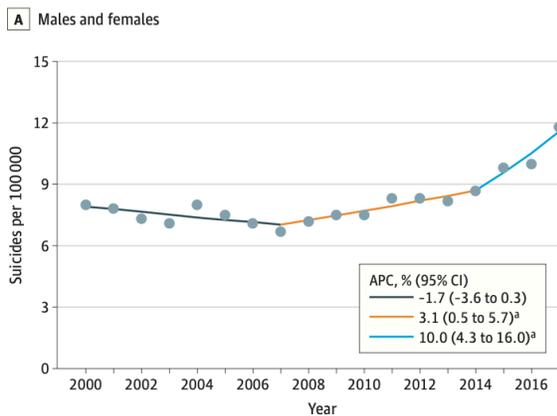


Figure 2. Trends in Suicide Death Rates at Ages 20-24 Years

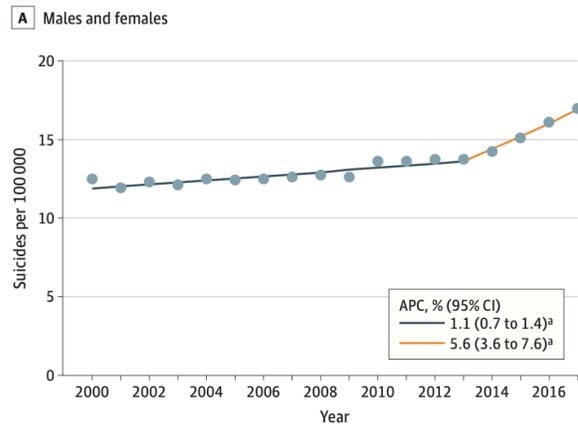


Figure 7: Trends in Suicide Rates for 15-19 and 20-24 year olds from Miron et. al.¹⁸

¹⁸ Oren Miron, Kun-Hsing Yu, Rachel Wilf-Miron, and Isaac S Kohane, "Suicide Rates Among Adolescents and Young Adults in the United States, 2000-2017." *JAMA* 321, no. 23 (June 18, 2019): 2362-2364.

The salience of religious belief has also declined among Generation Z compared to their preceding cohort. Figure 8 shows that there has been a steady increase in the percentage of high school seniors who report that religion is not important to them. There is a lot of variation in the percentage of those who report that religion is very important to them, but the overall trend has been declining in recent years alongside the declines in weekly religious service attendance.

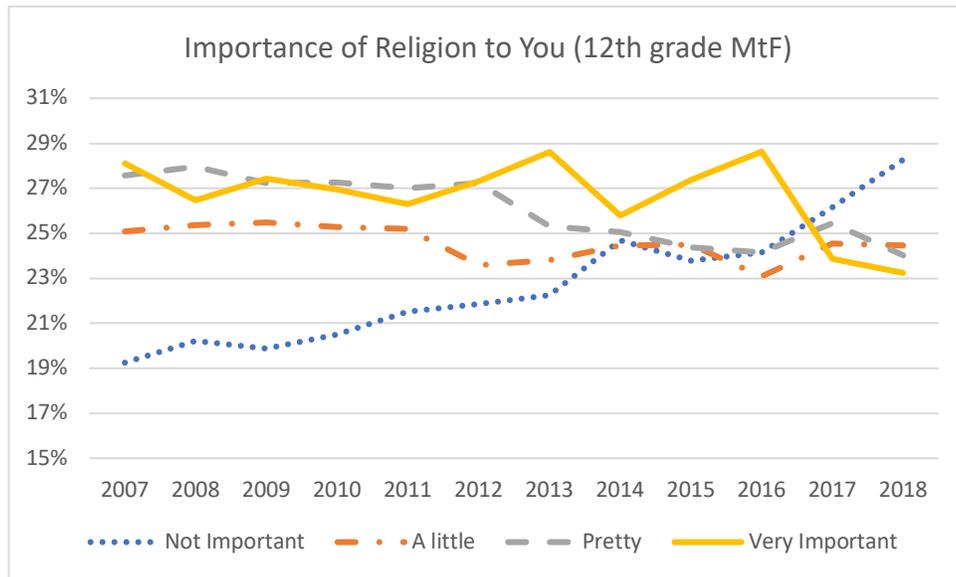


Figure 8: Salience of Religion for 12th Grade (MtF question 00380)

Data from the GSS encompassing a broader range of young adults 18 to 24 years old reveal more intimate insights into religious belief. Figure 9 shows that the percentage of young adults who have some belief in a personal God has decline by roughly ten percentage points between 2006 and 2018, while the percentage of people confident in God’s existence has declined from 52% in 2006 to 34% in 2018. The percentage of people claiming to be atheist only rose by three percentage points over the same period, while percentage who believe in some spiritual force rose six percentage points.

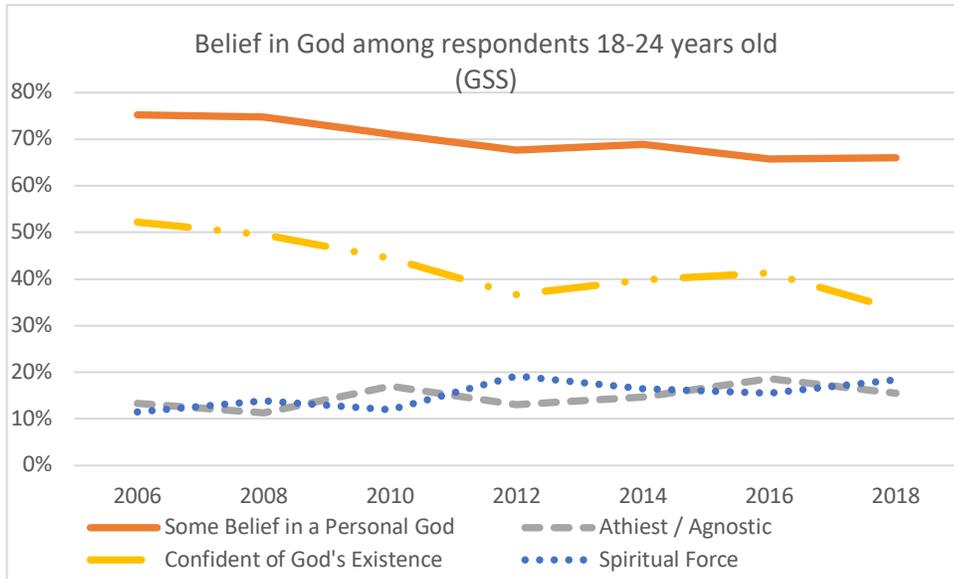


Figure 9: Belief in God among respondents 18 to 24-years old (GSS)

The percentage of respondents aged 18-24 who specified no religious preference rose from 24% in 2006 to 33% in 2018. Interestingly, Figure 10 shows the percentage of the young adult population that claims no affiliation has been nearly flat since 2012, increasing by just one percentage over six years.

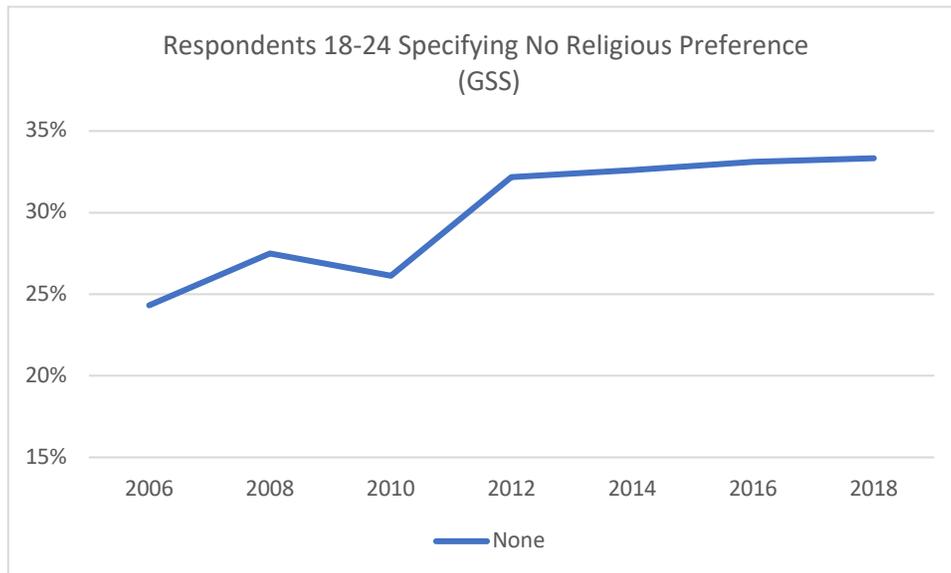


Figure 10: Respondents specifying no religious preference (GSS)

V. Theories Behind their Behaviors and Attitudes

Survey data show *what* large populations believe and *how* they behave, but such data inevitably leave open the question of *why* people believe and behave the ways they do. Addressing the broader question *why* is necessarily speculative, even though it is sometimes possible to draw statistical correlations or conduct controlled experiments for limited sets of variables.

Longstanding explanations of disaffiliation remain valid and relevant. The role of socialization is well-known in transmitting religious adherence over generations, and as a smaller percentage of people in Generation X claim affiliation than their preceding generations, fewer of their children belonging to Generation Z have been socialized in a religious tradition. Likewise, family structures have changed with more single parents, blended families and other arrangements. Nontraditional families have historically have not been as engaged in religious communities as married heterosexual parents have tended to be involved. Pluralism weakens the plausibility structures of religions, and the unprecedented diversity of Generation Z means that such plausibility structures are challenged with a greater intensity due to more frequent encounters with people of different ethnicities, cultures, and religious traditions or lack-there-of. The growth of the internet likewise has an amplifying effect on pluralism as ideas can spread unhindered by the past physical constraints of transmission via print, radio, or film.

To these well-known factors I argue we must consider the novel ways that the internet has reshaped people's relationships, perceptions, and desires. Twenge and other psychologists hypothesize that pervasive use of social media on mobile devices has driven declines in reported life satisfaction and the increasing prevalence of depressive symptoms and suicide among Generation Z. Twenge finds that time spent on social media has the strong positive correlation with depressive symptoms among eight graders, while time spent on sports / exercise and

religious services have the strongest and second strongest negative correlations with depressive symptoms, respectively.¹⁹ Likewise, electronic device usage has the strongest positive correlation with suicide risk factors and sports/exercise has the strongest negative correlation among high school students.²⁰ A 2018 study found that college students who limited their use of social media over a four week period reported lower depressive symptoms and feelings of loneliness than a control group that was encouraged to use social media as they normally would. The authors conclude, “The results from our experiment strongly suggest that limiting social media usage does have a direct and positive impact on subjective well-being over time,” and they claim this is the first study to demonstrate a causative relationship between social media use and symptoms of loneliness and depression.²¹

Different psychological theories have been proposed to explain why rising social media usage during adolescence has dramatically altered relational patterns and mental health.²² These theories also offer helpful insights into issues of religious practice, belief, and affiliation. One theory is that humans have a fundamental need for belonging, but smartphone and social media use radically alters the way adolescents experience how they belong to each other. According to Baumeister, Leary, and Steinberg, “people need frequent personal contacts or interactions,” and “people need to perceive that there is an interpersonal bond or relationship marked by stability, affective concern, and continuation into the foreseeable future.”²³ Digital communication lacks

¹⁹ Twenge, *iGen*, 82.

²⁰ Twenge, *iGen*, 84.

²¹ Melissa Hunt, Jordyn Young, Rachel Marx, & Courtney Lipson, “No More FOMO: Limiting Social Media Decreases Loneliness and Depression.” *Journal of Social and Clinical Psychology* 37 (2018): 766-7.

²² The following explanations of psychological theories are copied and adapted from a paper entitled “Helping Young People Overcome the Shadow Side of Social Media: Rediscovering the Value of Authentic Relationship” that I submitted for TRS 656A: Pastoral Counseling on December 3, 2018.

²³ Roy F Baumeister, Mark Leary, and Robert Steinberg, “The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation.” *Psychological Bulletin* 117, no. 3 (May 1995), 500.

the multi-sensory dimensions of frequent face-to-face interactions, so there are likely grave risks to human development when relationships differ drastically from the conditions through which humans have evolved.²⁴

Every human action in some way shapes the development and structure of the mind because the mind is remarkably plastic. Nicholas Carr examines how using the internet can fundamentally reshape neural pathways in the brain. Rapid flows of information online overstimulate the brain and inhibit slower neural pathways. Carr writes, "The more distracted we become, the less we are able to experience the subtlest, most distinctively human forms of empathy, compassion, and other emotions.... It would not be rash to suggest that as the Net reroutes our vital paths and diminishes our capacity for contemplation, it is altering the depth of our emotions as well as our thoughts."²⁵ Teens can be bombarded with alerts and images from a variety of applications while using their smartphones, so this research suggests that such overstimulation likely stunts their ability for deep emotional interactions with each other, which leaves a void in their innate need for deep relationships with others.

Most religious traditions have a deeply communal dynamic. More than a static set of teachings to be memorized or solitary experiences of prayer, weekly liturgical worship coupled with service to neighbor and stranger are integral to the fullest expression of Catholicism. "To be Catholic is to be part of a community."²⁶ Relationships that are predominantly mediated through social media stunt people's ability to engage with the complexity of human emotions and needs in real life. Religious affiliation and regular congregational participation involve belonging to

²⁴ Jean M Twenge, Thomas E. Joiner, Megan L. Rogers, and Gabrielle N. Martin. "Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time." *Clinical Psychological Science* 6, no. 1 (01, 2018), 4.

²⁵ Nicholas G. Carr, *The Shallows: What the Internet Is Doing to Our Brains*. (New York: W.W. Norton, 2010), 220-1.

²⁶ William Dinges, "Faith Hope and Excessive Individualism," in *Handing on the Faith: The Church's Mission and Challenge* ed. Robert Imbelli (NY: The Crossroads Publishing Company, 2006), 41.

communities of different people. Every person has a unique personality that requires time and attentiveness to discover and grow in relationship together. The rapidity of digital media consumption and communication distorts people's expectations for their in-person interactions. The internet also socializes people to expect the privilege of anonymity when they wish, which may make them uncomfortable with religious communities. Simply attending liturgy in-person may seem like an act of self-disclosure.

The role of social media in triggering feelings of envy may also be causative of depressive symptoms according to the *social rank theory* of depression. *Social rank theory* posits that depression can be caused by feeling subordinated to others who have more success in the competitive pursuit of finite resources.²⁷ When social media feeds flood the user with images of others' successes, feelings of envy and inadequacy can ensue, fueling depression. Social media can drastically change people's perceptions of reality as they see others putting forth their idealized versions of themselves without sharing their flaws and vulnerabilities.

Religious communities foster hopeful engagement with weakness and vulnerability. Confession of sin provides a forum to reflect on past regrets in dialogue with another person who can appreciate the nuanced complexity of such painful experiences and offer consolation and healing through prayer and forgiveness mediated by the Church. Intercessory prayer likewise offers a forum for believers to share their unmet desires, longings, and pain with one another in hope that God will help them. The isolating nature of social media, where people tend to accentuate their happy moments and limit their self-disclosure of their sadness, creates distorted perceptions of reality. Social media can thus foster the perception that vulnerability and the practices of religious communities are abnormal.

²⁷ Edson Tandoc, Patrick Ferrucci, and Margaret Duffy "Facebook Use, Envy, and Depression Among College Students: Is Facebooking Depressing?" *Computers in Human Behavior* 43, no. C (February 2015): 142.

Sherry Turkle believes that a desire for control, which technology facilitates, is the fundamental dynamic behind the deterioration of relationships and the rise of depression. She writes, “We expect more from technology and less from each other. This puts us at the center of a perfect storm. Overwhelmed, we have been drawn to connections that seem low risk and always at hand.”²⁸ Turkle observes that smartphones “offer us three gratifying fantasies. One, that we can put our attention wherever we want it to be; two, that we will always be heard; and three, that we will never have to be alone.”²⁹ Digital interactions can be carefully crafted, paused, or put aside, unlike in-person conversations that require our full attention. Many people are now afraid of real conversations in person, which are complex and unpredictable. People often avoid the complexities of friendships, believing they can substitute digital relationships as a convenient escape from their inner solitude. In the checkout line at the grocery store or at home before going to sleep, smartphones offer the endless distractions of social media such that people can avoid their deepest thoughts and feelings.

Unrealistic perceptions of control that the internet foster likewise spill over into the dynamics of religious affiliation. Belonging to a community requires frequent compromise and forgiveness as people clash over a variety of issues from the style of hymns to more fundamental questions of religious doctrine. Ethnic identity and the bonds of extended family held people together in the past, but now that those identities are more fluid, individuals frequently self-select into various communities of like-minded people. The ability to mute or block people with whom one disagrees on social media does not transfer into in-person communities where people must listen to a plurality of voices and navigate complicated collective decisions. I agree with Turkle

²⁸ Sherry Turkle, *Alone Together: Why We Expect More from Technology and Less from Each Other* (New York: Basic Books, 2012), 295.

²⁹ Sherry Turkle, "Connected, but Alone?" filmed February 2012, TED video, 19:41, https://www.ted.com/talks/sherry_turkle_alone_together/transcript?language=en.

that more than any other issue, the illusion of control that internet affords creates the biggest obstacle to good mental health, and I would add that the same phenomena is also the most insidious for the prospects of religious affiliation.

VI. Conclusion

Although this paper focuses primarily on the emerging differences between Generation Z and Millennials over the past decades, no generational cohort has been unaffected by the proliferation of the internet and more specific of social media. The data corroborates Pope Francis' claim that we are living through the change of an epoch as the internet upends how people relate and what they believe about the world.

Supply-side theories of religious affiliation posit that religious demand is constant, so the onus lies with religious congregations to meet the needs of the people. Functional differentiation theories posit that the multiple roles that used to belong to religious organizations, such as the education of children or social opportunities to meet future spouses, have been replaced by various other institutions in society, leaving shrinking roles for religions. Although emerging data for Generation Z show diminished religious services attendance, salience, and affiliation compared to preceding generations, the data also show that there are enormous unmet social and psychological needs. The mission of Jesus "to bring good news to the poor... proclaim release to the captives and recovery of sight to the blind, to let the oppressed go free" (Luke 4:18-19 NRSV) remains ever relevant as people suffer new types of poverty and blindness from the unhealthy excesses of the internet. The challenge for the Catholic Church will be to see these unmet needs and discern what resources from the Tradition can be brought to bear on this emerging crisis of relationship.

Bibliography

- Barna Group and Impact 360 Institute. *Gen Z*. 2018.
- Baumeister, Roy F., Leary, Mark R., and Steinberg, Robert J. "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation." *Psychological Bulletin* 117, no. 3 (May 1995): 497–529.
- Bessière, Katie, Pressman, Sarah, Kiesler, Sara, and Kraut, Robert. "Effects of Internet Use on Health and Depression: a Longitudinal Study." *Journal of medical Internet research* 12, no. 1 (February 28, 2010): e6.
- Carr, Nicholas G. *The Shallows: What the Internet Is Doing to Our Brains* 1st ed. New York: W.W. Norton, 2010.
- Centers for Disease Control and Prevention (CDC). 1991-2017 High School Youth Risk Behavior Survey Data. <https://nccd.cdc.gov/youthonline/App/>.
- Dinges, William. "Faith Hope and Excessive Individualism." In *Handing on the Faith: The Church's Mission and Challenge*. Edited by Robert Imbelli. New York: The Crossroads Publishing Company, 2006.
- Francis. "Meeting with the Participants in the Fifth Convention of the Italian Church: Address of the Holy Father." Libreria Editrice Vaticana: November 10, 2015. http://w2.vatican.va/content/francesco/en/speeches/2015/november/documents/papa-francesco_20151110_firenze-convegno-chiesa-italiana.html.
- Hunt, Melissa & Young, Jordyn & Marx, Rachel & Lipson, Courtney. "No More FOMO: Limiting Social Media Decreases Loneliness and Depression." *Journal of Social and Clinical Psychology* 37 (2018): 751-768. <https://doi.org/10.1521/jscp.2018.37.10.751>.
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2008. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2009-11-23. <https://doi.org/10.3886/ICPSR25382.v2>
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2009. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2010-10-27. <https://doi.org/10.3886/ICPSR28401.v1>
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2010. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2011-10-26. <https://doi.org/10.3886/ICPSR30985.v1>

- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2011. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2012-11-20. <https://doi.org/10.3886/ICPSR34409.v2>
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2012. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2015-03-26. <https://doi.org/10.3886/ICPSR34861.v3>
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2013. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2015-03-26. <https://doi.org/10.3886/ICPSR35218.v2>
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., Schulenberg, John E., and Miech, Richard A. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2014. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2017-05-24. <https://doi.org/10.3886/ICPSR36263.v3>
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., Schulenberg, John E., and Miech, Richard A. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2015. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2016-10-25. <https://doi.org/10.3886/ICPSR36408.v1>
- Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., Schulenberg, John E., and Miech, Richard A. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2016. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2017-10-26. <https://doi.org/10.3886/ICPSR36798.v1>
- Kross, Ethan, Verduyn, Philippe, Demiralp, Emre, Park, Jiyoung, Lin, Natalie, Shaback, Holly, Jonides, John, and Ybarra, Oscar. "Facebook Use Predicts Declines in Subjective Well-Being in Young Adults." *PLoS One* 8, no. 8 (August 1, 2013): e69841.
- Livingston, Gretchen and Thomas, Deja. "Why is the teen birth rate falling?" Pew Research Center, August 2, 2019. <https://www.pewresearch.org/fact-tank/2019/08/02/why-is-the-teen-birth-rate-falling/>.
- Miech, Richard A., Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-Grade Survey)*, 2017. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-10-29. <https://doi.org/10.3886/ICPSR37182.v1>
- Miech, Richard A., Johnston, Lloyd D., Bachman, Jerald G., O'Malley, Patrick M., and Schulenberg, John E. *Monitoring the Future: A Continuing Study of American Youth (12th-*

Grade Survey), 2018. Inter-university Consortium for Political and Social Research [distributor], 2019-11-19. <https://doi.org/10.3886/ICPSR37416.v1>

Miron, Oren, Yu, Kun-Hsing, Wilf-Miron, Rachel, and Kohane, Isaac S. "Suicide Rates Among Adolescents and Young Adults in the United States, 2000-2017." *JAMA* 321, no. 23 (June 18, 2019): 2362–2364.

Smith, Tom W., Davern, Michael, Freese, Jeremy, and Morgan, Stephen L., *General Social Surveys, 1972-2018 [machine-readable data file]*. NORC ed. Chicago: NORC, 2019, <https://gss.norc.org/>.

Tandoc, Edson C., Ferrucci, Patrick, and Duffy, Margaret. "Facebook Use, Envy, and Depression Among College Students: Is Facebooking Depressing?" *Computers in Human Behavior* 43, no. C (February 2015): 139–146.

Turkle, Sherry. *Alone Together: Why We Expect More from Technology and Less from Each Other*. New York: Basic Books, 2012.

Turkle, Sherry. "Connected, but Alone?" Filmed February 2012. TED video, 19:41. https://www.ted.com/talks/sherry_turkle_alone_together/transcript?language=en.

Twenge, Jean M. *iGen: Why Today's Super-Connected Kids Are Growing up Less Rebellious, More Tolerant, Less Happy--and Completely Unprepared for Adulthood*. New York: Atria Books, 2017.

Twenge, Jean M., Thomas E. Joiner, Megan L. Rogers, and Gabrielle N. Martin. "Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time." *Clinical Psychological Science* 6, no. 1 (01, 2018): 3-17. <http://dx.doi.org/10.1177/2167702617723376>.

Woods, Heather Cleland, and Scott, Holly. "#Sleepyteens: Social Media Use in Adolescence Is Associated with Poor Sleep Quality, Anxiety, Depression and Low Self-Esteem." *Journal of Adolescence* 51 (August 2016): 41–49.