

Why is there a higher rate of impostor syndrome among BIPOC?

FINXERUNT Social Science Research Committee

Authors:

Ahmed, Afran (ahmeda7@bxscience.edu)

Cruz, Tatyana (tcruz8783@bths.edu)

Kaushal, Aarushi (kaushala@bsxscience.edu)

Kobuse, Yusuke (yusukekobuse@gmail.com)

Wang, Kristen (kristen.wang22@sitechhs.com)

Abstract

BIPOC, referring to ethnic minorities, are underrepresented in higher-education and workplace environments in the U.S., in comparison to their white counterparts. An inevitable effect of working in a white-dominated economy, or learning in a white-dominated education system as a minority are feelings of insecurity or self-doubt, traits that correspond with impostor syndrome (IP) (Clance and Imes, 1978). Previous research has attributed factors such as family environment/parenting style, as well as generational status, race and socioeconomic and as determinants of IP. One goal of our research was to test and examine the correlation between the presence of IP and the familial/parental attitudes most pervasive among BIPOC parents: authoritarian parenting. Authoritarian parenting is characterized by low emotional support and low positive reinforcement, as well as high restriction, control, and emphasis on achievement. These same circumstances have been independently observed in the familial environments of impostors. (Li, Hughes, Thu, 2014; Bussotti, 1990; Langford and Clance, 1990). Our secondary objective was to see if race, socioeconomic status, or generational status had any significant effect on impostor syndrome feelings or parenting style. We conducted a survey (N=53) to see whether or not impostor syndrome was higher among BIPOC as opposed to non-BIPOC. The implications of our survey, while providing helpful information, was not enough to draw a

conclusion about whether or not race was the sole factor of higher rates of imposter syndrome. In fact, the results showed that the average scores for each question was relatively similar throughout each of the groups, with the exception of ‘African’ and ‘American Indian or Alaskan Native’ groups; however, the sample sizes of these two groups were not large enough to come up with a plausible conclusion.

Literature Review

The term BIPOC, an umbrella term for black people, indigenous people, and other people of color, has been ingrained into our vocabularies synonymous with words such as ‘marginalized,’ and ‘minority.’ In the U.S., “BIPOC” hovers over the major minority groups as follows: African Americans (13.4%), Native Americans (1.3%), Hispanics (18.5%), and Asians (5.9%). (Linares, 2015), (Census.gov, 2019). This is compared to the 60.1% of non-Hispanic, white people that make up the rest of the U.S population. (Census.gov, 2019).

Prevalent areas of which BIPOC are underrepresented are in school, higher-education, and professional environments. A study done by the Council of Graduate Schools found that minorities are underrepresented in higher-education institutions; for example, ethnic minorities comprised of only 21.4% of graduate education enrollment in 2006, 12% of which earned a research doctorate degree, while 10% specifically earned a STEM doctorate (Council of Graduate Schools, 2009). Additionally, it was found in 2010 that despite increased educational achievements of racial/ethnic minority groups over the decades, less than 4% of Fortune 500 (the top 500 richest, most prestigious companies in the U.S.) CEO positions were occupied by African Americans and Hispanics combined, while 90% of CEO positions were filled by white men. This same study indicated that African- American management in U.S. companies barely increased from 3% in 1985 to 3.3% in 2014 (Flory et. al, 2018). One undeniable effect of such underrepresentation of BIPOC in professional environments is reluctance to join a minimally diverse environment or workplace (Flory et. al 2018), or self-doubt, or a lack of sense of belonging in white-dominated higher-achievement fields. In correspondence to our research, this self-doubt is inflicted by the impostor syndrome.

Impostor syndrome (IP), coined by psychologists Pauline Clance and Suzanne Imes, is the belief that one’s academic/professional accomplishments are not due to their own capability, such as skill or intellect, but rather external factors, such as luck, effort, and receiving help from others. Thus, impostors paint themselves as intellectual frauds, and have fears that people will discover their underlying “lack of talent” and “phoniness.” (Clance and Imes, 1978). Traits repeatedly observed in impostors include undermining their own performance despite high-achievement (Clance, 1985; Want and Kleitman, 2006; Sakulku and Alexander, 2011) ;

secretly desiring to be the best compared to their peers (Clance, 1985); possessing perfectionist tendencies while also setting impossibly high self-expectations of success (Clance, 1985; Imes & Clance, 1984; Sakulku and Alexander, 2011) ; possessing fear of failure and shame (Clance, 1985; Clance and O’Toole, 1988; Sakulku and Alexander 2011); procrastinating or overworking corresponding to having difficulty accepting and internalizing praise (Clance, 1985; Chae et al., 1995; Harvey, 1981; Thompson et al., 1998; Topping & Kimmel, 1985; Sakulku and Alexander 2011); and concerning over others’ impressions of them, thus taking on a false identity to meet social expectations. (Clance, 1985; Sakulku and Alexander, 2011), (For a better understanding of IP, see Figure 1. The Impostor Cycle.) These traits of impostorism correlate with broader psychological stressors, such as depression and anxiety (Sakulku and Alexander, 2011). The scientific literature has classified impostorism in a spectrum of demographics, varying in gender (Bussotti, 1990; Langford, 1990; Topping, 1983; Sakulku and Alexander 2011), culture (Chae, Piedmont, Estadt, and Wicks, 1995 ; Clance, Dingman, Reviere, and Stober, 1995); Sakulku and Alexander 2011), occupations (including students), and age; approximately 70% of people will experience impostorism at some point of their life (Gravois, 2007; Sakulku and Alexander 2011). In addition, the literature has attributed a multitude of causes to impostorism. Most notably in our research, family dynamics/parenting attitudes and socioeconomic/generational circumstances are significant factors of IP. Thus, the objective in our research is to examine the causes of impostor syndrome, namely family environment/parental attitudes exposed to in childhood and socioeconomic and generational status, in BIPOC in school and professional environments.

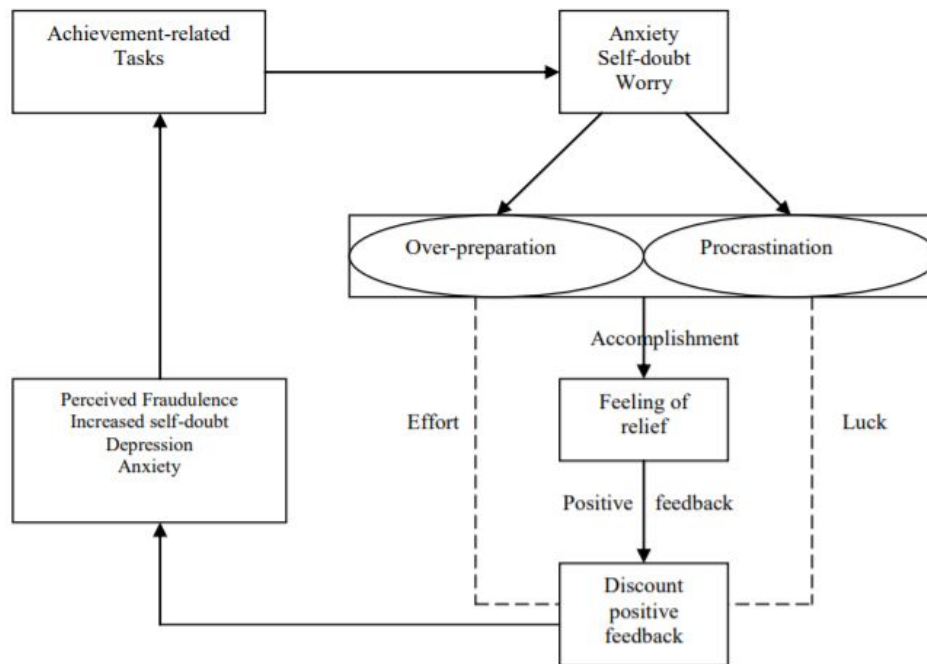


Figure 1. The Impostor Cycle (Clance, 1985), (Salkulku and Alexander, 2011). Impostors are first assigned an achievement-related task, which leads to anxiety, self doubt, and/or worry; impostors either over prepare or procrastinate on the task; once the task is completed, they will feel a temporary burst of relief, meanwhile discounting any positive feedback by attributing their success to effort or luck; the feeling of relief dissipates eventually, and impostors will begin to feel like frauds, they will doubt themselves, and may begin to feel depressed or anxious. The cycle repeats.

Familial and Parenting Dynamics

Family dynamics in early childhood has strongly correlated with the development of IP. Research done by M-H. Chayer and T. Bouffard (2010) has suggested that impostor feelings were present in students as young as 10-12 years old, examined through the use of social comparison, an intrinsic tool to measure self-competence, goals, aspirations, and helps establish normal expectations in terms of behavior, conduct, and ability. (Chayer and Bouffard, 2010). Social comparison is how one identifies with people of higher achievement or lower achievement. Results of this study showed that 80% of the participants, 10-12 year old late elementary school students, experienced IP; this suggests that IP is present in childhood. These

impostor children had tendencies of contrasting themselves from highly capable peers, identifying with less-capable peers, and some contrasted from less-capable peers. However, the impostor children in this study did not show signs of upwards identification.

Clance (1985) suggested that the common characteristics of impostors' families include: 1) priority of intelligence and success, 2), lack of positive reinforcement, 3) disparity between feedback received from the family versus feedback received from the outside world, and 4) perceptions of impostors that their interests and talents deviate from their family's interests and talents. Further research suggests that the families of those who have IP positively correlated with characteristics such as conflict and control, and negatively correlated with traits such as cohesion and expressiveness (Bussotti, 1990). In other words, it is suggested that impostors come from families that lack emotional support; enforce a high level of control on behavior; and experience a significant amount of conflict (Langford, Clance, 1993). Additionally Li, Hughes, and Thu (2014) found that a lack in parental care- that is, warmth, emotional support, and positive affection- positively correlated with impostor feelings in a sample of undergraduate/graduate students, and parental overprotection- control and restriction- was positively correlated with impostor syndrome as well. Impostors who develop around such family dynamics may develop distorted perceptions of achievement and distorted methods on how to handle failure and success. (Thompson, 2004). Because of the lack of typical positive reinforcement, impostors may also work excessively hard in order to win their parents affection (Langford and Clance, 1993).

Low emotional support (i.e. limited praise or positive reinforcement towards the child) and high standards of achievement through control (ie. expecting the child to fulfill the interests they have for the child) (Li, Hughes, and Thu 2014) are characteristics of authoritarian parenting (Leung and Kwan, 1998). Although parenting styles and familial care are individualized among people, for the purpose of relaying back to the cultural/ethnic connection to impostor syndrome, we categorize certain familial styles to their prevalence in BIPOC cultures/ethnicities.

Previous studies that examined parenting styles among various ethnic/cultural groups in the U.S. found that European American (white) parents were more likely to employ the authoritative parenting style, in which children are encouraged to be open about their feelings, honest, and autonomous; authoritative parents are also more responsive to their children, using a high rate of language with their child and responding quickly to crying infant. On the other hand, BIPOC- including Asian American, Hispanic, and African American parents are more likely to employ authoritarian parenting style, which underscores control, obedience, family obligation, respect to authority, and emphasizes achievement in their children at a greater rate than European Americans. To compare parental styles among five diverse ethnic groups in the U.S., namely

European Americans, African Americans, Hispanics, Asian Americans, and Asian Indians, Jumbunthan, Burts, and Pierce (2000) used the Adolescent-Adult Parenting Inventory (AAPI, Bavolek, 1984), which has four subscales: a) Role Reversal: reversing parent-child familial roles (i.e. children are obligated to comfort and care for their parents); b) Empathy: lack of empathetic awareness and sensitivity towards the child's feelings; c) Developmental Expectations: inappropriate, impractical expectations of children (i.e. children should be able to talk before one year old); and d) Corporal Punishment: strong parental beliefs in using physical, corporal punishment as a way to discipline their children (i.e. the use of spanking). Results showed that Asian American, Asian Indian, African American mothers were more likely to reverse roles with their children and have less empathetic awareness for their children than European Americans and Hispanics. Asian American, Asian Indian, African American and Hispanic mothers all had inappropriate expectations of their children's development. Asian American and African American mothers favored the use of corporal punishment more than European American and Hispanic mothers. (Jumbunthan, Burts, and Pierce, 2000). In addition, Lansford et. al. (2012) found that African American and Latin American parents had more authoritarian attitudes towards parenting in comparison to European Americans, who had more progressive attitudes towards parenting- that is, increased sensitivity towards the child's thoughts and opinions, increased individualism, increased behavioral autonomy, and equality within the parent-child relationship. Overall, there seems to be a strong trend of BIPOC parents' large emphasis on obedience, control, familial obligation, and smaller emphasis on sensitivity towards their child's emotional needs, compared to European Americans. As mentioned earlier, these authoritarian parenting traits, such as lack of warmth, emotional support, and positive affection, and presence of parental control and restriction (Bussotti, 1990), (Li, Hughes, Thu, 2014) have been strongly correlated with IP in the scientific literature. However, ethnicity may not be the best predictor of parenting style, as previous research has suggested. Other factors, such as socioeconomic status (SES) and Generational Status, may also be significant.

Generational & Socioeconomic Status

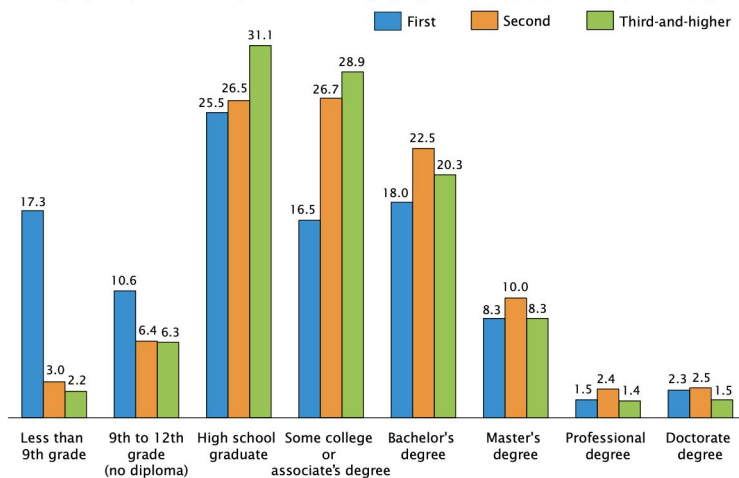
Generational Status refers to the place of birth of an individual or an individual's parents . First generation children, as defined by the US Census, have two foreign born parents, 12.9% of the legal US population meets this criteria (Trevelyan, Edward, et al 2019). Research suggests that both first generation college students, and students that are the first in their family to attend college experience IP at a higher rate in comparison to their second and third generation

counterparts (Bridgette J. Peteet, et al. 2015). A study done by Grace Kao and Lindsay R. Taggart found that first generation students have slightly higher rates of IP while generally having a higher overall grade point average (GPA) compared to other generations, with the exception of Hispanics. Hispanic students had a reverse effect, students had an overall increase in GPA over generations. This suggests that higher academic performance has no significant bearing on a student's level of IP across BIPOC. The first generation groups at the biggest social disadvantage are Asians and Hispanics, a language barrier impedes these groups of resources. Generational status also affects the social emotional status of first generation students due to lack of parental knowledge and comfortability with school institutions. First generation parents are less likely to be directly involved in their child's personal and academic life due to their lack of understanding of American culture and intuitions. (Kao & Taggart 2007)

Data obtained from The US Census Bureau depicts that first generation citizens are less likely to have a higher level of educational attainment (Figure 2). First generation students have higher highschool dropout rates in comparison to to second and third generation students. This lower amount of academic achievement can be linked more closely to race and socioeconomic status. Previous studies show no significant link between generational status, when controlled for gender and SES, and feelings of IP (Kao & Taggart 2007; Perreira, et al. 2006). The significance of generational status lies in the familial, economic, and identity stressors it introduces.

Highest Educational Attainment for the Population Aged 25 Years and Older by Generational Status: 2013

(Percent distribution. Data based on sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see www2.census.gov/programs-surveys/cps/techdocs/cpsmar13.pdf)



Note: Highest educational attainment represents the most advanced level of education that a person has attained.
 Source: U.S. Census Bureau, 2013 Current Population Survey, Annual Social and Economic Supplement.

Figure 2

Data shows that low socioeconomic status has a significant impact on education attainment and academic success. The groups that suffer most from poverty are BIPOC households. Hispanic and Black households have the lowest median salaries in the United States, USD 51,450 and USD 41,361 respectively (Figure 3). These groups in addition to American Indian/ Alaskan Native people also have the highest percent of minors in poverty compared to any other racial group (Figure 4).

Being of a lower SES puts children at a systemic disadvantage. Lower-SES university students feel less involved and integrated in the university community. This may contribute to feelings of incompetency and fears of being exposed as a fraud (i.e., imposturous feelings). Low SES Students also tend to have more responsibilities and higher stress levels compared to those of High SES students. Students with low SES also experience higher levels of stress when they are in friendships with students of a higher SES. These friendships served as reminders of their underprivileged status. Students with less friends of a higher SES have less imposturous feelings. There is also an inverse effect from students of a higher socioeconomic status. High SES students with a large number of Low SES friendships also tend to gain a sense of superiority furthering the imposturous feelings of their Low SES counterparts (MacInnis et al., 2019). While race itself is not a direct causal factors of IP, certain racial groups are linked to lower SES which does cause factors of IP .

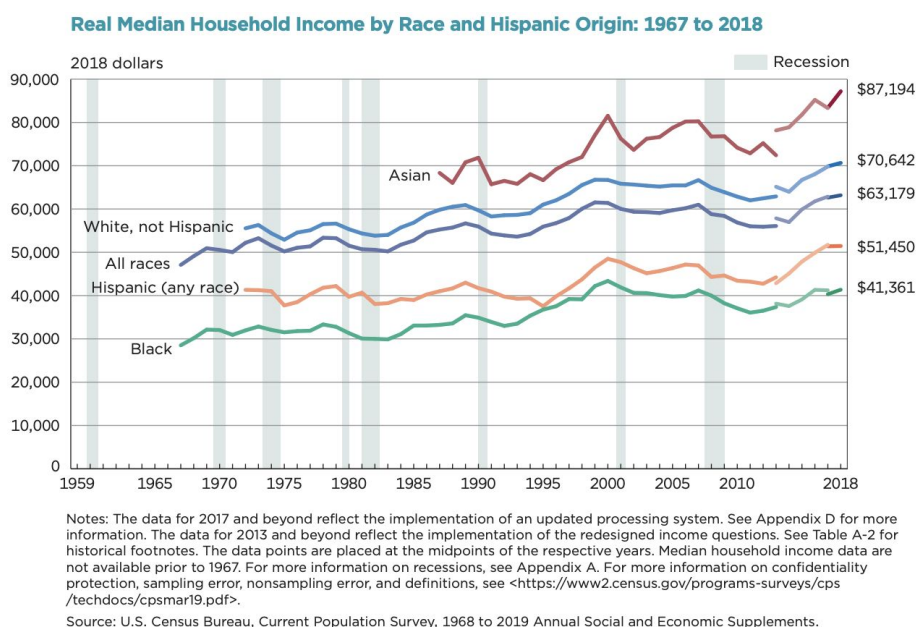
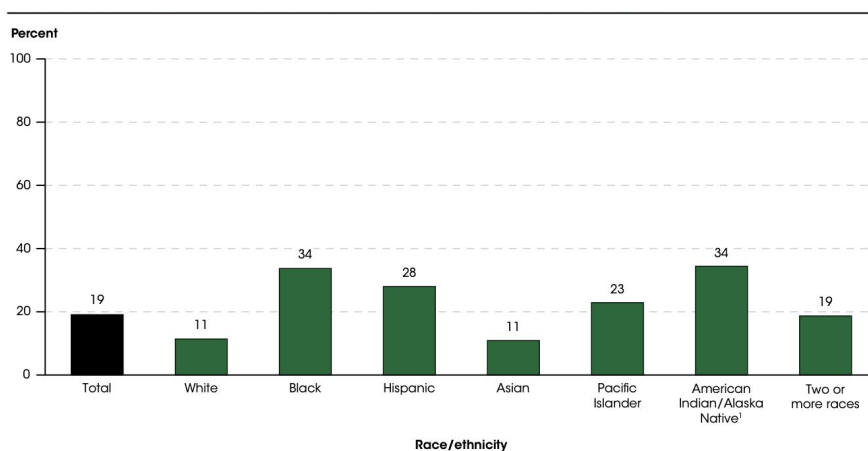


Figure 3



¹Includes persons reporting American Indian alone, persons reporting Alaska Native alone, and persons from American Indian and/or Alaska Native tribes specified or not specified.
NOTE: Data shown are based only on related children in a family; that is, all children in the household who are related to the householder by birth, marriage, or adoption (except a child who is the spouse of the householder). The householder is the person (or one of the people) who owns or rents (maintains) the housing unit. This figure includes only children related to the householder. It excludes unrelated children and householders who are themselves under the age of 18. Race categories exclude persons of Hispanic ethnicity. Although rounded numbers are displayed, the figures are based on unrounded estimates.
SOURCE: U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2016. See *Digest of Education Statistics 2017*, table 102.60.

Figure 4 (Brey 2019). The figure above shows the percent of children under 18 years of age in poverty by race.

Materials & Methods:

In order to determine if there is a higher rate of impostor syndrome amongst BIPOC, we formulated a survey using Google Forms. The survey consists of 3 sections. These sections consist of:

General Information - This section asks questions about the individuals as a whole. It is aimed at getting a feel for the participants education level, sex, generational status (optional), and most importantly, race/ethnicity. This will drive the bulk of our results; it will serve as the basis for our study by determining members of the BIPOC Community.

Childhood Information - This section consists of two questions; parenting style and household income. Parental style is divided into four categories (which are displayed in the form for clarity); permissive, uninvolved, authoritative, and authoritarian. They are assorted based on responsiveness and demandingness.

Permissive - A permissive parenting style, on the outside, is what many children desire; it is the parents who are forever loving of their children and accepting of their children. They do not hold their children to unreasonably high expectations and do avoid setting overbearing rules. As a result however, permissive parents show high levels of leniency and frequently avoid confrontation. They are under the subgroup of high responsiveness, but low demanding.

Authoritative - Authoritative parents have incredibly high standards for their children, however, they are very encouraging and do their best to aid their children every step of the way. However, authoritative parents may exercise their powers too much to the point where it feels as if it is assertive. They do come to the realization when they get out of hand, and ultimately end up trying to reconcile with their children for being overtly overbearing.

Authoritarian - Not to be confused with authoritative parents; authoritarian parents are rather demanding, but unlike authoritative parents, they are less likely to be responsive. They set high expectations and do not think to lower the bar even if they see their children struggle. Instead, they resort to punishment as a means of discipline. Children with authoritarian parents may find that their parents are unavailable in times of need or emotional comfort

Uninvolved - Uninvolved parents are the exact kind of parents the name implies. They are often absent throughout much of their child’s life, and even if they are there, they choose to distance themselves from their children. They fail to invest ample time for their children, and as a result, the children end up feeling neglected. The neglect these children face can have serious implications on their social, emotional, and even physical life.

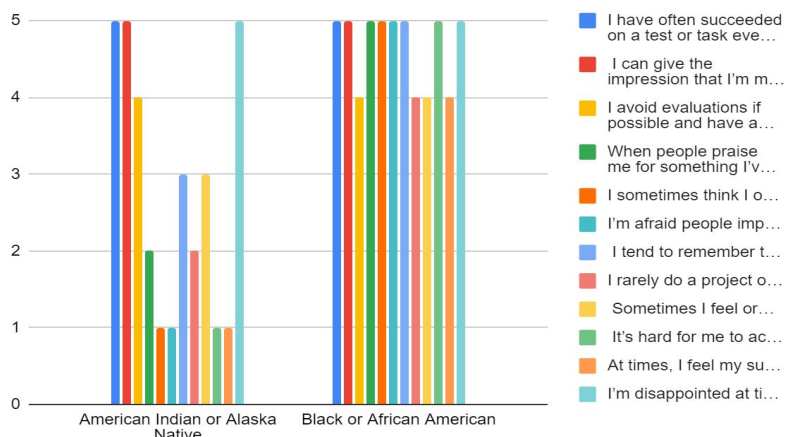


Household Income: The participants are asked to select in what range their household income falls in. This can serve as a variable that can be used in a regression analysis test. Wealth can serve to be a very prevalent factor in the extent to which people suffer from impostor syndrome. It is expected that those with higher incomes would be less likely to display signs of impostor syndrome, because they have access to a wider range of materials and resources that can aid them in their ability to perform their capabilities. However, this is not a guaranteed conclusion, and far from; people with high income may very well suffer from impostor syndrome, as the signs of impostor syndrome appear to be the direct result of more subjective behaviors and reasons rather than factors such as wealth.

The Impostor Syndrome Test - The final section of the test are the impostor syndrome questions themselves. Impostor syndrome is the psychological onset where an individual doubts their own capabilities and has a pessimistic attitude regarding themselves. These questions will assess the extent to which BIPOC and non-BIPOC members suffer from aspects of impostor syndrome. The questions are asked on a scale of 1 to 5, with 1 being not at all true, and 5 being very true (3 being neutral). The participants' answer to these questions will ultimately determine whether our hypothesis ends up being true or false.

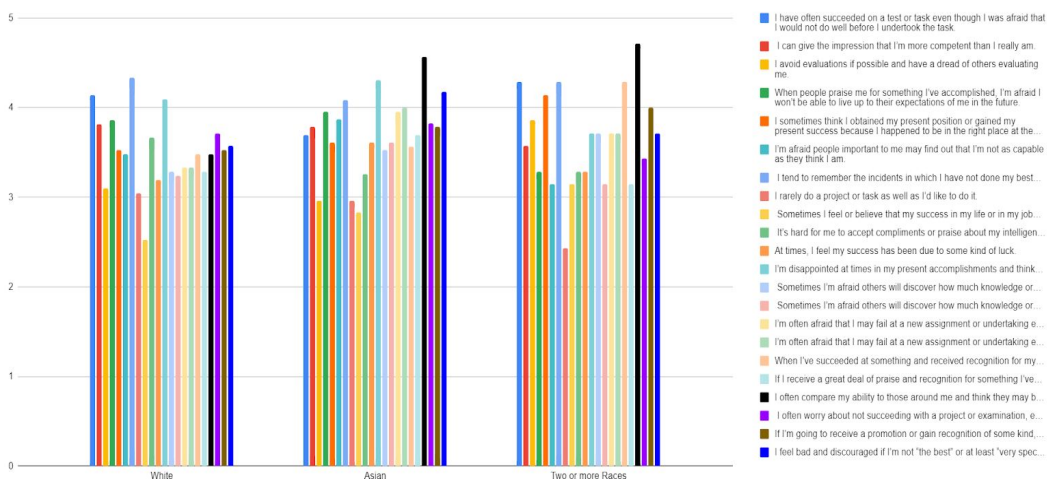
The participants will answer the survey section by section. The first section present is the general information section. They will then transition into the childhood information section before ultimately finishing with the impostor syndrome test itself. The data from the survey will then be compiled into a series of graphs and charts and analyzed to see whether or not there is a significant difference between impostor syndrome in BIPOC and non-BIPOC.

Note: In the survey , participants were asked to identify their race , in which data was collected from : Black/African Americans and American Indian or Alaskan native. We have decided that



not enough data was collected from these two groups to correlate certain points but the data is to the left (Below is the race of participants)
Black or African American (N=1)
American Indian or Alaska Native(N=1)
White (N=21)

Asian (N=23)
Two or more races (N=7)
Total (N=53)



Results/Data Analysis

After analyzing a graph of race versus average Impostor Syndrome scores, results show that race alone is not enough to determine why impostor syndrome exists within a certain race group. For most categories, the average answer for the impostor syndrome questions across all three categories is approximately 4, with some questions being slightly above or below (i.e. “I tend to remember the incidents in which I have not done my best more than those times I have done my best.” and “Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error,” respectively). One interesting feature of the graph lies in the average scores for the question “I often compare my ability to those around me and think they may be more intelligent than I am.” For white people, the average answer was close to 3, while for Asians and those of a mixed race, the average answer was nearly up by an entire point. Taking into consideration a factor such as parenting style can tell us more about this. For the white respondents, their reported parenting style varied between the four options (authoritarian, authoritative, permissive, and uninvolved). In contrast, the majority of responses from our asian

and two or more races respondents were nearly authoritarian or authoritative. Authoritative and authoritarian parents are more likely to set the bar high for their children, and an aspect that rises from such an expectation is the frequent comparison of their own children to someone else's, which in turn would lead these children to compare themselves to others on their own. It is plausible to expect the impact of parenting style to affect a child's perception of themselves compared to another to be to such a large extent because children often carry on the experiences and the implications of the environment they were raised in as they grow up. Growing up is where the majority of a child's development occurs to begin with. Another point to look at is for the question "Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error". In all three groups, this question was either number 1 or 2 for the lowest average score.(2.5, 2.8,3.2 respectively) However, when we look at a similar question, "At times, I feel that my success is due to some kind of luck" the average score for this one is a little bit higher(3.2, 3.6,3.2 respectively). The fact that the spread in between groups is not big suggests that the belief is luck over error; although the definition of luck may vary from person to person, it shows people's interpretation of IP is more leaned on luck.

Discussion

No study is expected to be perfect, and ours is no exception. After all, that is what drives the basis of the conduction of a study; always trying to fill in the gaps and try to answer the unanswered from the works of others. One issue with our study was the sample size, most notably the fact that our samples were not large enough to represent a larger population. Our survey featured answers from only 2 African American individuals, and 1 American Indian or Alaskan Native individual. While the data of these 3 individuals is important to take into consideration when addressing our question, it is not enough for us to use it to make a generalization about a larger 'African American' or 'American Indian or Alaskan Native' population as a whole. Additionally, given the times, it became difficult to do any sort of real statistical analysis using programs such as SPSS or JASP due to lack of resources which we primarily had access to through our institutions.

It was hypothesized that impostor syndrome would be higher amongst BIPOC individuals more so than non-BIPOC individuals. Unfortunately, there is not enough data or information that could allow us to come to this conclusion. There are more factors than just race that play into impostor syndrome. We tried to assess and take into account factors such as parenting style and household income, but there are most definitely more factors that can be discovered and classified as confounding variables.

An unpredicted result from our surveys show that across whites, asians, and people of two or more races, they unanimously scored an average of 3 or less for the question of “I rarely do a project or task as well as I’d like to do it.” While parenting style can most definitely be a cause of such a low score for this question, there may very well be other factors to consider as well, and as a result, provide other confounding factors that may be helpful to investigate when doing a future study. For example, researchers can take a look at how the environment at SCHOOL can affect the results of an individual’s impostor syndrome scores.

Another surprising result was the disparity in scores for each question of the IP for the ‘African American’ and ‘American Indian or Alaskan Native.’ For each question, the answers had been either on the higher end (high 4 to 5) or on the lower end (1 to mid 3). As to why these results turned out the way they did, we unfortunately did not have a large enough sample to draw a conclusion. However, it is most definitely worth looking into and focusing on if another study on the same basis is to be conducted. Even though we do not have enough information to generalize/confirm this, it is possible that the reason for these results has to do with either high or low expectations from the environment(s) in which they grew up in. High expectations may encourage higher scores as parents foster cognitive responses from their children that would result in them expressing self-doubt; the opposite may be expected for low expectations.

Looking over our results in a general sense, it is important to note that the majority of responses to the impostor syndrome test were on the higher end (3-5). This goes to show that impostor syndrome is very much a prominent issue within modern society and specifically the modern generation. The high scores can serve as an indicator of the lack of cognizance to mental health, as most of these questions assess/provide implication for a participant’s mental health. Our results can be used as part of a greater study to tackle the issue of mental health, which is one of the most prominent topics up for discussion and analysis as of now. More and more people need to be aware of the fact that mental health is just as important as physical and social health; the issue is that it is hardly taught in school, as it is often relegated to just “seek out your guidance counselor.” We hope that our study can promote the teaching of mental health on a much larger scale.

Steps to further our research would include surveying a much larger sample of a population in order to better grasp impostor syndrome among BIPOC and non-BIPOC and to truly narrow down on some of the root causes. If the survey route is to be taken again, it would be beneficial to further narrow the choices for race. For example, dividing ‘Asians’ into different subsets (i.e Southeast Asian, East Asian, etc.) and the inclusion of other races such as Hispanic/Latinx. We could also look into how the attitude and behaviors of peers may affect the scores of the impostor syndrome. Peers and friends play significant roles in the growth and

development of a child, whether it is for the betterment of them as individuals or for the worse. Regardless of how they impact the individual, there is most definitely an impact, and these impacts can cause the impostor syndrome results to vary between individuals.

REFERENCES

- Brey, Cristobal de. "Status and Trends in the Education of Racial and Ethnic Groups 2018." National Center for Education Statistics (NCES) Home Page, a Part of the U.S. Department of Education, 20 Feb. 2019,
- Bridgette J. Peteet, et al. "Predictors of Imposter Phenomenon among Talented Ethnic Minority Undergraduate Students." *The Journal of Negro Education*, vol. 84, no. 2, 2015, pp. 175–186.
- Bussotti, C. (1990). *The impostor phenomenon: Family roles and environment*. (Doctoral dissertation, Georgia State University, 1990). *Dissertation Abstracts International*, 51, 4041B
- Chae, J. H., Piedmont, R. L., Estadt, B. K., & Wicks, R. J. (1995). Personological evaluation of Clance's Impostor Phenomenon Scale in a Korean sample. *Journal of Personality Assessment*, 65(3), 468-485.
- Chayer, M., & Bouffard, T. (2010). Relations between impostor feelings and upward and downward identification and contrast among 10- to 12-year-old students. *European Journal of Psychology of Education*, 25(1), 125-140. Retrieved November 7, 2020
- Chromey, Kelli J. "I'm Not just Crazy.": Exploring the Impostor Phenomenon in an Educational and Communicative Context, North Dakota State University, Ann Arbor, 2017
- Clance, P. R. (1985). *The Impostor Phenomenon*. Atlanta: Peachtree.
- Clance, P. R., Dingman, D., Reviere, S. L., & Stober, D. R. (1995). Impostor Phenomenon in an interpersonal/social context: Origins and treatment. *Women and Therapy*, 16(4), 79-96.
- Clance, P. R., & Imes, S. A. (1978). The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice*, 15(3), 241–247.
- Clance, P. R., & O'Toole, M. A. (1988). The impostor phenomenon: An internal barrier to empowerment and achievement. *Women and Therapy*, 6(3), 51-64.

Cokley, Kevin, et al. "An Examination of the Impact of Minority Status Stress and Impostor Feelings on the Mental Health of Diverse Ethnic Minority College Students." *Journal of Multicultural Counseling and Development*, vol. 41, no. 2, 2013, pp. 82-95.

Council of Graduate Schools. (2009). *Broadening Participation in Graduate Education*. The Council of Graduate Schools, Washington D.C.

Flory, J. A., Leibbrandt, A., Rott, C., & Stoddard, O. (2018). *Increasing workplace diversity: Evidence from a recruiting experiment at a fortune 500 company*. St. Louis: Federal Reserve Bank of St Louis.

Gravois, J. (2007). You're not fooling anyone. *The Chronicle of Higher Education*, 54(11), A1.

Harvey, J., C. (1981). *The impostor phenomenon is an achievement: A failure to internalize success* (Doctoral dissertation, Temple University). *Dissertation Abstracts International*, 42, 4969B

Imes, S.A. & Clance, P.R. (1984). *Treatment of the Impostor Phenomenon in high achieving women*. In C. Brody (Ed.), *Women Therapists Working with Women: New Theory and Process of Feminist Therapy*. New York: Springer Publishing

Kao, Grace, and Taggart R. Lindsay. "Does Social Capital Still Matter? Immigrant Minority Disadvantage in School-Specific Social Capital and its Effects on Academic Achievement." *Sociological Perspectives*, vol. 50, no. 1, 2007, pp. 27-52.

Langford, J. (1990). *The need to look smart: The impostor phenomenon and motivations for learning*. (Doctoral dissertation, Georgia State University). *Dissertation Abstracts International*, 51, 3604B.

Langford, J., & Clance, P. R. (1993). *The imposter phenomenon: Recent research findings regarding dynamics, personality and family patterns and their implications for treatment*. *Psychotherapy: Theory, Research, Practice, Training*, 30(3), 495–501

Leung, P. W. L., & Kwan, K. S. F. (1998). Parenting styles, motivational orientations, and self-perceived academic competence: A mediational model. *Merrill-Palmer Quarterly*, 44(1), 1–19.

Linares, C. (2015). *A phenomenological approach to first-generation latino immigrants' experiences of cultural diversity and inclusion initiatives in the workplace* (Order No. 3739667). Available from Publicly Available Content Database. (1749782242).

- Li, S., Hughes, J., & Thu, S.M. (2014). The Links Between Parenting Styles and Imposter Phenomenon. *Psi Chi Journal of Psychological Research*, 19, 50-57.
- Levy, Aaron S. What Factors Influence Academically Proven Minority Students to Attend College, Tarleton State University, Ann Arbor, 2013. ProQuest,
- MacInnis, Cara C., et al. "Cross-Socioeconomic Class Friendships can Exacerbate Imposturous Feelings among Lower-SES Students." *Journal of College Student Development*, vol. 60, no. 5, 2019, pp. 595-611.
- Sakulku, J., Alexander, J. (2011). "The Impostor Phenomenon." *Behavioral Science Research Institute*, Vol. 6, No. 1, 73-92.
- Sheridan, John E., et al. "Factors Influencing the Probability of Employee Promotions: A Comparative Analysis of Human Capital, Organization Screening and Gender/Race Discrimination Theories." *Journal of Business and Psychology*, vol. 11, no. 3, 1997, pp. 373–380
- Perreira, Krista M., Mullan H. Kathleen, and Dohoon Lee. "MAKING IT IN AMERICA: HIGH SCHOOL COMPLETION BY IMMIGRANT AND NATIVE YOUTH*." *Demography* (Pre-2011), vol. 43, no. 3, 2006, pp. 511-36
- Thompson, T. (2004). Failure avoidance: parenting, the achievement environment of the home and strategies for reduction. *Learning and Instruction*, 14(1), 3-26
- Thompson , T., Davis, H., & Davidson, J. (1998). Attributional and affective responses of impostors to academic success and failure outcomes. *Personality and Individual Differences*, 25(2), 381-396
- Topping, M., E. (1983). The impostor phenomenon: A study of its construct and incidence in university faculty members. (Doctoral dissertation, University of South Florida). *Dissertation Abstracts International*, 44, 1948B-1949B
- Topping, M. E., & Kimmel, E. B. (1985). The impostor phenomenon: Feeling phony. *Academic Psychology Bulletin*, 7(1), 213-226.
- Trevelyan, Edward, et al. "Characteristics of the U.S. Population by Generational Status: 2013." The United States Census Bureau, 29 Nov. 2016,
- U.S. Census Bureau. (2019, July 1). QuickFacts, United States: Race and Hispanic Origin.