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FACTORS CONTRIBUTING TO IMPOSTER PHENOMENON IN DOCTORAL STUDENTS: A US-BASED QUALITATIVE STUDY

Sara Bano* Michigan State University, East Lansing, banosara@msu.edu
MI, USA

Cailen M. O'Shea Trinity College Dublin, Osheac16@tcd.ie
Dublin, Ireland

*Corresponding author

ABSTRACT

Aim/Purpose	Our study explores the factors contributing to the Imposter Phenomenon among doctoral students in the United States.
Background	Many studies show that Imposter Phenomenon impacts women doctoral students and students from minority groups, especially if they are enrolled in Predominantly White Institutions. Our study focuses explicitly on contributing factors to the Imposter Phenomenon among doctoral students in the United States. The study also explored how Imposter Phenomenon is related to doctoral students' academic goals and achievements.
Methodology	We utilized a qualitative phenomenological research design and conducted semi-structured interviews (45-90 minutes) in person and via Zoom. This study was conducted at a public research university in mid-western United States. A total of 14 (3 male and 11 female) doctoral students participated in the study. These students self-identified as White (9), African American (1), South Asian (2), mixed race (1), and Latina (1). Of the 14 students, 4 were international, and 10 were domestic. These students were from various disciplines, such as Education, Economics, Anthropology, Biology, Plant Sciences, and Engineering.
Contribution	The study contributes to the field of psychology and higher education and helps us better understand doctoral students' conceptions and experiences of the Imposter Phenomenon. The study provides empirical support to some of the previous claims by researchers and provides new insights related to the Imposter Phenomenon.
Findings	In our study, participants did not consider the Imposter Phenomenon merely a personal or internal feeling or mental condition as presented in previous studies.

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We found there are multiple layers of the issue, and sociocultural factors play a contributing role to the Imposter Phenomenon. In our study, we found that relations with family, siblings, peers, and faculty played a significant role in shaping our participants' sense of self and impacted how they responded to challenges in their academic life. We also noted that institutional culture impacts doctoral students' self-concept and academic performance. Female doctoral students mentioned institutional culture and prevalent sexism in STEM fields as contributing factors to the Imposter Phenomenon. Overall, gender, race, age, and mental health emerged as major contributing factors to the Imposter Phenomenon among doctoral students.

Recommendations for Practitioners

We recommend that higher education institutions should help doctoral students, especially students from underrepresented groups, by providing social, emotional, and economic support. To mitigate the challenges of institutional sexism, racism, and ageism, higher education institutions should consider creating peer support groups and try to foster a healthy and supportive environment for doctoral students. These groups could build on ontological inquiries to bolster student resiliency and self-perception. Also, there is a dire need for easily accessible mental health services on campuses, especially for graduate students.

Recommendations for Researchers

To further this line of inquiry, it is important to expand research to multicultural perspectives to understand better the Imposter Phenomenon and how it is applied and used in different cultural settings. It is also pertinent to build on the baseline work expressed here to identify factors associated with decreased senses of the Imposter Phenomenon.

Impact on Society

Doctoral students, if successful, can play a significant role in society's future growth. However, doctoral completion rates are currently staggeringly low, and the degree program is long. The situation is exacerbated due to the COVID-19 pandemic. This impacts doctoral students' emotional, psychological, and economic well-being, and may affect their health and family relationships. Incomplete doctoral degrees can be costly for individuals and society. Higher education institutions must provide better mental health and economic support to help doctoral students succeed in their programs so they can positively contribute to society and the world.

Future Research

We plan to expand our study to better understand the Imposter Phenomenon among doctoral students from cross-cultural perspectives to see if the same factors exist there.

Keywords

imposter syndrome, imposter phenomenon, doctoral students, qualitative study, higher education

INTRODUCTION

According to Zhou and Okahana (2019) and Xu (2014), student completion rates in doctoral programs across the US are as low as 60%. While these numbers are staggering, several factors play a role in the low completion rates, including the design of doctoral programs, influences from student integration, and the supportiveness of faculty and advisors (Ali & Kohun, 2007; Hanson et al., 2022; Jairam & Kahl, 2012). A more recently considered factor is the Imposter Phenomenon. Imposter Phenomenon can be understood as the feelings of fraudulence high achievers internalize when they are not able to attribute their success to their own abilities (Clance & Imes, 1978). Some of the more prevalent factors associated with the Imposter Phenomenon include anxiety, depression, low self-esteem, and perfectionism. Imposter Phenomenon is often used interchangeably with Imposer Syn-

drome. While the concepts are similar, Clance and Imes (1978) first took issue with the term “Imposter Syndrome.” Feenstra et al. (2020) also took exception as they explained the negative clinical connotation associated with “Syndrome.” Here we model our work along the same vein as we view this skewing of self-internalization or self-worth as more phenomenological than a syndrome.

Several studies mention the prevalence of Imposter Syndrome among doctoral students (Cope-Watson & Betts, 2010; Edwards, 2019; Muenks et al., 2020). Some studies even mentioned that the Imposter Phenomenon could impact doctoral students’ educational persistence and achievement (Willwock et al., 2016). Given the differing views and the problematic interchangeability of terminology, we sought to understand better how the Imposter Phenomenon is related to doctoral students’ academic experiences and achievements from their perspectives. This examination inquired how doctoral students’ experiences and cognitions perceive and make up their ontological approach to the Imposter Phenomenon.

CONCEPTUAL FRAMEWORK

IMPOSTER SYNDROME OR IMPOSTER PHENOMENON

The first step in understanding the impacts of the Imposter Phenomenon is understanding the concept itself. Clance and Imes (1978) introduced the concept of the Imposter Phenomenon in their seminal work. They studied 150 highly successful women during their psychotherapy sessions and found that most suffered from a psychological condition that the researchers named Imposter Phenomenon. They continued this explanation of the Imposter Phenomenon as a feeling of inadequacy and self-doubt. They also mentioned that the women in their study felt they were not intelligent enough and were convinced they had fooled anyone who thought otherwise. One example of this feeling was how “female students often fantasize that they were mistakenly admitted to graduate school because of an error by the admissions committee” (Clance & Imes, 1978, p. 1). The authors also highlighted the connection between mental health and the Imposter Phenomenon. According to them, women who exhibit the Impostor Phenomenon show clinical symptoms such as anxiety, lack of self-confidence, depression, and frustration related to an inability to meet self-imposed standards of achievement. Overall, Clance and Imes (1978) claimed that bright and high-achieving women do not own their intellectual abilities and consider their success and achievement as a result of luck or mistakes.

Over the last decade, Imposter Syndrome has gained significant attention in academic research and popular media outlets (Feenstra et al., 2020). Imposter Phenomenon is a well-researched topic in the academic literature (Bravata et al., 2020; Feenstra et al., 2020). As mentioned earlier, Imposter Syndrome and Imposter Phenomenon are often used interchangeably in studies. However, Feenstra et al. (2020) scrutinized the term Imposter Syndrome in a recent article. According to Feenstra et al. (2020), the term Imposter Syndrome bears a negative connotation in clinical psychology and is associated with a negative self-concept. The authors questioned the over-individualized framework to the point that they argued that many studies have focused on individual traits such as perfectionism and personality type as a reason for Imposter Syndrome and presented solutions such as therapy, coaching, and confidence training. The authors further explained that the individualistic approach is problematic since it focuses on fixing the individual. Feenstra et al. (2020) criticized the individualized approach since it has an underlying notion of victim blaming, where the researchers believe the problem is with the individual and the individual is responsible for fixing the problem.

Clance and Imes (1978) and Feenstra et al. (2020) suggested using the term Imposter Phenomenon instead of Imposter Syndrome, as it highlights the clinical difference between the two concepts. We align with the critique offered by Clance and Imes (1978) and Feenstra et al. (2020) that using the term Imposter Syndrome is problematic as it highlights the problems with how this phenomenon is

discussed within and outside the scientific community. In our study, we used the term Imposter Phenomenon and examined the experiences of doctoral students with this phenomenon and how it is related to their academic goals and achievements.

RESEARCH QUESTIONS

1. How do doctoral students make sense of the Imposter Phenomenon?
2. What factors contribute to the Imposter Phenomenon among doctoral students?
3. How is feeling like an imposter related to doctoral students' academic experiences and achievements?

LITERATURE REVIEW

IMPOSTER PHENOMENON AND MENTAL HEALTH

Many studies use psychological frameworks to explain the Imposter Phenomenon among doctoral students (Barreira et al., 2018; McGee et al., 2022; Perez, 2020). Sverdlik et al.'s (2020) study demonstrates, among other things, that the Imposter Phenomenon is a significant predictor of increased depression, stress, and illness symptoms in doctoral students. Barreira et al. (2018) indicated that 1 in 10 (11%) graduate students suffered from suicidal thoughts during their study. McGee et al. (2022) also mentioned that participants in their study felt like impostors and perceived it as a mental barrier they could not overcome. Perez (2020) also connected the Imposter Phenomenon with prevalent mental health issues among graduate students along with contributing factors to feeling like an imposter. He argued that this was a significant area of concern as the mental health crisis is increasing significantly among graduate students in the US. He studied how graduate students' level of involvement on campus affects their mental health, specifically focusing on the prevalence of the Imposter Phenomenon, and found that feeling like an imposter is often the result of isolation. Engaging in a variety of activities on campus can help increase a sense of belonging among graduate students and mitigate the imposter feeling. Similarly, Ali and Kohun (2007) highlighted that social isolation in doctoral programs can lead to prolonged periods of uncertainty, which can cause imposter feelings among graduate students.

IMPOSTER PHENOMENON AND STRUCTURAL BARRIERS

At the societal level, research suggests that an individual's position in the social hierarchy can play an important role in shaping their impostor feelings, including how the specific challenges and stressors that accompany a lower societal position can make one feel like an impostor (Chrousos & Mentis, 2020; Chrousos et al., 2020; Cokley et al., 2013; McClain et al., 2016). We know from social-psychological research that those groups in society that are often vulnerable to impostor feelings, such as women and ethnic minorities, are also subject to persistent negative stereotyping (Eagly & Karau, 2002; Eagly et al., 2000; Ellemers, 2018). Reyna (2000, 2008) argued that certain ethnic minorities are stereotyped as unintelligent, lazy, or underachieving. In response to such negative portrayals of their group, ethnic minority students are likely to worry that their admission to, for instance, a prestigious university is the outcome of luck instead of something they deserve (Reyna, 2000, 2008). In line with such reasoning, research examining impostor feelings among ethnic minority students showed that students who reported being racially discriminated against were more likely to feel like impostors (Austin et al., 2009; D. L. Bernard et al., 2018; Cokley et al., 2013). Many studies highlighted issues of racism and sexism in academia which cause imposter feelings among doctoral students (Ball, 2022; Edwards, 2019; McGee et al., 2022; Roberson, 2021).

Embedded racism and negative stereotyping

According to Parkman (2016), the Imposter Phenomenon is quite prevalent in academia and impacts students from minority groups, especially if they are enrolled in Predominantly White Institutions (PWIs). Ball (2022) used critical theory and concepts of intersectionality to study the Imposter Phenomenon in doctoral students of color. She argued that White male-dominated hierarchical structures perpetuate feelings of Imposter Phenomenon in racial minorities, especially in PWIs. Ball (2022) connected the feeling of otherness to a lack of belonging, which the author argued resulted from long-standing structures of patriarchy in higher education institutions. Roberson (2021) studied the experiences of the Imposter Phenomenon among Black doctoral students at PWIs through a phenomenological study and 10 in-depth interviews. Findings suggested that Black doctoral students experienced self-doubt and intellectual inadequacy by comparing themselves to others. Students also felt they needed to persevere and get ahead of their White counterparts to deal with the Imposter Phenomenon. Students were managing challenges beyond coursework and felt an increased external pressure to achieve and succeed. The study mentioned several contributors to the Imposter Phenomenon among Black doctoral students, such as first-generation student status, minority stress status, stereotype threat, and racial identity.

McGee et al. (2022) also studied the experience of 62 Black doctoral students in STEM fields using mixed methods approaches. The authors outlined three groups in terms of their approach to the Imposter Phenomenon: (1) those who reference classic understandings of the Impostor Phenomenon and attribute their feelings to internal processes; (2) those whose narratives exhibit stages of racial awakening and questioning of how structural and institutional racism contribute to feelings of impostor phenomenon; and (3) those who reject the impostor label and confront racism. The authors argued that the Impostor Phenomenon is related to embedded racism in the social and institutional structures in the US. Based on the narratives of 54 participants, they concluded that feelings of impostorism stemmed from experiences of social exclusion in STEM classes. Participants mentioned feeling anxiety and depression since they felt they were not valued in the departments or colleges. Only three participants related a sense of exclusion to inferiority and perfectionism. They attributed this to deficits in themselves and considered that they were unprepared for their doctoral program's highly competitive and challenging nature.

Sexism and negative stereotyping

Women are often depicted as lacking leadership qualities (i.e., stereotypically perceived as communal and warm), while men are portrayed as a more natural fit for leadership positions (i.e., stereotypically perceived as agentic and assertive (Heilman, 2001)). In response to these gender and leader stereotypes, research suggests that a woman may feel insecure and out of place if she were to achieve such a leadership position, as these pervasive stereotypes have consistently signaled, both directly and indirectly, that she would not be fit for such a position (Haynes & Heilman, 2013; Heilman, 2012). A woman's awareness of such stereotypes can trigger her to feel like an impostor (Cokley et al., 2013). Handforth (2022) studied how female doctoral students navigate academia, and his findings highlighted issues related to identity, sense of belonging, and neoliberalism. The author found that female students were often subjected to gender barriers, which caused them to feel unworthy or "stupid" compared to their male counterparts. Along these lines, Edwards (2019) and Arnold (2021) shared their experiences dealing with the Imposter Phenomenon as Black women in doctoral programs. Edwards (2019) argued for reconceptualizing the definition of a scholar to deal with systemic and structural issues that cause self-doubt in women of color. She then recommended steps to overcome Imposter Syndrome and stereotype threat.

Even Clance and Imes' (1978) seminal study considered gender an important aspect of the Imposter Phenomenon. They mentioned that during their psychotherapy sessions, they did not notice this phenomenon as commonly in men as it was among women. However, several studies have focused on men, too (N. S. Bernard et al., 2002; Cozzarelli & Major, 1990). In contrast to Clance and Imes'

(1978) findings, these studies showed that men also experience imposter feelings. This may also help explain inconsistencies in the current literature regarding gender differences related to the Impostor Phenomenon, with some studies showing that women experience more impostor feelings, while other studies failing to find gender differences (Bravata et al., 2020), as our reasoning suggests that women would only feel like impostors in contexts that signal that they are so.

Overall, researchers have used several theoretical lenses to understand the Imposter Phenomenon among doctoral students, which includes identity, institutional and social structures, and mental health. However, these studies often do not mention the consequences of the Imposter Phenomenon on doctoral students' academic performance and achievement (D. L. Bernard et al., 2018). As mentioned earlier, the Imposter Phenomenon was initially framed from a cognitive perspective as a "Syndrome," a clinical condition. However, with further research, Clance et al. (1995) considered the possibility that impostor feelings might be shaped by "interpersonal and social contexts" (p. 80). Several studies also highlighted that individuals do not exist in a social vacuum, and people's social context is very important in determining how they feel about themselves (Feenstra et al., 2020; Hogg, 2000; Tajfel & Turner, 1986). According to Feenstra et al. (2020), scholars and practitioners have yet to give the social roots of this phenomenon the theoretical and empirical attention it deserves.

Our study focused on doctoral students' experiences with the Imposter Phenomenon. We examined how they made sense of their experiences and how these experiences were related to their academic performance and achievement. Also, we tried to understand the factors that caused imposter feelings among doctoral students. Building on a rich body of social-psychological work, we considered how (a) society and culture at large, (b) organizations and other institutions, and (c) everyday interactions and interpersonal relationships may play critical roles in shaping impostor feelings among doctoral students.

RESEARCH DESIGN

This study used a qualitative and phenomenological methodology to understand how doctoral students made sense of the Imposter Phenomenon and how it related to their academic experiences and achievements. We used this methodology because the main aim of phenomenology is to understand the human experience of certain phenomena through a first-person perspective (Wojnar & Swanson, 2007). Furthermore, this methodology provides depth to the research questions examined. For example, a survey item could examine factors contributing to the Imposter Phenomenon, but it is not as adept at revealing the complexity associated with the response. Many emotions and visual cues observed during the interviews would simply not be collected using a different method.

CONTEXT AND SAMPLE

This qualitative, phenomenological study was conducted at a public research university in the mid-western part of the United States. We used purposeful sampling to recruit participants because Grossoehme (2014) recommended using purposeful sampling for phenomenological studies to better understand the participants' lived experiences. An open call for doctoral student participants was shared via a graduate-level list-serv email after the Institutional Review Board (IRB) approved the study. Data were collected in the summer of 2022. An open call was made to limit bias and better understand how doctoral students across disciplines conceptualize the Imposter Phenomenon. Participants were self-selected into the study based on the open call for participation. Self-selection ensured that those who participated might have an understanding and experience with the Imposter Phenomenon. Since it was an open call with no financial compensation, it can be assumed that participants would not voluntarily sign up for an interview unless they had deep feelings about the topic. This self-selection then served as the research team's most accurate screening procedure, as quantifying the intensity to which a person experiences the Imposter Phenomenon is subjective to the tool used. Given the dichotomy between the colloquial and academic understanding of the term Imposter Phe-

nomenon, we thought it advantageous for participants to self-select to provide us with a greater understanding of how doctoral students viewed and defined the phenomenon. Twenty-one students responded to the email expressing an interest in participating in the study. The final sample included 14 (3 male and 11 female) doctoral students since some participants did not respond to interview request emails. The participants' ages ranged from 25 to 45 years. These students self-identified as White (9), African American (1), South Asian (2), mixed race (1), and Latina (1). Of the 14 students, 4 were international, and 10 were domestic. These students were from various disciplines, such as Education, Economics, Anthropology, Biology, Plant Sciences, and Engineering. We have used pseudonyms to protect the identity of study participants (see Appendix A) for the demography table).

DATA COLLECTION

According to Grossoehme (2014) and Creswell and Creswell (2023), there are no specific requirements or strategies for data collection in phenomenology. Creswell and Creswell (2023) suggested that various data collection strategies, including interviews, participant observations, text analysis, and action research, can be used. However, interviews are considered the most commonly used data collection strategy in phenomenological studies (Spradley, 1979). We conducted semi-structured interviews in person or online via Zoom, depending on the participants' availability and preferences. All online interviews were videotaped via Zoom. Open-ended interview questions included items centering on academic achievement, how participants would characterize themselves as students, their familiarity with the term Impostor Phenomenon, and how it has impacted their lives. The research team generated this list based on existing literature. All questions were submitted as part of the IRB proposal. A list of interview questions can be found in Appendix B. Each interview lasted between 45-90 minutes. During the interviews, the researchers took field notes to help capture the participant's feelings. Since the topic was emotional for many, recording the participants' reactions was important throughout the process. The interviews were audio and video recorded and transcribed to allow each team member to immerse themselves in the information by watching, listening to, and reading the data. This notetaking and recording contributed to the accuracy of the data interpretation (Kelly, 2010). All the data were saved in shared Google Drive, and only researchers had access to the data.

DATA ANALYSIS

During the initial process, the researchers reviewed the literature to create an interview protocol and constantly engaged in discussion with the research team to manage the data collection process. Data analysis followed an iterative design to analyze coded data for emergent themes and patterns (Creswell & Poth, 2018). The process began with content analysis of the field notes and transcripts to identify common themes and areas of disagreement in interview responses for word choice and selection analysis. Interview analysis utilized *a priori* codes developed from previous research, including that of the theoretical framework and on the Impostor Phenomenon and conversations between the researchers (Yin, 2014), and followed a constant comparative methods approach where the researchers took the results of the first-round analysis and transposed them into a summative data matrix to visually organize the findings (Miles et al., 2014). This Excel matrix allowed the researchers to organize field notes and quotes from participants under specific codes. The codes, such as how participants viewed the Impostor Phenomenon, came before the research, whereas others, including family impact, emerged from the data. Prior codes were developed based on the literature review as themes we would expect to see, such as academic success and future aspirations. Though they were developed before the research, their use and development were fluid. The researchers then used a detailed Excel sheet to conduct analytic conversations to create shared understandings of the concepts, select example quotes, and consolidate the codebook. This use of multiple coders and peer review reduces researcher bias (Guest et al., 2012). We conducted a second round of deductive data analysis to review and refine key themes relevant to our research questions. Overall, data analysis was a collaborative and reiterative process that lasted for six months.

We took the following steps to ensure validity and reliability. First, the interview protocol was approved by the IRB. The researchers tested and revised the interview protocol by conducting practice interviews among themselves. Second, to ensure analytic trustworthiness, we examined the field notes, transcripts, and codes for data triangulation to ensure the depth of evidence for each theme (Miles et al., 2014). Third, findings were reviewed for validity internally through peer review (Creswell & Poth, 2018) for investigator triangulation.

FINDINGS

MAKING SENSE OF IMPOSTER PHENOMENON

All the participants, regardless of age, gender, race, or ethnic background, mentioned feeling like an imposter at some point in their doctoral studies. However, it is important to mention that White female doctoral students made up 9 of the 14 participants in our sample. Melissa shared that she felt imposter during her Ph.D. program but not during her undergraduate program. Most participants mentioned that they learned about or experienced the Imposter Phenomenon during their graduate studies. However, the intensity and duration of imposter feelings varied. Some doctoral students mentioned feeling like an imposter consistently, and others mentioned it as just white noise. They also considered it a “feeling”, “mental drag,” or “monkey on their back.”

Denzel shared,

It is like a mental drag. Like a mental version of white noise, like a car with a broken muffler. It has a noise. It is there, and I still keep driving it. It has not derailed me. It is just a drag.

Some participants associated imposter feelings with age. Participants who enrolled in doctoral programs after undergraduate studies without work experience felt like an imposter, especially during the first couple of years of their doctoral programs. For example, Melissa shared that she had no experience and directly came from an undergrad to a Ph.D. program. She felt like an imposter, especially during the first two years of her doctoral program. Due to her young age and lack of experience, she always felt she was not good enough or smart enough as her peers in the program. Similarly, the doctoral students who were in their 40s also felt inadequate due to their age. Denzel, who is in his late 30s talked about how it was sometimes difficult to be proud of his achievements when his advisor was nearly the same age and already working as an assistant professor.

Some participants associated the Imposter Phenomenon with their sociocultural environment. Mia considered her impostor feelings linked to social expectations and stemmed from her fear of embarrassment.

I have diagnosed that I have severe imposter syndrome. When I am talking to people from my field who know, I feel like an imposter, but if it is someone from other field, I would not feel like this. It has to do with the expectation with they should know these things. It is fear of being [an] embarrassment.

Like Mia, Raaj also had imposter feelings and pointed to the social and cultural environment as reasons for this feeling of inadequacy. He shared,

I experienced imposter feelings during my master's program because the field was different, new country, new language, new education system. Also, COVID-19 made things difficult, but I knew this is due to environmental factors.

In our study, all participants mentioned experiencing Imposter Phenomenon. They associated it with several factors, as discussed below.

FACTORS CONTRIBUTING TO IMPOSTER PHENOMENON

Family and social relationships

Our study found that family and sibling relationships played a significant role in shaping participants' sense of self and contributed to their imposter feeling. Emma shared that her family never appreciated or noticed her, and she felt they did not love her. She has a strong rivalry with her siblings even to this day. According to her, her sister performed better than her in her studies. She felt she was the child who was never good enough for her parents. During the interview, she cried and broke down while sharing her experiences. She explained that she was getting a Ph.D. to prove that she was smart. She explained that grades are a critical component for her sense of self, even stating that getting an "A" means success and getting a "C" means you are a failure. Melissa shared a similar story and mentioned that sibling comparison and the excessively critical attitude of her family deeply impacted her sense of self and contributed to her imposter feelings. She explained that even as an adult, she has not come to terms with her negative childhood experiences, which still impact her life since she feels she is not good enough. Kelley shared,

I did not have a lot of family support. I have moved out and have only one friend.

Excessive Competition

Many doctoral students mentioned the competitive nature of academia made them feel like an imposter. Lindsey shared,

You know, you gotta be independent. You have all this drive. You need to work like 10 times harder than everybody else around you. You basically have to be the best and know everything all the time, and then you will hopefully get, like, you know, one of the like 10 jobs in your field when like 300 people around the country are fighting for those 10 positions, and so they have this scarcity, and unfortunately, it doesn't seem made up. So going into academia, like becoming a tenure-track professor, is a cool goal. I don't know how achievable it's gonna be for me.

Olivia, Julie, Jennifer, Melissa, and Anna all expressed a high-stakes feeling about the importance of grades and competition almost at all levels of their education. There is an expectation for high academic performance, and doctoral students have to constantly compete at various levels for grants, fellowships, and awards.

We noted from field notes and transcripts that almost all participants mentioned constant comparison with their peers as one of the reasons behind their imposter feelings. Julie, Melissa, and Jennifer all explicitly mentioned and compared themselves to their peers in their doctoral programs. They felt their peers were more knowledgeable or had more experience than them. Other participants compared themselves with their advisors or mentors. For instance, Denzel shared that,

As a non-traditional student, I was feeling odd that my advisor is just five years older than me. One reason (for this feeling) was I was comparing myself to everybody, and it was driving me crazy. Comparison is natural when I am around other people. I see the work they are doing and their passion. I do not see all the help they have received to get to this level. I look at everything at the surface and not behind the scenes.

Participants knew they were making these comparisons and the stress it was causing. However, they were still unable to stop themselves from making such comparisons.

Sexism in academia

Furthermore, many female doctoral students, especially from STEM fields, mentioned experiencing sexism from their male peers and professors. One participant, Olivia, shared that her peers told her she did not belong in the Physics department. Olivia shared,

It was something that did come up as a woman in physics. You can probably see where this is going. As a woman in physics, some situations make you feel like you don't belong, and I mean that thing can be a lot of things.

Abby also shared a similar experience of sexism from her colleagues,

My first experience (with Imposter Phenomenon) was in 2012 in a government agency. The scientist told me to go to the field. It is important to wash hands after fieldwork. The person told me you don't want to wash your hands because of your nails or as if you are a model. That was always a joke in the office. The second time was with the same person I was doing the training. When I was in my master's degree, I was working with the same person. It took me a lot of time to overcome and tell him I am more a scientist than a model.

Mental health

Mental health emerged as a major theme in our study. The majority of the participants, regardless of age, gender, racial or ethnic background, experienced some level of mental health issues. More than half of the participants mentioned having a history of chronic stress, anxiety, and clinical depression since childhood. Denzel, Akash, Kelley, Emma, Julie, and Abby had been clinically diagnosed with depression, bipolar disorder, and anxiety. Abby shared that their mental health conditions deteriorated due to isolation and competition in graduate school. Some participants mentioned that COVID-19 further contributed to their mental health issues. Kelley shared,

I had a lot of mental health problems growing up. I never thought I would live long. I had a lot of trouble like socially just because of my mental health problems, that I wasn't getting treated like I refused to like do presentations in front of the class.

Kelley shared multiple factors that contributed to her imposter feeling.

I'm a first-generation college student, and my parents don't understand what I do. Even when I try and dumb it down for them, they aren't willing to listen, so I haven't had a lot of support family-wise. I moved out to the middle of nowhere, where I don't have a lot of friends. I had one friend, and they moved and, like my mental health, is poor. So that's stacked against me, and you know, I could be on medication and go to therapy, and you know, try all this self-improvement stuff till the day's end. But, like, you know, at the end of the day, I'm still like struggling with it. I also have like physical problems that I'm still trying to get diagnosed with. But like going through college in a pandemic when you have a disability is very difficult.

Overall, participants mentioned various factors that made them feel like an imposter, including family and peer relationships, institutional and academic culture, and mental health.

IMPOSTER PHENOMENON'S IMPACT ON DOCTORAL STUDENTS

Almost all participants mentioned that the Imposter Phenomenon impacted them. However, the nature of the impact varied across the participants. Some mentioned experiencing severe anxiety and panic attacks due to imposter feelings. For example, Olivia shared that she had panic attacks before her defense exam due to feeling inadequate. She shared,

I'm prepping for all that, I'm having honesty toward the end, daily panic attacks about how like I'm gonna fail. I'm not gonna pass. They (the committee members)'re gonna say it's not good enough. They're gonna say everything I've done is wrong.

Abby shared her experience with severe anxiety due to feeling like an imposter. This anxiety even caused her physical sickness, which needed treatment.

I had bad feelings. I had backache, vomiting. I went to the chiropractor, and he told me you have anxiety. The problem is when you are anxious, it causes you to vomit, and it causes pain.

Based on our findings, the Imposter Phenomenon impacted doctoral students' confidence, especially during their first year. Melissa shared, "It (the Imposter Phenomenon) has impacted my confidence." She experienced episodes of self-doubt at the start of her Ph.D. program.

Although almost all participants mentioned some emotional impact of the Imposter Phenomenon, some participants denied any lasting or debilitating effects on their academic goals and achievements.

For instance, Denzel shared that the Imposter Phenomenon was more of a feeling, but this feeling did not affect his goals. He was more concerned about his mental health issues than the Imposter Phenomenon.

Mia shared similar views,

It acts as an obstacle now and then, but I am aware and work on it actively, like before presentations. I don't think it has hindered me from reaching my potential. I don't think I am fooling people. I do think I deserve to be here. Not feeling worthy is not an issue for me.

Julie shared,

I don't know if it's stopped me from doing anything. It's just made me, you know, make stuff take longer, or it makes us more anxiety-inducing. I don't think it's like prevented me from pursuing what I wanted to; it's just kinda that anxiety.

Akash also shared,

It has not impacted me. I think I have evolved over time. I do not place a lot of value on grades and failure or success.

Some participants even mentioned some positive aspects of the Imposter Phenomenon which helped them be more humble. Jennifer felt it impacted her both positively and negatively. She explained that she needs to do more which she expressed was “great, but time is also short to do more.”

Karla shared a positive outcome of the Imposter Phenomenon. She mentioned,

I think it (Imposter Phenomenon) has affected my confidence a little bit. I don't think it has really affected my overall goals, and in fact, I think it made me humbler, I guess, in a way. To realize like I don't know everything, and if people think I don't know anything, then that is not really my fault.

These findings are notable as none of the previous studies have mentioned any positive outcome of the Imposter Phenomenon.

DISCUSSION

Previous studies approached the Imposter Phenomenon from a psychological or social perspective. Feenstra et al. (2020) argued that Imposter Phenomenon has its roots in clinical psychology. Often, scholars have depicted the Impostor Phenomenon as a personality trait that originates within individuals who experience impostor feelings. Feenstra et al. (2020) also mentioned that this individualistic approach to the Imposter Phenomenon leads the public discourse to ignore the social factors contributing to this phenomenon. This individualistic approach also leads to fixing the individual, or the individual is expected to overcome their feelings of being an imposter. Overall, Feenstra et al. (2020) criticized this individualistic clinical approach to the Imposter Phenomenon and encouraged researchers to look further into social and structural issues that perpetuate these feelings. Recently, some studies have paid attention to environmental factors contributing to the Imposter Phenomenon (Chakraverty, 2022; McGee et al., 2022; Nadal et al., 2021). We agree with Feenstra et al.'s (2020) argument and our findings confirm the findings from the above-mentioned studies that the Imposter Phenomenon is related to self-concept and is shaped by human interaction with their environment. A positive environment can help inculcate a positive self-concept, and negative environments can depreciate self-concept. Previously, Bothello and Roulet (2019) and Akerman (2020) linked the Imposter Phenomenon to identity and self-concept, considering it a misrepresentation of the self in an academic environment. Cope-Watson and Betts' (2010) study also considered the Imposter Phenomenon as connected to challenges with self-concept among doctoral students and highlighted three themes: fear, family, and fellowship. Findings from our study align with these ideas that multiple factors contribute to the feeling of being an imposter, including family, peer, school relationships, insti-

tutional and social environments, and expectations. However, participants mentioned that institutional culture and expectations negatively impacted their mental health. Furthermore, participants also mentioned COVID-19 as a contributing factor that further exacerbated the isolation of academic life and caused them to feel like an imposter. In our study, social relationships and institutional culture emerged as significant themes.

Social Relationships

Our findings highlighted the significance of relationships with parents, siblings, peers, and advisors as contributors to imposter feelings. Many doctoral students in their 30s or 40s discussed in detail how their family and peers shaped their sense of self and how it still impacts them. According to Clance and Imes (1978), healthy and nurturing relationships with parents and siblings can positively impact individuals, whereas distant and unaffectionate relationships can negatively affect children. They also mentioned that family upbringing impacts the Imposter Phenomenon, especially, excessively critical families, and excessively praising families.

Highly critical families instill self-doubt and feelings of being an imposter in their children. In contrast, highly praising families tend to create a feeling of immunity to criticism and failure in their children. These previous conceptions correspond with the more recent research of Nori et al. (2020), who highlighted the effects parents and family groups have on students during doctoral studies. Our findings aligned with these studies and confirmed that family relationships and childhood experiences can impact individuals and may contribute to feeling like an imposter. Comparison between siblings and peers illuminates that our sense of self depends on how others perceive us and how we perceive ourselves compared to others around us. Overall, our study found that family and peer interactions in academia were crucial in shaping self-concept among doctoral students.

Institutional and academic culture

Bothello and Roulet (2019) and Akerman (2020) argued that higher education institutions' environments might exacerbate students feeling like an imposter. We found sexism, racism, ageism, and isolation prevalent in higher education institutions, which contributed to feeling like an imposter among doctoral students.

Institutional culture perpetuated sexism, especially in STEM fields. Female doctoral students were more willing and interested in sharing their experiences of imposter feelings than male doctoral students. Furthermore, prevalent sexism in STEM fields emerged as an important factor contributing to imposter feelings among female doctoral students.

Regarding institutional culture and racism, several studies highlighted that Imposter Phenomenon impacts doctoral students from minority groups, especially if they are enrolled in PWI (Arnold, 2021; Chakraverty, 2020a, 2020b, 2022; Edwards, 2019). However, our study reconfirmed the understanding that White women also experienced feeling like an imposter. Most participants in our study (9) were White women who self-selected to engage and share their experiences with the Imposter Phenomenon. Two international and one Black male doctoral student participated in our study, but no White male did. This demonstrates that there are other influences beyond the systems level.

Age emerged as another contributing factor to imposter feelings. We found that it was linked with self-concept and social expectations.

Furthermore, a competitive environment was isolating for doctoral students and also added to them feeling like imposters. Bates and Ng (2021, p. 1) argued that "the academy is built on judgments large and small. We act as gatekeepers daily as we generate and assess research, design and deliver curriculum, educate students, and contribute service to universities and other stakeholders."

Ali and Kohun (2007) pointed out that the common feeling of social isolation for students in doctoral programs often leads to prolonged periods of uncertainty, even at the beginning of their studies.

Sverdlik et al. (2020) took this impact of the Imposter Phenomenon one step further by using it as a predictor for student health and wellness. Their study demonstrated, among other things, that the Imposter Phenomenon was a significant predictor of increased depression, stress, and illness symptoms in doctoral students. Our qualitative study confirms these findings since isolation emerged as a major factor that impacted doctoral students' mental health and self-concept and caused imposter feelings. COVID-19 further contributed to the isolated nature of academic work and intensified imposter feelings among doctoral students.

We argue that the Imposter Phenomenon is not a singular static condition. Rather, it is a feeling shifted or changed under different conditions. Social expectations and interactions played a significant role in causing imposter feelings among participants. There is no single factor that contributed to imposter feelings. It was a combination of mental health, age-related social expectations, and pressures to provide for a family and to perform well in school in limiting economic conditions as a graduate student. For women and students of color, the Imposter Phenomenon is not a mere feeling of "I am not smart enough," but social and structural barriers limiting their potential. These stresses can cause mental and physical health issues and can impact their academic performance. Nadal et al. (2021) discussed the legacies of systemic and internalized oppression and argued that experiences of sexism, microaggressions, and stereotype threat perpetuate feelings of Imposter Phenomenon in historically marginalized groups. The factors that alleviated the feeling of being an imposter in doctoral students included: Family support, open communication with fellow graduate students, increased social interactions, and support from faculty and department. We suggest that higher education institutions must support doctoral students, especially by providing socio-emotional support. Faculty and administrative staff can help students create support groups since many participants in our study mentioned that peer support groups and supportive academic advisors helped them deal with the stressors of graduate school. We suggest creating a community of support by creating peer support groups and organizing social activities for doctoral students.

LIMITATIONS AND STRENGTHS

Overall, the participants in the study were self-selected. This indicates that those who did participate felt strongly about the concept of the Imposter Phenomenon. Despite the limitation of self-selection bias, our study provides another level and confirmation of how we understand the phenomenon.

CONCLUSION

Based on the findings, we see that the Imposter Phenomenon is prevalent among doctoral students, including white women, women of color, and men of color. Multiple factors contributed to feeling like an imposter, including family, peers, school relationships, institutional and social environments, and expectations. Participants explained how the Imposter Phenomenon impacted them emotionally and physically. Some students mentioned that it impacted their confidence levels. However, a few participants stated that the Imposter Phenomenon did not affect their academic performance, career goals, or achievements. This difference in findings highlights the complexity of the phenomenon. While higher education institutions obviously care about academic performance, they are missing a critical element to student success. The most intriguing result of the study is that the Imposter Phenomenon could negatively impact doctoral students' physical and emotional selves. If higher education institutes simply look at student academic success, they would miss this point entirely, which might be the reason for its prevalence. These findings call attention to the serious issue of mental health concerns among doctoral students by providing them with resources and services to cope with these challenges. Making changes to support doctoral students' mental health could improve their retention and success. We recommend structured support for these students that could build on ontological inquiries to bolster student resiliency and self-perception.

REFERENCES

- Akerman, K. (2020). Invisible imposter: Identity in institutions. *Perspectives: Policy and Practice in Higher Education*, 24(4), 126-130. <https://doi.org/10.1080/13603108.2020.1734683>
- Ali, A., & Kohun, F. (2007). Dealing with social isolation to minimize doctoral attrition- A four-stage framework. *International Journal of Doctoral Studies*, 2, 33-49. <https://doi.org/10.28945/56>
- Arnold, K. R. (2021). Finding your place: Overcoming imposter syndrome. In E. Templeton, B. H. Love, & O. Johnson (Eds.), *Elevating marginalized voices in academe: Lessons for a new generation of scholars* (1st ed., pp. 100-104). Routledge. <https://doi.org/10.4324/9781003044338-19>
- Austin, C. C., Clark, E. M., Ross, M. J., & Taylor, M. J. (2009). Impostorism as a mediator between survivor guilt and depression in a sample of African American college students. *College Student Journal*, 43(4), 1094-1109. <https://doi.org/10.1037/e566962012-425>
- Ball, T. D. (2022). *Analysis, affirmation, and advocacy: Deconstructing experiences of imposter syndrome amongst doctoral students of color at a predominantly white institution* [Doctoral dissertation, American University]. <https://www.proquest.com/docview/2668174680?pq-origsite=gscholar&fromopenview=true>
- Barreira, P., Basilio, M., & Bolotnyy, V. (2018). Graduate student mental health: Lessons from American Economics Departments (Working Paper). Harvard University. https://scholar.harvard.edu/sites/scholar.harvard.edu/files/bolotnyy/files/bbb_mentalhealth_paper.pdf
- Bates, K. A., & Ng, E. S. (2021). Whiteness in academia, time to listen, and moving beyond White fragility. *Equality, Diversity, and Inclusion*, 40(1), 1-7. <https://doi.org/10.1108/EDI-02-2021-300>
- Bernard, D. L., Hoggard, L. S., & Neblett, E. W., Jr. (2018). Racial discrimination, racial identity, and impostor phenomenon: A profile approach. *Cultural Diversity and Ethnic Minority Psychology*, 24(1), 51-61. <https://doi.org/10.1037/cdp0000161>
- Bernard, N. S., Dollinger, S. J., & Ramaniah, N. V. (2002). Applying the big five personality factors to the impostor phenomenon. *Journal of Personality Assessment*, 78(2), 321-333. https://doi.org/10.1207/S15327752JPA7802_07
- Bothello, J., & Roulet, T. J. (2019). The impostor syndrome, or the mis-representation of self in academic life. *Journal of Management Studies*, 56(4), 854-861. <https://doi.org/10.1111/joms.12344>
- Bravata, D. M., Watts, S. A., Keefer, A. L., Madhusudhan, D. K., Taylor, K. T., Clark, D. M., Nelson, R. S., Cokley, K. O., & Hagg, H. K. (2020). Prevalence, predictors, and treatment of Impostor syndrome: A systematic review. *Journal of General Internal Medicine*, 35, 1252-1275. <https://doi.org/10.1007/s11606-019-05364-1>
- Chakraverty, D. (2020a). PhD student experiences with the impostor phenomenon in STEM. *International Journal of Doctoral Studies*, 15, 159-179. <https://doi.org/10.28945/4513>
- Chakraverty, D. (2020b). The impostor phenomenon among postdoctoral trainees in STEM: A US-based mixed-methods study. *International Journal of Doctoral Studies*, 15, 329-352. <https://doi.org/10.28945/4589>
- Chakraverty, D. (2022). Impostor phenomenon and identity-based microaggression among Hispanic/Latinx individuals in Science, Technology, Engineering, and Mathematics: A qualitative exploration. *Violence and Gender*, 9(3), 135-141. <https://doi.org/10.1089/vio.2021.0061>
- Chrousos, G. P., & Mentis, A.-F. A. (2020). Imposter syndrome threatens diversity. *Science*, 367(6479), 749-750. <https://doi.org/10.1126/science.aba8039>
- Chrousos, G. P., Mentis, A.-F. A., & Dardiotis, E. (2020). Focusing on the neuro-psycho-biological and evolutionary underpinnings of the impostor syndrome. *Frontiers in Psychology*, 11, 1553. <https://doi.org/10.3389/fpsyg.2020.01553>
- Clance, P. R., Dingman, D., Reviere, S. L., & Stober, D. R. (1995). Impostor phenomenon in an interpersonal/social context: Origins and treatment. *Women & therapy*, 16(4), 79-96. https://doi.org/10.1300/J015v16n04_07

- Clance, P. R., & Imes, S. A. (1978). The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice*, 15(3), 241-247. <https://doi.org/10.1037/h0086006>
- Cokley, K., McClain, S., Enciso, A., & Martinez, M. (2013). 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*, 41(2), 82-95. <https://doi.org/10.1002/j.2161-1912.2013.00029.x>
- Cope-Watson, G., & Betts, A. S. (2010). Confronting otherness: An e-conversation between doctoral students living with the Imposter Syndrome. *Canadian Journal for New Scholars in Education/Revue canadienne des jeunes chercheurs et chercheurs en éducation*, 3(1). <https://journalhosting.ucalgary.ca/index.php/cjnse/article/view/30474>
- Cozzarelli, C., & Major, B. (1990). Exploring the validity of the imposter phenomenon. *Journal of Social and Clinical Psychology*, 9(4), 401-417. <https://doi.org/10.1521/jscp.1990.9.4.401>
- Creswell, J. W., & Creswell, J. D. (2023). *Research design* (6th ed.). Sage Publications.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage Publications.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109(3), 573-598. <https://doi.org/10.1037/0033-295x.109.3.573>
- Eagly, A. H., Wood, W., & Diekmann, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes, & H. M. Trautner (Eds.), *The developmental social psychology of gender* (1st ed., pp. 123-174). Lawrence Erlbaum. <https://doi.org/10.4324/9781410605245>
- Edwards, C. W. (2019). Overcoming imposter syndrome and stereotype threat: Reconceptualizing the definition of a scholar. *Taboo: The Journal of Culture and Education*, 18(1), 18-34. <https://doi.org/10.31390/taboo.18.1.03>
- Ellemers, N. (2018). Gender stereotypes. *Annual Review of Psychology*, 69, 275-298. <https://doi.org/10.1146/annurev-psych-122216-011719>
- Feenstra, S., Begeny, C. T., Ryan, M. K., Rink, F. A., Stoker, J. I., & Jordan, J. (2020). Contextualizing the impostor “syndrome.” *Frontiers in Psychology*, 11, 575024. <https://doi.org/10.3389/fpsyg.2020.575024>
- Grossoehme, D. H. (2014). Overview of qualitative research. *Journal of Health Care Chaplaincy*, 20(3), 109-122. <https://doi.org/10.1080/08854726.2014.925660>
- Guest, G., MacQueen, K. M., & Namey, E. E. (2012). Validity and reliability (credibility and dependability) in qualitative research and data analysis. *Applied thematic analysis* (pp. 79-106). Sage Publications. <https://doi.org/10.4135/9781483384436>
- Handforth, R. (2022). Feeling “stupid”: Considering the affective in women doctoral students’ experiences of impostor ‘syndrome.’ In M. Addison, M. Breeze, & Y. Taylor (Eds.), *The Palgrave handbook of impostor syndrome in higher education* (pp. 293-309). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-86570-2_18
- Hanson, J., Loose, W., & Reveles, U. (2022). A qualitative case study of all-but-dissertation students at risk for dissertation non completion: A new model for supporting candidates to doctoral completion. *Journal of College Student Retention: Research, Theory, & Practice*, 24(1), 234-262. <https://doi.org/10.1177/1521025120910714>
- Haynes, M. C., & Heilman, M. E. (2013). It had to be you (not me)! Women’s attributional rationalization of their contribution to successful joint work outcomes. *Personality and Social Psychology Bulletin*, 39(7), 956-969. <https://doi.org/10.1177/0146167213486358>
- Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women’s ascent up the organizational ladder. *Journal of Social Issues*, 57(4), 657-674. <https://doi.org/10.1111/0022-4537.00234>
- Heilman, M. E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, 32, 113-135. <https://doi.org/10.1016/j.riob.2012.11.003>

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- Hogg, M. A. (2000). Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *European Review of Social Psychology*, 11(1), 223-255. <https://doi.org/10.1080/14792772043000040>
- Jairam, D., & Kahl, D. H., Jr. (2012). Navigating the doctoral experience: The role of social support in successful degree completion. *International Journal of Doctoral Studies*, 7, 311-329. <https://doi.org/10.28945/1700>
- Kelly, S. E. (2010). Qualitative interviewing techniques and styles. In I. L. Bourgeault, R. De Vries, & R. Dingwall (Eds.), *The Sage handbook of qualitative methods in health research* (pp. 307-326). Sage Publications. <https://doi.org/10.4135/9781446268247>
- McClain, S., Beasley, S. T., Jones, B., Awosogba, O., Jackson, S., & Cokley, K. (2016). An examination of the impact of racial and ethnic identity, impostor feelings, and minority status stress on the mental health of black college students. *Journal of Multicultural Counseling and Development*, 44(2), 101-117. <https://doi.org/10.1002/jmcd.12040>
- McGee, E. O., Botchway, P. K., Naphan-Kingery, D. E., Brockman, A. J., Houston, S., II, & White, D. T. (2022). Racism camouflaged as impostorism and the impact on black STEM doctoral students. *Race Ethnicity and Education*, 25(4), 487-507. <https://doi.org/10.1080/13613324.2021.1924137>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. Sage Publications.
- Muenks, K., Canning, E. A., LaCosse, J., Green, D. J., Zirkel, S., Garcia, J. A., & Murphy, M. C. (2020). Does my professor think my ability can change? Students' perceptions of their STEM professors' mindset beliefs predict their psychological vulnerability, engagement, and performance in class. *Journal of Experimental Psychology: General*, 149(11), 2119-2144. <https://doi.org/10.1037/xge0000763>
- Nadal, K. L., King, R., Sissoko, D. R. G., Floyd, N., & Hines, D. (2021). The legacies of systemic and internalized oppression: Experiences of microaggressions, imposter phenomenon, and stereotype threat on historically marginalized groups. *New Ideas in Psychology*, 63, 100895. <https://doi.org/10.1016/j.newideapsych.2021.100895>
- Nori, H., Peura, M. H., & Jauhiainen, A. (2020). From imposter syndrome to heroic tales: Doctoral students' backgrounds, study aims, and experiences. *International Journal of Doctoral Studies*, 15, 517-539. <https://doi.org/10.28945/4637>
- Parkman, A. (2016). The imposter phenomenon in higher education: Incidence and impact. *Journal of Higher Education Theory & Practice*, 16(1), 51-60. http://www.m.www.na-business-press.com/JHETP/ParkmanA_Web16_1_.pdf
- Perez, C. (2020). Caring for the whole self: Analyzing the relationship between graduate students' involvement on campus and the onset of imposter syndrome. *MA in Higher Education Leadership: Action Research Projects*. 51. <https://digital.sandiego.edu/soles-mahel-action/51>
- Reyna, C. (2000). Lazy, dumb, or industrious: When stereotypes convey attribution information in the classroom. *Educational Psychology Review*, 12, 85-110. <https://doi.org/10.1023/A:1009037101170>
- Reyna, C. (2008). Ian is intelligent but Leshawn is lazy: Antecedents and consequences of attributional stereotypes in the classroom. *European Journal of Psychology of Education*, 23, 439-458. <https://doi.org/10.1007/BF03172752>
- Roberson, C. D. (2021). *A phenomenological study on the experiences of imposter phenomenon on black doctoral students at predominantly white institutions* [Doctoral dissertation, Ohio University]. <https://www.proquest.com/docview/2572550741?pq-origsite=gscholar&fromopenview=true>
- Spradley, J. P. (1979). *The ethnographic interview*. Holt, Rhinehart & Winston.
- Sverdlík, A., Hall, N. C., & McAlpine, L. (2020). PhD imposter syndrome: Exploring antecedents, consequences, and implications for doctoral well-being. *International Journal of Doctoral Studies*, 15, 737-758. <https://doi.org/10.28945/4670>
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of inter-group behavior. In S. Worchel, & W. G. Austin (Eds.), *Psychology of intergroup relations* (2nd ed., pp. 7-24). Nelson-Hall Publishers.

- Villwock, J. A., Sobin, L. B., Koester, L. A., & Harris, T. M. (2016). Impostor syndrome and burnout among American medical students: A pilot study. *International Journal of Medical Education*, 7, 364-369. <https://doi.org/10.5116/ijme.5801.eac4>
- Wojnar, D. M., & Swanson, K. M. (2007). Phenomenology: An exploration. *Journal of Holistic Nursing*, 25(3), 172-180. <https://doi.org/10.1177/0898010106295172>
- Xu, Y. J. (2014). Advance to and persistence in graduate school: Identifying the influential factors and major-based differences. *Journal of College Student Retention: Research, Theory and Practice*, 16(3), 391-417. <https://doi.org/10.2190/CS.16.3.e>
- Yin, R. K. (2014). *Case study research: Design and methods* (7th ed.). Sage Publications.
- Zhou, E., & Okahana, H. (2019). The role of the department supports doctoral completion and time-to-degree. *Journal of College Student Retention: Research, Theory & Practice*, 20(4), 511- 529. <https://doi.org/10.1177/1521025116682036>

APPENDIX A: DEMOGRAPHY TABLE

Pseudonym	Sex	Age Range (years)	Race/Ethnicity	Country of Origin
Olivia	Female	25-34	White	America
Emma	Female	35-44	White	America
Denzel	Male	35-44	Black	International
Akash	Male	25-34	Indian	International
Mia	Female	25-34	Mixed Races	International
Abby	Female	25-34	Latina	International
Lindsey	Female	25-34	White	America
Kelley	Female	25-34	White	America
Raaj	Male	25-34	Nepali	International
Melissa	Female	25-34	White	America
Karla	Female	25-34	White	America
Julie	Female	25-34	White	America
Jennifer	Female	25-34	White	America
Anna	Female	25-34	White	America

APPENDIX B: INTERVIEW QUESTIONS

Background, Beliefs & Attitudes

1. Please tell us about your academic background and your academic experiences:
 - About the schools you attended
 - Your academic trajectory, why you chose certain path/majors, schools, or colleges.
 - Your successes and failures in academic journey
2. Growing up how would you characterize yourself as a student? I mean how would you describe the younger you as a student in your school and college?
3. In the past, how did you deal with academic challenges? Think of a situation when you did not get the grade you were hoping for, or your teacher provided critical feedback to your work? How did it make you feel and how did you respond to the situation?
4. What are your academic goals and what are your hopes for future life? What do you think would make it easy to accomplish your goals for you? Or what challenges are you expecting to face or your way?
5. How did you feel when you got into your graduate program? Tell us about your experience in graduate school, especially from the time you joined to now. Do you see any difference in yourself as a student and as a person?

Imposter Syndrome

1. Have you ever heard the term imposter syndrome? If yes, can you please tell us how you learned about this term and how you would describe it?
2. Have you ever felt that you are an imposter in any situation? Can you please tell us about that situation and your feelings?
3. What do you think were the reason/s or factors that made you feel like this (an imposter)? Please, can you elaborate on those reasons?
4. Do you think imposter syndrome impacted you and your life? If yes please explain how it has impacted you and your life, especially your sense of self, confidence, and ability to achieve your goals.
5. Please feel free to share if you like to add something which you think is important and I should know but I did not ask.

AUTHORS



Dr. Sara Bano is an assistant professor of higher, adult, and lifelong education at Michigan State University. Her research work explores the nexus between international and comparative higher education and adult and continuing education in a global context. Dr. Bano's expertise includes adult and continuing education, international and comparative higher education, and transformative learning in cross-cultural settings. Her research employs qualitative empirical methods such as phenomenology and case studies to examine adult learning experiences in diverse educational contexts. Her work has been published in the journals of *Transformative Education*, *Comparative and International Higher Education*, *Commission on International Adult Education*, and others. She is also currently serving as Co-Chair for the Conference Planning Committee for the Commission for International Adult Education in the American Association for Adult and Continuing Education. She is also a Co-Chair for Teaching International and Comparative Education SIG in Comparative and International Education Society.



Dr. Cailen O'Shea is a teaching fellow of Educational Leadership at Trinity College Dublin. His research interests focus on school transformation and equitable instructional leadership. Specifically, he looks at ways educational leaders can enhance instruction for all students. He utilizes both critical quantitative and qualitative research methodologies. Previously, Dr. O'Shea served as a behavior interventionist, 5th-grade teacher, and instructional technology coach in Title I schools in Lincoln, Nebraska.