Commentary: Prevalence, Predictors, and Treatment of Imposter Syndrome: A Systematic Review

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Introduction

Imposter syndrome is a condition that describes high-achieving individuals who, despite their objective successes, fail to internalize their accomplishments and have persistent self-doubt and fear of being exposed as a fraud or imposter1. Individuals struggling with imposter syndrome do not attribute their performance to their actual competence, instead ascribe their successes to external factors such as luck or help from others while considering setbacks as evidence of their professional inadequacy2.

In December 2019, we published the first systematic review of the published literature on imposter syndrome1. In that study, we evaluated the 62 peer-reviewed studies of 14,161 individuals with imposter syndrome published between January 1966 and May 20183-68. Initially described by psychologists Clance and Imes in 1978 among high-achieving professional women2, we sought to evaluate the evidence from the subsequent four decades of published literature on the prevalence of imposter syndrome in employed populations, characterize its relationship to workplace performance and burnout, describe common co-morbidities, and determine the most effective treatments for populations suffering from imposter symptoms.

The purpose of this commentary is to highlight the key findings of our previously published meta-analysis1 and discuss those results in light of the current COVID-19 pandemic and national discussion regarding racial equality.

Prevalence of Imposter Syndrome

The published literature on imposter syndrome is comprised exclusively of evaluations of cohorts to assess the prevalence of imposter syndrome and describe their psychiatric and psychological co-morbidities1. The prevalence of imposter syndrome varies widely from 9% to 82%, largely depending on the recruitment strategy for the study (e.g., population-based evaluations, studies of students), screening tool used (e.g., Clance Imposter Phenomenon Scale69, Harvey Impostor Phenomenon Scale70) and cutoff used to assess symptoms1. The literature on the prevalence of imposter syndrome may be subject to publication bias (i.e., the tendency of journals to publish studies with positive findings rather than negative findings) since all of the peer-reviewed studies reported some participants endorsing imposter feelings1.
Although much of the earliest literature focused on women, it is clear that imposter syndrome affects both men and women (although 16 articles found greater symptoms of imposter syndrome among women\(^\text{17,22,27,29-33,36,37,40,44,51,56,57,67}\), 17 articles found no gender effect). Additionally, imposter syndrome affects individuals across the age spectrum (two studies reported that increased age was associated with decreased imposter feelings\(^\text{12,64}\) while three studies found no age effect\(^\text{43,56,67}\)).

**Imposter Syndrome Among Employees**

The meta-analysis found that people with imposter syndrome aggressively pursue achievement while not being able to accept recognition when success is achieved\(^\text{1}\). Thus, in the workplace, those affected with imposter syndrome may experience increased levels of stress, burnout, and decreased job performance and satisfaction over time\(^\text{1}\). Employees who persistently question their professional legitimacy may also be at higher risk for experiencing adverse psychological outcomes with implications for career retention and advancement.

When employees with imposter syndrome are faced with more responsibility and less supervision their symptoms of self-doubt and fears of being exposed as a fraud have been shown to increase\(^\text{1}\). Since the COVID-19 pandemic, healthcare professionals and employees of companies who have had to reduce their workforce may be experiencing both of these circumstances. Additionally, employees who remain at work with a reduced workforce due to the financial crisis resulting from the pandemic may face “survivor guilt” which has also been associated with imposter syndrome\(^\text{31}\).

Crawford et al. found a significant relationship between imposter syndrome and self-reported conflict managing work/life balance among affected employees\(^\text{30}\). However, they found that this relationship was minimized if employees perceived that they were given greater organizational support\(^\text{30}\). Employees who are working from home for the first time may feel less supported by supervisors and managers. The situation may be complicated especially for those with caregiver responsibilities at home, assisting children with home-schooling, and facing new work/life balance issues. Employers and managers may need education in the recognition of imposter syndrome and in the development of both structured (e.g., training, orientation) and unstructured learning and career development activities (e.g., mentoring, coaching, self-directed learning) to help employees at this time\(^\text{1}\). Offering resources such as access to therapy and resilience trainings that focus on imposter syndrome could help identify and reduce the symptoms of imposter syndrome in employed populations. In addition, employers can mitigate the effects of imposter syndrome by creating healthier expectations and cultures where mistakes are not interpreted as failures and publicly acknowledging and celebrating employee accomplishments.

**The Treatment of Imposter Syndrome and its Co-Morbidities**

Imposter syndrome often co-exists with depression\(^\text{35,41,43,51,56,67}\), anxiety\(^\text{26,45,52,73}\), low self-esteem\(^\text{22,26}\), somatic symptoms and social dysfunction\(^\text{35}\). Critically, there have been no trials of therapeutic interventions to treat individuals with imposter syndrome\(^\text{1}\). Given the absence of specific treatment recommendations for imposter syndrome and the prevalence of co-morbidities, we encourage clinicians to rigorously screen patients presenting with imposter syndrome for depression and anxiety and offer evidence-based therapies for these conditions. Additionally, since individuals experiencing imposter syndrome often perceive themselves to be the “only one” having these feelings, resulting in even greater isolation, referral to group therapy in which peers/colleagues discuss their feelings of doubt and failure might be particularly therapeutic. Clinicians and other high-achieving professionals may be reluctant to participate in such groups unless they are carefully designed to normalize and destigmatize imposter feelings and provide a safe environment in which to share experiences openly. We encourage all clinicians (including mental health specialists) to pursue training on the common presenting symptoms, prevalence, and strategies for addressing imposter syndrome.

**Race / Ethnicity and Imposter Syndrome**

Eleven studies evaluated imposter syndrome among minority student populations\(^\text{6,7,4,15,17,23,45,46,48,58,67}\). These studies found that imposter syndrome is common among African-, Asian-, and Latino/a-American college students and that imposter feelings are significantly negatively associated with poor psychological well-being, depression, and anxiety. These studies identified several factors that may predispose minority students to increased psychological stress during their educational experiences including lack of adequate financial aid resulting in the need to work to support themselves financially, racial discrimination, and being the first in their families to pursue advanced education\(^\text{74,75}\). Given the current environment of financial uncertainty for all students and recent graduates, there may be an increase in the number of individuals suffering from imposter feelings.

Interestingly, one study found that imposter feelings were stronger predictors of impaired mental health than the stress of the individual’s minority status\(^\text{75}\). This is particularly significant given that research on ethnic minority populations tends to focus on their minority status and presumed experiences of discrimination, rather
than the individual differences within a minority group such as the presence or absence of imposter feelings\textsuperscript{76}. In the literature, attempts to standardize imposter syndrome assessment tools typically include only small numbers of ethnic minorities, which raises questions of whether current imposter syndrome screening tools are valid for ethnic minority populations.

There is some evidence to suggest that for ethnic minority populations there is a racial component of impostor feelings\textsuperscript{76,77}. For example, a recent qualitative study with Black graduate students found five themes related to impostor feelings: awareness of low racial representation, questioning intelligence, expectations, psychosocial costs, and explaining success externally\textsuperscript{76}. It may be prudent to consider that the clinical definition of imposter syndrome be culturally adjusted to properly assess minority students in order to help them navigate feelings of otherness and racial isolation and the "need to prove themselves" on the basis of their race\textsuperscript{76}.

**Imposter Syndrome as a Disorder**

Half of the 62 peer-reviewed publications on imposter syndrome were published in the last seven years underscoring the recent recognition of imposter syndrome as an important clinical phenomenon. Despite this, however, imposter syndrome is not a recognized psychiatric disorder; it is neither featured in the American Psychiatric Association’s Diagnostic and Statistical Manual 5th Edition (DSM-5)\textsuperscript{8} nor in the International Classification of Diseases, Tenth Revision (ICD-10)\textsuperscript{9}. Imposter syndrome should be considered for rapid inclusion in the next edition of the DSM so that patients with these symptoms can be identified and treated by behavioral health providers. This would also facilitate research on therapeutic interventions for this population, evaluate the effect of the pandemic on affected individuals, and assist in further assessments of the impact of racial and ethnic issues on mental health.

**Conclusion**

This analysis suggests that imposter symptoms are prevalent among men and women, members of multiple ethnic groups, and are significantly associated with worsened experiences in professional settings\textsuperscript{1}. Given that imposter syndrome largely affects how individuals perceive their accomplishments in the workplace, we recommend that clinicians screen patients presenting with employment-related complaints (e.g., difficulty with managers or co-workers, work-life balance issues, workplace performance anxiety) for imposter syndrome. The literature lacks consensus about evidence-based treatments for patients with imposter syndrome. Mental health professionals, educators, and employers must be educated about imposter syndrome to take steps to mitigate the psychological impact of this condition. We recommend a prospective evaluation of the use of individual and group cognitive behavioral therapy focused on addressing imposter feelings on clinical and workplace outcomes for employed populations across a range of professions.

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