

Coping with Impostor Feelings: Evidence Based Recommendations from a Mixed Methods Study

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[See table of contents](#)

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Article abstract

Objective – The negative effects of impostor phenomenon, also called impostor syndrome, include burnout and decreased job satisfaction and have led to an increased interest in addressing this issue in libraries in recent years. While previous research has shown that many librarians experience impostor phenomenon, the experience of coping with these feelings has not been widely studied. The aim of our study was to understand how health sciences librarians cope with impostor phenomenon in the workplace.

Methods – We conducted a census of 2125 Medical Library Association members between October and December 2017. An online survey featuring the Harvey Impostor Phenomenon scale and open-ended questions about coping strategies to address impostor phenomenon at work was administered to all eligible participants. We used thematic analysis to explore strategies for addressing impostor phenomenon and one-way analysis of variance (ANOVA) to examine relationships between impostor phenomenon scores and coping strategies.

Results – Among 703 survey respondents, 460 participants completed the qualitative portion of the survey (65%). We found that external coping strategies that drew on the help of another person or resource, such as education, support from colleagues, and mentorship, were associated with lower impostor scores and more often rated by participants as effective, while internal strategies like reflection, mindfulness, and recording praise were associated with less effectiveness and a greater likelihood of impostor feelings. Most respondents reported their strategies to be effective, and the use of any strategy appeared to be more effective than not using one at all.

Conclusions – This study provides evidence based recommendations for librarians, library leaders, and professional organizations to raise awareness about impostor phenomenon and support our colleagues experiencing these feelings. We attempt to situate our recommendations within the context of potential barriers, such as white supremacy culture, the resilience narrative, and the lack of open communication in library organizations.

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Research Article

Coping with Impostor Feelings: Evidence Based Recommendations from a Mixed Methods Study

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Data Availability: Barr-Walker, J., Bass, M. B., Werner, D. A., & Kellermeyer, L. (2019). Coping with impostor feelings: Evidence-based recommendations from a mixed methods study (V2) [Survey instrument, data, codebooks]. UC San Francisco. <https://doi.org/10.7272/Q65T3HP6>. The survey instrument is available in appendix 1. The de-identified data and codebook as well as qualitative codebooks are available in data appendices 2 and 3.

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Abstract

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Conclusions – This study provides evidence based recommendations for librarians, library leaders, and professional organizations to raise awareness about impostor phenomenon and support our colleagues experiencing these feelings. We attempt to situate our recommendations within the context of potential barriers, such as white supremacy culture, the resilience narrative, and the lack of open communication in library organizations.

Introduction

Impostor phenomenon, also known as impostor syndrome or impostor experience, is defined as an internal feeling of not deserving personal success that has been rightfully achieved (Clark et al., 2014). Individuals experiencing impostor

phenomenon may believe that they have fooled others into overestimating their own abilities; attribute personal success to factors other than their own ability or intelligence, such as luck, extra work, charisma, or misjudgment; and fear exposure as an impostor (Clark et al., 2014). Existing research has shown that up to 70% of

the population has experienced impostor phenomenon (Harvey & Katz, 1985), and many people suffer from its associated adverse effects such as anxiety, depression, lack of confidence, decreased job satisfaction and performance, and inability to achieve in the face of self-imposed unattainable goals, which can lead to burnout (Parkman, 2016).

The current study is part of a larger research project that hypothesized higher rates of impostor phenomenon among health sciences librarians compared to college and research librarians, primarily because of the lack of educational background health sciences librarians hold in their subject areas. This effect was not found, suggesting that the current study's findings around coping strategies are broadly applicable across the academic librarian community.

While anecdotal evidence and a growing body of research have shown that impostor phenomenon in librarianship exists, no studies have examined how librarians cope with this phenomenon. Our study attempts to provide an evidence base for recommendations to address impostor phenomenon among librarians.

Literature Review

Impostor phenomenon has been studied extensively in academia, with two comprehensive literature reviews focusing on the existing research in this field (Parkman, 2016; Parkman & Beard, 2008). Many studies have documented the prevalence of impostor phenomenon among faculty, students, and staff, with some noting that the academic environment of “scholarly isolation, aggressive competitiveness, disciplinary nationalism, a lack of mentoring and the valuation of product over process” (McDevitt, 2006, p. 1) may cultivate impostor feelings. Race and gender, previously thought to be unrelated to the experience of impostor phenomenon, have recently shown associations with impostor scores in academic populations, including women graduate

students (Collett et al., 2013; Oriel et al., 2004) and Black undergraduate students (Bernard et al., 2018; Cokley et al., 2017). Within academic libraries, two studies have shown that one in eight librarians have experienced impostor phenomenon, with younger and newer librarians demonstrating higher impostor scores than their older and more experienced colleagues (Barr-Walker et al., 2019; Clark et al., 2014).

Although countless studies have measured the prevalence of impostor phenomenon using two validated measurements (Clance & Imes, 1978; Harvey & Katz, 1985), few studies have examined the ways in which people with impostor phenomenon successfully cope with these feelings. Two studies discovered a range of coping strategies used by faculty, including seeking support from colleagues, family, and friends; correcting cognitive distortions about the meaning of success and validating successes; and using avoidant behaviors like substance use, ignoring impostor feelings, and working harder (Hutchins & Rainbolt, 2017; Rakestraw, 2017). Mentor relationships were consistently reported as a successful strategy for addressing impostor phenomenon, with mentors encouraging participants to own their accomplishments, reassuring them about the normalcy of impostor feelings, modeling positive behaviors like avoiding unrealistic comparison with others, and providing emotional and practical support, including ideas and advice about their work (Hutchins & Rainbolt, 2017). Importantly, while all strategies lessened impostor feelings, this lessening was reported as a temporary effect overall.

Despite the lack of research on the use of coping strategies, most of the literature on impostor phenomenon recommends similar strategies at the individual level (e.g., recording accomplishments, self-evaluation, collaborating with colleagues), the managerial level (e.g., giving praise to direct reports, accepting mistakes), and the organizational level (e.g., creating mentoring programs) (De Vries, 2005;

Parkman, 2016; Rakestraw, 2017). Within academia, programs for faculty, staff, and students have been developed to acknowledge and address impostor phenomenon, including awareness workshops at faculty orientations, mentoring and peer group programs, regular discussions for first-year employees, and the implementation of structured feedback systems (Parkman, 2016). Recommendations in the literature for supervisors include giving positive, documented feedback, facilitating a written record of accomplishments for employees, discussing clearly what success and excellence in a particular position might look like, modeling work-life balance while eschewing expectations of perfection, and being aware of the signs of impostor phenomenon in order to prevent and address it (De Vries, 2005; Rakestraw, 2017).

Efforts to raise awareness about impostor phenomenon within academic librarianship have increased in the last five years, with American Library Association-sponsored webinars (Conner-Gaten, Van Ness, & Tate-Louie, 2018; Puckett, 2018), the appearance of regular workshops at conferences like the New Librarian Symposium and the Association of College and Research Libraries (ACRL) conference, and a proliferation of published articles on the topic (Agostino & Cassidy, 2019; Lacey & Parlette-Stewart, 2017; Murphy, 2016; Rakestraw, 2017; Sobotka, 2014). Despite this increased interest, no evidence yet exists to support the range of recommendations that are widely suggested to address impostor phenomenon.

Aims

The aim of this study was to understand how health sciences librarians cope with impostor phenomenon. Our research questions include the following: How are librarians experiencing impostor phenomenon at work? What types of coping strategies do librarians use to address these impostor feelings? How effective are current coping strategies at addressing impostor

phenomenon? By answering these questions, we seek to provide evidence based solutions for addressing the experience of impostor phenomenon among librarians.

Methods

We developed an online, anonymous survey using REDCap, a secure, web-based application designed to support data capture for research studies. Our survey contained the 14-statement Harvey Impostor Phenomenon scale, seven demographic questions, and two open-ended questions: "Do you use any strategies to address feelings of inadequacy at work?" and "If applicable, how effective are these strategies in addressing those feelings of inadequacy?" (see appendix 1 referenced in Data Availability).

The development of our survey instrument has been described in detail elsewhere (Barr-Walker et al., 2019). Briefly, the Harvey Impostor Phenomenon scale, developed in 1981, is a validated tool widely used to measure impostor phenomenon (Harvey & Katz, 1985). The Harvey scale contains 14 statements that respondents score on a scale of 1 to 7, representing "Not at all true" to "Very true"; some statements are reverse scored. For example, a statement like "In general, people tend to believe I am more competent than I really am" is scored as 1 for "Not at all true" and 7 for "Very true," while a statement like "I feel I deserve whatever honors, recognition, or praise I receive" is reverse scored. Overall scores can range from 0 to 84, with higher scores corresponding to higher instance of impostor phenomenon. Scores of 42 and higher "may indicate possible troubles due to impostor feelings, and scores in the upper range suggest significant anxiety" (Harvey & Katz, 1985).

Univariate analysis and one-way ANOVA with Tukey's post-hoc test were completed in Stata, a statistical analysis software, by one author (Author 1). For qualitative analysis, two authors (Author 1 & Author 2) used thematic analysis (Silverman, 2003; Wolcott, 2001) to create 14

codes from the responses to the open-ended survey questions using Google Sheets. Participant responses were reviewed independently by both authors who then shared their ideas about emerging themes and came to consensus on codes; the two authors then independently assigned thematic codes to each response. Inter-rater reliability was conducted after this step, with both authors checking each response and resolving any discrepancies between code assignments via deliberation until resolution. Study data and corresponding codebooks are available in appendices 2 and 3 noted in Data Availability.

All 2,125 eligible members of the Medical Library Association (excluding students, unemployed members, and members located outside the United States) were emailed an invitation to complete the online survey in October 2017, with two reminders sent over the next two months; the survey closed for responses on December 31, 2017. This study was approved as exempt research by the University of California, San Francisco IRB (study #17-22873).

Results

Respondents

Of those surveyed, 703 respondents completed the survey (33% response rate), and 460 (65% of those who completed the survey) provided information for the two open-ended questions about strategies used to address feelings of inadequacy at work and the effectiveness of those strategies. Quantitative analysis of the study results has been reported elsewhere (Barr-Walker et al., 2019); for the purposes of this paper, we will report only on the 460 respondents who completed the open-ended questions.

Most of the 460 respondents identified as women (85%) and White (84%), worked in an academic library (58%), had an MLS degree (98%), did not have educational training in a

health sciences field (62%), and had 11 or more years of experience working in libraries (55%). Age varied among respondents: the majority were between 36-50 (37%) or over 51 (44%), with a smaller percentage under 36 (19%). While total impostor phenomenon scores ranged from 5-70 (out of a possible 84), the average impostor score was 28.69, with 15% of respondents scoring 42 or above, indicating an experience of impostor phenomenon (Harvey & Katz, 1985). These results reflected the overall trends among the 703 participants of the survey (Barr-Walker et al., 2019), indicating that the 460 respondents examined in the current study were representative of this larger population.

Strategy Types

We identified 22 types of coping strategy themes, listed in Table 1 (see end of the article). The most frequently reported strategy was education ($n = 173$), followed by support from colleagues ($n = 133$), reflection ($n = 87$), perseverance ($n = 54$), and mindfulness ($n = 47$). About half of respondents (55%) reported a single strategy, while the rest described multiple strategies: there were no significant differences in impostor scores at the $p < 0.05$ level between those who selected one or multiple strategies [$F(1,458) = 1.92, p = 0.17$]. The strategies that corresponded to the highest mean impostor phenomenon scores, indicating greater likelihood of impostor feelings), were avoidance (38.59), other external (37.13), recording praise (34.5), and fake it 'til I make it (34.1), with the lowest mean impostor phenomenon scores for support from colleagues (28.95), acknowledgement (27.19), and education (25.95) (Figure 1).

We categorized each strategy as “internal” or “external” based on whether or not the respondent relied on another person or resource as part of the strategy. For example, internal strategies included reflection, mindfulness, and perseverance, all of which can be done by one individual without the assistance of another, while external strategies include education,

mentorship, and support from colleagues. Respondents were split between reporting strategies categorized as internal ($n = 176$), external ($n = 172$), or both ($n = 111$). Many respondents included multiple internal or external strategies in their responses, but only those who included at least one strategy of each type were counted as having used both. Using

one-way ANOVA with Tukey’s post hoc test, significant differences at the $p < 0.0001$ level were observed in impostor scores between two groups, with those reporting only internal strategies having higher mean scores than those who reported only external strategies [$F(2, 457) = 9.24, p = 0.0001$].

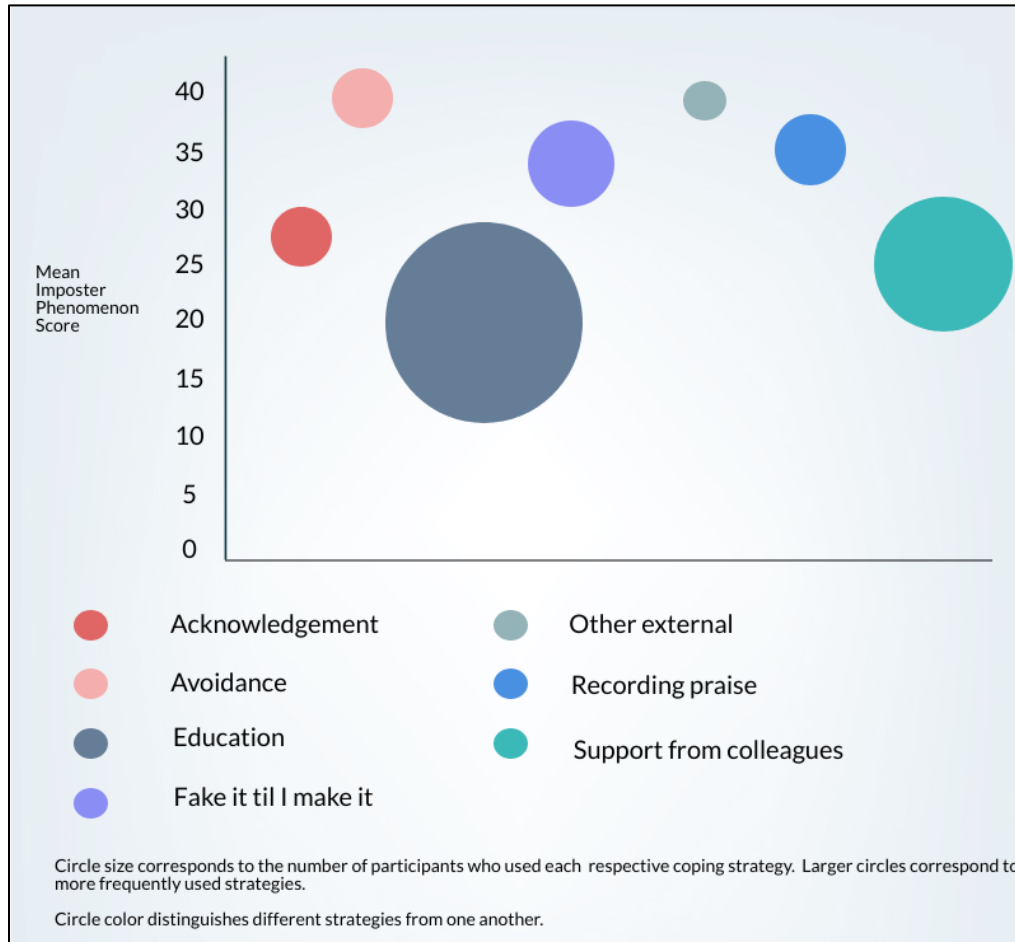


Figure 1
Summary of the strategies with the highest and lowest impostor score means.

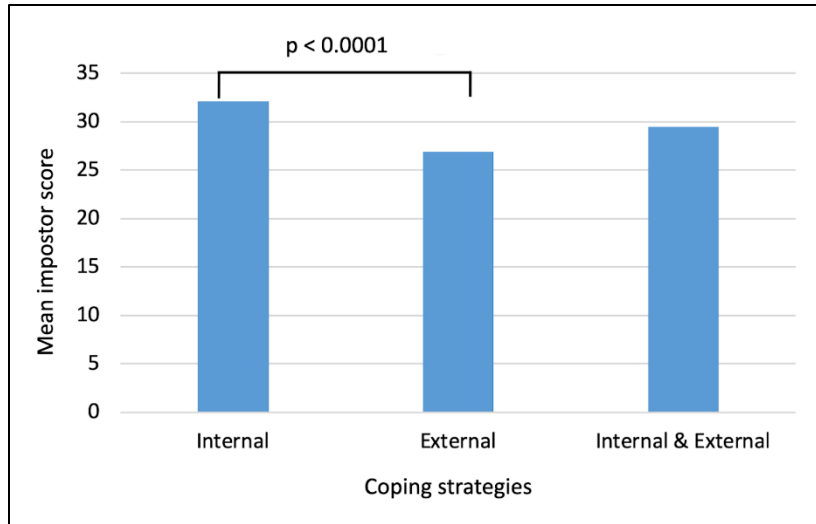


Figure 2
Comparison of impostor scores by type of strategy.

Although mean scores were lower for those that used both internal and external strategies than those using internal strategies only, this was not a significant effect (Figure 2). There were no significant differences in the use of external versus internal strategies between demographic groups such as age, years of experience, race, gender, or type of library, with usage remaining consistent between groups.

Strategy Effectiveness

Most participants rated their strategies favorably, with 74% of participants reporting that their strategies were effective ($n = 320$, $M = 26.81$, $SD = 10.20$). Using one-way ANOVA and Tukey's post hoc test, we found that the mean impostor scores for participants who reported that their strategies were somewhat effective ($n = 84$, $M = 38.25$, $SD = 9.59$) or not effective ($n = 21$, $M = 41.33$, $SD = 12.20$) were significantly higher than those who reported effective strategies [$F(3, 428) = 38.35$, $p = 0.0001$], showing that self-reported effectiveness corresponded to lower impostor scores. The most frequently reported ineffective strategies were avoidance, perseverance, and reflection, all internal strategies. The most frequently reported effective strategies represented a mix of external

and internal strategies: education, support from colleagues, reflection, mindfulness, and perseverance.

Examples of Strategies

Reflection, an internal strategy, was an individual process focused on reviewing what one has accomplished in order to reach the current position in their career. Examples focused on both general accomplishments, "I remind myself of what I've done in the past, and the things I've learned, and the fact that I can learn more," and achievements related to their job roles:

"I have my school diplomas on my office wall -- both my undergrad... and grad, which was a master's degree; the purpose isn't to impress or intimidate other people -- they are there to remind *me* that I do belong legitimately in my office. Sometimes I wonder if that's why other people have theirs on their own walls, too."

Education was a commonly referenced external coping strategy that involved engagement with resources beyond an individual's own knowledge. One participant stated, "I try to

participate in a lot of professional development, especially free professional development opportunities: MOOCs for example." Another participant gathered ideas for educational opportunities by "attending professional development sessions; reading colleagues' resumes and LinkedIn accounts to learn about ways to improve my own."

Effectiveness of Strategies

Out of the 74% of participants that rated their strategies as effective, the most frequently reported were education and support from colleagues, external strategies that were associated with lower impostor scores. While responses around formal education like CE courses, advanced degrees, and professional conference participation were common, participants also found informal educational opportunities and support from colleagues to be effective:

"I take additional classes or read articles and books to improve areas that need work. These strategies help, but implementing them and seeing improvements helps improve feelings more than just completing a class or readings."

"Ask questions, seek help, go to experts, seek feedback. It broadens my knowledge and makes me more confident."

Receiving support from colleagues and mentors, inside and outside their own libraries, was often mentioned as an effective strategy:

"I usually find a colleague that is at the same stage or slightly further along than me to bounce ideas off of. I also try to reach out to mentors who may not necessarily be in my field, to compare my ideas with them. [This is] usually very successful, I think often I underestimate my thought process, and they often assure me that I am on the right path."

"I have several trusted colleagues at my place of work, and several from previous employment that I discuss any uncertainties I am feeling to work through my impostor syndrome. [This is] highly effective. Sometimes bouncing ideas off of another person is all I need, and occasionally reassurance that I'm not inept or that I am the right person for the job is necessary. Mostly it just helps boost my confidence and strengthen my ideas."

"I try to talk to colleagues in other medical libraries who can understand my feelings. [This is] very effective! My fellow librarians are so helpful and empathetic - they make me feel that I am not alone."

Although internal strategies alone were associated with higher impostor scores, some individuals reported their use of these strategies to be effective. Many responses combined internal and external strategies, such as the following example which includes reflection, recording praise, and support from colleagues:

"I list all of the projects that I am currently working on, and all of the projects that I have completed, whether I did a great job or a not-so-good job. I sometimes also think about how I could be doing a worse job and imagine what that would look like. I then think about what I could be doing better and list small steps for improvement. Talking to peers that you are close with also helps. You recognize that you are not alone and that you may be doing better than you thought. The list helped me to recognize the hard work that I've put in and does help me feel like I'm doing enough, or more than enough, in my position. Imagining what doing a worse job would look like helps a great deal in addressing feelings of inadequacy. Talking to peers helps significantly."

Discussion

Individual Coping Strategies

The two measurements used in our study, impostor phenomenon scores and self-reported effectiveness, provide evidence of the association between external strategies, lower impostor scores, and greater self-reported effectiveness. However, variations exist among individual strategies: perseverance, for example, was one of the most frequently reported ineffective strategies but was associated with a lower impostor score than mentorship, a strategy often self-reported as effective. How can we explain this? Looking closer at this particular strategy reveals that 72% of respondents that reported perseverance also used at least one additional strategy; because almost half of respondents used more than one strategy, it is difficult to separate the effects of any individual strategy from another. What seems clear from our aggregate data is the fact that using any strategy to deal with feelings of impostor phenomenon seems to be helpful, both in terms of self-reported effectiveness and impostor phenomenon score. Within the choice of strategy type, our evidence points to the use of external strategies.

Education was the most commonly reported external coping strategy, was self-reported as effective, and was associated with the lowest mean impostor score of all reported coping strategies. We did not distinguish between formal and informal education in our analysis; therefore, educational strategies could include anything from taking for-credit courses to reading articles. Recommending educational strategies to combat impostor phenomenon, then, seems straightforward, and for those who are able to participate in educational activities, it is our highest recommendation to counter impostor feelings. However, we must also acknowledge the potential barriers to utilizing this strategy: lack of resources to pay for courses, webinars, or paywalled articles; uncertainty, particularly for newer librarians,

about whether engaging in educational activities while at work is acceptable; and lack of time to engage in these activities. Suggestions for organizations and leaders to address these barriers are discussed in the next section.

Another self-reported effective external strategy was support from colleagues. This strategy may work well when one has already established a network of trusted colleagues, but in some workplace environments, this is not a feasible option. Solo librarians, for example, must look for support outside of their own libraries where they may lose the shared experience that support from an institutional colleague often provides. Librarians new to an institution might not know others well enough or be unsure when to ask for support. Additionally, while many respondents described trusted colleagues, others described environments where they lacked support or encountered toxic colleagues. For librarians who are able to develop networks of trusted colleagues, the ability to share feelings around impostor phenomenon can help confirm that these feelings are shared by successful people; many respondents in our survey described not feeling so alone after discussions with colleagues about these issues. Support from colleagues, therefore, can serve as an individual coping strategy and a way to raise awareness about impostor phenomenon within our field.

One self-reported effective internal coping strategy was acknowledgement: stating and accepting one's lack of knowledge on a given topic. This strategy, while not reported nearly as frequently as education or support from colleagues, reflected the second lowest mean impostor score, following education. Overall, internal strategies like mindfulness, fake it 'til I make it, and avoidance were associated with higher mean impostor scores than external strategies, but acknowledging a gap in knowledge is a necessary step before taking action, like seeking additional education or support from colleagues; in this context, its effectiveness makes sense.

Some differences observed in internal and external scores and self-reported effectiveness may be explained by the fact that several internal strategies match impostor phenomenon indicators. For example, overpreparing, fake it 'til I make it, perseverance, and avoidance are coping strategies that also describe the characteristics of those with impostor feelings. It is not surprising that some of these internal strategies, including avoidance and perseverance, were self-reported as ineffective.

Less obvious is why the strategy of reflection was also described as not effective and associated with higher impostor scores. One possible explanation is that self-reflection, if using the warped mirror of impostor phenomenon, can reinforce negative thoughts and perceptions. Impostorism has been described as “an inability to accurately self-assess with regard to performance” (Parkman, 2016). When reflecting on performance, those who experience impostor feelings will likely undervalue their strengths and achievements and overemphasize their mistakes and failures. Reflection and recording praise (i.e., looking back at the things you have accomplished and praise you have received) are commonly recommended techniques to combat impostor phenomenon (De Vries, 2005; Hutchins & Rainbolt, 2017; Lacey & Parlette-Stewart, 2017). However, these internal strategies were associated with higher mean impostor scores in our study, indicating that if one is to use them, they should be combined with external strategies to increase their likelihood of effectiveness.

Addressing Impostor Phenomenon Through Organizational Culture Change

Beyond individual coping strategies, another method of addressing impostor phenomenon may come at the leadership level. Several studies suggest a potential association between impostor feelings and job roles with a lack of clarity in their scope (Lacey & Parlette-Stewart, 2017; Parkman, 2016). In librarian positions

where individuals are often responsible for a broad variety of tasks, performance targets can be vague and may lead to uncertainty about what success in one's job looks like. As our findings have shown, support from colleagues and mentorship are associated with lower impostor scores: improving communication with librarians, including feedback on job performance, is a first step toward using these coping techniques. It is important to clarify, however, that not all feedback leads to decreased uncertainty. A recent study confirmed that supervisors do not always have an understanding of librarians' work; thus, feedback received in these cases can be frustrating (Thomas et al., 2017). Alternative models of feedback such as appreciative inquiry (Rosener et al., 2019) and two-way feedback systems may help to provide a shared understanding of librarians' work and allow library leaders to change their expectations based on librarian feedback. Leaders that prioritize clear, specific feedback as part of their regular conversations with employees can begin to create a culture of open communication in which impostor feelings can be acknowledged and addressed. Leaders in our field have previously advocated for transparency in communication from leadership (Robertson, 2017) in order to “create a safe environment for library workers ... to talk with one another about their concerns and needs without fear of reprisal or rejection” (Lew, 2017).

Another opportunity for library leaders who want to create supportive environments for their staff to address impostor phenomenon is to reject and disrupt aspects of white supremacy culture in their organizations. White supremacy culture is the series of characteristics that institutionalize whiteness and Westernness as normal and superior to other ethnic, racial, and regional identities and customs (Gray, 2019). Naming whiteness as a culture helps us question its neutrality and normativity, including how white culture shapes the norms, beliefs, and ideas of everyone in it (e.g., creating standards of professionalism for dress code and speech

that privilege whiteness) (Gray, 2019; Hathcock, 2015). Impostor phenomenon can thrive in this culture because its norms are often not named as such, and librarians whose work (and, often, personal selves) do not fit these norms may question their own success and ways of doing things.

Many of the hallmarks of white supremacy culture can reflect the manifestations of impostor phenomenon in libraries, including perfectionism, a sense of urgency, individualism, either/or thinking, and quantity over quality, with several studies linking these two concepts (Berg et al., 2018; Dudău, 2014; Henning et al., 1998; Okun & Jones, 2016; Ross et al., 2001; Thompson et al., 2000). Although our institutions have historically been shaped by white supremacy culture, libraries can begin to dismantle these systems by proactively naming our norms and standards of behavior to reflect the type of culture that we want to see: one that does not facilitate impostor phenomenon. To do this, library leaders can recognize that projects often take longer than expected and create realistic work plans; create environments where it is expected that everyone will make mistakes and recognize that these mistakes sometimes lead to positive results; develop a values statement for the library which expresses the ways in which people want to do their work; evaluate people based on their ability to delegate to others; and/or make sure that everyone knows and understands their level of responsibility and authority in the organization (Okun & Jones, 2016). Library leaders interested in continuing the anti-racist work of disrupting “the neutrality of whiteness” (Gray, 2019) in their organizations can look to scholars in our profession who have written extensively on this topic (Bourg, 2016; Ettarh, 2014; Schlesselman-Tarango, 2017).

In the current study, over 10% of participants described a coping strategy related to perseverance or not giving up on a task even though you do not feel fully capable of completion. This feeling of perseverance or

resilience is challenged in the library literature for obscuring structural issues and shifting responsibilities to library workers to overcome barriers for success (Berg et al., 2018). Using an example from our study, librarians may feel that obtaining education in order to relieve feelings of impostor phenomenon is their responsibility. Framing education as a coping strategy that individual librarians must seek out ignores structural inequalities that prevent librarians in low-resource settings or with limited support from their library administrations from accessing these resources. According to this theory, resilience encourages library workers “to manage up, to ignore systemic inequalities, to return to a status quo which too often upholds silence over difficult change, and reinforces fictions of neutrality” (Berg et al., 2018). Library leaders can recognize the manifestations of resilience in their environments and begin to build organizational cultures that reframe resilience. Resilience can be reimagined in libraries within the context of addressing the negative effects of impostor phenomenon: library leadership can create organizations whose values include letting go of unnecessary tasks, embracing discomfort during new training efforts, and helping staff accept “done” rather than perfection (Berg et al., 2018).

Moving Forward: Working Together as a Profession

Professional organizations have a role to play in raising awareness about impostor phenomenon and supporting librarians with educational and mentorship opportunities. Our study shows that education, support from colleagues, and mentorship are some of the most effective strategies that librarians can use to deal with impostor feelings. ACRL, MLA, and others can strengthen their existing mentorship programs, specifically targeting those who are younger or new to the profession, groups that displayed higher impostor scores in our study (Barr-Walker et al., 2019). Professional organizations can also work together across disciplines (e.g., ACRL, MLA, PLA, SLA) to share expertise and

connect members in different job roles for peer mentoring programs. Local chapters may be able to play a role in creating a network of supportive colleagues and mentorship, but these chapters are often underfunded and understaffed by volunteer librarians. While our professional organizations currently offer regular educational opportunities including continuing education classes, webinars, and conferences, we must consider as a profession how fee-based education creates barriers for librarians in low-resource settings and how we can support our colleagues without financial resources to pay for existing educational opportunities. As the results of our study show, external strategies like education and mentorship are associated with lower impostor scores; these evidence based approaches should be valued when library leaders consider budgetary decisions around professional development for staff.

When advocating for mentorship within professional organizations, we must point out that formal mentorship programs often fail to address the impacts of white supremacy culture on librarianship, especially around how librarians of colour must navigate the whiteness of our profession (Brown et al., 2018). When mentorship programs do not name, identify, or interrogate the whiteness of our institutions, they are unable to provide a supportive environment for participants of colour, and may facilitate feelings of impostor phenomenon, the very thing these programs are designed to disrupt (Brown et al., 2018; Dancy & Brown, 2011). In addition to supporting and expanding existing diversity-centered mentorship programs, our organizations can create supportive environments for librarians of colour in all mentorship programs by acknowledging the harmful effects of white cultural norms and allowing participants to express their authentic selves (Brown et al., 2018). Great strides have been made to create informal and volunteer networks of peer mentors as a response to the lack of support for librarians of colour in formal mentoring spaces (Brown et al., 2018); our

professional organizations can recognize this as an opportunity to leverage these networks of experts to improve existing programs.

Moving forward, future studies can build on our work by examining the differences in effectiveness between individual coping strategies and how the use of multiple strategies affects one's experience. Additionally, there is a lack of research on how librarians' intersectional identities (e.g., race, gender, socioeconomic status) affect their feelings of inadequacy at work and how the coping strategies recommended in this study may be experienced differently based on these identities, rather than as a universal approach. Although our study did not show differences in impostor scores by race or gender, the lack of diversity in librarianship combined with the ways in which dynamics of privilege are enacted in our field may inform interpretations of these results (Barr-Walker et al., 2019). Future study in this area would allow us to better understand the associations between impostor phenomenon, how white supremacy culture is enacted in libraries, and how these intersectional identities are experienced.

Conclusion

In our census of members of the Medical Library Association through an online survey, 15% of librarians experienced impostor phenomenon, and most reported using one or more coping strategies to address these feelings. External strategies like education, support from colleagues, and mentorship were associated with self-reported effectiveness and lower impostor scores. Although our findings showed less evidence for the use of commonly recommended strategies such as reflection, mindfulness, and recording praise, it appears that using any strategy at all is more effective than using none. We encourage librarians and library leaders to develop and utilize evidence based recommendations to address impostor phenomenon, with careful consideration given to structural barriers, such as the resilience

narrative and white supremacy culture, within our field.

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Table 1
Qualitative Themes for Coping Strategies Identified by Respondents

Strategy	Definition	External or Internal	Example	Number of responses	Mean impostor score
Education	Taking a class, attending a conference, reading resources on a given topic, working towards a degree	External	“Take continuing education classes, attend conferences, work on certifications.”	173	25.95
Support from colleagues	Talking with colleagues about tasks and/or seeking their advice	External	“I think it is important to be able to communicate with my supervisor and peers. Right now I have a very approachable boss who I trust and can share my feelings with.”	133	28.95
Mentorship	Mention of a mentor or someone who is in a formal coaching or guidance position	External	“I have a wonderful mentor whom I ask for advice. She is an excellent librarian, and a strong supporter of my work an[d] my morale.”	17	30.06

Support from friends/family	Talking with friends/family about tasks and/or seeking their advice	External	"Talk to family, talk to friends. Talk to myself as if I were one of my friends."	19	31.16
Other—external (includes Therapy)	Combination of external strategy categories that had <15 responses	External	"I see a mental health professional for career burnout and anxiety."	8	37.13
Acknowledgement	Stating and accepting one's lack of knowledge on a given topic	Internal	"I find it OK to say 'I don't know' or 'I don't know how' but add 'but I will find out.'"	31	27.19
Personal best	Doing one's best on a given task	Internal	"I mainly do my best to work hard and do a good job no matter how small or large the task. The thought that I am doing all I can helps counteract feelings of inadequacy."	26	28.96
Perseverance	Not giving up on a task even though you don't feel fully capable of completion	Internal	"I don't have a choice, but to keep trying."	54	29.69
Other— internal (Age, Comparison, Music, Organization, Personal activities, Physical activities, Religion, and Substance use)	Combination of internal strategy categories that had <15 responses	Internal	"Ride my bike after work."	47	31.04

Mindfulness	Mentioning of meditation or mindfulness techniques	Internal	"I start each day having a pep talk with myself. I see myself being successful and happy. And most of the time it comes true."	47	31.45
Reflection	Thinking about the work one has done	Internal	"I tell myself you have accomplished these efforts before and you can do it again. I take a deep breath and go for it."	87	31.56
Over-preparing	Doing as much as possible before completing a task	Internal	"Prepare for meetings etc. more thoroughly than other people."	21	32.39
Fake it 'til I make it	Working through the skill as you learn how to do it	Internal	"Just keep going. 'Fake it until you make it.'"	19	34.10
Recording praise	Creating/saving a physical or electronic copy of a verbal or written compliment	Internal	"I keep a file of notes of praise or thanks that I have received from a job well done, and refer to them if I doubt myself."	22	34.5
Avoidance	Not doing a given task	Internal	"I just ignore them."	27	38.59

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