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Harnessing the Strengths of Neurodiverse Students in Graduate STEM Fields: The Central Role of Advisor-Advisee Communication

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Harnessing the Strengths of Neurodiverse Students in Graduate STEM Fields: The Central Role of Advisor-Advisee Communication

Neurodiverse students, encompassing autistic students, as well as students with ADHD, dyslexia, and other neurological variations, bring a wealth of unique traits and skills such as divergent thinking, creativity, and spatial visualization to advanced study in the fields of Science, Technology, Engineering, and Mathematics (STEM). These traits can not only fuel unconventional problem-solving but also contribute to the richness of cognitive diversity. Despite their potential, navigating the traditional academic landscape at a major R1 university presents unique challenges for these students. While there are many institutional hurdles to optimizing neurodiverse graduate students' experience, a key area of impact lies in the communication dynamics within their advisor-advisee relationships. Drawing from the experiences of current graduate students, this paper explores the opportunities embedded in these relationships to foster a more inclusive and productive academic environment. We used thematic analysis of the transcripts from 13 focus groups and 1 interview to examine the advisor-advisee relationship as experienced by 31 students who identify as neurodiverse in graduate STEM programs. The findings from this research highlighted several themes related to the importance of communication in the relationship between neurodiverse students and their advisor. This paper focuses on three themes related to communication: Mutual Trust, Clear Expectations, and Delivery of Feedback. The findings suggest that these three elements of communication may either promote or hinder the success of neurodiverse graduate students in STEM programs, impacting disclosure of neurodiversity-related diagnoses, self-esteem, self-advocacy, self-efficacy, and wellbeing.

Introduction

Neurodiversity is a term that encompasses a range of neurological variations in human populations. Recent research indicates that neurodiverse individuals such as autistic students, and students with attention deficit hyperactivity disorder (ADHD), or dyslexia, may possess strengths that are considered assets in engineering and other STEM fields, such as creative thinking [1]-[4], visual-spatial skills [5]-[7], and pattern recognition [8], [9]. Despite efforts to increase the participation of marginalized students in STEM, neurodiverse students, including autistic students, and students with ADHD and dyslexia, have remained underrepresented and underserved in STEM graduate programs. Estimates based on a 2014 report indicate that neurodiverse individuals make up only around 3% of science and engineering doctoral degree recipients [10].

Graduate students face a unique set of challenges when compared to undergraduate students, with faculty advisors playing a large role in student success. Several studies have noted specific challenges related to advisors, including work-life balance, which may be impacted by faculty expectations, and hierarchical faculty-student relationships [11]-[13]. Satterfield et al.'s [14] literature review focused on the experiences of graduate students during their studies and explored how individual factors (the influence of the student's advisor), programmatic factors (isolation and teaching assistantships), and external factors (work-life balance and family influence) influenced the persistence of graduate students in their field [14] Meanwhile, Berdanier et al.'s [15] study of social media forums found that the student's advisor was among the key factors influencing attrition in graduate engineering programs. While it is clear that

graduate students face a range of challenges within rigorous programs, existing literature emphasizes the key role of the advisor in graduate student experiences.

In this study, the role of the advisor was pivotal in the experiences of neurodiverse graduate students as they navigated their graduate STEM programs. This paper focuses on three themes related to communication in the context of the advisor-advisee relationship: Mutual Trust, Clear Expectations, and Delivery of Feedback. The findings suggest that these three elements of communication may either promote or hinder the success of neurodiverse graduate students in STEM programs, impacting disclosure of neurodiversity-related diagnoses, self-esteem, self-advocacy, self-efficacy, and wellbeing. While these findings may be somewhat applicable to the advisor-advisee relationship in the context of graduate programs in general, we explore the nuances of these themes as they relate to the lived experiences of neurodiverse graduate students. The findings also underscore the potential of a strength-based approach to remove barriers by not merely accommodating, but meaningfully harnessing the capabilities of neurodiverse students. These insights may provide a roadmap for advisors and institutions alike, thereby enhancing inclusivity, fostering innovation, and enriching the educational landscape in graduate STEM programs.

Researcher Perspectives/Positionality

Our work's direction and purpose are heavily influenced by the personal stories of the authors with ADHD and/or dyslexia, alongside our collective work with neurodiverse students in neurodiversity-focused engineering and STEM education projects. Our own experiences have led us to adopt an approach that celebrates and affirms neurodiversity by using supportive language when recruiting participants and during our study interactions. We believe our shared journey has created a welcoming space for neurodiverse graduate students to share their personal experiences. It's also important for us to note that while our team offers diverse points of view on gender, culture, and other aspects of society, our understanding is shaped by our backgrounds as white individuals in the United States.

Project Overview

This IRB-approved, NSF-funded research project included ten focus groups of students who self-identified as neurodivergent and were pursuing advanced degrees in STEM disciplines at an R1 university in the Northeastern United States. Recruitment took place *via* an email listserv for all graduate students and an email from the university's disability services office. The focus group participants a) self-identified as neurodiverse and b) indicated that they were completing a graduate degree in a STEM field. Degree programs were classified as STEM programs based on the university's list of STEM majors and/or their inclusion on the list of National Science Foundation Research Areas [16].

Participants

In this study, 32 neurodivergent graduate students participated in 13 focus groups and one individual interview. Due to unexpected scheduling conflicts experienced by multiple participants, one scheduled focus group had only one participant in attendance. Because the attendee was not able to reschedule, the session was conducted as an interview using the same protocol used in the focus groups. One participant from a STEM-adjacent field was removed from the data set in order to maintain a tighter focus on graduate students in fields clearly defined as STEM disciplines, resulting in a final sample of 31 participants. Six students participated in multiple focus groups, responding to separate recruitment emails for different

focus group rounds, each exploring varied topics related to neurodivergent experiences in STEM graduate programs. This participation added depth to the data. The majority of participants were White women pursuing doctoral degrees. Of the participants, 19 (61.3%) identified with ADHD, 6 (19.4%) as autistic, and 18 (58.1%) reported a mental health condition. Over half (54.8%) identified with more than one neurodiversity-related diagnosis or condition. It is common for neurodiverse conditions to co-occur [17]-[19].

We noted that participants who reported only mental health-related conditions strongly identified as neurodiverse, which aligns with our broad understanding of neurodiversity as a range of neurological variations present in human populations. By broadly defining neurodiversity within our sample, we were able to consider common themes across a range of neurodiverse experiences of graduate STEM education. To reduce the potential exclusion of participants from populations less likely to receive a formal diagnosis, such as women or students from racially or ethnically marginalized backgrounds in STEM who identify as neurodiverse, we did not require proof of a formal diagnosis as a prerequisite for participation. There are many barriers to diagnosis, including financial cost, access to care, subjective or biased diagnostic criteria, as well as variations in familial and community understandings of neurodiversity [20]. Existing literature shows a pattern of disparities in formal diagnosis rates and access to supports between individuals from minoritized racial groups and their White peers [21]-[24]. Additionally, neurodiverse women frequently receive a diagnosis of anxiety or depression, while ADHD or autism diagnoses are delayed or unrecognized [25], [26]. The demographic data of the 31 participants are summarized in Table 1.

Table 1: Summary of Demographic Information (Total N = 31)

Field of Study	N (%)
Biology	5 (16.1%)
Biomedical/Health Sciences	2 (6.4%)
Chemistry	4 (12.9%)
Data Analytics	1 (3.2%)
Earth Sciences	1 (3.2%)
Engineering	7 (22.6%)
Environmental Sciences	3 (9.7%)
Mathematics	1 (3.2%)
Physics	1 (3.2%)
Psychology	4 (12.9%)
Social Sciences	2 (6.4%)
Neurodiverse Identity or Condition Reported	
Anxiety (generalized anxiety disorder or social anxiety)	15 (48.4%)
Attention deficit hyperactivity disorder (ADHD)	19 (61.3%)
Auditory processing disorder	1 (3.23%)
Autism	6 (19.4%)
Bipolar disorder	1 (3.2%)
Depression	7 (22.6%)
Dyslexia	1 (3.2%)
Migraine	1 (3.2%)
OCD (obsessive compulsive disorder)	3 (9.7%)
PTSD (post-traumatic stress disorder)	2 (6.5%)

Mental health (self-harm)	1 (3.2%)
Gender Identity	
Woman	19 (61.3%)
Non-binary/Gender non-conforming	3 (9.7%)
Man	9 (29.0%)
Race/Ethnicity	
Black or African American	1 (3.2%)
Hispanic or Latinx	2 (6.4%)
Multiracial/biracial	3 (9.7%)
White	25 (80.7%)
Graduate Program	
MS (Master's degree)	5 (16.1%)
PhD (Doctoral degree)	26 (83.9%)

Note: 16 participants (51.6%) identified with multiple neurodiverse identities or conditions.

Data collection

We conducted four rounds of focus groups with neurodiverse graduate students to explore their experiences in graduate-level STEM programs, through which we hoped to identify challenges, supports, strategies, and resources. As we were interested in learning about participants' shared experiences of neurodiversity, the focus group allowed the participants to build on one another's responses, explaining how their experiences differed or provided insights into commonalities across multiple dimensions of neurodiversity. The one interview, while lacking the feature of building on shared experiences across participants, was conducted by a neurodiverse graduate researcher who was able to establish rapport with the interviewee. The interview did provide some additional depth in response related to specific writing strategies in use by the participant. However, effort was made to ensure that the interview data was not over-represented or over-emphasized in the findings. The focus groups, determined by participant availability, ranged from 2 to 5 participants. The first round explored broader experiences, with writing and communication both emerging as significant themes. Data from the first three rounds informed a semi-structured protocol for the fourth round, focusing on writing experiences, strengths, challenges, and support strategies. This round included three focus groups and one interview due to scheduling conflicts. All focus groups were held virtually, via Microsoft Teams, and the videos were recorded and transcribed using Otter.ai (2022). Pseudonyms were used for participant anonymity. A summary of the focus groups and example questions is provided in Table 2.

Table 2: Summary of Focus Groups

Round	Area of Focus and Sample Questions	(N) Groups
Round 1	Strengths and challenges, graduate school experiences, strategies, inclusive environments	4
	Sample Questions:	
	• What has been your experience so far as a student in your graduate STEM program?	

	• What do you think someone needs to do to be successful in your graduate STEM program?	
Round 2	Advisor-advisee relationship, graduate-level writing experiences, understandings of neurodiversity	2
	Sample Questions:	
	• How would you describe your experiences with writing in your graduate program? • How would you describe your writing process?	
Round 3	Current and past educational experiences, current and past writing experiences, accommodations	4
	Sample Questions:	
	• Overall, how would you describe your experiences in your current program? • Can you tell me about your experiences with writing in your current field of study?	
Round 4	Current and past writing experiences, writing strengths and challenges, strategies and resources that support writing productivity.	4*
	Sample Questions:	
	• What feelings or emotions do you have when you think about your writing tasks? • What strengths do you think you bring to your writing? • What strategies do you use to address writing challenges?	

Note: Round 4 included 3 focus groups and 1 interview.

Based on our prior experiences conducting informal roundtable discussions with neurodiverse engineering students, we opted to collect data via focus groups rather than through individual interviews, as this format provides multiple benefits to participants. Namely, the focus group format counters the isolation and stigma often felt by neurodiverse students. We noted that the discussions facilitated sharing of similar experiences, fostered connections among students who expressed interest in connecting with one another outside of the research, and prompted rich, meaningful discussions. Many participants expressed appreciation for the learning and connection opportunities provided through the focus groups. This approach highlighted shared experiences and reduced feelings of isolation and marginalization common among neurodivergent students in higher education.

Methodology and data analysis

Qualitative methods were selected because they are appropriate for exploring the inner experiences of participants [27]. Additionally, qualitative methods are appropriate for use with small sample sizes, where quantitative investigations may lack the power to produce meaningful findings. In this thematic analysis, we take a constructionist approach in which participants' realities are seen as both socially constructed and subjective [28]. From this perspective, knowledge is created through the interactions and experiences of individuals within their social and cultural contexts [29]. Thus, we aimed to understand the ways in which the study participants made sense of their experiences through interaction with the environment of graduate STEM programs. Our thematic analysis followed the phases of activity described by Braun and Clarke [30]: "(1) familiarizing yourself with your data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report" (p. 87). The raw data was categorized and developed into themes. We integrated reflexivity into our approach through researcher memos and weekly team discussions to reduce the influence of biases on the research process. This approach allowed us to remain aware of how our perspectives and experiences could shape the data collection, analysis, and interpretation.

Two researchers coded independently, using inductive coding, then reviewed codes collaboratively. Each quote was also coded for the participant's specific neurodiverse group or condition. Finally, the research team used an iterative analysis cycle, reorganizing the data as themes emerged. This paper presents the themes that emerged from the focus groups as participants discussed their relationship with their advisor, which is known to be a key factor in the success of graduate students across the board. Quotes were selected to illustrate the core themes and the selected quotes represent a range of neurodiverse identities within the sample.

Findings and Discussion
The findings from this research highlighted several themes related to the importance of communication in the relationship between neurodiverse students and their advisor. This paper focuses on three themes related to advisor-advisee communication: Mutual Trust, Clear Expectations, and Delivery of Feedback.

Mutual Trust
When asked if they would share information about their neurodiversity-related experiences, strengths, and challenges with their advisor, most participants expressed some hesitation about doing so, suggesting that students may not have the necessary trust in their advisor-advisee relationship to facilitate these types of discussions. Wendy, who later on in her program developed open communication with her advisor about neurodiversity, reflected on her early perception that she was not safe discussing her experiences with ADHD, saying:

> I think it would be something that might be helpful to share with my advisor…
> And so, if you asked me this question two years ago, I would have said,
> Absolutely not. Don't tell anybody anything. I don't know how to stand up for
> myself. But… it would have been a lot easier, if at the beginning I was like,
> these are the things I need you to know about how I communicate and how I
> process information.

Even as she considered the potential benefits that open communication with her advisor might have offered, this quote highlights the ongoing struggle of one student to trust her advisor with

this information. While Wendy eventually did disclose her ADHD to her advisor, she notes that it would have been easier for her if she had done so earlier in her academic program. In a similar vein, Nancy, a student with an auditory processing disorder and anxiety, describes the effort that she puts into hiding her internal struggles, and the subsequent impact that keeping this hidden from her advisor has on her mental health and wellbeing.

> I do this masking where I put on that I'm very together in front of her and I have all these plans, and my calendar is all marked, but then my day to day, I don't feel like that. So, revealing that side of me, is something that gives me anxiety.

The need to maintain a facade again suggests a hesitation to fully trust the advisor with their vulnerabilities. Twyla describes a similar environment in her department in other words, saying:

> …there's not a lot of talking about our own experiences… right now, in my department, we're … talking about how we can be a little bit more open community and a little bit … more comfortable space to talk about these things.

Here, the norm is to not talk about one's personal experiences openly. She notes that there is talk of making change so that the current discomfort with these types of discussions might dissipate enough for students to be able to have open conversations about their neurodiversity. Stevie, who reported challenges with mental health and identified as neurodiverse, perceived that their faculty advisor, who was noted to be very open and accommodating, was the exception, rather than the norm in their department, emphasizing the difference it makes.

> I'm very lucky that my research area, I think, has the most supportive faculty members in it. So, I felt very comfortable going to my advisor and being like, hey, I need some extra time on this, oh, I'm struggling with this. And he's been really good on being just open and accommodating, which I think is great. I don't think that's true for everyone in the department.

This observation points to a broader departmental culture that may not always encourage openness about personal experiences, though there appears to be a recognition of the need for change towards a more supportive environment. Additionally, this contrast suggests that the quality of support may vary significantly across departments, impacting students' willingness to communicate openly.

Finally, when asked what advice they would offer to others, the participants advocated for open communication with advisors. For example, Twyla said:

> … a piece of advice I give to someone … would be to not be afraid to talk to your advisor about, like, what works best for you. And how you think and how they can help you with that because they should be … your mentor. Not every advisor is good at that… I think you're doing both yourself and the advisor a disservice if you're not being honest with them about what you need.

Notably, this advice emphasizes the reality that there is great variability among the quality of support given by faculty advisors even as it encourages neurodiverse graduate students to

advocate for themselves. These responses illustrate the inner conflict that neurodiverse students may experience when they are aware that honest dialogue is crucial for their success, yet they are not able to fully trust their advisor with knowledge about their experiences and struggles.

Clear Expectations

As we consider the advisor-advisee relationship, the connection between trust and clear communication becomes evident. Trust establishes a foundation on which expectations can be clearly communicated, which is vital for neurodiverse students whose approaches to learning and working may conflict with normative expectations. Clear communication of unspoken norms and expectation becomes critical as advisors ultimately decide whether or not graduate students are a good fit in their program or laboratory. Ted, a student with ADHD, anxiety and depression, points out that the mindset of faculty advisors is crucial to determining student success in a research group, as he says, "Not every advisor knows that people are different and can't just all work the same way. And then you know, maybe they don't care. Maybe they're just like, if you don't fit, you don't fit."

Ronnie, a graduate student with obsessive compulsive disorder (OCD), points out the importance of clear expectations to mitigate confusion and enhance productivity.

> "I really like environments where I have really clear roles and things to do. And as a graduate student, there's nobody saying you need to do all of these things, you just have to know that you need to do them. And that might be remedied if I talked to my advisor more and was like, Hey, can you help me like structure the things that I should work on? But yeah, instead, I'm just often feeling like, there's a lot of things I need to do, but I don't know what they are."

Ronnie perceives that there is a hidden curriculum in the form of unspoken expectations embedded within the environment in which she works and learns. She is aware that the expectations are not communicated directly, yet there continue to be barriers to more proactive communication with her advisor.

Meanwhile, Alexis, who identified as autistic emphasizes that avoiding ambiguous expectations in relation to graduate writing assignments enhances productivity because it helps her to avoid wasting time. She purposely seeks clarification before beginning, as her approach may differ than her advisor's, which may lead to wasted effort and increased workload.

> I have a hard time with kind of ambiguous or indirect feedback. Like sometimes someone will make a note like in track changes and say, oh, you should do it this way. And I'm like, what does that mean? Like, what are you looking for? Are you looking for this? Are you looking for this? Are you looking for this and like, I have to clarify before I can even start, because I don't want to like start down a path and just assume what they mean. And just for them to say, Oh, that's not what I wanted. So like, I try to be like, tell me exactly what you're looking for. So I don't waste either of our time.

Gwen, a doctoral student who reported ADHD, depression and anxiety, has also identified a lack of clarity related to her advisor's expectations. However, in this case, the source of the challenge is somewhat ambiguous. The source of confusion may be unclear instructions on the part of the

advisor or a different interpretation of the instructions on her part. Either way, Gwen notes the importance of advocating for her own needs by reviewing expectations at the end of meetings and creating a written list.

> I'll have a meeting with my advisor. I'm like, Yeah, I get it… I know what you're saying. But then after the meeting, I'm like, what do I do? … so I've gotten in the habit of at the end of every meeting being like, okay, so, I should do XYZ. Like list out exactly what I should do. So it's totally clear for me because there's been so many times, and then you don't want to go back to them and be like, hey, I don't know what I'm supposed to be doing because they'll be like, Well, did you not just say you understood? …Did we not just meet and you said you got it?

Adapting communication strategies to ensure clarity of expectations after meetings is described here as a practical approach for neurodiverse students to avoid misunderstandings and take steps toward self-advocacy.

Delivery of Feedback
The transition to the delivery of feedback highlights its critical role in the academic development of neurodiverse students. Effective feedback can bolster self-confidence, whereas unclear or harsh feedback may have the opposite effect for neurodiverse students, who may have internalized negative messages about their ability during their earlier academic career. Sensitivity to criticism, when compounded with the power dynamics inherent in the hierarchies of academia, can make feedback a critical area within the advisor-advisee relationships. When describing their experiences receiving feedback from male advisors, Robin recognizes the role of power dynamics in intensifying the emotions related to receiving feedback, saying:

> … I have an inherent bias to take male perceiving people as like a higher weight of regard… And then if they say something that's not even offhandedly negative, but like, not positive, that's the important part is that it's not explicitly positive, it will devastate me. Because I don't have that validation.

Jim, a student who identified as autistic and reported anxiety and post-traumatic stress disorder (PTSD), noted that his high sensitivity to criticism made it difficult to receive feedback, as well. He says,

> I obviously struggled to take even really constructive criticism not personally… I think my advisor has softened on stuff to accommodate that. And that's been good. So, there's certainly just an issue of being able to get feedback in a timely enough manner, to keep a good flow of work and writing going.

In addition to pointing out the emotional impact of even constructive criticism, Jim's comment also indicates the importance of timeliness to a student's workflow. For students with challenges related to executive function or motivation, re-starting a stalled writing assignment can present challenges. Wendy, who also has ADHD, confirms this as she discusses how stalled feedback interrupted her writing process and made it more challenging to make progress on writing tasks, when she says, "So I was kind of just like, frustrated with that system and how it could have been. In my mind, it could have been a lot more streamlined. If I wasn't waiting a month for edits

every time I had to hand in a draft." She also mentions the insensitivity of some faculty as they provide feedback, saying:

> …I have a committee member whose idea of feedback is like a seven-paragraph email that just says, we didn't learn anything, this paper is stupid. And also, I don't understand what you're trying to say. But there isn't actually any way to do anything with that. So, like those situations where I don't - I'll be like, Okay, well, that's how you feel. But I don't know what to do with that.

Finally, students emphasized the need for clear, unambiguous feedback, to avoid uncertainty and hindered progress. Nancy notes that the adjustment to the intense revision process of graduate-level writing tasks has increased her anxiety level.

> …it's a relationship I haven't gotten used to. And so, I have this anxiety about trying to make it perfect, so that my advisor spends less time editing it… it's a different experience than I've ever had before graduate school with this one-on-one very intense editing writing process. And I think that's just added to my anxiety that - how much feedback, how much change. Like her seeing that first draft and just ripping it apart is something that's new, and anxiety-inducing.

The anxiety associated with receiving feedback, particularly in a one-on-one setting, is addressed, highlighting the emotional dimensions of academic mentoring for neurodiverse students. Twyla, a student with ADHD, pointed to a positive experience in which her advisor used positive feedback and encouragement as a support mechanism:

> …when I'm pretty visibly upset when I'm talking with my advisor, he gives… a lot of patience and a lot of positive encouragement and that just makes me feel a lot better. And so, I think that's a relevant example of how advisors can help.

The supportive role an advisor can play is encapsulated in this final quote, suggesting that empathy and encouragement in feedback can significantly alleviate student anxiety and foster a positive learning environment.

Implications for Practice
Literature suggests that the advisor-advisee relationship has a profound impact on the student experience, and that this is particularly important for students from marginalized groups [31]. In the case of neurodiverse students, whose marginalized identity is invisible, the advisor-advisee relationship may take on particular significance in relation to graduate students' decision-making process related to disclosure of their neurodiversity diagnoses, their working and learning profiles, and their challenges in the context of their courses and research [32]. Thus, establishment of trust and open communication becomes key for creating an inclusive environment in which students may advocate for themselves without fear of negative perceptions on the part of their advisor, who holds significant power within the relationship [33].

One feature that may be key in providing this type of environment is the adoption of a strengths-based approach toward neurodiversity that challenges the predominant deficit-based narrative toward neurological variations and empowers neurodiverse students to leverage their strengths in the academic and research environment [34]. If neurodiverse students feel that their strengths are

valued, they may be more likely to build positive relationships based on honest communication about their experiences. By creating an environment in which students may "remove the mask," programs may reduce the cognitive and emotional burden carried by neurodiverse students who are working hard to make it in graduate programs that weren't designed for them.

Faculty advisors who work with graduate students should seek opportunities to increase their awareness of the strengths and challenges of neurodiverse students, to challenge the overarching norms and assumptions embedded in the graduate school experience and build more open pathways of communication. Faculty should prioritize cultivating trust with their graduate students in order to facilitate self-advocacy and access to needed supports.

Additionally, faculty may consider fostering alternative modes of communication (in addition to in-person verbal communication or email), such as visual mapping, virtual conferencing, instant messaging, audio notes, or a shared research journal. Such options might open up conversation about students' preferred modes of communication, which may be particularly important to neurodiverse students whose ways of communicating, working, and socializing may vary from the norm [35]. These modes may provide additional clarity for students with unique approaches to traditional tasks. For example, providing meeting summaries and clear expectations for tasks in writing may allow students to refer back to instructions at a later time.

Initiating conversations related to clarification of expectations may take the burden off of students who may hesitate to ask questions for fear of being perceived in a negative light. Finally, thoughtful and sensitive delivery of constructive feedback may be a support to students who struggle with anxiety or negative self-image due to negative past experiences. Faculty may also find it useful to discuss their own strengths and challenges with their graduate students as a way to encourage open and honest communication about what students bring to the table and the supports that they may need for success.

Graduate program administrators may provide faculty development that focuses on fostering an environment where there is open dialogue between students and advisors, as well as breaking the stigma associated with discussing mental health, so that students feel comfortable coming forward and seeking needed supports.

Conclusion
This qualitative study used thematic analysis to examine the experiences of 31 neurodiverse students in graduate STEM programs at a large, R1 university. The findings suggest that the establishment of mutual trust between neurodiverse graduate students and their advisor may be a key factor that promotes disclosure of neurodiversity-related diagnoses, self-advocacy and access to supports, and wellbeing. Additionally, trust allows for clear communication of expectations, which may be particularly important for neurodiverse students whose approaches to their work and ways of communication may vary from what is typical. Finally, we emphasize the importance of the ways in which feedback is delivered for the success and wellbeing of neurodiverse graduate students, with potential impacts on students' self-esteem, self-efficacy, and mental health.

recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

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