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Brief research report: Investigating neurodiversity acceptance in the college classroom: an exploratory study

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Introduction: Higher education represents a potential opportunity to address autism stigma and, in turn, prevent the negative health consequences of stigma as autistic college students transition into adulthood. The purpose of the current study was to investigate the general college student body and describe their (1) level of autism acceptance based on the neurodiversity framework utilizing the Autism Attitude Acceptance Scale (AAAS) and (2) self-reported knowledge and interests about neurodiversity.

Methods: The sample (n = 90, M age = 21.86, SD = 1.18) featured undergraduates enrolled in a large, diverse, public university in the U.S. Approximately 32% (n = 29) identified as neurodivergent, with 5 identifying as autistic. Separate groups of students completed the AAAS—administered *via* Qualtrics—in February and September of 2022. In addition, students were provided the opportunity to ask up to three questions each about neurodiversity. We utilized qualitative thematic coding to extract themes from the neurodiversity questions.

Results: We derived frequency and descriptive statistics for each item and the two AAAS subscales: (1) the General Acceptance (GA) subscale (Cronbach's alpha = 0.89) and (2) the Attitudes toward Treating Autistic Behavior (ATAB) subscale (Cronbach's alpha = 0.77). Responses reflected high general autism acceptance. Responses demonstrated greater variability, however, with respect to attitudes toward treating autistic behaviors. Qualitative findings revealed both a high degree of interest in the neurodiversity movement, as well as high variability in knowledge and familiarity with its tenets.

Conclusion: This research can inform higher education's efforts to address and prevent stigma towards autistic and other neurodivergent students.

KEYWORDS

neurodiversity, autism, autism acceptance, higher education, postsecondary

1. Introduction

There is an increasing number of autistic college students in the U.S (Bakker et al., 2019). Data based on a nationally representative sample of two- and four-year colleges and universities indicated that 2% of students registered with a disability reported being autistic (Raue and Lewis, 2011). This upward trend reflects a range of factors, including marked increases in supports and

services in high schools and colleges; awareness of the neurodiversity movement; and recognition of autism as a facet of identity, rather than a deficit (Robertson and Ne'eman, 2008; Kapp et al., 2013; Leadbitter et al., 2021; Botha and Gillespie-Lynch, 2022). Research finds no significant differences between autistic and non-autistic students' first-year grades (Bakker et al., 2020), suggesting that they are equally as equipped as non-autistic students for academic success in the college environment.

Despite these shifts, autistic college students take longer to reach higher education (Bakker et al., 2019) and experience significantly lower academic performance after enrollment (DeNigris et al., 2018; McLeod et al., 2019), relative to non-autistic college students. There is limited research regarding graduation and retention, yet existing research indicates that approximately 59 and 41% of neurotypical and neurodivergent—including autistic—students graduate from Bachelor's granting institutions, respectively (Newman et al., 2011; COE – Undergraduate Retention and Graduation Rates, n.d.). Autistic college students also experience higher co-occurring conditions and physical and mental health challenges—including higher anxiety, depression, and loneliness—compounded by limited accessible services and supports (Bakker et al., 2019; Viezel et al., 2020; Fernandes et al., 2021; Kuder et al., 2021). Taken together, there is a need for research on this significant—and increasing—college student population to better understand and respond to disparate negative outcomes in the college environment.

1.1. The role of autism and neurodiversity acceptance in higher education

There are a range of potential environmental and social mechanisms responsible for the negative outcomes experienced by autistic college students. Among these mechanisms, lack of *autism and neurodiversity acceptance* (i.e., recognition that autistic and other neurodivergent individuals do not need to be fixed or cured but accepted for who they are) is a potentially preventable factor that partially contributes to negative outcomes in college for this population (McLeod et al., 2019; Kim, 2020; Golson et al., 2022). Importantly, *acceptance* is distinct from *awareness*, a construct that is often promoted as key for supporting autistic individuals. While awareness seeks to identify autistic differences, acceptance acknowledges that autistic individuals do not need to be fixed or cured (Kim, 2020).

Indeed, despite the proliferation of the neurodiversity movement, lack of autism and neurodiversity acceptance persists in many forms across college campuses. First, it surfaces in stigma in social and interpersonal interactions. Survey research with college students at 14 public institutions finds that autistic college students experience significantly worse bullying and social relationships, relative to non-autistic students (DeNigris et al., 2018; McLeod et al., 2019). In addition, research utilizing hypothetical vignettes and interviews with college students finds that exclusion is deemed more socially acceptable if it involves the exclusion of autistic—rather than non-autistic—peers (Bottema-Beutel et al., 2019).

Importantly, researchers have posited that many of the challenges autistic college students face in college result from the stigma and social rejection associated with disability rather than from the unique characteristics of autism (McLeod et al., 2019). Bullying and exclusion may be particularly detrimental to autistic students due to their heightened experiences of isolation; lower social connectedness; apprehension regarding disclosure of their diagnosis; and anxiety and depression resulting from social demands (Bolourian et al., 2018; Casagrande et al., 2020; Davidson et al., 2021).

Lack of autism and neurodiversity acceptance may also translate into a lack of accessibility in academic and non-academic college activities. In particular, faculty may not recognize the imperative of making classrooms more conducive to diverse learners by implementing Universal Design and other flexible and multi-modal pedagogical strategies (Zeedyk et al., 2019). This lack of recognition may disadvantage autistic students academically (Clouder et al., 2020). In addition, autistic college students report that on-campus activities are not accessible (Davidson et al., 2021) and have low utilization of campus mental health and disability services, suggesting the need to increase campus accessibility (Petcu et al., 2021).

Finally, lack of autism and neurodiversity acceptance may manifest through a lack of autistic inclusion in physical and virtual environments. During and post-pandemic, lack of inclusion in digital spaces is particularly problematic, given that online spaces have become the primary means of engagement between students and institutions. Digital content analysis, for example, reveals that campus websites are unwelcoming for autistic students. The majority of community– and two-year colleges—postsecondary institutions that are typically more inclusive and accessible than four-year colleges and universities—do not reference autism on their websites. When references to autism were present, website content used medical and legal language to depict autistic students as deficient (Nachman and Brown, 2020). Taken together, lack of autism and neurodiversity acceptance is a potential modifiable mechanism underlying much of the disparate negative outcomes in college students.

In contrast, autism acceptance and alignment with the neurodiversity movement in interpersonal, educational, healthcare, and other contexts has been identified as beneficial for autistic college students. Both non-autistic and autistic individuals who are aware of the neurodiversity movement have more positive emotions about autism, relative to those who are unaware of the neurodiversity movement (Kapp et al., 2013). Survey research suggests that autistic college students who experience higher levels of connection with their university and peers report higher satisfaction with life (Casagrande et al., 2020). This finding lends support to the potential that a neurodiversity orientation on campuses may facilitate connectedness. As a result, the college environment represents a potential opportunity to promote autism acceptance and, in turn, prevent the negative health consequences of stigma as autistic college students transition into adulthood.

1.2. Promoting autism and neurodiversity acceptance in the general college student body

To be sure, there are emerging initiatives geared towards supporting autistic college students. College transition programs for autistic students, for example, are gradually emerging and yielding promising findings in terms of enhancing self-advocacy, mental health, and a range of other key indicators of quality of life (Hotez et al., 2018; Capriola-Hall et al., 2021). Although these programs

provide autistic students with important skills, knowledge, and capacities, they do not address lack of interpersonal and structural acceptance in higher education. Although limited, there are emerging efforts in this specific area. This research suggests that initiatives such as service-learning pedagogy can increase undergraduate student awareness, knowledge, and acceptance of autism (Nowell et al., 2020). These programs, however, remain small and individualized to specific campuses.

Autism acceptance educational programs—featuring factual information about autism and first-person narratives as a basis for education content—have demonstrated positive effects on *explicit bias* about autism (i.e., conscious ideas and beliefs that often result in negative or exclusionary behaviors towards certain people or groups), but have had no measurable impacts on *implicit bias* (i.e., unconscious ideas about certain people or groups, operating from outside of the person's awareness) (Jones et al., 2021; NCCC | home, 2022).

Given these findings, there are opportunities to improve existing interventions and programming that address lack of autism and neurodiversity acceptance in postsecondary institutions. A potential strategy to this end is to conduct research to identify the specific gaps in autism and neurodiversity acceptance among the general student body. This will hone in on specific learning objectives for high-yield neurodiversity-oriented interventions and educational programming in postsecondary schools with maximal relevance to students. As a first, step, there is a need to identify both specific aspects of acceptance that may be lacking, as well as provide opportunities for open-ended data collection to understand broader gaps in neurodiversity acceptance.

1.3. The current study

The current study aligns with the resounding call in the literature for colleges and universities to promote neurodiversity and inclusion to enhance the acceptance of autistic students by peers, faculty, and staff (Gunin et al., 2021). The purpose of the current study was to investigate the general college student body and describe their (1) level of autism acceptance based on the neurodiversity framework utilizing the Autism Attitude Acceptance Scale (AAAS) and (2) self-reported knowledge and interests about neurodiversity. This research can inform targets for educational programming in postsecondary institutions regarding autism acceptance and neurodiversity.

2. Methods

2.1. Overview

This study was cross-sectional. A convenience sample of undergraduates enrolled in a public affairs class at a large, diverse, public university in the U.S. completed the Autism Attitude Acceptance Scale (AAAS) (Kim, 2020)—administered to two separate groups of students *via* an anonymous Qualtrics survey—in February ($n = 49$) and September ($n = 51$) of 2022. Each participant had the option of submitting up to three questions about neurodiversity (open-ended). Participants had no known formal training in neurodiversity, autism, or related topics. This study was approved by the University of California, Los Angeles (UCLA) Institutional Review Board.

2.2. Sample

Sample characteristics are reported in Table 1. The sample ($n = 90$, M age = 21.86, $SD = 1.18$) was diverse with respect to race (White: $n = 41$, 45.56%; Asian: $n = 21$, 23.33%; Black / African American: $n = 5$, 5.56%; Native American / Alaska Native: $n = 1$, 1.11%; Multi-Racial: $n = 5$, 5.56%%) and ethnicity (Hispanic: $n = 4$, 4.4%). Approximately 32.22% ($n = 29$) identified as neurodivergent, with 5 identifying as autistic.

2.3. Measures

2.3.1. Autism Attitude Acceptance Scale

The AAAS (Kim, 2020) elicits cognitive, behavioral, and affective beliefs about accepting and accommodating autistic individuals without trying to change them, based on the neurodiversity framework. In the AAAS, participants responded to a range of statements, many of which corresponded to a hypothetical vignette about "Andy," who is autistic. Validation research identified that the AAAS consists of two subscales (Kim, 2020).

The General Acceptance (GA) subscale measures how much a person accepts autism as a unique way of beings and feels comfortable supporting and having a personal relationship with an autistic person (Cronbach's alpha = 0.89). A high score indicates greater endorsement of these perspectives. The Attitudes toward Treating Autistic Behavior (ATAB) subscale measures how much a person agrees that receiving treatments to reduce autistic symptoms will benefit autistic individuals (Cronbach's alpha = 0.77). A high score in the ATAB suggests endorsement of the notion that autistic behaviors are characteristic of each individual and belief that receiving treatments to reduce autistic symptoms will not benefit autistic individuals. Several items were reverse-coded prior to calculating the mean scores for each subscale to ensure that higher scores on each item aligned with higher orientation towards neurodiversity. We compared the mean scores to those derived in previous research (Kim, 2020). We also investigated each item individually to assess the proportion of "strongly agree" or "agree" responses.

2.3.2. Open-ended neurodiversity questions

Within the same Qualtrics survey, students were provided the opportunity to ask up to three questions each about neurodiversity (i.e., "please list 1–3 questions you have about neurodiversity"). Data were analyzed using a thematic coding approach that involved: (1) initial code sources (i.e., literature review and identification of initial themes), (2) initial code development (i.e., application of initial codes to raw qualitative data), (3) code development (i.e., codes are labeled and described and coders undergo training and testing), (4) code application (i.e., application of codebook to entire dataset), and (5) interpretation (i.e., generate conclusions and recommendations) (Roberts et al., 2019). The first author reviewed all of the responses to a given question, developed themes that reflected the majority of responses, and then collaboratively coded a subsection of responses with a second coder. Each member of the dyad then independently

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TABLE 1 Demographic and student characteristics.

Characteristic	*N* (*N* = 90)	%
Age		
18–20	16	17.78%
21–23	69	76.67%
24–26	3	3.33%
27–29	2	2.22%
Mean (SD)	21.86 (1.18)	
Race/Ethnicity		
White	41	45.56%
Black or African American	5	5.56%
Native American or Alaska Native	1	1.11%
Asian	21	23.33%
Multiracial	5	5.56%
Prefer not to say	2	2.22%
Hispanic	4	4.44%
Missing	11	12.22%
Gender		
Male	30	33.33%
Female	48	53.33%
Non-Binary / Non-Conforming	4	4.44%
Missing	8	8.89%
Sexual Identity		
Straight	58	64.44%
LGBTQ+	20	22.2%
Prefer not to say / other	4	4.44%
Missing	8	8.89%
Disabilities (Select all that apply)		
Any	29	32.22%
Learning Disability	1	1.11%
ADHD	16	17.78%
Autism	5	5.56%
Other Mental Health Challenges	8	8.89%
Chronic Conditions	9	10.0%
Parent / Guardian Income		
Less than $15,000	8	8.89%
$15,000–$59,999	11	12.22%
$60,000–$99,999	21	23.33%
$100,000–$149,999	11	12.22%
$150,000 or higher	24	26.67%
Missing	15	16.67%
Dependent on Parent / Guardian Income		
Yes	60	66.67%
No	21	23.33%
Missing	0	0.00%
Year in College		
1	1	1.11%
2	8	8.89%
3	27	30.00%
4	41	45.56%
Other	5	5.56%
Missing	8	8.89%
Major		
Arts and Humanities	15	16.67%
Biological and Life Sciences	6	6.67%
Social Science	52	62.22%
Other	5	5.56%
Missing	8	8.89%

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TABLE 2 AAAS descriptive statistics ($n = 86$).

Item	Mean	SD	Agree / Strongly Agree (n)	Agree / Strongly Agree (%)
General Acceptance subscale				
People need to learn more about autism to support individuals with autism better. (GA1)	4.70	0.63	83	96.51%
Autism is a unique way of being that should be appreciated. (GA 2)	4.55	0.78	76	88.37%
When individuals with autism flap their hands, it's no different than people without autism tapping their feet in terms of their appropriateness. (GA3)	4.0	0.98	60	69.77%
I would start conversation with Andy. (GA4)	4.40	0.86	74	86.04%
I would try to get to know Andy on a personal level. (GA5)	4.33	0.85	72	83.73%
I avoid Andy if I can. (GA6) *	4.17	0.98	6	6.98%
I would try to change the environment as much as possible to accommodate Andy's needs. (GA7)	4.16	0.82	72	83.72%
If I were Andy's colleague, I would work with management on ways to inform the employees of the department to be knowledgeable about autism. (GA8)	4.42	0.79	76	89.41%
If I were Andy's colleague, I would personally work with Andy to help him/her find a work environment that works best for Andy. (GA9)	4.23	0.85	70	81.40%
I would consciously try to include Andy in social events. (GA10)	4.31	0.82	74	86.05%
I would feel comfortable sitting next to Andy. (GA11)	4.51	0.82	77	89.54%
I would prefer not to work on the same project as Andy. (GA12) *	3.93	1.15	11	12.94%
I would feel comfortable hanging out with Andy. (GA13)	4.11	0.90	67	78.83%
I would enjoy having a coffee break with Andy. (GA14)	4.09	0.99	67	77.91%
GA Mean	4.27	0.57		
Attitudes toward Treating Autistic Behaviors (ATAB) subscale				
It is important for researchers and doctors to devote resources to genetic and biological research to find a cure for autism. (ATAB15) *	2.23	1.39	55	63.95%
Eliminating individuals' autistic symptoms can support a better quality of life for them. (ATAB16) *	2.79	1.28	36	41.86%
It is important for an individual with autism to get interventions about how to pick up on social cues to make friends. (ATAB17) *	2.50	1.09	43	50.00%
ATAB mean	2.51	1.05		

*Reverse coded.

coded all remaining responses from a given prompt. Coding from each member was compared to evaluate reliability. Codes developed were not mutually exclusive and reliability for each code was 80% agreement or higher.

3. Results

Findings from the AAAS are reported in Table 2. The first set of results pertain to the General Acceptance subscale of the AAAS ($M = 4.27$ $SD = 0.57$). This mean is higher that that reported in Kim (2020) ($M = 3.63$, $SD = 0.91$). 96.51% endorsed GA1; 80–89% endorsed GA2, GA4, GA5, GA6 (reverse coded), GA7, GA8, GA9, GA10, GA11, and GA12 (reverse coded); 70–79% endorsed GA3, GA13, and GA14. The second set of results pertain to the Attitudes toward Treating Autistic Behavior (ATAB) subscale ($M = 2.51$, $SD = 1.05$). The following proportions of respondents endorsed the ATAB statements: ATAB15 (63.95%); ATAB17 (50.00%); ATAB16 (41,86%). The ATAB mean was slightly higher than that reported in Kim (2020) ($M = 2.05$, $SD = 0.80$).

Qualitative analysis of students' open-ended neurodiversity-related questions are reported in Table 3. Codes were not mutually exclusive, with several responses aligning with multiple coding categories. There were 207 questions across all participants. The majority of questions were general and asked about overarching definitions of, or concepts related to, neurodiversity ($n = 94$, 45.41%). These included questions such as, "what is neurodiversity?" and "is neurodiversity a concept or a movement?" The remainder of the questions were more specific. They included questions that were context-specific (i.e., asked about neurodiversity in relation to education, work, family, or other contexts; $n = 30$, 14.49%). These included questions such as "What supports can schools offer students that are neuro-divergent?" and "Are there significant implications that neurodiversity has among social interactions?"

Other questions were advocacy– or ally-ship-related, in that they asked about how individuals or groups can further the mission of the neurodiversity movement ($n = 18$, 8.70%). These included questions such as "How can we support neurodiversity/alleviate the surrounding stigma?" and "How can we be more inclusive of neurodivergence?" Some questions were identity– or condition-specific, as they asked about neurodiversity in the context of certain conditions ($n = 21$, 10.14%). These included questions such as "What's different about the brains of autistic people?" and "What are some resources we could read to learn more about neurodiversity, especially about the autism spectrum disorder?" Importantly, these questions still generally reflected an understanding of neurodiversity; questions that reflected a cure-oriented mindset were coded in the other category (described below).

Participants' questions were also reflective of the individual participants' needs, in that they asked about how neurodiversity can help them as individuals ($n = 8$, 3.86%). These included "What are daily habits that I can try to adopt to better meet my neurodiverse needs?" and "How can one apply the neurodiversity principles to oneself?" Questions were also age-specific, in that they asked about specific developmental stages in relation to neurodiversity ($n = 9$, 4.35%). These included "How would you describe neurodiversity to a child?" and "How is Neurodiversity related to emerging in adulthood?"

Finally, questions were coded as strengths-oriented if they asked about how neurodiversity can be an asset to individuals or society ($n = 11$, 5.31%). Questions included "How might neurodiversity be an asset in the workplace?" and "What are some things neurodiverse individuals might be particular good at?" Questions were grouped in the Other category if they asked non-neurodiversity-oriented questions (e.g., asks about curing or normalizing self or others, or the question reflects fundamental lack of understanding of neurodiversity). These included "Is there any way to reverse such a condition or to treat it after it arose?" and "Is it possible to fully eradicate a mental illness from your brain or are there permanent differences?"

4. Discussion

Lack of autism and neurodiversity acceptance perpetuates barriers to postsecondary success among autistic students. There is high utility in conducting research to identify the specific gaps in autism and neurodiversity acceptance among the general student body. This research can inform the development and enhancement of interventions and programming. The purpose of the current study was to investigate the general college student body and describe their (1) level of autism acceptance based on the neurodiversity framework utilizing the Autism Attitude Acceptance Scale (AAAS) and (2) self-reported knowledge and interests about neurodiversity. This study had several findings that informed recommendations for higher education.

Overall, the majority of participants' responses reflected high self-reported autism acceptance on the General Acceptance (GA) subscale. This subscale measures how much a person accepts autism as a unique way of being and feels comfortable supporting and having a personal relationship with an autistic person. In our study, almost all endorsed statements such as "people need to learn more about autism to support individuals with autism better" and "autism is a unique way of being that should be appreciated." This finding may, in part, reflect previous research that suggests that neurodiversity-oriented initiatives particularly impact explicit—rather than implicit—attitudes surrounding stigma of autistic individuals (Jones et al., 2021). Indeed, it is possible that increasing discourse of neurodiversity across college campuses has contributed to widespread explicit attitudes of autism acceptance among college students. Much of this discourse has taken place over multiple public online channels *via* both national news outlets and autistic-run communities (Robertson and Ne'eman, 2008). Future research should assess the sources of students' knowledge and perspectives.

Although students reported high autism acceptance, responses demonstrated greater variability, with respect to statements on the three-item Attitudes toward Treating Autistic Behavior (ATAB) subscale. These statements primarily related to curing or normalizing autistic individuals. Mixed proportions of students endorsed the items, "it is important for researchers and doctors to devote resources to genetic and biological statements research to find a cure for autism," "it is important for an individual with autism to get interventions about how to pick up on social cues to make friends," and "eliminating individuals' autistic symptoms can support a better quality of life for them." Thus, although students purported high self-reported autism acceptance, it appears that they do not have a strong understanding of the linkage between autism acceptance and cure-oriented efforts and initiatives. Indeed, a key aspect of the neurodiversity movement involves reframing autism and other neurodivergence as facets of identity, rather than as deficits that require cures (Kapp et al., 2013; Clouder et al., 2020; Kapp, 2020). Our research underscores the potential utility of focusing education or training programs on this topic.

Qualitative findings derived from students' questions about neurodiversity revealed both a high degree of interest in the neurodiversity movement—as suggested by the number of questions asked to an optional and anonymous prompt about neurodiversity-related questions—as well as high variability in knowledge and familiarity with its tenets. The majority of questions were general in nature, suggesting that many students did not have a baseline understanding of neurodiversity. Although the neurodiversity movement has made important strides across college campuses, many students may still be unfamiliar with its tenets. This may be due, in part, to lack of concerted neurodiversity-specific education or training programs available to college students. Beyond the general questions, students asked about several specific topics, demonstrating that some may have a higher foundational understanding of neurodiversity. The most frequent specific topics were asking about neurodiversity in relation to specific contexts (e.g., education and work) and conditions (e.g., autism). Students

TABLE 3 Qualitative neurodiversity questions (n = 207).

Theme	*N*	%	Sample Quotations
General			
Asks about overarching definition of or concepts related to neurodiversity, including misconceptions OR asks about resources for ND populations	94	45.41%	"What is neurodiversity?" "Is neurodiversity a term socially understood?"
Specific			
Context specific: Asks about neurodiversity in relation to education, work, family, social or another specific environment/context	30	14.49%	"What supports can schools offer students that are neuro-divergent?" "What role does society play in neurodiverse students?"
Advocacy: Asks about how individuals or groups (or the general public) can further the mission of the neurodiversity movement	18	8.70%	"How can we support neurodiversity/alleviate the surrounding stigma?" "How can we increase help to the community?"
Condition or identity specific: Asks about neurodiversity in the context of certain conditions or identities (reflects a neurodiversity perspective, whereas Other code does not)	21	10.14%	"What's different about the brains of autistic people?" "What are some tendencies of students with ADHD?"
Individual Needs: Asks about how neurodiversity can help them as an individual	8	3.86%	"What are daily habits that I can try to adopt to better meet my neurodiverse needs?" "What exactly is neurodiversity and how does it affect me as an individual?"
Age Specific: Asks about specific developmental stages in relation to neurodiversity	9	4.35%	"How would you describe neurodiversity to a child?" "Can you develop neurodiversity at a later stage of your life or is it developed at a young age?"
Strengths: Asks about how neurodiversity can be an asset to individuals or society	11	5.31%	"How might neurodiversity be an asset in the workplace?" "Does neurodiversity strengths come from thinking differently?"
Other			
Asks non-neurodiversity-oriented question (e.g., asks about curing or normalizing self or others, OR question reflects fundamental lack of understanding OR question does not pertain)	10	4.83%	"Is there any way to reverse such a condition or to treat it after it arose?" "What can cause negative neuro affects?"

Total N reflects number of questions. Each participant had the opportunity to ask up to 3 questions. Codes are not mutually exclusive.

also frequently asked questions relating to how to be an advocate or ally for the neurodiversity movement. This may, in part, reflect a commitment to activism and social justice identified across postsecondary contexts (Gray and Gayles, 2022).

4.1. Recommendations for neurodiversity education and training in higher education

This research—although preliminary—can inform the development and implementation of neurodiversity-oriented education and training in postsecondary schools. Based on our study, priority areas for neurodiversity-oriented curricula are: 1) providing foundational knowledge on neurodiversity, including discussing the overall conceptual framework underlying neurodiversity, as well as the practical applications of neurodiversity; 2) discussing the history of the medical and social models of disability and unpacking the implications of cure- or deficit-oriented language; and 3) emphasizing how these concepts can be practically reflected in the college environment. Particular attention should be paid to the specific neurodiversity topics asked about in our qualitative research, including discussing neurodiversity in the context of specific environments (e.g., higher education); conditions and identities (e.g., autism); as well as how to be a neurodiversity advocate or ally (e.g., how to support neurodivergent peers).

Importantly, our recommendations are specifically geared towards informing the content of a potential class, program, or training. Readers should refer to comprehensive recommendations for inclusive postsecondary education generated by autistic researchers (Dwyer et al., 2022). These comprehensive recommendations reflect: (1) diversity, equity, and inclusion-oriented recommendations, (2) support- and accommodation-focused recommendations, and (3) campus-student communication recommendations. In addition, these recommendations specifically pertain to creating high-yield content for students. Future research is necessary to inform trainings for other stakeholders. Similarly, future research should identify the structure and approach that are most feasible and acceptable to learners. Finally, it is well-documented in the literature that autistic individuals experience a lifetime of stigma, discrimination, exclusion, and rejection well before they enter the postsecondary environment; we recommend neurodiversity-oriented efforts occur earlier in development, ideally during elementary school.

4.2. Limitations

The current study had several limitations. Although our sample was diverse with respect to demographics and neurodiversity, it was a small convenience sample at a single institution. Future research should survey larger and more representative samples that facilitate subgroup analyses. This will be particularly important to discern potential subgroup differences in social desirability for this measure (Dalton and Ortegren, 2011). Second, this research was preliminary and utilized exploratory measurement that—as is the case with all survey methodology—may be prone to social desirability effects. Our thematic approach to coding provided suggestions as to students' baseline knowledge and interests in neurodiversity, yet a more robust, grounded theory approach to coding that better explains "how" and "why" – related questions are warranted (O'Brien et al., 2014). Further, our analysis did not assess prior experiences with the autistic population, which would provide important context to our analyses. Our goal in presenting this research is to spur additional studies that can inform the development of neurodiversity-oriented curricula in higher education. Future research should deploy a wider range of measures to understand factors that predict autism and neurodiversity acceptance. Finally, although our research informed potential content for student education and training around autism and neurodiversity acceptance, additional studies are necessary to develop the specific structure and approach of potential programming. These studies should glean the perspectives of students, faculty, and service providers to inform efforts to address lack of autism and neurodiversity acceptance at all levels in postsecondary environments.

5. Conclusion

The current study represents one of the few studies to investigate autism acceptance based on the neurodiversity framework among the general college student body. In this research, a focus on undergraduate students facilitates the translation of findings to the development of strategies for cultivating an understanding of autism and neurodiversity in higher education. Such strategies have the potential to address and prevent stigma towards neurodivergent individuals into adulthood.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving human participants were reviewed and approved by University of California, Los Angeles (UCLA) IRB Protocol ID: IRB#20-000320. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

Author contributions

EH and JR collaboratively led the conceptualization, design, implementation, data analysis, and manuscript drafting and revisions. AK provided supervision and oversight at all stages of this research and contributed to the manuscript drafting and revisions. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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