REVIEW



Autistic Perspectives on Employment: A Scoping Review

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Accepted: 29 November 2023

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Abstract

Purpose Inclusive recruitment and employment of autistic adults has garnered recent attention in research and policy. To address a need to better understand the experiences of autistic adults in relation to paid employment, we asked the literature, *what are the experiences of autistic individuals (from their perspectives) in competitive employment?*

Methods A scoping review was conducted to summarize and consolidate the findings across research to date. A systematic search and screen of the literature resulted in 32 relevant studies.

Findings Key study characteristics, participant demographics, and thematic findings are shared, along with considerations and recommendations for future research and practice. Six key themes were described by autistic participants across the 32 studies: (1) accessibility of employment, (2) workplace relationships and communication, (3) role alignment, (4) sensory needs and/or mental health, (5) colleagues' knowledge and beliefs about autism, and (6) family and community context. **Conclusion** It is anticipated that the results of this review will be beneficial for stakeholders engaging in discussions and decision-making across research and employment contexts.

Keywords Scoping review · Autism · Employment · Diversity, equity and inclusion (DEI) · Workplace · Neurodiversity

Introduction

For many, gainful employment provides financial security while fostering positive self-worth and connection. Yet, autistic individuals experience disproportionate rates of unemployment and underemployment. In North America, nearly 80% of autistic adults are unemployed or underemployed [1, 2]. Common barriers to employment that have been identified in the research to date include employer stigma and/or misconceptions about hiring autistic people, inaccessibility of supports and accommodations,

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communication challenges, lack of diversity and inclusion policy and processes specifically naming autism or neurodivergence, and employers feeling ill-prepared to effectively support and manage autistic employees [3–9]. Autistic self-advocates, employers, employment service providers, researchers, and policy makers have identified an urgent need to address the inequities faced by autistic adults seeking to access and sustain meaningful employment [10–13].

Much of the research examining employment inequities for autistic adults has focused on pre-employment stages, transitions into the workplace, and initiatives aimed at enhancing pre-employment educational and vocational supports [14–16]. Research on competitive, paid employment of autistic adults has focused more on individual needs for accommodations and identified areas for intervention, mostly at the level of the individual employee [11, 17, 18]. The employment experiences of autistic adults are often merged thematically with the experiences of supporting family members, employers, and/or employment service providers [11, 17, 18]. Much of the research to date has not clearly delineated the experiences of those in paid employment versus those in unpaid/supported employment or internships [19-21]. There is a need to capture and identify common and recurring themes across the experiences of autistic adults, in relation to paid employment, to better inform employers, employment service providers, policy makers, and future research in supporting and retaining autistic employees more specifically.

There has been a recent shift in autism research advocating to amplify and prioritize autistic voices and experiences, acknowledging that those with lived experience can offer unique insights that may not be adequately captured or appreciated by those outside of the autistic community [22, 23]. The studies conducted to date that explore specifically the experiences and perspectives of autistic adults in competitive, paid employment have yet to be examined through a comprehensive review. This scoping review addresses this knowledge gap through a formalized review of published research literature that explores the competitive, paid employment experiences of autistic adults. The aims are to offer a thematic portrayal across research to date, identify potential gaps in knowledge, and present opportunities to inform future practice, policy, and research in this area [24].

Methods

A scoping review methodology was utilized to review and synthesize research to date on the experiences of autistic adults within paid employment [24, 25]. Scoping reviews can use quantitative, qualitative, or mixed-methods approaches depending on the research question and goals [24]. For the current review, we utilized a qualitative approach as we were seeking to better understand and capture the experiences of autistic adults, which tend to be examined within qualitative studies.

Literature Search and Screening Strategy

A systematic search of the literature across two databases (PsycINFO and Ovid MEDLINE) was conducted with the support of a research librarian, initially in June 2021 and again in December 2022 to include more recent literature. Search terms related to experiences of autism and paid employment were applied to expand the scope of articles retrieved (see Table 1).

This search strategy resulted in 1857 articles. A two-step screening process was conducted, first a review of titles and abstracts followed by a full-text review of the remaining articles. These screens were based on the following inclusion criteria: (1) English language, (2) primary research study, i.e., studies that collected data directly from participants, (3) topic addressed was paid autistic employment, (4) primary focus was autistic individual's experiences, and (5) studies included qualitative data collection methodology. Studies with a primary focus on supported employment intervention (described as the process of enabling a person with a disability to secure and maintain a paid job in a typical work environment through external employment-focused supports) [26] and/or experiences that were not clearly capturing solely paid employment were excluded from this review.

During the initial screen of titles and abstracts, 1819 articles were screened out, leaving 38 remaining for fulltext review. Two of the authors independently reviewed the remaining articles for inclusion, then compared them to assess for discrepancies. An 89% agreement rate occurred, meaning four articles were discussed in more depth with a third author to mediate decision-making around inclusion, and consensus was achieved by all three reviewers. To enhance the comprehensiveness of the search, authors engaged in citation chaining by reviewing citations of the

Table 1 Search strategy

Database	Search terms
Ovid MEDLINE	Autism Spectrum Disorder/Keywords: (autis* or asperger* or ASD or neurodiver*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
	(employee attitudes or job satisfaction or employee well-being or work (attitudes toward)) mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
	(employment or employee). mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
Psyc Info	DE "Autism Spectrum Disorders" OR Autis* or Asperger* or ASD or neurodiver* Keywords: "Employment" or "employee" OR DE "Employee Attitudes" OR DE "Job Satisfaction" OR DE "Employee Well Being" OR DE "Work (Attitudes Toward)" AND "Autism Spectrum Disorders" OR Autis* or Asperger* or ASD or neurodiver*

included and adjacently related articles to locate relevant articles that may have been missed in the broader search [27]. Additionally, a Google scholar alert for "autism and employment" was set to alert the authors of newly published articles in this area. Through these additional search methods, two articles were added to this review. This final screen eliminated 13 articles, leaving 27 remaining for inclusion in this review.

During the analysis phase in December 2022, a second identical search of both databases was conducted to update the search findings to include any studies that had been published since the original search. Five additional articles were screened in, increasing the number of included articles to N=32 (21 qualitative and 11 mixed-methods). The full screening process is outlined in Fig. 1.

Data Extraction and Analysis

All 32 studies were explored in-depth and information about study characteristics (including country of origin, sample size), research design (including theoretical and methodological approach), participant demographics, and relevant qualitative results were extracted from each. Analysis of methodological rigor of the included studies was not conducted, as per the scoping review methodological approach [23, 24].

Analysis of commonly occurring themes was conducted using NVivo software [28]. Included manuscripts were uploaded into NVivo and an emergent coding approach [29] was utilized to extract full sentences from the findings section of each study to form individual codes, following which an iterative and collaborative process of grouping findings into common themes was conducted by the first two authors. The resulting thematic framework was then shared with the other two authors who each offered an independent review of the themes and compared this with their review of the included articles. Emerging themes were regularly discussed with consideration given to potential researcher bias throughout the process, as all the authors are professionally and personally invested in this topic, including one author with lived experience as an autistic employee.

Results

Key Study Characteristics

Of the 32 included studies, half were conducted in the United States (n = 16), followed by the United Kingdom (n=6), Australia (n=5), Israel (n=2), Germany (n=1), Wales (n=1) and Switzerland (n=1). Twenty-one studies employed solely qualitative design, and 11 used a mixed-method approach. Across studies, the majority of the first

author disciplines were in the health sciences (n = 14), including psychology and occupational therapy; followed by 12 in education; five in business; and one in library sciences. Seven studies identified autistic collaboration by either engaging autistic authors or citing participatory research methods [30–35, 37]. Fifteen of the 32 studies included were published between January 2021 and December 2022 [31–45]. Most studies broadly explored the overall experiences of autistic adults in the workplace in their research question, whereas fifteen studies focused more on certain aspects or types of experiences in the workplace, such as social dynamics and/or support needs [32, 33, 35, 36, 41–51]. See Table 2 for an overview of key study characteristics.

Key Participant Characteristics

A total of 1153 autistic participants, ranging in age from 18 to 75 years, contributed across the 32 studies. Most studies required a self-reported formal diagnosis of autism for participation; though six studies included participants who selfidentified as autistic or were awaiting a formal diagnostic assessment [30, 33, 35, 37, 52, 53]. Most studies classified gender identity, with 645 male, 496 female, and 30 other gender identities reported across participants [30, 31, 34, 44, 53, 54]. Only six studies reported gender identity of participants beyond binary male and female identities [32-34, 37, 40, 55]. Most of the studies did not include information about race or ethnicity. Of the six studies that did mention race, either all or most participants identified as Caucasian [32, 33, 36, 39, 46, 56]. Education and recency of work experiences varied across participants. Three studies focused on specific work settings or industries, including librarians [30], academia [34], and teaching [37].

Thematic Findings

Six key themes related to experiences of paid employment were shared by participants across studies: (1) accessibility of employment, (2) workplace relationships and communication, (3) role alignment, (4) sensory needs and/or mental health, (5) colleagues' knowledge and beliefs about autism and (6) family and community context. See Table 3 for themes and description and Table 4 for an overview of themes mentioned by study.

Accessibility of Employment

Thirty-one of the studies revealed themes related to accessibility of equitable employment for autistic adults. This theme included experiences navigating organizational aspects of employment such as policies and procedures, workplace bureaucracy, disclosure, and formal accommodations.

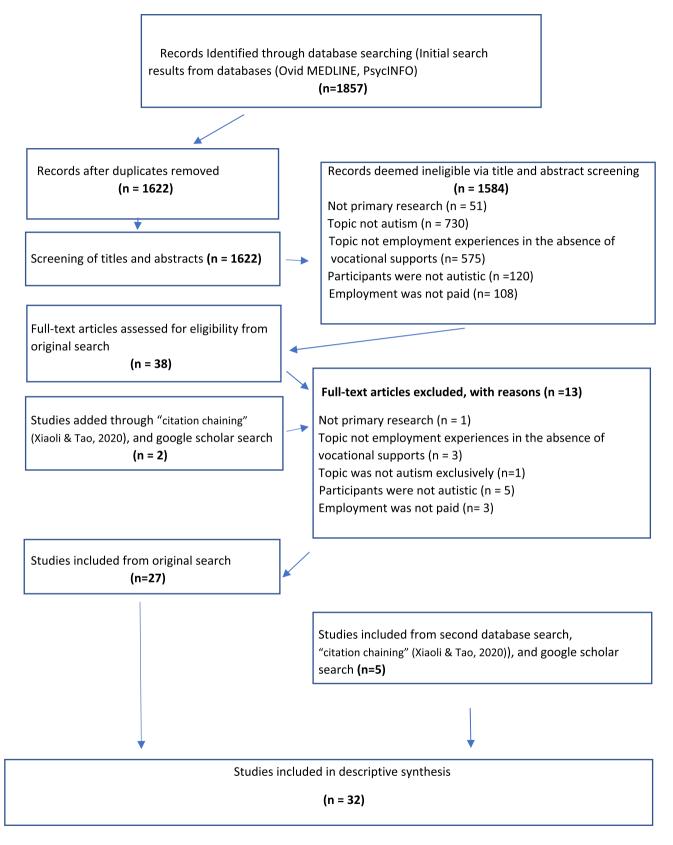


Fig. 1 Methodological screening process

Journal of Occupational Rehabilitation

Table 2 Article demographics

Author (year)	Country	Lead author academic discipline	Focus of study	Methodologies utilized that address our research question ^a	Sample size (n)
Qualitative methods $(N=2)$	21)				
Anderson (2021)	United States	Library Sciences	Overall workplace expe- riences	Semi-structured inter- views (phenomenologi- cal methods)	10
Bross et al. (2021)	United States	Education	Overall workplace expe- riences	Semi-structured interview (grounded methods)	10
Buckley et al. (2021a)	United Kingdom	Education	Overall workplace expe- riences	Semi-structured inter- views	18
Buckley et al. (2021b)	United Kingdom	Education	Performing arts work experiences	Semi-structured interviews (inductive methods)	11
Bury et al. (2021)	Australia	Psychology	Social dynamics	Open-ended narrative survey (exploratory mixed-methods)	29
Conte (2021)	United States	Education	Overall workplace expe- riences	In-depth interviews (descriptive phenom- enological methods)	9
Goldfarb et al. (2021)	Israel	Occupational Therapy	Motivational factors	Semi-structured inter- views (inductive and deductive methods)	12
Griffith et al. (2011)	Wales	Psychology	Overall workplace expe- riences	Semi-structured inter- views (interpretative phenomenological analysis)	11
Hurlbutt and Chalmers (2004)	United States	Education	Overall workplace expe- riences	Semi-structured inter- views	6
Johnson and Joshi (2016)	United States	Organizational Behavior	Diagnosis and disclosure	Semi-structured interviews (inductive methods)	30
Kreiger et al. (2012)	Switzerland	Occupational Therapy	Overall workplace expe- riences	In-depth narrative inter- views (developmental and hermeneutic narra- tive methods)	6
Lizotte (2016)	United States	Rehabilitation Counsellor Education	Overall workplace expe- riences	Semi-structured interviews (in-depth phenomenology)	7
McKnight-Lizotte (2018)	United States	Rehabilitation Counsellor Education	Social dynamics	Open-ended interviews (inductive, phenomeno- logical methods)	6
Megrew (2019)	United States	Industrial and Organiza- tional Psychology	Overall workplace expe- riences	Semi-structured inter- views (phenomenologi- cal methods)	8
Müller et al. (2003)	United States	Education	Overall workplace expe- riences	Semi-structured inter- views	18
North (2021)	United Kingdom	Social Work	Accommodations (gen- dered)	Semin-structured inter- views and two focus groups	15
Ortiz (2018)	United States	Organizational Leader- ship	Workplace supports	Qualitative bounded case study design with in- depth interviews	6
Pfeiffer et al. (2017)	United States	Rehabilitation Sciences	Environmental factors and work satisfaction	Semi-structured inter- views (grounded theory methods)	14

Table 2 (continued)

Author (year)	Country	Lead author academic discipline	Focus of study	Methodologies utilized that address our research question ^a	Sample size (n)	
Pfeiffer et al. (2018)	United States	Rehabilitation Sciences	Social and sensory rela- tionships	Survey	50	
Rebholz et al. (2012)	United States	Psychology	Overall workplace expe- riences	Humanistic interviewing	9	
Thompson (2018)	United States	Education	Accommodations	Qualitative multiple-case study design	10	
Mixed methods $(N=11)$						
Baldwin et al. (2014)	14) Australia Psychology Overall workplace experiences		Survey	130		
Berman (2022)	United States	Education	Overall workplace expe- riences view		13	
Davies et al. (2022)	United Kingdom	Centre for Research in Autism and Education	Accommodations	Survey	181	
Goldfarb et al. (2022)	farb et al. (2022) Israel Occupational Therapy		COVID-19 Semi-structured inter- views		10	
Harvery	Australia Allied Health		Accommodations	Survey	149	
Hayward et al. (2019)	19) Australia Business and Economics Overall workplace expe- riences		Survey (inductive meth- ods)	44		
Lorenz et al. (2016)	Germany	Education	Entering the job market	Qualitative questionnaire	65	
Martin (2021)	United Kingdom	Education	Overall workplace expe- Brief questionnaire riences		12	
Scott et al. (2015)	Australia	Occupational Therapy	Workplace issues	Q method	40	
Whelplay et al. (2021)	United States	Management and Market- ing	Accommodations	Questionnaire (inductive methods)	65	
Wood and Happé (2021)	United Kingdom	Education	Overall workplace expe- riences	Survey	149	

^aOther methods may have been used in portions of the study that did not apply to our research question

Table 3 Six key themes

Theme #	Theme	Description
1	Accessibility of employment	This theme included experiences navigating organizational aspects of employment such as policies and procedures, workplace bureaucracy, disclosure, and formal accommodations
2	Communication with supervisors and colleagues	This theme include professional and social communication experiences and needs, relationships with supervisors and with colleagues
3	Role alignment	This theme explored a sense of alignment between personal strengths and skills, and factors that enhance motivation to engage in responsibilities of their position
4	Sensory needs and mental health	This theme described participants coping with sensory sensitivities leading to overwhelm, co-occurring mental health conditions (such as anxiety), burnout, masking and camouflaging
5	Colleagues' knowledge and beliefs about autism	This theme described supervisors' and coworkers' understanding and awareness of autism, inclusive employment practices
6	Family and community context	This theme described factors outside of work that were impactful to work experi- ences such as transportation, support systems, and COVID-19

Challenges with organizational processes were described in eleven studies [34–36, 39, 42, 43, 46–48, 51, 57]. Such challenges described processes and procedures that did not account for the needs of autistic staff members. For example, two studies describe participants struggling with schedules [33, 56]; however, as one of the studies points out, prior notice of scheduling changes is both attainable and helpful [33].

Formal accommodations (also referred to as adjustments in some studies) were specifically referenced in seven studies

Table 4Themes addressedacross articles

Author (year)						
Qualitative methods $(N=21)$	1	2	3	4	5	6
Anderson (2021)	х	х	х		х	
Bross et al. (2021)	х	х	х	х		х
Buckley et al. (2021a)	х	х	х	х	х	
Buckley et al. (2021b)	х	х	х	х	х	
Bury et al. (2021)	х	х	х	х		
Conte (2021)	х	х	х			
Goldfarb et al. (2021)	х	х	х			
Griffith et al. (2011)		х	х	х	х	х
Hurlbutt and Chalmers (2004)	х	х		х		
Johnson and Joshi (2016)	х	х	х		х	
Kreiger et al. (2012)	х	х	х	х		
Lizotte (2016)	х	х	х	х		х
McKnight-Lizotte (2018)	х	х	х			
Megrew (2019)	х	х	х	х	х	
Müller et al. (2003)	х	х	х	х	х	
North (2021)	х	х	х	х		
Ortiz (2018)	х	х	х	х		
Pfeiffer et al. (2017)	х	х	х	х		х
Pfeiffer et al. (2018)	х			х		
Rebholz et al. (2012)	х	х	х	х	х	
Thompson (2018)	х			х		х
Mixed methods $(N=11)$	1	2	3	4	5	6
Baldwin et al. (2014)	х	х	х	х	х	
Berman (2021)	х		х	х	х	х
Davies et al. (2022)	х		х	х	х	
Harvery	х		х	х	х	
Goldfarb et al. (2022)	х	х	х			х
Hayward et al. (2019)	х	х	х	х		
Lorenz et al. (2016)	х	х	х			
Martin (2021)	х	х				х
Scott et al. (2015)	х		х			
Whelplay et al. (2021)	х	х	х			
Wood and Happé (2021)	х	х		х		

[32, 35, 38, 46, 48, 55, 58]. Two studies emphasized the importance of accommodation to minimize obstacles that could impact work; yet, in those studies, many participants were not receiving them [32, 33]. Another study referenced the lack of successfully implemented accommodations as impactful on one's wellbeing [32].

When considering accommodations, participants in two studies emphasized that they should be individualized to best meet the needs of each employee [36, 40]. As one participant in Ortiz (2018) shares, "every person is different" in relation to needs in the workplace. Across six studies, self-awareness and/or self-efficacy were presented as important factors for workplace success, including the ability to self-identify where one might have particular needs for accommodation or adjustments [30, 32, 38, 41, 53, 57]. Participants in one study described discomfort with the responsibility being put on them to know and advocate for adjustments they may need in the workplace [32].

Participants described mixed experiences of autism disclosure in the workplace across seven studies [30, 32, 40, 45, 46, 53, 57]. In one study, the authors noted that participants expressed diverse experiences with the process of disclosure and the decision of whether or not to disclose diagnosis, and that there was no consistency across participants due to the personal nature of the outcomes or consequences of this decision [53]. In some circumstances, positive experiences were described, such as disclosure leading to workplace accommodation [30, 32] and personal feelings of relief [53]. Participants in Megrew [57] described experiences of not disclosing or feeling the need to disclose. Also, in relation to accessibility of sustainable employment, three studies referenced cycles of unemployment and underemployment as a common experience among autistic adults [31, 35, 59]. One participant described, "the years roll by, and I stumble from one job situation to another, and nothing consummated into a promotion or career type move" [59], p. 166].

Communication with Supervisors and Colleagues

Workplace relationships and communication was mentioned by participants across 26 studies [30, 31, 34–37, 39–49, 52–54, 56–61]. This theme included professional and social communication experiences and needs as well as relationships with supervisors and with colleagues.

Participants in eight studies referenced personal challenges with social communication, including difficulty interpreting social cues, being understood by colleagues, navigating social interactions, and/or processing information differently [30, 35, 40, 42, 49, 52, 61]. Participants in three studies described using social or communication strategies to navigate the social dynamics in their workplaces [36, 42, 48]. In one study, the author queried beyond the autistic employee in the discussion, making reference to the likely impacts of the double-empathy problem (a problem identifying that both autistic and non-autistic people experience struggles when trying to understand and communicate with each other) on communication gaps in the workplace [35].

Participants across ten studies named workplace communication as a key barrier or facilitator to positive experiences. Eight studies spoke about communication with supervisors [42, 45, 47, 56–59, 61], and six studies spoke about communication with colleagues [36, 45, 48, 56, 59, 61]. Participants described key facilitators as co-workers and supervisors who are patient, caring, supportive, respectful and accepting of autism as important to their success at work [36, 39, 43, 58, 59]. Participants across three studies described a lack of and/ or need for more peer support within the workplace [41, 57, 58]. One study referenced peer support as a facilitator of positive work experiences [34].

Role Alignment

Specific aspects of the job role and/or responsibilities were identified as a theme impacting employment experiences across 27 studies [30–33, 35, 36, 38–49, 51–53, 56–61]. Participants spoke about a sense of alignment between their personal strengths and skills and the scope of their role as well as factors that enhance motivation to engage in the responsibilities of their position.

For example, participants across five studies noted that roles and responsibilities that feel meaningful to them are important for motivation to engage fully in work [36, 43, 51, 53, 61]. In two studies, income was named as a primary motivator for maintaining employment [43, 60]; and understanding one's future career path was also identified in one [43]. Participants spoke about skill building, opportunities for growth and career progression as important to staying engaged in their work [31, 35].

Alignment between role and personal strengths were described across several studies as being important to overall experiences in the workplace. Poor alignment between personal strengths and expectations of the role were identified as negatively impacting experiences across eight studies [39, 42, 45, 48, 49, 56, 59, 60]. For example, the expectation to communicate in a way that does not feel natural with customers was identified in four studies as a challenge [42, 45, 48, 56]. Across three studies, positions with low social demand were described as a facilitator to feeling successful and maintaining employment [46, 59, 60]. In four studies, participants identified several specific strengths that they attributed to their neurodivergence, such as the ability to be detail-oriented and to hyper-focus at times [30, 40, 42, 57].

Sensory Needs and Mental Health

Sensory needs and/or mental health were referenced by participants across 22 studies [32–42, 49, 50, 52–58, 60, 61]. More specifically, participants described coping with sensory sensitivities as requiring masking and camouflaging and leading to stress and overwhelm, co-occurring mental health conditions (such as anxiety), and burnout. (Masking and camouflaging are understood to be coping strategies in response to neurotypical expectations and repeated experiences of being excluded, judged, and/or bullied for characteristics and behaviors that do not align with these expectations) [62, 63].

The impact of sensory experiences and needs in the workplace were referenced by participants across 20 studies [31-39, 42, 49, 50, 53-58, 60, 61]. Two studies referenced sensory sensitivities and needs as being exacerbated by rigidity in requirements to work in a particular space or to perform a specific task [41, 42]. Participants in another study referenced altering or desiring to alter their physical working environment to accommodate sensory needs, such as noise or lighting adjustments that make it easier for them to focus on their work and feel included [60].

Mental health was also named as a separate factor from sensory needs by participants across 14 studies [32, 35–38, 40, 49, 52, 53, 56–59, 61]. Co-occurring conditions, including anxiety [36–38, 40, 49, 56, 57] and depression were noted to be impacted by and also impact experiences in the workplace [52, 53, 58]. Participants in two studies described significant mental health implications of needing to mask and camouflage to be better accepted by colleagues and supervisors in the workplace [35, 40].

Colleagues' Knowledge and Beliefs About Autism

Participants in twelve studies spoke about the impact of supervisors' and coworkers' understanding and awareness of autism and/or inclusive employment [30, 32, 33, 40, 41, 46, 49, 52, 57–59, 61]. A desire for more autism awareness and greater acceptance among coworkers was identified by participants in four studies [30, 33, 36, 52].

Descriptions of mistreatment by coworkers were noted across 11 studies, including discrimination [22, 24, 38], unfairness [32, 33, 35, 40, 45], bullying [36], injustice [37], distrust [57], and judgment [31, 40]. A participant in one study described, "We have some real jerks working at the place that I worked at," in the context of a colleague's disbelief in neurodiversity [30], p. 54]. In one study, participants that had been diagnosed later in life perceived more discrimination in the workplace than those diagnosed earlier [46].

Participants across four studies noted positive experiences of being employed in workplaces where there was a culture of awareness and acceptance about autism and neurodiversity, and where coworkers were understanding of and flexible towards their individual differences and needs [35, 43, 49, 60]. Participants in some studies described discomfort with disclosure and feared negative judgement by employers and/or colleagues [24, 32, 38]. Participants across five studies suggested that perhaps colleagues' knowledge and acceptance could be improved through co-worker and supervisor training about autism and inclusive employment [30, 33, 59–61].

Family and Community Context

Family and community context presented as a theme related to participants' employment experiences in eight of the studies [34, 38, 39, 44, 49, 52, 55, 56]. External supports that were identified as influential to experiences in the workplace included attitudes and behaviors of family members [38, 39, 49, 55] and access to other community supports (i.e., support groups) [34, 52]. Participants also spoke about transportation to and from work and geographic location of the workplace as indirectly influencing experiences with employment [39, 56].

Only one of the 14 studies published since the onset of the COVID-19 pandemic specifically addressed the impact of pandemic on employment experiences [44]. Participants in this study shared that maintaining employment was a protective factor for mental health, and that despite the adjustments to workplace communication, working from home during lockdowns did not change the feeling of social relatedness [44]. Several participants in this study described the benefits of their proficiency in technological aspects of the job that allowed them to become an important source of support for colleagues during the pandemic [44].

Discussion

The six themes shared across the studies in this review build upon the previous literature by emphasizing specifically the lived experiences and expertise of autistic adults as relates to employment.

Across the studies reviewed, participants demonstrated a depth of self-awareness and ability to clearly articulate personal skills and strengths as well as their own unique sensory, communication, and accommodation needs in the workplace. This nuanced articulation of experiences across studies bolstered the applicability of the thematic findings to generate practical changes in workplace policies and procedures. While employers are ultimately responsible for setting role expectations and approving accommodation requests, this highlights the benefits to employers of collaborating with employees in decisionmaking whenever possible. The more self-awareness an employee has about their own strengths and needs, and the more opportunity they have to explore and discuss this with their employer, could lead to greater opportunity for role alignment and meaningful accommodations. For example, job matching employees' personal strengths to role and responsibilities is known to be a key factor influencing successful outcomes including job retention and sustainability [11].

Similarly, participants across the studies reviewed emphasized the need for an individualized approach to workplace communication and accommodations and drew attention to barriers generated by employers taking a more generalized approach to processes or implementation of accommodations. At the same time, participants shared mixed feelings about the benefits and risks of disclosure of diagnosis in the workplace, which is often required to access formal accommodations. These findings reinforce a recent push in the literature to hold employers and organizations more responsible for fostering an inclusive workplace environment and culture where invisible disability is normalized to the point that the benefits of disclosure outweigh the potential risks [64, 65]. As highlighted in this study, sensory aspects of the workplace were closely associated with professional and personal well-being and mental health outcomes. Consideration of sensory differences across all employees may be a beneficial aspect of inclusive workplace environments particularly for autistic clients who are more likely than the general population to have heightened sensitivity to sensory stimuli and who also may hesitate to disclose this for fear of ostracization [66-68].

Participants across studies drew attention to the impact of relationships with colleagues and supervisors on experiences in the workplace. Prior research has identified communication barriers and needs as a key consideration in workplaces with autistic employees [5, 69], but this review highlights broader relational aspects as wellbeyond when and how to communicate. For example, participants spoke about the importance of workplaces where all employees align with a culture of awareness and acceptance of neurodivergence, and working alongside colleagues who demonstrate caring, supportive, and respectful attitudes about autism and differences in interpretation of social cues and interactions. Participants identified peer supports both in and outside of the workplace as contributing to positive outcomes for success. These findings align with organizational research identifying the benefits of workplace culture and peer support on factors of workplace success, including long-term sustainment of knowledge and skills training, and employee well-being [70–72].

Limitations

Some limitations exist because of the homogeneity of aspects of the studies conducted on this topic to date. Most of the studies were conducted in the United States, thus, thematic findings shared may not generalize for autistic adults in other geographic locations. Additionally, a few authors' names recurred across studies, which may have a homogenizing influence on research design and analysis across the findings shared. Finally, all the studies were representative of English language researchers and participants.

A homogeneity across study participants was also present. Most participants whose gender was captured in the data identified as male. There may be unique impacts of the intersection of gender identity that have not yet been described in the research to date. Due to few studies describing participants' race or ethnicity, it is unclear how cultural or ethnic factors may influence the findings shared to date or whose voices and ethnocultural representations may be excluded. Homogeneity is also reinforced by self-selection to participate in research. What may be absent from research to date is the experiences of autistic employees who do not have the resources to participate in research (for example time, transportation, etc.,), who have less insight into the factors influencing their experiences with employment, and/ or choose who not to participate in research. None of the studies described methods to engage non-speaking autistic individuals, autistics with intellectual disabilities, or individuals with other marginalized identities.

While scoping review methodology was carefully followed, we acknowledge inherent limitations with this approach, namely a lack of rigor analysis of reviewed primary studies. It may be the case that there are methodological gaps in this body of research; however, this was not the focus of the review.

Considerations for Employers and Vocational Services

The results of this study highlight the value of applying an ecosystems approach to accessibility by recognizing the multiple systemic influences on the experiences of employment among autistic people, including holding colleagues, employers, and communities responsible for creating neurodiversity-inclusive spaces that allow autistic people to thrive as they are [7, 11, 13]. Employers and employment support persons may wish to engage in a critical exploration of opportunities to enhance their role in advocacy for broader awareness, acceptance, and inclusion of autistic employees across multiple systemic levels. It may benefit employers and vocational supports to reflect on the themes shared in this review and use this as a starting point for exploration of common barriers faced by autistic employees they work alongside as well as ways to leverage their role to address these barriers. For example, employers may want to reflect on the benefits and challenges of universal design-inspired policies and procedures [73, 74], that allow flexibility or options that people can select that best meet their needs. This could be a way of shifting responsibility onto employers, rather than requiring individuals to formally disclose a diagnosis and/or self-advocate for their needs to be met as an adjustment to 'typical' procedures. This approach may be a way to be more considerate and inclusive of diverse needs of all employees and benefit undiagnosed autistic employees in particular as it is known that there are numerous barriers to accessing diagnostic assessment of autism, particularly in adulthood [75–77].

Incorporating and aligning with a neurodiversity perspective may be a beneficial way for employers and employment support persons to actively disrupt ableist and deficit-oriented assumptions about autistic employees [78, 79]. Neurodiversity is a truism that recognizes that all human brains work differently and have different strengths and needs. Honouring this truism would set an expectation of diversity across how employees process information and communicate with others. Then, rather than seeing certain types of differences as 'deficits' requiring personalized adjustment or accommodations, employers could consider ways that they may be marginalizing or disabling certain employees through rigid and/or non-inclusive policies and procedures [80]. This approach, if taken by employers, might support a more inclusive and accessible workplace environment that enables improved workplace satisfaction, performance, and employment sustainability amongst all employees [35, 67, 81].

Suggestions for Future Research

It is recommended that future research purposefully address gaps in knowledge in this substantive area, particularly reflective of the homogeneity of studies and participants sampled to date. Such breadth and depth in future research likely would more fulsomely explore the impact of intersecting identities such as gender identity, race, socioeconomic status, mental/physical health, crossdisability, and other demographics as they have a bearing on experience [82]. Although few studies included in this scope identified marginalized identities and social locations (i.e., racial, gender, and sexual minorities, etc.) autism literature highlights that ableism and discrimination may be compounded for autistic individuals with intersectional identities [82]. As such, using intersectionality to explore and better understand how systemic discrimination and ableism may be compounded for autistic people of multiple marginalized identities and social locations in employment may offer unique and important insights informing systemic interventions and strategies for improving inclusive employment practices [83].

Industry-specific studies may also offer unique insights, including a purposeful exploration within industries or employment sectors that are either under-explored and/or not stereotypically believed to be suited for autistic individuals, such as industries outside of information and technology. Additional research on the impacts of the COVID-19 pandemic and remote work arrangements may also offer unique insights into the post-pandemic context of 'work' and important areas for development in moving forward. Future research should also include a more in-depth exploration of the impact of contexts outside the workplace on the experiences of employment among autistic adults and their well-being, including potential support at the family and community levels.

Future researchers may consider the benefits of examining the methodological approaches utilized across studies to date, including an analysis of methodological rigour and recommendations for improving research design in this area. Additionally, there may be benefits for quantitative researchers to utilize the results of this review when generating or designing surveys or other methodological designs in this field, for instance, assessment of barriers and facilitators to inclusive and accessible employment.

Many of the studies in this review explicitly explored barriers or challenges in the workplace, and deficit-based language was used across some of the studies to frame research design, questions, and findings including communication differences. This deficit-bias has also been highlighted in research examining healthcare providers experiences working alongside autistic patients [84]. While there are benefits to a purposeful examination of barriers and challenges, at some point the research discourse itself may be reinforcing ableist biases and assumptions of autistic employees as being particularly complex and requiring supports and resources beyond that which is traditionally offered [84]. There may be benefit for future research to examine potential deficit-oriented biases in research design and/or purposely explore facilitators and learn from autistic adults and employers who have had positive and successfully inclusive workplace experiences.

Most importantly, research that is led by or co-conducted with autistic researchers should be prioritized, including inclusive and participatory methodological approaches in collaboration with autistic adults with lived experience in the workplace [22]. Interestingly, some of the more recent studies reviewed were led or co-written by autistic individuals and/or purposely engaged autistic individuals in participatory research methodologies. This advancement offers hope and promise towards the authentic inclusion of autistic adults in decision-making surrounding inclusive employment policies and procedures.

Conclusion

This scoping review offers a comprehensive summary of research conducted to date on the experiences of autistic adults in competitive, paid employment. The results invite researchers and stakeholders to reflect on employment spaces in the aim of inclusive employment for autistic adults. These findings further support the prioritization of lived-expertise in future research and the development of initiatives in this area.

Author Contributions SS and RM wrote the main manuscript, figures and tables. DN and MP reviewed manuscript and made editing suggestions.

Funding The lead author on this project is a Canada Graduate Scholarship Award Holders (Grant Number: 767-2022-1558). While funding is not specifically allocated to this project from these scholarships, authors are obliged to share this funding source.

Declarations

Competing interests The authors have no relevant financial or non-financial interests to disclose.

Ethical Approval This submission is a scoping review and in accordance with Wilfrid Laurier University Ethics Committee, it does not require ethical approval.

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