Challenges of social interaction of people with autism in the job market

Desafíos de la interacción social de la persona con autismo en el mercado laboral

Desafios da interação social da pessoa com autismo no mercado de trabalho

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Abstract: Individuals diagnosed with autism spectrum disorder (ASD) have behavioral and social interaction difficulties as typical characteristics of their syndrome. For those who require support and are able to enter the job market, several obstacles are experienced, including losses in selection processes, suffering from stigma and prejudice, and inadequacy of environmental and communication structures. This scoping review sought to explore the social aspects present in the reality of individuals with ASD inserted in the job market, in an attempt to identify the inherent difficulties at the various levels, as well as what support measures were taken. Thirty-six articles were located and analyzed from the Scopus, Web of Science, PsycINFO, SciELO and PePSIC databases, none of which were written in Latin America. Results point to the lack of knowledge at a satisfactory level about ASD on the part of organizations, managers, and co-workers, in order to prevent discrimination, adapt working conditions, and promote the professional fulfillment of this population with justice and dignity.

Keywords: autism; labor market; discrimination; deficiency

Resumen: Los individuos diagnosticados con Trastorno del Espectro Autista (TEA) tienen dificultades conductuales y de interacción social como características típicas de su síndrome. Quienes necesitan ayuda y logran ingresar al mercado laboral, experimentan varios obstáculos como desventaja en los procesos de selección, sufrimiento de estigma y prejuicio, insuficiencia de las estructuras ambientales y de comunicación. Esta revisión de alcance buscó explorar los aspectos sociales presentes en la realidad de las personas con TEA en el mercado de trabajo, en un intento de identificar las dificultades inherentes a los diversos niveles, así como las medidas de apoyo tomadas. Se localizaron y analizaron 36 artículos de las bases de datos Scopus, Web of Science, PsycINFO, SciELO y PePSIC, ninguno de estos escritos en América Latina. Los resultados apuntan a la falta de conocimiento en un nivel satisfactorio sobre los TEA por parte de las organizaciones, directivos y colaboradores, con el fin de prevenir la discriminación, adecuar las condiciones de trabajo y promover la realización profesional de esta población con justicia y dignidad.

Palabras clave: autismo; mercado laboral; discriminación; discapacidad



Resumo: Indivíduos com diagnóstico de Transtorno do Espectro Autista (TEA) possuem dificuldades comportamentais e de interação social como características típicas de sua síndrome. Para aqueles que exigem apoio e conseguem se inserir no mercado de trabalho, diversos entraves são vivenciados, incluindo prejuízos nos processos seletivos, sofrimento de estigma e preconceito, inadequação de estruturas ambientais e de comunicação. Esta revisão do tipo *scoping* buscou explorar os aspectos sociais presentes na realidade de indivíduos com TEA inseridos no mercado de trabalho, na tentativa de identificar quais as dificuldades inerentes nos diversos níveis, bem como quais medidas de apoio realizadas. Foram localizados e analisados 36 artigos a partir das bases Scopus, Web of Science, PsycINFO, SciELO e PePSIC, sendo que nenhum foi elaborado na América Latina. Os resultados apontam para a falta de conhecimento em nível satisfatório sobre o TEA por parte das organizações, gestores e colegas de trabalho, de forma a prevenir a discriminação, a adequar as condições laborais e promover a realização profissional dessa população com justiça e dignidade.

Palavras-chave: autismo; mercado de trabalho; discriminação; deficiência

Autism Spectrum Disorder (ASD) is a diagnosis characterized by persistent deficiencies that manifest in two main dimensions: one is connected to communication and social interaction and the other, to restrictive and repetitive behavior, interests, and activity patterns. Symptoms can manifest differently in each individual, depending on factors such as level of cognitive development, chronological age, and severity of the disorder, which leads to its characterization as a "spectrum". In recent years, a growth in prevalence has been observed in several countries, reaching 1 % of the population both in children and in adults. The causes for this growth are being investigated and may include underreporting due to methodological issues in previous studies, a broadening of diagnostic criteria, increased awareness, or a real increase in cases (American Psychiatric Association, 2014). In a recent publication, the Center for Diseases Control estimated that the autistic population between 18 and 84 years of age in the United States (USA) was around 2.2 %, the equivalent of 5.5 million people (Maenner et al., 2023).

Diagnosis is four times higher in men than in women, probably due to social and communication symptoms being more subtle in adult women. Of all those diagnosed, only a minority with mild deficiencies and with no cognitive impairment is able to develop minimum social and adaptative capabilities required for living independently and joining the job market. When successful, they often face socialization and organizational challenges that lead to mental suffering and to a greater tendency for anxiety and depression. If work is a source of encouragement and motivation for those who develop specific superior skills, the effort involved in deploying compensatory strategies and coping mechanisms can lead to intense stress (American Psychiatric Association, 2014; Kevelson et al., 2022).

In Brazil, to this moment, only one small study of prevalence was conducted, which identified a rate of 27.2 people with ASD for each 10,000 inhabitants (Paula et al., 2011). After reviewing demographic data from the 2010 census to adapt them to the National Health Survey conducted in 2013, it is estimated that the number of people with some sort of disability is around 12.4 million. Of these, 0.8% has some sort of intellectual disability and 0.5% of them are diagnosed at birth (Instituto Brasileiro de Geografia e Estatística [IBGE], 2019).

According to Decreto n.º 3.298 (Brazil, 1999), which regulates Lei n.º 7.853 of 1989, related to the National Policy for Integrating People with Disabilities, companies with: more than 200 employees must have at least 2 % of their positions filled by people with disabilities; 201 to 500 employees, 3 %; 501 to 1,000 employees, 4 %; and companies with more than 1001 employees, 5 %. However, according to a study conducted with Brazilian companies, only a fourth of these companies meet the quota, prioritizing people who need minor structural adaptations. Therefore, they prioritize hiring people with mild physical disabilities, with only 25 % of positions filled by people with intellectual disability (do Carmo et al., 2020).

In Uruguay, Ley n.º 19.691, enacted on 29 October, 2018, established a series of benefits for the labor inclusion of people with disabilities. This law points out the need of planning "work support" that covers from the modification of building structures to the assignment of mentors to guarantee work performance and adaptation to people with disabilities. It also defines the figure of the "Labor Operator", whose role is to support them in their placement (Uruguay, 2018). In Uruguay, according to data from the Federación Autismo Uruguay, between 30 and 25 thousand people have ASD.

Even though many people with high-functioning ASD have intellectual ability that is average or above average, often being more than qualified to perform their chosen occupation (Hayward et al., 2018; Lorenz et al., 2021; Nagib & Wilton, 2019), studies like the one conducted by Shattuck et al. (2012)

and Taylor and Seltzer (2011, 2012) show that this population usually faces higher levels of unemployment or underemployment than the average for the general population. Even when employed, many people with autism suffer prejudice, bullying, and persecution, as well as anxiety, exhaustion, and discomfort caused by a work environment that is not adapted to their needs (Cooper & Kennady, 2021; Djela, 2021; Hayward et al., 2018).

Still, as Bartalotti (2010) points out, people with some sort of disability are not limited by their condition itself, but rather by the barriers imposed by neurotypical individuals who are unaware of how differently neurodivergent people relate to the world, thus adopting excluding policies —either on purpose or due to a lack of knowledge. Therefore, we postulate that the exclusion of people with high-functioning ASD in the work environment is not focused solely on them, but originates in modern social organization, its values, and its ideologies.

The main objective of this study was to explore aspects related to social problems faced by people with ASD in the job market, seeking to understand which challenges exist as well as the effectiveness of support actions undertaken.

Method

Type of study

This is a scoping review (Peters et al., 2015). This kind of review aims to document different recent aspects of the literature on a subject that is still little explored in research, favoring the comprehension of broad topics before focusing on more specific subjects (Arksey & O'Malley, 2005). Understanding the reality of individuals with ASD in the job market is an extremely important topic given the rise in diagnoses in the last decades, especially of milder cases of individuals who have the minimum abilities required to have an active work life. Therefore, knowing contributing factors, both individually and organizationally, as well as the real results of measures used so far is relevant to realize where there are still gaps to be filled. This study followed existing recommendations for a scoping review, being structured in five steps: 1) identifying the research question; 2) identifying relevant studies; 3) selecting studies; 4) analyzing reviewed data; 5) collating, summarizing, and reporting results (Arksey & O'Malley, 2005).

Guiding question

The research question "What is the social reality of people with autism in the job market?" was created using the acronym PCC: P = population; C = concept; C = context (Peters et al., 2015). This study considered as a population individuals with autism, the concept of social interaction, and the context of the work environment.

Inclusion and exclusion criteria

Inclusion criteria were: psychology articles, no date limit, pair reviewed, written in Portuguese, English, or Spanish, and that discussed the topic of autism and its social interactions in the job market specifically, from the perspective of autistic individuals —with a confirmed diagnosis and previous or current work experience— and of the professionals around them. Exclusion criteria were: articles that did not directly discuss the proposed topic; and editorials, letters, perspectives, comments, book chapters, and master or doctoral dissertations. Given the option of focusing on psychological aspects of autistic individuals' social interactions in the job market, articles of other areas, such as social work or sociology, for instance, were not included.

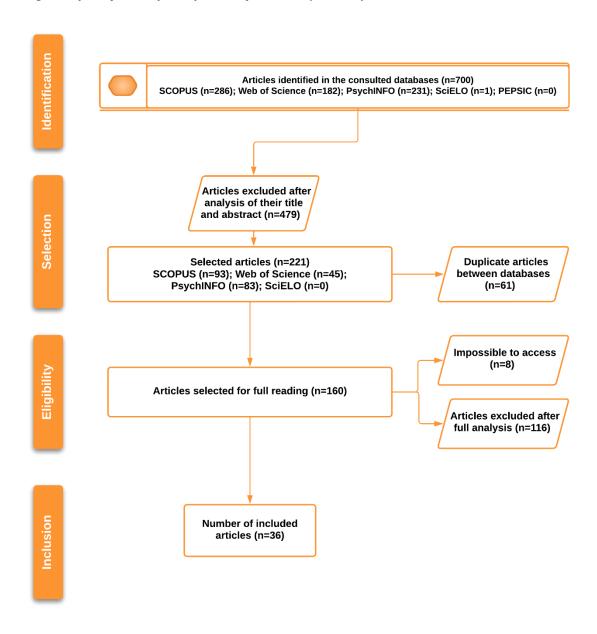
Data collection, organization, and analysis

This study used the following databases: Scopus, Web of Science, PsycINFO, SciELO, and PePSIC. Searches used the following keywords: *autism* OR *ASD* OR *asperger* to select the population. *Employment* OR *workplace* OR *workforce* OR *job* to characterize the context of the job market; and *social* OR *relationship* OR *socialization* to define the concept of this study. In SciELO, keywords in Portuguese were also used. In the investigation process, all possible combinations were used by applying the Boolean AND.

The initial search in the databases resulted in 700 articles. In the first selection, after reading titles and abstracts, articles that did not discuss the topic chosen for this review were excluded. All articles that at least mentioned in some way the subject of social interactions of autistic individuals in the work environment were included. As a result of this first stage, 221 articles were selected. Of these, 61 were duplicates and were properly excluded, 160 articles were left for the full analysis.

Of the 160 articles, eight could not be fully accessed and 116 were excluded after being read and analyzed, since they did not fulfill the inclusion criteria. The remaining 36 articles were incorporated to the *corpus* of this review. Figure 1 shows the diagram of the selection process.

Figure 1Diagram of the process flow of the scope review (PRISMA)



Results

Of the selected studies, 32 were cross-sectional, with two of them being case studies and two being longitudinal studies. The most referenced country in the studies was the USA, followed by the United Kingdom and Australia. No studies were found in Latin America. Table 1 shows the articles that were selected, according to authors and publication in chronological order, sample, methodology, and results.

Table 1 *Main information of the selected articles*

Reference (Year)	Sample (Region)	Methodology	Objective	Results
Burt et al. (1991)	4 subjects with ASD (USA)	Interventional study (case study)	Training to adapt participants to the job market.	Participants found employment after the training.
Shields- Wolfe & Gallagher (1992)	1 autistic individual with special skills (USA)	Interventional study (cross-sectional)	Training for improving skills.	Better results in social tasks and skills.
Howlin et al. (2005)	203 people with ASD/140 of them employed (United Kingdom)	Quantitative study (cross-sectional)	Evaluating changes in clients of "NAS Prospects" programs.	Difficulty in performing social tasks and interactions. Learning about autism from employers.
Yokotani (2011)	22 people with ASD (Japan)	Quantitative study (cross-sectional)	Investigating the relationship between avoidant behavior and professional adaptation.	Individuals who have been working for more than one year show more avoidant behavior when dealing with work situations.
Wehman et al. (2012)	33 people with ASD (USA)	Interventional study (longitudinal)	Examining the effects of employment with support for people with ASD.	Behavioral and communication difficulties. Need to support social interaction.
Parr et al. (2013)	52 people with ASD (USA)	Qualitative study (cross-sectional)	Evaluating "transformational leadership" theory and its impact in anxiety.	Communication that is not emotionally laden, clear goals, idealized leadership, and individualized consideration, among others, help autistic people perform better.
Baldwin et al. (2014)	130 people with ASD (Australia)	Quantitative study (cross-sectional)	Describing experiences of autistic people at work.	Adapting tasks and environments, interpersonal relationships, communication, social exclusion, anxiety, and independence.
Johnson & Joshi (2016)	30 people with ASD (USA)	Qualitative study (cross-sectional)	Analyzing the impact diagnosis has on work.	Several difficulties reported due to late diagnosis.

Reference (Year)	Sample (Region)	Methodology	Objective	Results
Lorenz et al. (2016)	66 people with ASD (Germany)	Quantitative study (cross- sectional)	Identifying barriers and solutions for entering the job market.	Difficulties related to social interactions, formality, and work demands.
Murza (2016)	932 vocational rehabilitation counselors (USA)	Quantitative study (cross- sectional)	Analyzing autistic people's work experiences.	Difficulties in social interactions, interviews, task resolution, lack of support services, environmental sensitivity, transportation needs, and emotional confusion.
Zalewska et al. (2016)	570 people with ASD/3,540 people with diverse disabilities (USA)	Quantitative study (cross- sectional)	Correlating personal and external skills with job acquisition in autistic people.	Transportation independence favors employability. Employment increases psychological empowerment. There was no relation between social skills and employment.
Hedley et al. (2017)	9 people with ASD / 19 people including support and family (Australia)	Qualitative study (cross-sectional)	Understanding the transition to the work experience, barriers, and enablers.	Identifying favorable and hindering factors for the development of autistic people in the job market.
Nicholas et al. (2017)	71 people with ASD/137 people of the support program/51 caregivers (Canada)	Qualitative study (cross-sectional)	Evaluating employment- support services.	Importance of support for the success of people with autism in the workplace and the lack of sufficient help for their difficulties.
Pfeiffer et al. (2017)	14 people with ASD (USA)	Qualitative study (cross-sectional)	Understanding the impact of environmental factors on work satisfaction and performance.	Stigmatization, social interactions, sensory sensitivity, and adaptation to the environment as important topics.
Bross et al. (2018)	1 person with ASD (USA)	Interventional study (cross-sectional)	Evaluating the effects of a video modeling intervention.	Considered positive by the participant.

Reference (Year)	Sample (Region)	Methodology	Objective	Results
McKnight- Lizotte (2018)	6 people with ASD (USA)	Quantitative study with phenomenological analysis (cross-sectional)	Analyzing communication difficulties at work.	Difficulty in the interaction with colleagues, superiors, and clients in interviews.
Pfeiffer et al. (2018)	50 people with ASD (USA)	Quantitative study (cross-sectional)	Evaluating satisfaction and social and sensory aspects of personenvironment fit.	Pleasant physical environments, support interventions, room for autonomy, and work orientation help with job satisfaction.
Sung et al. (2018)	17 people with ASD (USA & China)	Interventional study (longitudinal)	Detailing the ASSET intervention program.	Development of social skills, self-awareness, self- confidence, and employment.
Black et al. (2019)	19 people with ASD/60 other professionals (multicentric)	Qualitative study (cross-sectional)	Identifying enablers and barriers for the employment of autistic people.	Main challenges: anxiety, stress, task and environment adaptation, relationship with colleagues and superiors, diagnostic disclosure, and communication. Employment as positive.
Nagib & Wilton (2019)	507 people with ASD (Canada)	Qualitative study (cross-sectional)	Exploring gender roles in carrier and job search.	Difficulties in interviews, choice of carrier, and adaptation to the work environment between genders.
Nicholas et al. (2019)	82 employers and employees (Canada)	Quantitative study (cross-sectional)	Evaluating strategies and barriers to greater work engagement.	Low understanding of autism by employers.
Taylor et al. (2019)	443 people with ASD (USA)	Quantitative study (cross-sectional)	Comparing work experiences between genders.	Differences between genders and their relationship to work were observed.
Vincent et al. (2019)	24 people with ASD (France)	Quantitative study (cross-sectional)	Describing the socio- professional development and quality of life.	Need for actions focusing on greater social and professional inclusion of people with autism.

Reference (Year)	Sample (Region)	Methodology	Objective	Results
Buckley et al. (2020)	18 people with ASD/19 employers (United Kingdom)	Qualitative study (cross-sectional)	Evaluating the experiences and adaptation to work in performing arts.	Difficulties: unexpected changes, social interactions, diagnosis, hypersensitivity, anxiety, and bad mental health.
Bury et al. (2020)	29 people with ASD/15 supervisors (multicentric)	Quantitative study (cross-sectional)	Investigating social challenges in the workplace.	Social interaction, adaptation to the environment, and tasks as challenges.
Gorenstein et al. (2020)	22 people with ASD (USA)	Interventional study (cross-sectional)	Evaluating a program to improve social skills.	Improvement in social skills and employability rates.
Hayward et al. (2020)	101 people with ASD/39 neurotypical individuals (Australia; United Kingdom; USA)	Quantitative study (cross-sectional)	Comparing the impact of work demands on autistic and NT individuals.	Problems: social interaction, adaptation to the organization's policies and bureaucracy, stress, anxiety, and demand management.
Pesonen et al. (2020)	55 people with ASD (multicentric)	Qualitative study (cross-sectional)	Analyzing employment support strategies.	Description of adjustments to the work environment, social interactions, performance of tasks, and acceptance of needs.
Waisman- Nitzan et al. (2020)	47 people with ASD (Israel)	Quantitative study (cross-sectional)	Correlating evaluated characteristics and employment.	Correlations of the variables self-efficacy, performance, efficiency, personal factors, and interpersonal relationships.
Cooper & Kennady (2021)	600 neurodivergent subjects (95 with ASD) (England)	Quantitative study (cross-sectional)	Evaluating work experiences.	Bullying, lack of understanding by the superiors, difficulty in socializing and adapting to the job.

Reference (Year)	Sample (Region)	Methodology	Objective	Results
Djela (2021)	34 people with ASD (United Kingdom)	Qualitative study (case study)	Identifying barriers to employment.	Difficulties in diagnosing, bullying, poor preparation of managers, and unfair dismissals.
Lorenz et al. (2021)	53 people with ASD (Germany)	Quantitative study (cross-sectional)	Identifying difficulties in the workplace.	Barriers were identified in three categories: social, formalities, and job demand.
Maras et al. (2021)	25 neurotypical / 25 ASD (United Kingdom)	Quantitative study (cross-sectional)	Identifying adaptations in a job interview.	Better quality of answer and evaluation after adaptations.
Siedler & Idczak- Pacés (2021)	15 people with ASD (Poland)	Qualitative study (cross-sectional)	Determining difficulties for finding and maintaining employment.	Difficulties in interaction with work colleagues, self-control, socialization, and independence.
Spoor et al. (2021)	32 work colleagues of autistic trainees (Australia)	Qualitative study (cross-sectional)	Understanding the perspective of colleagues and managers on an employment program.	Better adaptation, organization, and understanding of autism.
Walkowiak (2021)	16 neurodiversity professionals (Australia; Canada; USA)	Qualitative study with phenomenological analysis (cross- sectional)	Correlating digital transformation and neurodiversity.	Technology can help autistic people improve their existing skills.

The scientific literature identified in this review discusses the difficulties autistic individuals face in the job market from different perspectives. Inherent characteristics of ASD, such as sensory hypersensitivity, difficulty in verbal and non-verbal communication, and stereotyped behaviors, among others, may directly and negatively impact their performance in the work environment, causing suffering. This leads to suffering, especially when there is a lack of support, be it in the social or work contexts (Buckley et al., 2020; Bury et al., 2020; Waisman-Nitzan et al., 2020).

Research shows that, in the job search process, people with ASD face barriers related to interviews and selection processes from the start. Standard surveys and interviews, designed for neurotypical individuals, may affect the evaluation of their cognitive ability as well as the evaluator's perception (Cooper & Kennady, 2021; Maras et al., 2021). Even though many agencies offer support and guidance for a better performance both in interviews and in retaining a job, there are still many flaws in these procedures, as some of the articles show. Misperception and underestimation of abilities and potential may restrict opportunities to simple positions with lower salaries (Nagib & Wilton, 2019; Tint & Weiss, 2017).

Despite being recognized as beneficial and important in alleviating feelings and anguish and fear, as well as for professional integration, the support that is offered for employment is still insufficient (Nicholas et al., 2017; Rodgers et al., 2018; Vincent et al., 2019). According to some authors, a considerable part of the low efficiency of this support is related to inadequate formation of the vocational rehabilitation specialists. This perception appears on both sides: professionals feel insecure due to a lack of deeper training related to this condition (Murza, 2016), and workers with ASD, according to complaints, due to inappropriate treatment and to the limited perception advisors have of people with ASD (Nagib & Wilton, 2019).

Once in the job market, workers with ASD face difficulties in different areas, including problems related to interpersonal relationships, obstacles in performing tasks, and inadequacies of organizational structures for their condition. Social demands represented the largest problem, being considered barriers for 90 % of the autistic population (Hayward et al., 2020). The greatest challenges were associated to the work environment, such as meetings, parties, group discussions, and others (Bury et al., 2020). In an attempt to integrate in the social context, the individual with ASD may develop a behavioral pattern known as masking —hiding their peculiarities and, through social observation and mimicry—, acting "similarly" to their colleagues. Despite bringing some benefits, continuing with this conduct may hide the need for real support and cause suffering (Murza, 2016).

As for task execution, measures such as adapting guidance given by superiors and colleagues, adapting the physical environment, simplifying and objectivizing tasks that are requested, routine coherence, and flexibility of requisites proved to be efficient for the commitment and productivity of the worker with ASD (Black et al., 2019; Hayward et al., 2020; Hedley et al., 2017; Pesonen et al., 2020; Pfeiffer et al., 2017, 2018). In this adaptation process, Johnson and Joshi (2016) observed that individuals with an early diagnosis showed greater acceptability when compared to those with a late diagnostic. On the other hand, the authors related late diagnosis with feelings of conflict and anguish related to revealing the diagnosis in the work environment for fear of discrimination by colleagues and superiors.

Inadequacies in the organization that were mentioned in the studies range from the lack of adequate physical structures and complicated bureaucratic aspects to discriminatory practices in the behavior or colleagues or superiors, with greater emotional harmful effects. The need to adapt to the physical environment related mainly to the symptom of sensory hypersensitivity present in individuals with ASD (Black et al., 2019; Buckley et al., 2020; Bury et al., 2020). In these cases, adapting the work environment leads to more comfort and, consequently, to more satisfaction in performing tasks (Pfeiffer et al., 2018).

Bureaucratic and people management problems were identified as common barriers by people with autism (Hayward et al., 2020). Due to a lack of knowledge, workers with ASD are placed in positions that are not adequate to their condition, which significantly harms job retention and the possibility of professional development (Parr et al., 2013; Pesonen et al., 2020). According to Djela (2021), the autism diagnosis is a limiting factor for equality in work opportunities, since employers tend to offer different positions instead of providing the help and support needed for progression with equality. Challenges found in competitive occupations may be even more difficult for the individual with ASD without the proper structure (Koffer Miller et al., 2017).

As for work relationships, conducts that devalue the work as well as the practice of bullying were described (Cooper & Kennady, 2021). Work colleagues tend to consider characteristics of autism as negative points, exaggerating existing distinctions, often using pejorative and biased terms (Bury et al., 2020; Djela, 2021). Recurring discrimination and bullying were a relevant factor for job abandonment in 60% of the autistic people interviewed by Cooper and Kennady (2021).

The implementation of adaptive processes in the organizational environment has not been easy. There is also a difficulty in acceptance by employees of all hierarchical levels (Djela, 2021) and even by workers with autism (Buckley et al., 2020). Leadership plays a fundamental role in applying adaptive measures through direct contact with the worker (Hayward, 2020; McKnight-Lizotte, 2018). This efficacy was described by Lorenz et al. (2016) when observing that people with autism sought help from their direct superiors and had a greater number of problems solved than those who did not have that option and, therefore, sought external help for their work problems.

Despite difficulties, the adaptation process has been described as fundamental, involving coping strategies for communication problems with support materials, training, and personal support (McKnight-Lizotte, 2018), technology (Walkowiak, 2021), and projects of transformational leadership (Parr et al., 2013). When effectively managed, these resources can lead to feelings of achievement and pride in their work (Pfeiffer et al., 2017). On the other hand, there is still, obviously, a need for greater understanding of the necessity and relevance of adaptive processes by coworkers. Spoor et al. (2021) found a consensus on the benefits of the program for people with autism and for the organization. However, they also found a reinforcement of stereotype, disagreement with the adaptations, and discomfort with the changes that favored the adaptation of the worker with ASD.

Measures and interventions were also subject of study in these articles. The first interventions with people with ASD to show positive results were conducted by Burt et al. (1991) and by Shields-Wolfe and Gallagher (1992). Subsequently, other academics reported benefits both in training for work life, job retention, and increase in workload (Gorenstein et al., 2020; Wehman et al., 2012). Work on personal development has also been described, such as improvements in social skills, self-confidence, self-awareness, and the feeling of belonging (Bross et al., 2018; Sung et al., 2018). Only one longitudinal study was conducted, which showed that positive repercussions of the interventions remained after eight years (Howlin et al., 2005).

Discussion

Work is considered a fundamental activity in most people's lives, not only as a representation of independence and autonomy, but also for its effect of integrating someone into society by promoting interaction with others and especially by being a way of allowing the individual to feel part of a group (Morse & Weiss, 1955). For individuals with any sort of disability, joining the job market and, consequently, fulfilling this requirement that is inherent to human beings is much harder, since this population has difficulty finding a job (Bezyak et al., 2021), is excluded and/or attacked in their workplace in a more pronounced and emotionally devastating manner (Koch et al., 2021), and often receives lower pay even when performing the same job and with the same productivity rates (Kruse et al., 2018).

Even though there are laws and assistance for them to join the job market, there are still pronounced difficulties in the selection process, especially in regard to proper understanding of the limitations and possibilities of people with disability, which are reflected in the evaluation process. As shown by Rezende et al. (2015), there are still many questions and much disagreement on the correct way HR professionals understand deficiencies, with a little more than half of those who answered the survey saying they believe there is a real benefit in including disabled professionals in their companies. In the case of people with autism, due to obstacles in social aspects, their skills are subjugated by their lack of empathy, interaction, and teamwork, which are considered fundamental for hiring professionals in the current job market (Da Silva et al., 2020). Less than 10 % of autistic people evaluated by Cooper and Kennady (2021) reported being able to show their skills during the work interview and 58 % described disadvantages in the selection process.

Aside from social limitations, people with ASD have to face the consequences of the stigma of their condition to find work. In a recent review, Turnock et al. (2022) presented several aspects related to the stigma people with ASD face, showing that a lack of proper knowledge of this condition is related to more negative attitudes, more prejudice, and avoidance on the part of others. When joining the job market, this stigma becomes evident in the companies' resistance to hire these people due to prejudice on the part of employers and employees, in the lack of adaptation measures, and in offers of low-quality positions and lower pay (Leopoldino & Coelho, 2018; Talarico et al., 2019).

As a way of coping and adapting to the "normality" of the work environment they inhabit, the individual with ASD usually develops a "camouflage" of their symptoms, which is known as masking (Murza, 2016). This practice, however, can lead to mental suffering and to the development of psychopathologies, such as anxiety and depression, as well as to the risk of suicide (Bradley et al., 2021; Pearson & Rose, 2021). For some people with ASD, masking often develops not only as a defense mechanism against perceived stigma, but also as a way of disguising clear signs of the disorder with the intent of hiding their diagnosis. It may also bring a feeling of "normalcy" and "ability" to face global issues (Bradley et al., 2021).

The inadequate structure of organizations was intensely highlighted and plays an important role in social difficulties of workers with autism. Leopoldino and Coelho (2018) point out that, despite incentives from Brazilian legislation, companies do not invest in adaptations and resources for the inclusion of these workers. The lack of structure in social subjects is mainly due to lack of knowledge of the condition by colleagues and superiors, creating a negative, one-sided vision that focuses on the difficulties and not in the abilities of the individual with ASD (Cooper & Kennady, 2021; Talarico et al., 2019).

The importance of conscious management is reflected in attitudes that promote well-being, feeling of recognition, and trust on the part of the worker with autism, who feels safe in seeking help

from their superior, as shown by the studies of Hayward et al. (2020), McKnight-Lizotte (2018), and Lorez et al. (2016). However, this is not the reality lived by these workers, since only 1% of them report that their superiors understand their condition (Cooper & Kennady, 2021). Providing information and training are still the best ways of mitigating stigma related to ASD in the workplace and outside of it (Turnock et al., 2022). In Brazil, however, there is a lack of information and of studies on the applicability of adaptive measures in organization, which is an important area for understanding the needs, gaps, and failures in the Brazilian job market (Conceição et al., 2021; Leopoldino, 2015).

Studies on intervention resources for direct care for people with ASD, even if still scarce, demonstrate in full the positive results in social aspects, with improvement in well-being, higher productivity, and increase of workload (Bross et al., 2018; Burt et al., 1991; Gorenstein et al., 2020; Howlin et al., 2005; Shields-Wolfe & Gallagher, 1992; Sung et al., 2018; Wehman et al., 2012). Aligned with these results, literature reviews emphasize the importance and need to invest in the development of skills and abilities of people with ASD in all stages: education, employment, and professional life. This allows for the increase in possibility of employment, improvement of performance, and especially in the development of social skills (soft skills), considered to be these workers greatest difficulty for keeping their positions (Leopoldino & Coelho, 2018; Seaman & Cannella-Malone, 2016; Talarico et al., 2019).

Final considerations

In an exploratory manner, this scoping review aimed at identifying scientific productions on topics that are inherent to social issues of individuals with autism in the job market. Personal difficulties were observed to refer mainly to communication and social interaction skills, which impact from initial selection process to their performance at work and their ability to retain their position.

From the organizational side, little understanding of the disorder was also observed, which leads to discriminatory behavior and devaluation of workers with ASD both by their colleagues and their superiors. Presence of stigma, and the prejudice and discrimination that follows, are responsible for the intense psychic suffering of these workers. Therefore, educational and training measures are fundamental in all levels of access to employment and positions in organizations.

It was also observed that, even with public and private resources, aside from government incentives, adaptation is still, in reality, ineffective, especially due to a lack of will on the part of organizations. This reflects in lack of training for professionals and lack of personal and technical support. Although reports of interventions are scarce and have few participants, they all showed significant benefits for both the worker with ASD and for the organization. Therefore, new research is needed to address individual and organizational aspects, especially in the context of the Latin American reality.

That is why this review highlights the importance of this theme, which is extremely relevant to society. However, it is still necessary to create scientific, technical knowledge that empowers different parties to promote inclusion in an effective, dignified, and healthy manner.

References

- American Psychiatric Association. (2014). *Manual diagnóstico e estatístico de transtornos mentais: DSM-5* (5.ª ed.). Artmed Editora LTDA.
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19-32. https://doi.org/10.1080/1364557032000119616
- Baldwin, S., Costley, D., & Warren, A. (2014). Employment activities and experiences of adults with high-functioning autism and asperger's disorder. *Journal of Autism and Developmental Disorders*, 44(10), 2440-2449. https://doi.org/10.1007/s10803-014-2112-z
- Bartalotti, C. C. (2010). *Inclusão social das pessoas com deficiência: utopia ou possibilidade* (2.ª ed.). Paulus.
- Bezyak, J., Iwanaga, K., Moser, E., & Chan, F. (2021). Assessing employers' stigmatizing attitudes toward people with disabilities: A brief report. *Journal of Vocational Rehabilitation*, *54*(2), 185-191. https://doi.org/10.3233/jvr-201129
- Black, M. H., Mahdi, S., Milbourn, B., Thompson, C., D'Angelo, A., Ström, E., Falkmer, M., Falkmer, T., Lerner, M., Halladay, A., Gerber, A., Esposito, C., Girdler, S., & Bölte, S. (2019). Perspectives of key

- stakeholders on employment of autistic adults across the United States, Australia, and Sweden. *Autism Research*, *12*(11), 1648-1662. https://doi.org/10.1002/aur.2167
- Bradley, L., Shaw, R., Baron-Cohen, S., & Cassidy, S. (2021). Autistic adults' experiences of camouflaging and its perceived impact on mental health. *Autism in Adulthood*, *3*(4), 320-329. https://doi.org/10.1089/aut.2020.0071
- Brazil. (1999, December 20). Decreto n.º 3.298. Regulamenta a lei nº 7.853, de 24 de outubro de 1989, dispõe sobre a política nacional para integração da pessoa portadora de deficiência, consolida as normas de proteção, e dá outras providências. https://www.planalto.gov.br/ccivil_03/decreto/d3298.htm
- Bross, L. A., Travers, J. C., Munandar, V. D., & Morningstar, M. (2018). Video modeling to improve customer service skills of an employed young adult with autism. *Focus on Autism and Other Developmental Disabilities*, *34*(4), 226-235. https://doi.org/10.1177/1088357618805990
- Buckley, E., Pellicano, E., & Remington, A. (2020). "The real thing I struggle with is other people's perceptions": the experiences of autistic performing arts professionals and attitudes of performing arts employers in the UK. *Journal of Autism and Developmental Disorders*, *51*(1), 45-59. https://doi.org/10.1007/s10803-020-04517-0
- Burt, D. B., Fuller, S. P., & Lewis, K. R. (1991). Brief report: competitive employment of adults with autism. *Journal of Autism and Developmental Disorders*, 21(2), 237-242. https://doi.org/10.1007/BF02284763
- Bury, S. M., Flower, R. L., Zulla, R., Nicholas, D. B., & Hedley, D. (2020). Workplace social challenges experienced by employees on the autism spectrum: an international exploratory study examining employee and supervisor perspectives. *Journal of Autism and Developmental Disorders*, *51*(5), 1614-1627. https://doi.org/10.1007/s10803-020-04662-6
- Conceição, L. R. da, Escalante, N. R. de F., & Silva, F. M. da. (2021). Autistas no mercado de trabalho: análise sobre as ações e práticas inclusivas. *Gestão Contemporânea*, 11(2), 203-221. https://estacio.periodicoscientificos.com.br/index.php/gestaocontemporanea/article/view/5 9/53
- Cooper, R., & Kennady, C. (2021). Autistic voices from the workplace. *Advances in Autism*, 7(1), 73-85. https://doi.org/10.1108/AIA-09-2019-0031
- Da Silva, B. X. F., Carolina Neto, V., & Gritti, N. H. S. (2020). Soft skills: rumo ao suceso no mundo profissional. *Revista Interface Tecnológica*, 17(1), 829-842. https://doi.org/10.31510/infa.v17i1.797
- Do Carmo, M. M. I., Gilla, C. G., & Quiterio, P. L. (2020). Um estudo sobre a inclusão de pessoas com deficiência no mercado de trabalho brasileiro. *Interacao Em Psicologia*, *24*(1), 448-458. https://doi.org/10.5380/PSI.V24I1.59972
- Djela, M. (2021). Change of autism narrative is required to improve employment of autistic people. *Advances in Autism*, 7(1), 86-100. https://doi.org/10.1108/AIA-11-2019-0041
- Gorenstein, M., Giserman-Kiss, I., Feldman, E., Isenstein, E. L., Donnelly, L., Wang, A. T., & Foss-Feig, J. H. (2020). Brief report: a Job-Based Social Skills program (JOBSS) for adults with autism spectrum disorder: a pilot randomized controlled trial. *Journal of Autism and Developmental Disorders*, 50(12), 4527-4534. https://doi.org/10.1007/s10803-020-04482-8
- Hayward, S. M., McVilly, K. R., & Stokes, M. A. (2018). "Always a glass ceiling". Gender or autism; the barrier to occupational inclusion. *Research in Autism Spectrum Disorders*, *56*, 50-60. https://doi.org/10.1016/j.rasd.2018.09.001
- Hayward, S. M., McVilly, K. R., & Stokes, M. A. (2020). Sources and impact of occupational demands for autistic employees. *Research in Autism Spectrum Disorders*, 76. https://doi.org/10.1016/j.rasd.2020.101571
- Hedley, D., Cai, R., Uljarevic, M., Wilmot, M., Spoor, J. R., Richdale, A., & Dissanayake, C. (2017). Transition to work: perspectives from the autism spectrum. *Autism*, *22*(5), 528-541. https://doi.org/10.1177/1362361316687697
- Howlin, P., Alcock, J., & Burkin, C. (2005). An 8 year follow-up of a specialist supported employment service for high-ability adults with autism or Asperger syndrome. *Autism*, *9*(5), 533-549. https://doi.org/10.1177/1362361305057871

- Instituto Brasileño de Geografía y Estadística. (2019). *Releitura dos dados de pessoas com deficiência no Brasil*. Ministério Da Saúde. https://www2.camara.leg.br/atividade-legislativa/comissoes/comissoes-permanentes/cpd/arquivos/cinthia-ministerio-da-saude
- Johnson, T. D., & Joshi, A. (2016). Dark clouds or silver linings? A stigma threat perspective on the implications of an autism diagnosis for workplace well-being. *Journal of Applied Psychology*, 101(3), 430-449. https://doi.org/10.1037/apl0000058
- Kevelson, S., Rahman, J., & Veenstra-VanderWeele, J. (2022). Autism Spectrum Disorders. In M. K. Dulcan (Ed.), *Dulcan's Textbook of Child and Adolescent Psychiatry*, (pp. 135-156) https://doi.org/10.1176/appi.books.9781615374809.md08
- Koch, L. C., Glade, R., Manno, C. M., Zaandam, A., Simon, L. S., Rumrill, P. D., & Rosen, C. C. (2021). On-the-job treatment of employees with disabilities: a grounded theory investigation. *Rehabilitation Counseling Bulletin*, 65(4), 294-309. https://doi.org/10.1177/0034355221993571
- Koffer Miller, K. H., Mathew, M., Nonnemacher, S. L., & Shea, L. L. (2017). Program experiences of adults with autism, their families, and providers: Findings from a focus group study. *Autism*, 22(3), 345-356. https://doi.org/10.1177/1362361316679000
- Kruse, D., Schur, L., Rogers, S., & Ameri, M. (2018). Why do workers with disabilities earn less? Occupational job requirements and disability discrimination. *British Journal of Industrial Relations*, *56*(4), 798-834. https://doi.org/10.1111/bjir.12257
- Leopoldino, C. B. (2015). Inclusão de autistas no mercado de trabalho: uma nova questão de pesquisa. *Revista Eletrônica Gestão & Sociedade*, 9(22), 853-868. https://doi.org/10.21171/ges.v9i22.2033
- Leopoldino, C. B., & Coelho, P. F. D. C. (2018). O processo de inclusão de autistas no mercado de trabalho. *Revista Economia & Gestão, 17*(48), 141-156. https://doi.org/10.5752/p.1984-6606.2017v17n48p141-156
- Lorenz, T., Brüning, C. R., Waltz, M., & Fabri, M. (2021). Not a stranger to the dark: discrimination against autistic students and employees. *Advances in Autism*, 7(1), 60-72. https://doi.org/10.1108/AIA-10-2019-0036
- Lorenz, T., Frischling, C., Cuadros, R., & Heinitz, K. (2016). Autism and overcoming job barriers: comparing job-related barriers and possible solutions in and outside of autism-specific employment. *PLOS ONE*, *11*(1), e0147040. https://doi.org/10.1371/journal.pone.0147040
- Maenner, M. J., Warren, Z., Williams, A. R., Amoakohene, E., Bakian, A. V., Bilder, D. A., Durkin, M. S., Fitzgerald, R. T., Furnier, S. M., Hughes, M. M., Ladd-Acosta, C. M., McArthur, D., Pas, E. T., Salinas, A., Vehorn, A., Williams, S., Esler, A., Grzybowski, A., Hall-Lande, J., ... Shaw, K. A. (2023). Prevalence and characteristics of Autism Spectrum Disorder among children aged 8 years Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2020. MMWR. Surveillance Summaries, 72(2), 1-14. https://doi.org/10.15585/mmwr.ss7202a1
- Maras, K., Norris, J. E., Nicholson, J., Heasman, B., Remington, A., & Crane, L. (2021). Ameliorating the disadvantage for autistic job seekers: An initial evaluation of adapted employment interview questions. *Autism*, *25*(4), 1060-1075. https://doi.org/10.1177/1362361320981319
- McKnight-Lizotte, M. (2018). Work-related communication barriers for individuals with autism: a pilot qualitative study. *The Australian Journal of Rehabilitation Counselling*, 24(01), 12-26. https://doi.org/10.1017/jrc.2018.4
- Morse, N. C., & Weiss, R. S. (1955). The function and meaning of work and the job. *American Sociological Review*, *20*(2), 191-198. https://doi.org/10.2307/2088325
- Murza, K. A. (2016). Vocational rehabilitation counselors' experiences with clients diagnosed with autism spectrum disorder: Results of a national survey. *Journal of Vocational Rehabilitation*, 45(3), 301-313. https://doi.org/10.3233/JVR-160831
- Nagib, W., & Wilton, R. (2019). Gender matters in career exploration and job-seeking among adults with autism spectrum disorder: evidence from an online community. *Disability and Rehabilitation*, 42(18), 2530-2541. https://doi.org/10.1080/09638288.2019.1573936
- Nicholas, D., Mitchell, W., Zulla, R., & Dudley, C. (2019). Perspectives of employers about hiring individuals with autism spectrum disorder: Evaluating a cohort of employers engaged in a jobreadiness initiative. *Journal of Vocational Rehabilitation*, 50(3), 353-364. https://doi.org/10.3233/jvr-191018

- Nicholas, D. B., Zwaigenbaum, L., Zwicker, J., Clarke, M. E., Lamsal, R., Stoddart, K. P., Carroll, C., Muskat, B., Spoelstra, M., & Lowe, K. (2017). Evaluation of employment-support services for adults with autism spectrum disorder. *Autism*, *22*(6), 693-702. https://doi.org/10.1177/1362361317702507
- Parr, A. D., Hunter, S. T., & Ligon, G. S. (2013). Questioning universal applicability of transformational leadership: examining employees with autism spectrum disorder. *Leadership Quarterly*, 24(4), 608-622. https://doi.org/10.1016/j.leaqua.2013.04.003
- Paula, C. S., Ribeiro, S. H., Fombonne, E., & Mercadante, M. T. (2011). Prevalence of pervasive developmental disorder in Brazil: a pilot study. *Journal of Autism and Developmental Disorders*, 41(12),1738-1742. https://doi.org/10.1007/s10803-011-1200-6
- Pearson, A., & Rose, K. (2021). A conceptual analysis of autistic masking: understanding the narrative of stigma and the illusion of choice. *Autism in Adulthood*, 3(1), 52-60. https://doi.org/10.1089/aut.2020.0043
- Pesonen, H., Waltz, M., Fabri, M., Syurina, E., Krückels, S., Algner, M., Monthubert, B., & Lorenz, T. (2020). Stakeholders' views on effective employment support strategies for autistic university students and graduates entering the world of work. *Advances in Autism*, 7(1), 16-27. https://doi.org/10.1108/AIA-10-2019-0035
- Peters, M., Godfrey, C., McInerney, P., Soares, C., Khalil, H., & Parker, D. (2015). *The Joanna Briggs Institute reviewers' manual 2015: methodology for JBI scoping reviews*. Joanna Briggs Institute.
- Pfeiffer, B., Braun, K., Kinnealey, M., Derstine Matczak, M., & Polatajko, H. (2017). Environmental factors impacting work satisfaction and performance for adults with autism spectrum disorders. *Journal of Vocational Rehabilitation*, 47(1), 1-12. https://doi.org/10.3233/jvr-170878
- Pfeiffer, B., Brusilovskiy, E., Davidson, A., & Persch, A. (2018). Impact of person-environment fit on job satisfaction for working adults with autism spectrum disorders. *Journal of Vocational Rehabilitation*, 48(1), 49-57. https://doi.org/10.3233/jvr-170915
- Rezende, M. G., Carvalho-Freitas, M. N. de., & Vieira-Silva, M. (2016). Crenças, atitudes e práticas dos profissionais de recursos humanos diante do cumprimento da lei de cotas. *Interação em Psicologia*, 19(1), 47-59. https://doi.org/10.5380/PSI.V19I1.31553
- Rodgers, J., Herrema, R., Garland, D., Osborne, M., Cooper, R., Heslop, P., & Freeston, M. (2018). Uncertain futures: reporting the experiences and worries of autistic adults and possible implications for social work practice. *The British Journal of Social Work, 49*(7), 1817-1836. https://doi.org/10.1093/bjsw/bcy117
- Seaman, R. L., & Cannella-Malone, H. I. (2016). Vocational Skills Interventions for Adults with Autism Spectrum Disorder: A Review of the Literature. *Journal of Developmental and Physical Disabilities*, 28(3), 479-494. https://doi.org/10.1007/s10882-016-9479-z
- Shattuck, P. T., Narendorf, S. C., Cooper, B., Sterzing, P. R., Wagner, M., & Taylor, J. L. (2012). Postsecondary education and employment among youth with an autism spectrum disorder. *Pediatrics*, 129(6), 1042-1049. https://doi.org/10.1542/peds.2011-2864
- Siedler, A., Idczak-Paces, E. (2021). Difficulties in employment perceived by individuals with ASD in Poland. *Advances in autism*, *7*(1), 49-59. https://doi.org/10.1108/AIA-11-2019-0042
- Shields-Wolfe, J., & Gallagher, P. A. (1992). Functional utilization of splinter skills for the employment of a young adult with autism. *Focus on Autistic Behavior*, 7(4), 1-16. https://doi.org/10.1177/108835769200700401
- Spoor, J. R., Bury, S. M., & Hedley, D. (2021). Non-autistic employees' perspectives on the implementation of an autism employment programme. *Autism*, *25*(8). https://doi.org/10.1177/13623613211012880
- Sung, C., Connor, A., Chen, J., Lin, C. C., Kuo, H. J., & Chun, J. (2018). Development, feasibility, and preliminary efficacy of an employment-related social skills intervention for young adults with high-functioning autism. *Autism*, *23*(6), 1542-1553. https://doi.org/10.1177/1362361318801345
- Talarico, M. V. T. da S., Dos Santos Pereira, A. C., & Goyos, A. C. de N. (2019). A inclusão no mercado de trabalho de adultos com Transtorno do Espectro do Autismo: uma revisão bibliográfica. *Revista Educação Especial*, *32*, 1-19. https://doi.org/10.5902/1984686x39795

- Taylor, J. L., & Seltzer, M. M. (2011). Employment and post-secondary educational activities for young adults with autism spectrum disorders during the transition to adulthood. *Journal of Autism and Developmental Disorders*, 41(5), 566-574. https://doi.org/10.1007/s10803-010-1070-3
- Taylor, J. L., & Seltzer, M. M. (2012). Developing a vocational index for adults with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 42(12), 2669-2679. https://doi.org/10.1007/s10803-012-1524-x
- Taylor, J.L., DaWalt, L.S., Marvin, A. R., Law, J.K., & Lipkin, P. (2019). *Autism*, 23(7), 1711-1719. https://doi.org/10.1177/1362361319827417
- Tint, A., & Weiss, J. A. (2017). A qualitative study of the service experiences of women with autism spectrum disorder. *Autism*, *22*(8), 928-937. https://doi.org/10.1177/1362361317702561
- Turnock, A., Langley, K., & Jones, C. R. G. (2022). Understanding stigma in autism: a narrative review and theoretical model. *Autism in Adulthood*, *4*(1), 76-91. https://doi.org/10.1089/aut.2021.0005
- Uruguay. (2018, November 8). Ley n.º 19.691. Aprobación de normas sobre la promocion del trabajo para personas con discapacidad. https://www.impo.com.uy/bases/leyes/19691-2018
- Vincent, A., Da Fonseca, D., Baumstarck, K., Charvin, I., Alcaraz-Mor, R., & Lehucher-Michel, M. P. (2019). The quality of life and the future of young adults with Asperger syndrome. *Disability and Rehabilitation*, 42(14), 1987-1994. https://doi.org/10.1080/09638288.2018.1544297
- Yokotani, K. (2011). Avoidant Attachment Style Indicates Job Adaptation of People with High Functional Autistic Spectrum Disorders. *Education and Training in Autism and Developmental Disabilities*, 46(2), 291-296. https://www.jstor.org/stable/23879698
- Waisman-Nitzan, M., Schreuer, N., & Gal, E. (2020). Person, environment, and occupation characteristics: What predicts work performance of employees with autism? *Research in Autism Spectrum Disorders*, 78, 101643. https://doi.org/10.1016/j.rasd.2020.101643
- Walkowiak, E. (2021). Neurodiversity of the workforce and digital transformation: The case of inclusion of autistic workers at the workplace. *Technological Forecasting and Social Change, 168,* 120739. https://doi.org/10.1016/j.techfore.2021.120739
- Wehman, P., Lau, S., Molinelli, A., Brooke, V., Thompson, K., Moore, C., & West, M. (2012). Supported employment for young adults with autism spectrum disorder: preliminary data. *Research and Practice for Persons with Severe Disabilities*, 37(3), 160-169. https://doi.org/10.2511/027494812804153606
- Zalewska, A., Migliori, A., Butterworth, J. (2016). Self-determination, social skills, job search, and transportation: Is there a relationship with employment of young adults with autism? *Journal of Vacational rehabilitation*, 45, 225-239. https://doi.org/10.3233/JVR-160825

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