Trends
in Psychiatry and Psychotherapy

JOURNAL ARTICLE PRE-PROOF

(as accepted)

Review Article

Clinical characteristics of Autism Spectrum Disorder in older adults: a scoping review

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http://doi.org/10.47626/2237-6089-2026-1369

Original submitted Date: 04-May-2026

Accepted Date: 16-Jul-2026

Clinical characteristics of Autism Spectrum Disorder in older adults: a scoping review

Short Title: ASD in the Elderly: A Scoping Review

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Abstract

Introduction: Autism Spectrum Disorder (ASD) is a lifelong condition; however, literature regarding its manifestation in old age remains scarce.

Objective: To synthesize descriptive studies on the clinical characteristics of ASD in the elderly, aiming to improve diagnosis and quality of life.

Methodology: This is a scoping review based on the Joanna Briggs Institute guidelines and reported according to PRISMA-ScR. Searches were conducted in MEDLINE/PUBMED and SCIELO databases, covering the period from 2011 to 2026, focusing on descriptive studies with participants aged over 50 years. Ultimately, 18 articles were selected and analyzed.

Results: The evolution of autism symptoms proved to be complex and non-linear; while some behaviors and psychiatric symptoms tend to decline with age, social difficulties may persist or worsen. From a cognitive perspective, data suggest an aging pattern parallel to neurotypicals, although there are reports of specific deficits in working memory and attention. An alarming burden of psychiatric

comorbidities was identified, highlighting depression and high rates of suicidality, as well as significant clinical comorbidities.

Conclusion: Older adults with ASD constitute a vulnerable population. There is an urgent need for prospective longitudinal studies to adequately map the aging trajectories of this population.

Keywords: Autism Spectrum Disorder; Aged; Aging; Diagnosis; Phenotype.

Introduction

The nosological entity currently termed Autism Spectrum Disorder (ASD) was first described by Leo Kanner in 1943 as “Autistic Disturbances of Affective Contact,” in a work involving a group of 11 young patients [1]. As this is considered a life-long condition, the first patients to receive this diagnosis are now octogenarians. Despite this, little is known about the nuances of this disorder in older individuals [2,3].

According to the Global Burden of Disease study in 2021, an estimated 61.8 million individuals globally were on the autism spectrum in 2021[4]. A study conducted in the United Kingdom found that the prevalence of ASD in adults was 0.9% among 45–74 years, and 0.8% in those over 75 years [5]. These figures are close to those found in a recent study of the Brazilian population, which indicated a prevalence of 0.86% in individuals over 60 years—data extracted from a self-diagnosis questionnaire included in the latest census [6]. It is projected that in the United States, the prevalence of individuals over 65 years diagnosed with ASD will be approximately 700,000 by 2030 [2]. In 2021, ASD was responsible for 11.5 million Disability-Adjusted Life Years (DALYs), positioning it among the top ten non-fatal causes of health burden for people under 20 years [4].

Considering that, in recent decades, the Western world has experienced a concomitant increase in the general population's life expectancy, associated with the rising prevalence of ASD, the need to deepen the understanding of this population's aging becomes a priority. In March 2010, Piven and associates defined a research agenda on the topic. Their work highlighted the necessity of conducting new descriptive studies on the clinical characteristics of ASD in older adults, in addition to longitudinal studies on the prognosis of this condition in advanced ages [2]. In 2020, a review by Wise and colleagues indicated that this is

still an under-explored topic requiring further research [3].

Therefore, the present study aimed to research and synthesize descriptive studies, which address the clinical characteristics of ASD in older adults, such as diagnosis, symptomatic and phenotypic manifestations, cognitive profile, psychiatric and clinical comorbidities, social functioning, quality of life, and other information considered relevant for the clinical understanding of the condition. The objective was to enhance the available knowledge and provide a foundation for more precise diagnoses, consequently improving this population's quality of life. The study seeks to fill a critical gap, as the majority of scientific evidence remains focused on childhood, leaving healthcare professionals without adequate resources for diagnosis in advanced ages.

Methodology

A scoping review was conducted following the *Joanna Briggs Institute* (JBI) manual. The work was reported according to the *Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews* (PRISMA-ScR). The research protocol was registered on the *Open Science Framework* (OSF) on January 16, 2026, receiving the DOI 10.17605/OSF.IO/2UG7F.

The review sought to answer the following question: *What are the clinical characteristics identified in descriptive studies of older adults with Autism Spectrum Disorder*? The search was conducted on the MEDLINE/PUBMED and SCIELO platforms, utilizing combinations of terms that included “Autism Spectrum Disorder”, “Older Adults” and “Clinical Characteristics”. The search strategies are provided in Appendix 1.

The search was conducted on 17 January 2026. A total of 161 articles were found in MEDLINE/PUBMED and 68 articles in SCIELO, totaling 229 articles. The Rayyan® platform was used for duplicate detection, and no duplicates were identified. No reference searching was performed. Primary screening was conducted based on reading the title and abstract, followed by secondary screening, in which eligibility criteria were applied after reviewing the methodology. This process was performed, using the Rayyan® platform, by two independent and blinded authors. Disagreements were arbitrated by the third

author.

Studies were included if they involved a sample of individuals over 50 years of age, or aggregated data where the mean age of participants exceeded this threshold. In addition to studies with participants who had a formal diagnosis of ASD (DSM-IV, DSM-V, ICD-9, ICD-10, ICD-11), those that included participants with an informal diagnosis (autistic trait scales, such as the AQ, ADOS-2, BAPQ) were also included. Methodological adaptations to the protocol were necessary, specifically, broadening the age range and including informal diagnoses, to increase the volume of available literature. Regarding the clinical characteristics assessed, included studies explored data on diagnosis, symptomatic and phenotypic manifestations, cognitive profile, psychiatric and clinical comorbidities, social functioning, quality of life, and other information deemed relevant for a clinical understanding of the condition under investigation. Only descriptive, cross-sectional, or longitudinal study designs were considered. Were included articles published in Portuguese or English, between 2011 and 2026. Studies were excluded if the analysis of data from younger adults was grouped, with a mean age under 50 years; also were excluded studies with a primary focus on another condition, or that did not analyze autistic characteristics as a specific variable. Studies primarily focused on interventions or treatments, reviews, case reports, preclinical studies, editorials, letters to the editor, or conference abstracts were also excluded.

The first author selected 18 articles and the second selected 15, resulting in 7 disagreements. Following arbitration by the third author, a total of 18 articles were ultimately selected. Regarding the included articles, there were 10 cross-sectional studies, 5 retrospective cohort studies, and 3 prospective cohort studies. The topics assessed in the papers covered: Comorbidities (11 papers), Cognition (6 papers), Phenotypic Characteristics/Symptoms (4 papers), Neuromorphology (2 papers), Functionality (1 paper), and Quality of Life (1 paper). The illustrative selection diagram is presented in Figure 1. The selected studies are presented in Appendix 2, in the data extraction spreadsheet.

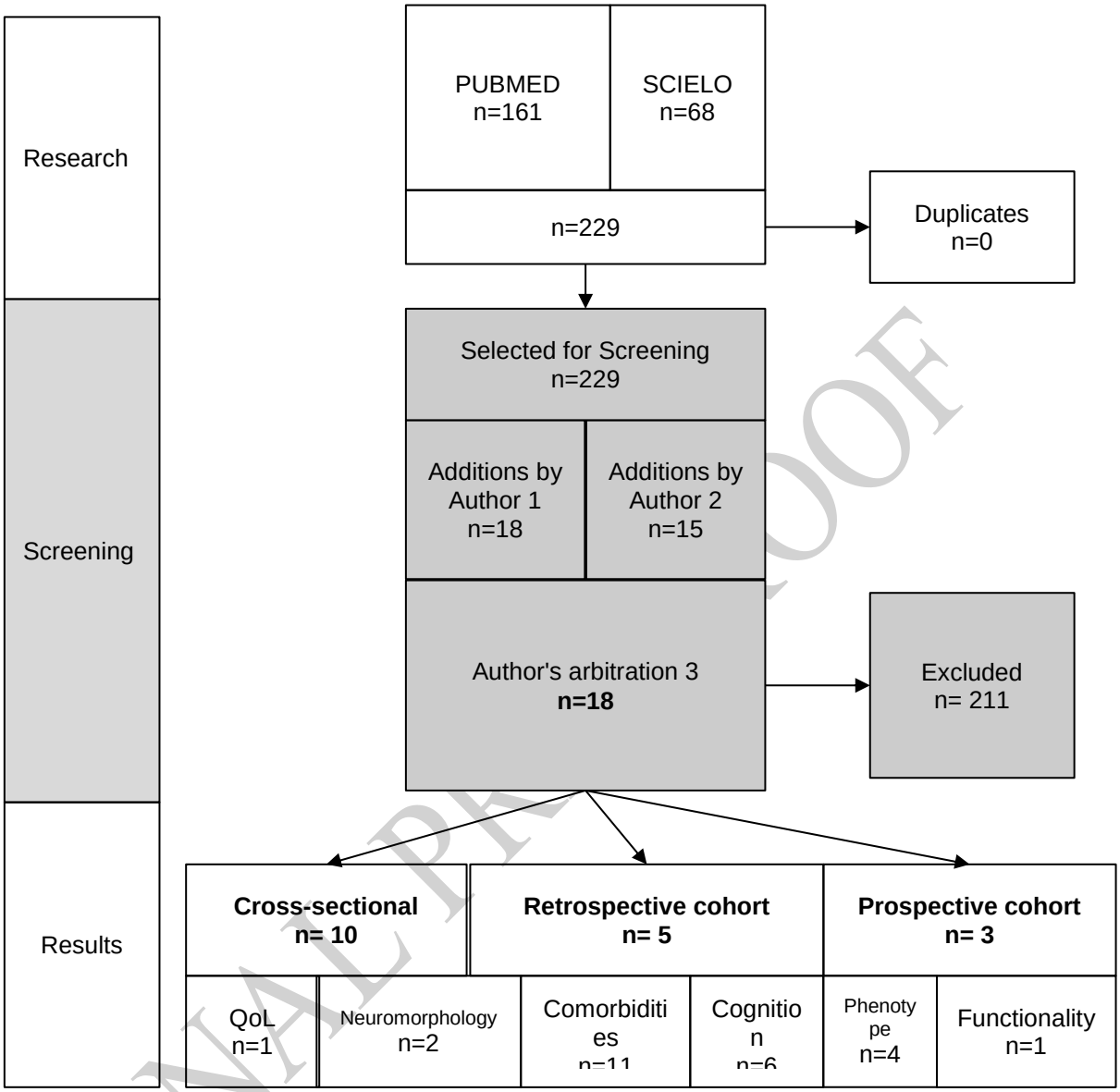

Figure 1 - Selection Diagram

AI-assisted technologies, specifically Gemini and NotebookLM, were used to assist with the translation into English and to improve the overall readability and language of the manuscript, complementing the writing process. The authors take full responsibility for the final submitted text.

Results

Autism Symptoms and Phenotypic Characteristics

Regarding phenotypic characteristics and their evolution with age, the data are divergent. One cross-sectional study, which applied the *Autism Spectrum Quotient* (AQ), *Sensory Sensitivity Questionnaire* (SSQ), and *Interpersonal Reactivity Index* (IRI) across different age groups of individuals previously diagnosed with ASD (by DSM-IV), concluded that the *total AQ score*, *Attention to Detail*, and SSQ scores increased with age until reaching a peak in middle age (a non-linear, "inverted U" pattern), declining in older adults. Conversely, the *Social Skills* subscale showed a linear decline with aging. Measures of *Empathy* (IRI) remained stable with aging [7]. Another cross-sectional study, which assessed individuals with a prior formal diagnosis, concluded that there was no significant effect of age on *Autism Symptoms*, whether via self-report (SRS-2) or clinical evaluation (ADOS-2) [8].

Regarding the *Broad Autism Phenotype* (BAP), a cross-sectional study that utilized an online convenience sample (non-random) to compare age differences in individuals with high and low scores on the BAPQ scale concluded that *total scores* were lower in older adults compared to younger adults. Specifically, the *Pragmatic Language* and *Aloofness* phenotypes were lower among middle-aged and older adults compared to younger adults. *Rigidity* did not show a significant association with age [9].

A naturalistic retrospective cohort study was conducted to evaluate the evolution of *Behavioral and Neuropsychiatric Symptoms* (BNPS) across aging in patients with a prior formal diagnosis using the DSM-V, and it revealed a significant decline in the prevalence of 12 out of 13 analyzed symptoms over a mean period of 25 years. Furthermore, when comparing two groups of individuals (<50 vs. ≥50 years), *Physical Aggression* was significantly lower in the older group (10% vs. 32.3%) [10]. A caveat of this study is that only patients linked to a community service agency were assessed, and it is posited that institutional support may have influenced the reduction of symptoms over the follow-up period.

Cognition

Regarding cognition, a prospective study that compared a group of older adults with high autistic traits (HAT+, defined by an AQ score of ≥ 23 points) to a control group (HAT-, defined by AQ < 23) found that the HAT+ group exhibited higher baseline scores for *Subjective Cognitive Decline* (SCD) and, after age 60, demonstrated a significantly greater annual rate of increase in these complaints compared to the control group (0.05 vs 0.02). Nevertheless, no significant difference was observed in the incidence rate of *Mild Cognitive Impairment* (MCI) between the groups (8.9% in the HAT+ vs 7.8% in the HAT-) over a 10-year period [11]. A pertinent consideration is that the choice of the 23-point cutoff on the AQ scale may have resulted in a reduction of the analysis's specificity.

A retrospective cross-sectional study observed that the presence of *autistic traits* (defined by the GARS-2 scale) was significantly associated with greater severity of MCI and an earlier age of symptom onset (71.1 vs 76.6 years). In the authors' assessment, the data suggest that neurodegeneration may unmask subclinical autistic phenotypes or generate overlapping symptoms, indicating shared neuroanatomical substrates [12]. It is important to consider the reduced sample size and the use of a scale not validated for adults in the definition of autistic traits.

A cross-sectional study, conducted with participants from the online British PROTECT cohort, compared cognitive performance between a group of older adults with high autistic traits (ASD group, defined and selected using the cohort's specific questionnaire) and a control group (matched for age, symptoms of depression, and anxiety). The ASD group performed significantly worse on tasks measuring: Working Memory (visual, verbal, and spatial), Secondary Visual Episodic Memory, Sustained Attention, and Information Processing Speed. No significant differences were found between the groups on tasks assessing: Verbal Reasoning, Simple Reaction Time, and Reaction Time for Visual Episodic Memory Retrieval. Furthermore, in this study, the ASD group self-reported significantly more SCD than the control group; however, this difference was no longer significant when controlled for symptoms of depression [13]. Another study, also conducted with participants from the PROTECT cohort but which performed a 7-year prospective follow-up, separated the participants into three groups: high,

intermediate, and low autistic traits (also based on the cohort's specific questionnaire), to evaluate the decline of Spatial Working Memory (SWM). The findings suggest that middle-aged and older adults with high autistic traits do not show an increased risk of accelerated decline in SWM, supporting the hypothesis of parallel aging [14].

Regarding the progression to a dementia process, a recent retrospective cohort assessed the general prevalence of Alzheimer's Disease and Related Dementias (ADRD) in autistic individuals (diagnosis registered by ICD-9 OR ICD-10), observing an increase from 2.09% to 8.11% over 8 years (2011-2019); for the group aged 75 years or older, the prevalence rose from 16.5% to 29.3%. Individuals with ASD without comorbidity with Intellectual Disability (ID) had a later age of onset compared to those with comorbidity with ID (~63-67 vs. ~55 years) [15].

Neuromorphology

Two studies aimed to understand the impact of aging on the neuromorphology of autistic patients (in both, patients with a previous formal diagnosis, ADOS-4 score ≥7 or AQ ≥26 were accepted; patients with IQ < 80 were excluded) [16,17]. The first aimed to evaluate cortical morphology in middle-aged and older adults with ASD, using Magnetic Resonance Imaging (MRI); the ASD group was divided into 2 subgroups, younger (mean age 40.99 years) and older (mean age 62.35 years), with respective control groups. The results of this study observed age-consistent losses in cortical volume and thickness in both groups, with no significant differences between the ASD groups and the control groups. The authors concluded that the findings do not indicate a pattern of premature aging in gray matter morphology in individuals with ASD, suggesting a decline parallel to typical aging [16].

The second study sought to characterize the white matter microstructure and its relationship with age, in addition to testing associations with Intra-Individual Reaction Time Variability (IIVRT). The sample was divided into two groups, ASD (mean age 51.32 years) and control (mean age 50.47 years), and age was analyzed as a continuous variable in hierarchical linear regression models to investigate group-by-age interactions. It was observed that the

increase in diffusivity in projection and association tracts (signaling microstructural decline) is more accentuated in the ASD group. Furthermore, greater instability in IIVRT was observed in the ASD group, indicating lower white matter integrity—in a pattern that resembles observations typically reported in cognitive aging. The authors conclude, speculatively, that the findings may indicate different aging patterns in the ASD group (in relation to neurotypicals), but emphasize that implications for daily life still need to be tested in longitudinal studies [17].

Psychiatric Comorbidities

A prospective cohort study aimed to assess autistic characteristics, using the AQ scale, in depressed older adults and compare them with a control group (non-depressed). The study identified that 31% of older adults with Depressive Disorder scored above the cutoff for ASD characteristics (AQ-28 ≥ 70), versus 2.6% in the control group. Furthermore, elevated AQ-28 scores were associated with a greater number of comorbid anxiety disorders, specifically *Social Phobia*, *Agoraphobia*, and *Generalized Anxiety Disorder*, although the study did not select individuals with diagnoses of anxiety disorders [18].

A large cross-sectional, population-based study (2011 Scottish census) investigated the prevalence of comorbidities in adults with ASD (the ASD group was selected based on self-report or third-party report during the census assessment). Individuals in the ASD group aged over 65 years exhibited a significantly higher prevalence of other mental disorders compared to the control group (37.2% vs. 4.6%; OR: 1.5). While the prevalence of mental disorders in the general population drastically decreased with age (from 10.1% in younger adults to 4.6% in older adults), in the autistic population it increased from 27.4% in younger adults (25-34 years) to 37,2% in older adults (≥65 years) [19].

A large retrospective cohort compared the prevalence of health conditions in an autistic population (defined by ICD-10) with the general population. Autistic older adults demonstrated significantly higher odds for nearly all examined mental health conditions compared to the age-matched control group. Expressive differences were noted in: *Schizophrenia* and *Psychotic Disorders* (OR: 25.3);

Attention-Deficit/Hyperactivity Disorder (*ADHD)* (OR: 24.4); *Personality Disorders* (OR: 24.1) [20].

Yarar et al. (2022) compared the prevalence of mental disorders across different age groups within the ASD group. The older group presented significantly lower prevalences of *Anxiety*, *Somatoform Disorders*, and *Eating Disorders* compared to the younger group. There was no statistically significant difference for *Depression*, *Obsessive-Compulsive Disorder, ADHD*, and *Substance Use Disorder* [8].

Suicidality

One of the most critical issues regarding aging in autistic patients is suicidality. A cross-sectional study involving participants from the PROTECT cohort investigated the prevalence of self-harm and suicidality in older adults with high autistic traits (ASD group), according to the cohort's specific criteria, and compared this information with a control group presenting few traits. The ASD group showed significantly higher rates for: *Suicidal Ideation* and *Self-Harm Thoughts* (73% vs. 30%); *Deliberate Self-Harm* (20% vs. 5%); and *Suicidal Self-Harm* (13% vs. 3%). The ASD group had a 5 to 6 times greater probability (OR: 5.01–6.43) of presenting *Self-Harm* and *Suicidality behaviors* compared to age-matched peers, in addition to using more dangerous methods. The elevated rates of self-harm and suicidality in the ASD group persisted even after controlling for depressive symptoms. Regarding the effect of aging in the ASD group, more advanced age was associated with lower rates of self-harm contemplation, deliberate self-harm, and suicidal self-harm [21].

The elevated rates of suicidality in autistic groups of advanced age were also found by Hand et al. (2020), in which autistic older adults had an 11-fold greater chance of having a medical encounter for *Suicidality* or *Intentional Self-Harm* (OR = 11.1) [20]. In the study by Liu et al. (2023), older and middle-aged adults with an ASD diagnosis exhibited a higher cumulative incidence of *Intentional Self-Harm* (RR 7.08) and *Poisoning* (RR 4.63) when compared to the control group (without ASD); the risk was higher for individuals with ASD without co-occurring ID (compared to those with ID) [22].

Clinical comorbidities

Data from the 2011 Scottish census indicates high rates of clinical comorbidities in older adults (≥65 years) with ASD (self-reported), compared to a control group (without ASD). Notable findings include *Visual Impairment/Blindness* (30.4% vs 9.0%); *Hearing Loss/Deafness* (45.6% vs 25.4%); *Physical Disability* (45.1% vs 20.5%) [19]. Another cohort study yielded concordant results, showing that older autistic adults (defined by ICD-10) had significantly higher odds for nearly all examined physical health conditions compared to the control group (non-ASD older adults), with pronounced differences for *Epilepsy, Parkinson's Disease*, *Cognitive Disorders*, *Osteoporosis, Heart Diseases*, *Cerebrovascular Disease*, *Osteoarthritis, Gastrointestinal Disorders* [20]. A retrospective cohort, utilizing data from the Swedish national patient register, investigated the association between ASD (defined by ICD-9 or ICD-10) and other health conditions. The ASD group showed significantly increased risk for 14 of the 39 conditions assessed, notably for *Iron Deficiency Anemia*, *Type 2 Diabetes Mellitus*, *Cystitis*, *Heart Failure*, *Obesity*, and higher cumulative incidence for *Bodily Injuries* and *Falls*. The risks were lower for *Ischemic Heart Disease* and *Osteoarthritis* [22].

A retrospective cohort study aimed to evaluate the postoperative outcomes in patients with ASD (formal diagnosis by ICD-9 or ICD-10) who underwent *Total Knee Arthroplasty* (TKA) for osteoarthritis, comparing the incidence of adverse events at 90 days and surgical revision rates at 5 years with a control group (without ASD). The patients with an ASD diagnosis who underwent TKA were significantly younger (mean age 60.0 vs. 65.8 years) and presented a higher comorbidity burden (CCI 7.8 vs. 4.2) compared to the control group. The ASD group showed higher odds of aggregated adverse events; there was a significant increase in the odds of: *Sepsis* (OR 3.11); *Pneumonia* (OR 3.55); *Urinary Tract Infection* (OR 3.02). Despite this, there was no significant difference between the groups in the surgical revision rates at 5 years (4.9% in the ASD group vs. 4.5% in the control group) [23].

A cross-sectional study, utilizing online community recruitment, aimed to evaluate differences in menopause symptoms in a group of autistic patients (defined by the RAADS-14), compared to a non-autistic control group. The results

indicated that the autistic group reported significantly higher levels of *Psychological* and *Somatic Symptoms* than the control group, regardless of the menopause stage. No statistically significant difference was found in the overall total score for *Vasomotor Symptoms* between the two groups. An important finding of this study was that the autistic group did not exhibit a reduction in symptoms in the post-menopause period, maintaining high levels of psychological, somatic, and vasomotor discomfort, in contrast to the control group which showed improvement [24].

Functionality and Quality of Life

A retrospective study compared cohorts of autistic patients (<50 vs. ≥50 years) linked to a community service agency and found no significant difference in the need for *residential or vocational supervision* between the groups, suggesting that the need for support may persist in old age [10].

Quality of Life (QoL) was analyzed as an independent variable in a single cross-sectional study. This study found that the ASD group reported lower QoL across all domains compared to controls. Furthermore, depression was shown to be the strongest predictor of QoL, surpassing autism severity or *Intelligence Quotient* (IQ). When evaluating aging, although no general effect on *global*, *physical*, *psychological*, or *environmental QoL* was observed, older autistic adults reported significantly better *social QoL* than younger autistic adults, a pattern that did not repeat in the control group [8].

Discussion

The expression of phenotypic characteristics appears to fluctuate with aging, depending on the study context. The studies included in this review suggest a linear decline trend in autistic traits. This conclusion is supported by the convergence of three cross-sectional studies, which indicate a lower prevalence of traits/symptoms in older populations [7–9]. Additionally, the longitudinal observation of patients demonstrated that BNPS decreased with age [10], while a report indicated better social QoL in the older autistic group compared to younger individuals [8]. Despite this, associative measures suggest that some traits may remain stable (Rigidity, Empathy) or even worsen (Social Skills) [7,9].

Furthermore, the work by Lever and Geurts suggests a non-linear evolution pattern (an "inverted U" shape), where the self-report of autistic characteristics peaks in middle age (40-53 years) and declines in older adulthood [7].

Regarding studies that assessed cognition in older adults with autism, the literature is divergent in determining whether there is an accelerated or parallel pattern, with the exception of cases comorbid with ID. The findings of a cross-sectional study suggest that older adults with high autistic traits exhibit an uneven cognitive profile, with specific difficulties in working memory, sustained attention, and information processing [13], whereas a prospective cohort study, which specifically assessed the decline of *Spatial Working Memory*, found no differences compared to the general population [14], supporting the hypothesis of parallel aging. Data from a retrospective study report an increase in the prevalence of ADRD in patients with ASD in recent years [15], while a cross-sectional study associated the presence of autistic traits with earlier onset and greater severity of MCI [12]. Conversely, two studies with concordant results indicate that older adults with high BAP characteristics may exhibit an increase in the prevalence of SCD, which is disproportionate to objective cognitive decline [11,13]. This increase in subjective complaints appears to be related to psychological distress [11], considering that the prevalence of SCD was no longer significant when controlled for the presence of current depressive symptoms [13].

The two neuroimaging studies conducted, despite being limited by their cross-sectional methodology, suggest a parallel evolution of cortical morphology to that of neurotypical individuals [16]. However, signs of a more pronounced microstructural decline in projection and association tracts were observed in the group of older autistic adults, which does not necessarily point to accelerated cognitive decline [17], and could be an expression in older adults of the underconnectivity hypothesis, requiring further investigation into the implications for daily life impairments.

There was an evident consensus regarding the high burden of clinical comorbidities. The older adult population with ASD presented significantly higher risks for a vast range of conditions [19,20,22]. Worse outcomes were observed in surgical procedures [23], as well as a more adverse experience with menopause [24]. The high prevalence of visual and auditory impairments in this population is a

critical finding, given that such sensory losses can exacerbate the reciprocal communication difficulties already characteristic of autism [19]. Regarding functionality, older adults with ASD may continue to demand intensive levels of support [10], and in light of the comorbidity findings, it is likely that this need will become more substantial with aging.

According to the results of this study, older autistic adults (or those with high autistic traits) exhibit elevated rates of various comorbid psychiatric disorders [18–20]. Depression warrants particular attention, as, in addition to its high comorbidity [18], it was demonstrated to be the strongest predictor of QoL, surpassing autism severity or IQ [8]. Furthermore, older adults with high autistic traits present alarming rates of suicidal ideation and self-harm, with a 5- to 6-fold greater risk compared to neurotypical peers, persisting even after controlling for depressive symptoms [21]. Regarding the impact of aging, the results were conflicting. The Rydzewska study suggests that the rate of psychiatric comorbidities increased after 65 years in the autistic population [19]; conversely, the Yarar study found that older autistic adults have significantly lower prevalences of Anxiety, Somatoform Disorders, and Eating Disorders, with no statistically significant differences for Depression, OCD, ADHD, and SUD [8]. Similarly, more advanced age was associated with lower rates of contemplation of self-harm, deliberate self-harm, and suicidal self-harm among groups with high autistic characteristics [21]. Given the high comorbidity rate with schizophrenia and personality disorders, and considering the symptomatic overlap between these conditions, the substantial risk of underdiagnosis of ASD in this population is emphasized. It is plausible that autistic characteristics are frequently underreported or mistakenly attributed to these other psychiatric conditions.

Extrapolating the findings of this study, the clinical presentation of autism in older adults, when compared to younger adults, is marked by greater heterogeneity. This is due to the developmental pattern of phenotypic symptoms (in which some tend to remain stable, while others appear to decline) and their interdependence with the accumulation of psychiatric and non-psychiatric comorbidities. Thus, ASD in older adults should not be understood as the persistence of younger-adult autism into old age, but as a lifelong

neurodevelopmental condition whose clinical phenotype may be reshaped by aging, cumulative life experiences, and health-related vulnerabilities.

Conclusions

This review points to a fragmented scenario. The understanding of aging in Autism Spectrum is hindered by significant methodological limitations in the available studies. There is an excessive reliance on cross-sectional data, which may underestimate the complexity of aging in autism due to survival bias or cohort effects. A wide variety of instruments and scales were used in the studies, some of which lacked adequate validation. Additionally, there is a lack of a consistent definition for "older adult" in autism, ranging from 45 to 65 years.

Nevertheless, it is possible to deduce that this is a highly vulnerable population. The evolution of symptoms, which is apparently non-linear, indicates a relative cognitive stability, maintained under high demand. This is reflected in an accumulation of clinical or mental comorbidities, with high burdens of suffering and expressive numbers in suicidality measures. In this regard, efforts are necessary to better comprehend this context, and to recover and care for this "lost generation" in a more assertive and integrated manner.

Limitations

Only articles published in Portuguese and English were included, the literature search was restricted to only two databases, and did not include searching the references of the selected papers, which may have limited the breadth of the evaluation. The adoption of the 50-year cutoff and in this study may have excluded relevant work. Furthermore, a gender-specific analysis was not performed.

Implications and next steps

The replacement of cross-sectional designs with prospective longitudinal studies is proposed to track the evolution of phenotypic characteristics, BNPS, cognition, neuromorphology, outcomes in clinical and psychiatric comorbidities, QoL and functionality. It is crucial to monitor individual trajectories to generate more robust data on the aging of this population. It is recommended to consider

the early onset of old age in autistic individuals (e.g., 45-50 years), given the high burden of comorbidities. Studies must include simultaneous measures of self-report, third-party report, and clinical observation, due to the discrepancies found in the studies evaluated in this work.

Given the dissimilarity between individuals with a formal ASD diagnosis and those in the BAP, future research should be conducted to differentiate the outcomes for these two groups. Moreover, it is important to explore gender's peculiarities.

Furthermore, the necessity to develop age-appropriate ASD criteria is emphasized, considering the specificities, limitations, and diagnostic history of this population. The tools must be sensitive to the sensory and motor changes of aging. It is a priority to investigate the biological and environmental mechanisms that link autism to the high burden of comorbidities in old age, in order to inform integrated clinical care guidelines, promote better Global Health, and Suicide Prevention.

A preliminary version of this protocol was registered on the Open Science Framework (DOI: 10.17605/OSF.IO/2UG7F). This study has not been previously presented at any scientific meetings or published as a preprint. No funding originating from non-commercial institutions, foundations, or government grants was received. The authors declare no potential conflicts of interest of any type (financial, commercial, political, academic, or personal) concerning the publication of this article.

Author contributions: CRediT TaxonomyJoão Silva GontijoConceptualization-Lead, Data curation-Lead, Formal analysis-Lead, Funding acquisition-Lead, Investigation-Lead, Methodology-Lead, Project administration-Lead, Resources-Lead, Software-Lead, Supervision-Lead, Validation-Lead, Visualization-Lead, Writing - original draft-Lead, Writing - review & editing-EqualMarcelo H MartinsConceptualization-Supporting, Data curation-Supporting, Formal analysis-Supporting, Funding acquisition-Supporting, Investigation-Supporting, Methodology-Supporting, Project administration-Supporting, Resources-Supporting, Software-Supporting, Supervision-Supporting, Validation-

Supporting, Visualization-Supporting, Writing - original draft-Supporting, Writing - review & editing-EqualLucas AlvesConceptualization-Supporting, Data curation-Supporting, Formal analysis-Supporting, Funding acquisition-Supporting, Investigation-Supporting, Methodology-Supporting, Project administration-Supporting, Resources-Supporting, Software-Supporting, Supervision-Supporting, Validation-Supporting, Visualization-Supporting, Writing - original draft-Supporting, Writing - review & editing-Supporting

Handling Editor: Mirela Moreno

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Supplementary material

Appendix 1 - Search Strategies

PUBMED: (((((Aged[MESH] OR Aged[TIAB] OR Aging*[TIAB] OR "Geriatric Psychiatry"[TIAB] OR "Older age"[TIAB] OR "Middle Aged"[MESH] OR "Middle Aged"[TIAB]) AND ("Autism Spectrum Disorder"[MESH] OR "Autism Spectrum Disorder*"[TIAB] OR "Autistic Disorder*"[TIAB] OR Autism[TIAB] OR "Autistic traits"[TIAB] OR "Asperger Syndrome"[TIAB] OR "pervasive developmental disorder"[TIAB])) AND (Diagnosis[MESH] OR diagnosis*[TIAB] OR manifestations[TIAB] OR Phenotype[MESH] OR Phenotype[TIAB] OR Comorbidity[TIAB] OR Prevalence[TIAB] OR characteristics[TIAB] OR "clinical profile"[TIAB] OR phenomenology[TIAB] OR symptoms[TIAB] OR behaviors[TIAB] OR "neuropsychiatric features"[TIAB])) AND ("Cross-Sectional Studies"[Mesh] OR "Observational Study"[pt] OR "Cohort Studies"[Mesh])) NOT ("Child"[Mesh] OR "Infant"[Mesh] OR "Adolescent"[Mesh])) NOT (Letter[pt] OR Editorial[pt] OR Comment[pt] OR "Review"[pt] OR "Case Reports"[pt]). Filters: from 2011 - 2026

SCIELO: ((Idoso* OR Envelhec* OR Geriatr* OR "Meia Idade" OR "Terceira Idade" OR Aged OR Aging OR Elderly OR "Middle Aged")) AND ((Autismo OR Autista* OR Asperger OR "Transtorno do Espectro Autista" OR TEA OR Autism OR Autistic OR "Autism Spectrum Disorder" OR ASD)) AND ((Diagnostico* OR Manifesta* OR Fenótipo* OR Comorbidade* OR Prevalencia OR Característica* OR "Perfil Clinico" OR Fenomenologia OR Sintoma* OR Comportamento* OR Diagnosis OR Phenotype OR Comorbidity OR Prevalence OR Characteristics OR "Clinical Profile" OR Phenomenology OR Symptoms OR Behaviors)). Filters: from 2011 - 2026.

Appendix 2 - Data extraction spreadsheet

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Autism Characteristics in Older Adults with Depressive Disorders. **Geurts et al. 2016**. Netherlands	N: 372, Mean age: 70 years. Depression group: N: 258, Mean: 70.1. Control group: N: 114, Mean: 69.2. ASD Criteria: AQ-28 (cutoff: 70). Context: Data analysis derived from NESDO†.	Objectives: To examine ASD characteristics in older adults with and without depression. Design: Prospective, naturalistic, and multicenter cohort. Outcome: Comorbidities (Depressive disorder, anxiety disorders).	31% of older adults with Depressive Disorder scored above the cutoff for ASD, versus 2.6% in the control group. High scores on the AQ-28 were associated with a higher number of anxiety disorders.	Use of screening instrument (AQ-28). Possible overlapping of symptoms between depression, anxiety, and ASD. Risk of selection bias for assessing anxiety disorders, as the selection was restricted to a depressive disorder diagnosis.
Gray Matter Characteristics in Mid and Old Aged Adults with ASD. **Koolschijn and Geurts. 2016.** Netherlands	N: 100. ASD Group 1: N: 26, Mean: 40.9. Control Group 1: N: 24, Mean: 39.9. ASD Group 2: N: 25, Mean: 62.3. Control Group 2: N: 17, Mean: 59.8. ASD Criteria: Formal previous diagnosis; ADOS-4 (≥ 7); AQ (≥ 26). Context: Participants recruited from a large-scale behavioral study.	Objectives: To evaluate cortical morphology in middle-aged and older adults with ASD. The study was conducted in a medical center using high-resolution structural MRI. Design: Cross-sectional. Outcome: Neuromorphology (cortical volume, thickness, surface area, and gyrification).	Age-related loss of cortical volume and thickness was observed in both groups, with no significant differences between ASD and controls, suggesting a parallel aging pattern.	Cross-sectional design prevents analysis of neuroanatomical evolution; Small sample size limits representativeness; Medication bias (78% in ASD group vs. 39% in control group)

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Aging and Autism Spectrum Disorder: A Naturalistic, Longitudinal Study of the Comorbidities and Behavioral and Neuropsychiatric Symptoms in Adults with ASD. **Wise et al. 2017**. USA	N: 74. Group < 50 years: N: 34. Group ≥ 50 years: N: 40. ASD Criteria: DSM-5 (previous formal diagnosis). Context: Patients linked to a community service agency (CSAAC).	Objective: To examine the longitudinal course of BNPS and compare the profile of comorbidities, BNPS, and cognitive symptoms between younger and older adults with ASD. Design: Retrospective, naturalistic cohort with cross-sectional components. Outcomes: Phenotype, BNPS, Comorbidities, Functioning.	The prevalence of BNPS declined significantly over time. Physical aggression was significantly less common in the older group (10% vs. 32.3%, p = 0.02). Gastrointestinal disorders were more common in the older group (59% vs. 32.4%). There was no significant difference in the need for residential or vocational supervision between groups.	Single-center sample with high support needs (risk of selection bias). Small sample size, which may have limited statistical power. Institutional support may have influenced the reduction of symptoms.
Age-Related Differences in Autism: The Case of White Matter Microstructure. **Koolschijn et al. 2017**. Netherlands	N: 96. ASD Group: N: 48, Mean: 51.32. Control Group: N: 48, Mean: 50.47. ASD Criteria: Formal (previous); ADOS-4 (≥ 7); AQ (≥ 26). Context: Participants recruited from a large-scale behavioral study.	Objective: To characterize white matter microstructure and its relationship with age, and to test associations with IIVRT. Age was analyzed as a continuous variable in hierarchical linear regression models to investigate group-by-age interactions. Design: Cross-sectional. Outcome: Neuromorphology (white	It was observed that the increase in diffusivity in projection and association tracts is more pronounced in the ASD group. In the ASD group, greater instability in IIVRT was observed, indicating lower white matter integrity.	Cross-sectional study does not track repercussions of findings; Exclusion factors may limit spectrum representation; Medication bias (79% in ASD group vs. 40% in control group)

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
		matter microstructure); Cognition (IIVRT).		
Is Older Age Associated with Higher Self- and Other-Rated ASD Characteristics? L**ever and Geurts. 2018.** Netherlands	N: 435. ASD Group: N: 241, Mean: 46. Control Group: N: 199, Mean: 45.6. The ASD group was divided into: 19-40 years (N: 79); 40-53 years (N: 79); 53-79 years (N: 79). ASD Criteria: DSM-IV (previous diagnosis). Context: Mental health and community institutions.	Objective: To compare self- and other-reported ASD characteristics throughout aging by administering questionnaires (AQ, IRI, SSQ). Design: Cross-sectional. Outcome: Phenotype (general autistic traits, attention to detail, social skills, sensory sensitivity, empathy).	Total AQ score, Attention to Detail, and SSQ increased with age until peaking in middle age, being lower in older adults (non-linear, inverted U pattern). In the Social Skills subscale, there was a linear association with age, worsening with aging. Empathy evaluation (IRI) remained stable over time.	Cross-sectional design, does not track changes over time (possible cohort effect). Sample with high-functioning participants (risk of selection bias).

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Prevalence of long-term health conditions in adults with autism: observational study of a whole country population. **Rydzewska et al. 2018.** Scotland	N: 3.746.584. ASD Group: 55-64 years: N: 707; 65+ years: N: 698. ASD Criteria: Self-report or proxy report (Census). Context: Population-based (2011 Scottish Census).	Objective: To investigate the prevalence of physical and mental comorbidities in adults with ASD, and to perform age-adjusted binary logistic regressions. Design: Cross-sectional. Outcome: Comorbidities (deafness, blindness, intellectual disability, physical disability, etc.).	Older adults with ASD (65+) had elevated rates of comorbidities: Visual loss: OR = 5.1. Deafness: OR = 11.1. Physical disability: OR = 3.6. Mental disorders: OR = 1.5. Intellectual disability: OR = 1.5.	Census data based on self-report (risk of informant/reporting bias). The ASD rate was lower in older age groups (risk of survival/diagnostic bias).
Subjective Cognitive Impairment and the Broad Autism Phenotype. **Caselli et al. 2018**. USA	N: 419. BAP+ Group: N: 45, Mean: 67.9. BAP- Group: N: 374, Mean: 65.7. ASD Criteria: AQ (≥ 23 points). Context: Subgroup of the Arizona APOE Cohort.	Objective: To investigate the prevalence of BAP in a cohort of older adults and analyze its influence on the incidence of cognitive symptoms. Data collection was done through questionnaires (AQ, MANS, NEO-PI-R) and neuropsychological evaluation. Design: Prospective cohort with cross-sectional components (10-year follow-up).	The BAP+ group had higher baseline SCD scores and, after age 60, exhibited a significantly higher annual rate of increase than the control (0.05 vs 0.02, p = 0.02). There was no significant difference in the incidence rate of MCI between groups (8.9% in BAP+ vs 7.8% in BAP-) over 10 years.	Use of the BAP concept instead of a formal ASD diagnosis (risk of measurement bias). Small N in the BAP+ sample. The 23-point cutoff on the AQ scale may reduce specificity. Risk of selection bias at cohort baseline (response to advertisements).

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
		Outcome: Cognition (MCI and SCD).		
Behaviors characteristic of Autism spectrum disorder in a geriatric cohort with mild cognitive impairment or early dementia. **Rhodus et al. 2020**. USA	N: 142. "Unlikely Autism" Group: N: 119, Mean: 80.41. "Likely Autism" Group: N: 23, Mean: 76.96 years. ASD Criteria: GARS-2. Context: Participants selected from the UK ADC longitudinal cohort.	Objective: To investigate autistic behaviors in older adults with MCI or dementia using the GARS-2 scale (completed by caregivers). Design: Retrospective cross-sectional. Outcome: Cognition (MCI), Comorbidities (dementia).	The presence of autistic traits was significantly associated with greater severity in the advancement of MCI and an earlier age of symptom onset (71.1 vs. 76.6 years).	Study design prevents causal inference. GARS-2 is not validated for adults. Small sample size, which may have limited statistical power.

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Prevalence of physical and mental health conditions in Medicare-enrolled, autistic older adults. **Hand et al. 2020.** USA	N: 51,535, 65+ years. ASD: N: 4,685. Control: N: 46,850. ASD Criteria: ICD-10 (F84.0, F84.1, F84.5, or F84.9). Context: Health service users (Medicare Fee for Service).	Objective: To compare the prevalence of health conditions in autistic older adults vs. the general population. Logistic regressions were performed to compare the odds of each condition between groups. Design: Retrospective cohort with cross-sectional analysis. Outcome: Comorbidities (physical and mental).	Autistic older adults had significantly higher odds of almost all physical and mental health conditions examined compared to the control group of older adults, after statistical adjustments.	Risk of selection bias (only Medicare Fee for Service users). Possible diagnostic inaccuracy inherent in the use of administrative data (billing records).
Age differences in broader autism phenotype traits from young adulthood to older adulthood. **Chopik et al., 2021**. USA	Age: 18-29 years: N: 1,105. 30-49 years: N: 1,323. 50 years or older: N: 536. ASD Criteria: BAPQ. Context: Online community (Amazon Mechanical Turk).	Objective: To examine age differences in the prevalence of BAP traits in adults. Design: Cross-sectional. Outcome: Phenotype (Aloofness, Pragmatic Language, Rigidity).	Total BAPQ scores were lower in older adults. Pragmatic language and aloofness phenotypes were lower among middle-aged and older adults. Rigidity showed no significant association with age.	The study used a non-random sample (risk of selection bias). Cross-sectional design (risk of cohort effect).

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Aging and autism: Do measures of autism symptoms, co-occurring mental health conditions, or quality of life differ between younger and older autistic adults? **Yarar et al. 2022.** UK / Turkey	N: 136, Younger Autistic Adults: N: 38, Mean: 31.03 years. Older Autistic Adults: N: 41, Mean: 57.88years.. Younger Controls: N: 30, Mean: 30.90 years. Older Controls: N: 27, Mean: 61.48 years. ASD Criteria: Previous formal diagnosis. Context: Clinical and research databases (ASD) and community (control).	Objective: To examine age-related differences in autism symptoms, mental health, and Quality of Life using a test battery (ADOS-2, WASI-II, SRS-2, OCI-R, BAI, BDI-II, PHQ, ASRS-v1.1, WHOQOL-BREF, CSRI). Design: Cross-sectional. Outcomes: Phenotype, Comorbidities (mental health), Quality of Life.	There was no significant effect of age on autism symptoms, either via self-assessment (SRS-2) or clinical assessment (ADOS-2). Older autistic adults reported significantly better social QoL than younger autistic adults, a pattern not observed in the control group. Autistic adults reported lower QoL than controls in all domains. There was no overall effect of age on global, physical, psychological, or environmental QoL. Depression was the strongest predictor of QoL, more so than autism severity or IQ. The older autistic group had significantly lower prevalences of Anxiety, Somatoform Disorders, and Eating Disorders compared to the younger group.	Small sample size; Cross-sectional cohort effects; Control group excluded psychiatric diagnoses; QoL data collected before ASD-specific tool adaptation

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Age-related physical health of older autistic adults in Sweden: a longitudinal, retrospective, population-based cohort study. **Liu et al. 2023**. Sweden	N: 4,200,887. Autism Group: N: 5,291. Birth cohorts: 1932-37 (1.9%); 1938-43 (4.2%); 1944-49 (9.3%); 1950-55 (16.0%); 1956-61 (27.0%); 1962-67 (41.6%). Non-Autistic Group: N: 4,195,596. ASD Criteria: ICD-9 (299); ICD-10 (F84.0, F84.1, F84.5, and F84.9). Context: Swedish National Patient Register.	Objective: To investigate the association between autism and physical health conditions. The 25-year cumulative incidence and risk ratios were calculated. Design: Retrospective cohort. Outcome: Physical Comorbidities (39 conditions).	The ASD group had a significantly increased risk for 14 of the 39 evaluated conditions. Highlights include Intentional Self-Harm (RR 7.08), Poisoning (RR 4.63), Iron Deficiency Anemia (RR 3.12), Type 2 Diabetes Mellitus (RR 1.65), Cystitis (RR 2.03), Heart Failure (RR 1.89), and Obesity (RR 1.75). A higher cumulative incidence was also observed for Bodily Injuries (50.0%) and Falls (39.3%). Lower risks of ischemic heart disease and osteoarthritis in autistic individuals compared to the general population.	Observational nature prevents causality analysis. Possible underestimation of physical health burden due to barriers in accessing care. Risk of survival bias inherent to the methodology. Unmeasured confounding factors, socioeconomic status, medication use.
Self-harm and Suicidality Experiences of Middle-Age and Older Adults With vs. Without High Autistic Traits. **Stewart et al. 2023**. UK	N: 10,771, Mean: 63 years (50+). Autistic Traits (ASD) Group: N: 276, Mean: 62.97. Control Group (COA): N: 10,495, Mean: 62.42. ASD Criteria: PROTECT	Objective: To investigate self-harm and suicidality in older adults with high autistic traits through the PROTECT study online research platform, using specific questionnaires.	The ASD group had a 5 to 6 times higher probability of exhibiting self-harm and suicidality behaviors compared to same-age peers, persisting even after controlling for depression symptoms. A	Only 7.6% of the group with autistic traits reported having a formal autism diagnosis. The questionnaire used is short and non-standardized (risk of selection bias). Inability to account for

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
	"Autism Spectrum Traits". Context: Participants of the "PROTECT" online cohort.	Design: Cross-sectional. Outcome: Comorbidities (Suicidality and Self-harm).	negative correlation was observed between age and self-harm behaviors in the ASD group.	deaths by suicide (risk of survival bias).
The cognitive profile of middle-aged and older adults with high vs. low autistic traits. **Stewart et al. 2023.** UK	N: 12,020, 50-80 years (Mean: 61). ASD Group: N: 325, Mean: 60.8. Control Group (COA): N: 11,695, Mean: 61. ASD Criteria: PROTECT "Autism Spectrum Traits". Context: Participants of the "PROTECT" online cohort.	Objective: To investigate the cognitive profile of older adults with high autistic traits compared to a matched group with low autistic traits, using online cognitive tests (CogTrack). Design: Cross-sectional. Outcome: Cognition (memory, information processing speed, and executive functions).	The ASD group showed significantly poorer performance in tasks of: Working Memory, Secondary Visual Episodic Memory, Sustained Attention, and Information Processing Speed. No significant differences were found between groups in tasks of: Verbal Reasoning, Simple Reaction Time, and Reaction Time for Visual Episodic Memory Retrieval. The ASD group self-reported significantly more SCD than the control group; however, this difference was no longer significant when controlled for depression	Based on traits, not diagnosis. The questionnaire used is short and non-standardized. Risk of selection bias: excludes older adults without access to digital means; those able to participate in the research tend to be more mentally fit. Cross-sectional nature, does not measure intra-individual decline or establish causality.

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
			symptoms.	
Outcomes After Total Knee Arthroplasty in Patients With Autism: A Retrospective Database Study. **Kim et al. 2024**. USA	N: 1,708, Mean: 60 years. ASD Group: N: 352, Mean: 60. Control Group: N: 1,356, Mean: 60. ASD Criteria: ICD-9, ICD-10. Context: Data extracted from the M157 PearlDiver Mariner Patient Claims Database (2010-2021).	Objective: To evaluate postoperative outcomes in patients with and without ASD undergoing TKA‡ due to osteoarthritis, comparing the incidence of adverse events and surgery revision rates. Design: Retrospective Cohort. Outcome: Comorbidity (TKA).	Patients with ASD undergoing surgery were significantly younger (60.0 vs. 65.8 years) and had a significantly higher comorbidity burden (7.8 vs. 4.2). Patients with ASD had higher odds of aggregated adverse events. There was a significant increase in the odds of: Sepsis: OR 3.11. Pneumonia: OR 3.55. Urinary Tract Infection: OR 3.02. There	Risk of selection bias: use of administrative data. Did not evaluate post-discharge social condition.

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
			was no statistically significant difference in 5-year surgery revision rates between groups.	
The Association Between Autism Spectrum Traits and Age-Related Spatial Working Memory Decline: A Large-Scale Longitudinal Study. **Ghai et al. 2025**. UK	N: 13,390; 50+ years. 1. High Autistic Traits Group: N = 205. Mean: 60. 2. Intermediate Autistic Traits Group: N = 589. Mean: 62. 3. COA Group (Comparison/No traits): N = 12,451. Mean: 62. ASD Criteria: PROTECT "Autism Spectrum Traits". Context: Participants of the "PROTECT" online cohort.	Objective: To investigate whether autistic traits are associated with a higher risk of SWM decline. SWM performance was captured annually over 7 years. Design: Prospective cohort. Outcome: Cognition (Spatial working memory).	The findings suggest that middle-aged and older adults with high autistic traits do not have an increased risk of accelerated decline in spatial working memory.	Based on traits, not diagnosis. The questionnaire used is short and non-standardized. Risk of selection bias: excludes older adults without access to digital means; those able to participate in the research tend to be more mentally fit.

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Self-Reported Psychological, Somatic, and Vasomotor Symptoms at Different Stages of the Menopause for Autistic and Non-autistic People. **Charlton et al. 2025.** UK	N: 342, 40-86 years. Autistic Group: N = 242; Mean: 56. Non-Autistic Group: N = 100; Mean: 60. ASD Criteria: RAADS-14. Context: Community (online recruitment).	Objective: To examine menopause symptoms in autistic vs. non-autistic individuals at different stages. Symptoms were assessed using the GCS§, which measures psychological, somatic, and vasomotor symptoms. Data collection via the Qualtrics platform. Post hoc analyses were performed adjusting for confounding variables, specifically self-reported anxiety and depression scores. Design: Cross-sectional. Outcome: Comorbidity (Menopause symptoms).	Autistic individuals report significantly higher rates of psychological and somatic symptoms than the control group, regardless of menopause stage. Vasomotor Symptoms: There was no statistically significant difference in the overall total score between the two groups. Autistic individuals do not experience the expected reduction of symptoms post-menopause, unlike the control group.	Cross-sectional nature, preventing causal conclusions. Classification of menopause stage based on self-report, which may generate incorrect classifications. Sampling bias inherent to online surveys.

1. Identification	2. Sample	3. Methodology and Outcomes	4. Key Findings	5. Analysis
Epidemiology of Alzheimer Disease and Related Dementia Among Medicare and Medicaid Enrolled Autistic Adults, 2011-2019. **Tewolde et al. 2025.** USA	N: 90,229 autistic individuals. Age groups analyzed: 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75+. ASD Criteria: ICD-9, ICD-10. Context: Data extracted from the CMS Chronic Condition Warehouse (Medicare/Medicaid).	Objective: To describe the epidemiology of ADRD in autistic individuals, identifying prevalence, incidence, age of onset, and survival curves. Design: Retrospective cohort (2011-2019). Outcome: Cognition / Comorbidities (ADRD).	Overall ADRD prevalence increased from 2.09% to 8.11% over 8 years (2011-2019); for the 75+ group, it rose from 16.5% to 29.3%. Mean age of ADRD onset was 59.3 years (SD: 14.2). Individuals with ASD without ID comorbidity had a later age of onset compared to those with ID comorbidity (~63-67 vs. ~55 years).	Use of administrative data (risk of coding error); lack of a non-autistic control group; selection bias (only public insured). Mortality bias: Autistic adults die earlier, which can affect the observed prevalence at older ages.

Abbreviations: ADOS: Autism Diagnostic Observation Schedule; ADRD: Alzheimer's Disease and Related Dementias; AQ: Autism-Spectrum Quotient; ASD: Autism Spectrum Disorder; BAP: Broad Autism Phenotype; BAPQ: Broad Autism Phenotype Questionnaire; BNPS: Behavioral and Neuropsychiatric Symptoms; COA: Comparison group; GARS: Gilliam Autism Rating Scale; ICD: International Classification of Diseases; ID: Intellectual Disability; IIVRT: Intraindividual Variability in Reaction Time; M: Mean sample age; MCI: Mild Cognitive Impairment; N: Sample size; OR: Odds Ratio; QoL: Quality of Life; RR: Risk Ratio; SCD: Subjective Cognitive Decline; SD: Standard Deviation; SWM: Spatial Working Memory; TKA: Total Knee Arthroplasty. Symbols: † Netherlands Study of Depression in Older Persons; ‡ Total Knee Arthroplasty; § Greene Climacteric Scale; || IQ < 80 was an exclusion criterion.