

Higher education among generation Z students on the autism spectrum: educational challenges and self-reported health issues¹

<https://doi.org/10.34766/fy3tmj26>

Sylwester Podgórski ✉

Sylwester Podgórski, <https://orcid.org/0009-0000-3092-5440>; European Social and Technical University, Radom, Poland

✉ Corresponding author: spodgorski@wp.pl

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Received: 5 July 2026 | Accepted: 3 September 2026 | Revised: 11 September 2026 | Published: 22 September 2026

Abstract: *Introduction:* Higher education represents a new and often difficult stage of life for neurotypical individuals, but it poses a particular challenge for the autism spectrum (ASD). Higher education represents a major transition for young adults and may pose particular challenges for students on the autism spectrum. Students on the autism spectrum may continue to require forms of support similar to those available during earlier stages of education; however, such support is not always systematically provided in higher education, and appropriate support models are still being developed. Autism spectrum disorder is characterized by persistent differences or difficulties in social communication and interaction, together with restricted or repetitive patterns of behavior, interests, or activities. Although the etiology of ASD is not fully understood, current evidence indicates an important contribution of genetic and other biological factors. Previous studies have reported an increased prevalence of selected physical health conditions among individuals on the autism spectrum, indicating the importance of examining somatic health in this population. *Methods:* A researcher-developed questionnaire was used to assess selected sociodemographic characteristics and self-reported health conditions among students on the autism spectrum at the Robert Schuman European University of Social Sciences and Technology in Radom, Poland. Of the 154 respondents who completed the survey, 142 provided sufficiently complete data and were included in the final analysis. *Results:* The final sample comprised 142 students aged 18–26 years, all of whom met the study's definition of Generation Z. Most participants reported receiving an ASD diagnosis between the ages of 9 and 12 years, corresponding to grades 4–6 of primary education (71.8%, $n = 102$). The most frequently reported physical health conditions included food allergies, diabetes, thyroid disease, asthma, polycystic ovary syndrome, and insulin resistance. *Conclusions:* The findings highlight the need for university-based support tailored to the individual educational and health needs of students on the autism spectrum. More than half of the analyzed participants reported at least one physical health condition. A total of 100 respondents (70.4%) reported following a gluten-free diet or using dietary supplements. These findings indicate the need for further research using clinically verified health data and larger, more representative samples.

Keywords: autism spectrum disorder; autistic university students; generation Z; higher education; physical health; comorbidity.

1. Introduction

The transition to higher education represents a major developmental and educational challenge for many young adults, including students on the autism spectrum. Students entering higher education must adapt to a less structured environment that requires greater independence, flexibility, and responsibility for organizing their academic and daily activities. The university environment differs from secondary education in its organizational structure, physical and social context, academic expectations, and degree of student independence. Beginning university sub-

stantially increases academic and personal demands and may involve leaving the family home and living independently, transitions for which some students may feel insufficiently prepared.

Generation Z has reached adolescence and young adulthood during a period of substantially increased recognition and diagnosis of ASD. Some students on the autism spectrum continue to require individualized educational and psychosocial support similar to that available at earlier stages of education. However, access to such support may become less

¹ Article in Polish language: https://stowarzyszeniefidesetratio.pl/fer/67p_Podg.pdf

systematic after the transition to higher education, and universities continue to develop and evaluate appropriate models of accommodation and support (Van Hees et al. 2015).

1.1. Generation Z: Characteristics and competencies

Several generational classifications are used in the sociological and demographic literature, although their boundaries and terminology vary across sources. Some classifications distinguish an older cohort comprising individuals born before or during the Second World War; however, terminology for this group varies across countries and sources. The next cohort is commonly referred to as the Baby Boomer generation and generally includes people born between 1946 and 1964. Baby Boomers constitute a particularly large cohort now entering older and very old age in many populations (Szweda-Lewandowska, 2014). Generation X is commonly defined as comprising individuals born approximately between 1965 and 1980. In many countries, members of Generation X grew up during periods of substantial economic, political, and technological change (Szweda-Lewandowska, 2014). Generation Y, also known as the Millennial generation, is commonly defined as including individuals born approximately between 1981 and 1996. In Poland and other Central and Eastern European countries, their childhood coincided with major political transformation, while their transition to adulthood occurred alongside rapid digitalization. Some generational studies have described Millennials as placing greater emphasis on autonomy, flexibility, and individual expectations; however, such generalizations should be interpreted cautiously (Wojtoszek, 2023). Millennials are followed by Generation Z, generally defined as individuals born from the mid-1990s to the early 2010s. Although definitions vary, Generation Z is commonly understood to include individuals born approximately between 1995 and 2012 (Wojtoszek, 2023). Generation Z is frequently described as a 'digital native' cohort because digital technologies have been present throughout much of its members' lives (Huczek, 2023). Generation Z is followed by Generation Alpha, defined in the present

article as individuals born between 2013 and 2024. Members of Generation Alpha have grown up in environments characterized by widespread access to mobile technologies, digital media, and increasingly, artificial intelligence-based tools. Some contemporary generational classifications use the term Generation Beta for cohorts born from 2025 onward. This cohort is expected to grow up in an environment increasingly shaped by advanced digital technologies and rapid technological change. The term Generation C is also sometimes used in the literature to describe highly connected digital-media users; however, unlike Generations X, Y, or Z, it is not consistently defined by year of birth. Generation C is typically described in behavioral rather than strictly chronological terms, referring to individuals characterized by intensive engagement with digital and online environments.

Members of Generation Z have reached adolescence and young adulthood during a period of substantially increased recognition and diagnosis of neurodevelopmental conditions, including autism spectrum disorder. As growing numbers of students with diagnosed neurodevelopmental conditions enter higher education, universities are increasingly required to consider accessibility, accommodation, and individualized support. Some studies describe members of Generation Z as placing considerable value on innovation, social change, and technological development (Wojtoszek, 2023). Generation Z is frequently described as a digitally immersed cohort. Extensive use of digital communication may influence patterns of social interaction, although the relationship between digital-media use and social competence is complex and should not be interpreted as uniformly negative or causal.

Some studies suggest that members of Generation Z may rely more heavily on digitally mediated communication than previous generations (Wojtoszek, 2023). At the same time, online communication enables frequent contact and ongoing exchange of information within peer networks. Greater reliance on online communication may be associated with changes in the ways social competencies are developed and expressed, although the direction and magnitude of this relationship remain subject to debate. Members of Generation Z tend to obtain

information increasingly through digital rather than traditional media, although patterns of media use vary considerably within the generation (Huczek, 2023; Wojtoszek, 2023). Frequent media multitasking has been discussed as one factor potentially associated with difficulties in sustaining attention; however, such effects vary across individuals and should not be treated as defining characteristics of Generation Z (Huczek, 2023).

Soft skills, including communication, collaboration, self-regulation, and time-management abilities, play an important role in academic and occupational functioning. Some students may demonstrate strong technical or digital competencies while experiencing difficulties in communication, collaboration, or other interpersonal aspects of academic functioning. Such differences in skill profiles may affect interactions with peers and academic staff. The intensive use of digital technologies characteristic of contemporary educational and social environments may influence how some young adults develop and use interpersonal skills; however, individual differences remain substantial. Some students may experience difficulties in communication, time management, and coping with stress, all of which can affect adaptation to higher education. Difficulties in these areas may limit students' ability to benefit fully from academic, social, and professional development opportunities. Accurate identification of students' educational and support needs is therefore important, as inappropriate or insufficient support may hinder the development and effective use of individual strengths. Higher education institutions therefore face the challenge of adapting teaching and support systems to the diverse learning needs of Generation Z while also preparing graduates for changing social and labor-market demands. Constructive feedback may play an important role in the development of academic and interpersonal competencies. At the same time, increasing recognition of neurodiversity in higher education highlights the need for effective and individualized support strategies.

1.2. Generation Z on the autism spectrum and higher education

Conceptualizations of autism and the terminology used to describe it have evolved substantially over time. Contemporary discussions of autism commonly draw on both clinical and neurodiversity-oriented perspectives. Two influential perspectives are the clinical model, which conceptualizes autism as a neurodevelopmental disorder, and the neurodiversity perspective, which emphasizes variation in neurological development and functioning. Within the clinical framework, autism spectrum disorder (ASD) is classified as a neurodevelopmental condition characterized by a heterogeneous range of manifestations. The core diagnostic features of ASD primarily involve:

- persistent difficulties or differences in social communication and social interaction;
- restricted or repetitive patterns of behavior, interests, or activities (Hare, 2024).

These characteristics may influence academic, social, and organizational functioning in higher education.

The DSM-5-TR uses the diagnostic term 'autism spectrum disorder,' while the ICD-11 also classifies autism within the group of neurodevelopmental disorders (World Health Organization, 2026). Many adults and university students may nevertheless retain diagnoses made under earlier classification systems, including Asperger syndrome (Głód, 2023) or childhood autism (First et al., 2022). Under earlier diagnostic classifications, Asperger syndrome was generally distinguished from other autism diagnoses by the absence of clinically significant delays in language development and intellectual functioning. Autistic individuals show substantial variability in cognitive profiles, strengths, interests, and support needs. ASD is associated with differences in neurodevelopment and patterns of brain functioning relative to more typical developmental trajectories. The etiology of ASD is complex and not fully understood, although genetic and other biological factors are known to make substantial contributions. ASD is a lifelong neurodevelopmental condition

whose manifestations and support needs may change across the life span. Autistic individuals constitute a highly heterogeneous population, and epidemiological studies have documented increasing rates of identified ASD diagnoses in many countries. A 2025 report from the U.S. Centers for Disease Control and Prevention, based on ADDM Network surveillance data, estimated ASD prevalence at approximately 1 in 31 among 8-year-old children in the monitored U.S. communities (Centers for Disease Control and Prevention, 2025). Because these estimates derive from a specific surveillance population, they should not be interpreted as estimates of global ASD prevalence. The World Health Organization (2026) has estimated that approximately 62 million people worldwide are autistic, corresponding to roughly 1 in 127 individuals. These global estimates differ from surveillance-based national estimates because they are derived using different populations and methodologies. Increased awareness, broader diagnostic criteria, and improved access to assessment may have contributed to the rise in identified cases.

Contemporary young adults have access to a wide range of educational and intellectual development opportunities. Despite their cognitive potential, some young adults on the autism spectrum do not pursue higher education. Possible barriers may include low confidence in one's abilities, concerns about increased independence, and anxiety related to major changes such as moving away from the family home (Davis et al., 2021). Research indicates that some students do not disclose their ASD diagnosis to their university, which may contribute to underestimation of their numbers in institutional statistics and reports (Cierzniewska, 2021). Previous studies have also described changes of degree program, interruptions in study, and withdrawal from higher education among some students on the autism spectrum (Perkowski et al., 2024). However, available data are insufficient to estimate the scale of this phenomenon reliably.

In Poland, available estimates of the number of university students on the autism spectrum remain limited, particularly with regard to age distribution and generational cohorts. International studies may provide additional insight into the educational experiences and support needs of autistic university

students. The increasing number of ASD diagnoses among children and adolescents may be accompanied by a gradual rise in the number of autistic students entering higher education in Poland.

Preparation for the transition from secondary education to university may facilitate adaptation among Generation Z students on the autism spectrum. The transition from secondary school to university may represent a particularly challenging period for students on the autism spectrum (Van Hees et al., 2015). Starting university involves substantial changes in academic routines, daily organization, and expectations for independent functioning. These changes may include different teaching and learning methods, greater responsibility for organizing academic work, and reduced day-to-day support from family members. Such demands may pose substantial challenges for some autistic students (Stefańska-Klar, 2010). These challenges may reflect differences in social communication, executive functioning, sensory processing, and adaptation to change, with considerable individual variation. During primary and secondary education, pupils on the autism spectrum may have access to various forms of educational and specialist support (Stefańska-Klar, 2010).

After entering higher education, students typically assume greater responsibility for identifying their support needs and applying for available accommodations. Some students on the autism spectrum may experience difficulties with daily organization, independent living, and adaptation to the demands of university life. Early identification of ASD may facilitate earlier access to specialist support tailored to the child's individual needs. Depending on individual needs, support may focus on developing skills that promote autonomy, self-management, and effective functioning in adulthood.

On 12 July 2013, the Sejm of the Republic of Poland unanimously adopted the Charter of Rights of Persons with Autism. The Charter emphasizes, among other principles, the right of autistic people to accessible education, support for independent living, and opportunities for full social and occupational participation (M.P. 2013 item 682). Adults diagnosed with ASD in childhood have reported that career guidance, volunteering, school-based social activities,

and other forms of structured participation during secondary education helped facilitate the transition to adulthood (Van Hees et al., 2015). By contrast, adults diagnosed later in life may describe negative consequences associated with the earlier absence of an explanatory framework for their longstanding difficulties. Studies of autistic students indicate that limited access to supportive peer relationships and difficulties in establishing or maintaining social connections may contribute to challenges in completing higher education. Withdrawal from higher education may in turn limit opportunities to acquire advanced qualifications and professional competencies that are consistent with an individual's cognitive potential (Perkowski et al., 2024). Some students may be reluctant to disclose their diagnosis or support needs to the university because of concerns about stigma and negative labeling associated with disability (Głód, 2023). Universities should establish transparent procedures that enable students with formal documentation to access appropriate accommodations while also providing broadly accessible forms of academic and psychosocial support. Some autistic students may experience difficulties in independently organizing their study plans, including scheduling classes, monitoring program requirements, and ensuring completion of the required number of ECTS credits.

Autistic individuals may develop intense and highly focused interests from childhood onward. Such interests may function as important strengths, although in some social contexts they may also be associated with misunderstanding or social isolation. School curricula require students to engage with a broad range of subject areas and prescribed learning outcomes. This may reduce the time and flexibility available for pursuing highly focused individual interests. A highly standardized educational environment may create difficulties for some autistic learners; nevertheless, many continue to pursue higher education. Research suggests that some autistic students regard their university years as an important and meaningful period of life (Cierzniewska, 2021). Certain characteristics observed in some autistic individuals, such as persistence and sustained engagement with preferred topics, may support academic achievement. Some autistic students demonstrate

particularly well-developed abilities and skills in selected domains. Individual characteristics such as persistence, systematicity, attention to detail, and strong subject-specific interests may support academic engagement. Potential strengths reported in some autistic individuals include:

- a detail-focused style of information processing, particularly in relation to visual information;
- originality of thought and creative approaches to selected problems (Perkowski et al., 2024).;
- well-developed information-technology skills in some individuals;
- strong memory abilities in selected domains;
- perseverance and the capacity for sustained engagement in preferred tasks;
- the ability to sustain attention for extended periods when engaged in highly preferred activities;
- intense and in-depth interests in selected topics;
- well-developed abilities in selected areas aligned with individual interests.

The presence of these strengths does not, however, guarantee successful adaptation to university demands or completion of higher education. An appropriately adapted academic environment, together with access to workshops, skills training, individual consultations, or tutoring, may support the development and use of competencies important for academic and social functioning. Some autistic students demonstrate strong motivation to address difficulties related to learning and social interaction. Experiences during the COVID-19 pandemic highlighted the potential value of remote learning and digital technologies for some autistic students, although individual responses to online education varied.

Regardless of generational cohort, higher education requires considerable independence, flexibility, intrinsic motivation, and self-directed learning skills. For some autistic students, these demands may be difficult to manage without support tailored to their individual needs. Although many autistic students have substantial intellectual potential, strong subject-specific interests, and high motivation to learn, some may experience difficulties in meeting the organizational, social, and adaptive demands of higher

education. Some autistic students may experience social interactions with peers and academic staff as demanding, particularly in situations requiring spontaneous communication or interpretation of implicit social cues. At the same time, rigid academic schedules or insufficient flexibility in course organization may create difficulties for some students. Some Generation Z students with ASD may experience difficulties with planning, prioritizing tasks, and time management. Some may also find changes in routine and unpredictable events particularly challenging. Autistic university students may be at increased risk of psychological distress, including depressive symptoms, particularly when academic demands, social difficulties, and limited support co-occur (De-la-Iglesia & Olivar, 2015).

Many autistic university students report loneliness, limited peer relationships, and insufficient social support within the university environment (Mazurek, 2014). Some students also report uncertainty about whom they can approach for practical or academic assistance. Some autistic students may participate less actively in informal student communication networks, including social-media groups, which may reduce access to practical information exchanged among peers. Difficulties in social communication, together with anxiety in unfamiliar or demanding situations, may hinder communication with peers, academic staff, and administrative personnel. Some students may find it difficult to formulate follow-up questions or seek clarification, which can make it harder to obtain necessary information.

Another area relevant to higher education involves restricted or repetitive patterns of behavior and a preference for predictability and routine, which may create additional challenges in some academic contexts. Highly focused interests may sometimes be misunderstood by others, particularly when they dominate communication or academic engagement. Such misunderstandings may be compounded by a strong preference for routine, predictability, and consistency. This perception is reinforced by their strong attachment to patterns and routines and their insistence on stability and invariability. Some autistic individuals develop intense and sustained interests in selected topics, which may influence how they allocate

attention and engage with new subject matter. Unfamiliar situations, unexpected changes, or departures from established routines may evoke discomfort or anxiety in some autistic individuals. Unfamiliar situations, unexpected changes, or departures from established routines may evoke discomfort or anxiety in some autistic individuals. Repetitive motor or vocal behaviors may also occur, particularly during stress, sensory overload, or periods of increased need for sensory regulation. Such behaviors may include repetitive vocalizations or movements used for self-regulation.

1.3. Mental and physical health in autistic individuals

Because autistic individuals may have diverse educational, psychosocial, and health-related needs, support should be comprehensive and individualized. Receiving an autism diagnosis may evoke a range of emotional responses in autistic individuals and their families, particularly when the diagnosis occurs later in life (Perkowski et al., 2024). ASD may co-occur with a range of mental and physical health conditions.

The differential diagnosis of ASD may involve a range of psychiatric, developmental, neurological, sensory, and medical conditions, including intellectual disability, anxiety disorders, selective mutism, psychotic disorders, hearing impairment, and selected metabolic or neurological conditions (Pisula, 2022). Importantly, some of these conditions may also co-occur with ASD rather than constitute alternative diagnoses. ASD is associated with an increased prevalence of a range of co-occurring psychiatric and physical health conditions (Kiehl et al., 2024). The mechanisms underlying these co-occurring conditions are complex and may involve genetic, neurobiological, environmental, and psychosocial factors, as well as the cumulative effects of unmet support needs and chronic stress. Frequently reported co-occurring conditions in autistic individuals include intellectual disability, sleep disorders, attention-deficit/hyperactivity disorder (ADHD), mood and anxiety disorders, epilepsy, and tic disorders (Lupindo, Maw & Shabalala, 2023). Autistic individuals have an increased prevalence of co-occurring mental health conditions compared with the general population (First et al., 2022).

The health problems most commonly accompanying the autism spectrum are:

- intellectual disability, which according to analyses in the latest CDC report affects approximately 40% of children with ASD for whom IQ results were available (Centers for Disease Control and Prevention, 2025), while World Health Organization estimates approximately 50% (World Health Organization, 2026);
- sleep disorders, particularly difficulty falling asleep, waking during the night, or waking early, which occur in 40% to 83% of those studied;
- ADHD, which occurs in approximately 30% of children with ASD;
- affective disorders: depressive episodes in up to 38% of people with ASD and bipolar affective disorder in up to 3%;
- anxiety disorders, which occur in 30% to 50%;
- epilepsy, which affects 18% to 33%;
- tics, affecting nearly 22% (Guo et al., 2023; Kereszturi, 2023; Pisula, 2022; Winczura, 2018).

Psychiatrists also note that, in addition to the social-interaction and communication problems and restricted, stereotyped interests typical of autism, people with ASD often display undesirable and dangerous behaviors such as aggression, impulsivity, or self-injury (Pisula, 2022). Consequently, alongside systematic autism therapy, psychological and educational work, speech therapy, and physical rehabilitation, antidepressants, anticonvulsants, and antipsychotics are often used (Guo et al., 2023). Elevated rates of depressive symptoms have also been reported among autistic adolescents and young adults (De-la-Iglesia & Olivar, 2015). Depressive symptoms in autistic individuals have been associated with social isolation, loneliness, perceived lack of acceptance, and difficulties in social participation (De-la-Iglesia & Olivar, 2015; Zheng, 2021). These challenges may become particularly relevant during adolescence and early adulthood, developmental periods in which peer relationships and social belonging often assume greater importance. Some autistic individuals report experiences of social difference, exclusion, or reduced sense of belonging (Davis et al., 2021). Autistic in-

dividuals may also experience elevated rates of peer rejection, bullying, victimization, and social isolation (Fukushima, Yajima, & Moriyama, 2025). Another relevant phenomenon is autistic masking or camouflaging, which involves concealing or compensating for autistic traits in order to conform to perceived social expectations. Sustained masking may require substantial cognitive and emotional effort and has been associated with stress, exhaustion, and poorer mental health outcomes (Cierzniewska, 2021). Prolonged masking has been associated with psychological distress, depressive symptoms, and experiences described as autistic burnout (Zheng, 2021). Research has identified elevated rates of suicidal ideation and suicidal behavior among autistic individuals compared with the general population e.g., among young people (Strauss et al., 1988). Scientific sources indicate that approximately 75% of the studied sample of students on the autism spectrum had suicidal thoughts, and as many as 40% had imagined specific ways of taking their own lives (Jackson et al., 2018).

The increasing presence of autistic students in higher education highlights the need to understand not only their educational and psychosocial experiences but also their physical health needs. Although previous studies have documented elevated rates of selected co-occurring health conditions among autistic individuals, evidence concerning university students, particularly in Poland, remains limited. Moreover, little is known about self-reported health conditions and health-related behaviors among Generation Z students on the autism spectrum. Therefore, the present study aimed to characterize selected physical health conditions and health-related behaviors in this population.

2. Material and methods

2.1. Study participants

The survey was designed to assess selected sociodemographic characteristics and health-related information among university students on the autism spectrum. The data were collected as part of a broader institutional project aimed at informing future psychological

assessment and the development of support and accommodation strategies for autistic students at the university. A total of 154 students completed the questionnaire. This initial total included questionnaires with missing responses to one or more items. Questionnaires were excluded from the final analysis when missing data prevented reliable interpretation of the variables included in the present study (missing at least one answer). The final analyzed sample comprised 142 students with a formally confirmed ASD diagnosis who provided complete data for the variables included in the present analysis. The sample included 120 women (84.5%) and 22 men (15.5%). No participant selected the 'Other' response category. Participants were aged 18–26 years ($M = 20.6$, $SD = 2.1$). Participants aged 19 or 20 years constituted the largest age subgroup (58.5%). Based on the generational definition adopted in this study, all participants were classified as members of Generation Z (Wojtoszek, 2023). Detailed demographic characteristics of the sample are presented in Table 1.

2.2. Procedure

The study used an anonymous questionnaire survey. Data were collected from October 2025 to May 2026. Participation was voluntary and anonymous, and informed consent was obtained from all participants before survey completion. Participants were students enrolled in law, psychology, or public health programs at the Robert Schuman European University of Social Sciences and Technology in Radom, Poland.

All participants met the study's age-based definition of Generation Z and had a previous diagnosis of autism spectrum disorder. The questionnaire consisted primarily of closed-ended items, including single- and multiple-response questions, supplemented by several short open-ended questions. The questionnaire comprised eight sections presented in the following order:

- sociodemographic characteristics, including sex, age, degree program, year of study, whether the participant was enrolled in their first degree program, and place of residence;

Table 1. Demographic characteristics of the study sample (N = 142)

Demographic variable		N	%
Sex	Female	120	84.5
	Male	22	15.5
	Other	0	0
Age	18	5	3.5
	19	55	38.7
	20	28	19.7
	21	15	10.6
	22	12	8.5
	23	8	5.6
	24	10	7.0
	25	2	1.4
	26	7	4.9
Place of residence	Rural area	21	14.8
	Town < 50,000	15	10.6
	City 50,000–150,000	20	14.1
	City 150,000–500,000	78	54.9
	City > 500,000	8	5.6
Degree program	Law	22	15.5
	Psychology	68	47.9
	Public Health	52	36.6
First degree program undertaken	Yes	118	83.1
	No	24	16.9
Year of study	Year 1	26	18.3
	Year 2	34	23.9
	Year 3	62	43.7
	Year 4	12	8.5
	Year 5	8	5.6

- health-related information, including neurodevelopmental diagnoses, mental and physical health conditions, disability status, and age or period at diagnosis;
- university engagement, including participation in activities and opportunities offered by the institution and satisfaction with these forms of engagement;
- support and services, including use of specialist assistance, forms of support received, and satisfaction with available support;

- mental health, including symptoms of depression, anxiety, stress, and other aspects of psychological functioning assessed within the broader survey (e.g.: PSS-10–Perceived Stress Scale; STAI–State-Trait Anxiety Inventory; BAI -Beck Anxiety Inventory);
- functioning in higher education, including perceived accessibility and difficulties in academic, social, sensory, and environmental domains;
- autistic traits, assessed using a self-report questionnaire (CAT-Q: Camouflaging Autistic Traits Questionnaire);
- experiences of stigma and discrimination within the university environment.

2.3. Questionnaire and study measures

The broader survey included psychological measures as well as a researcher-developed questionnaire. The present study analyzed only data from the socio-demographic and health-related sections of the questionnaire; results from the psychological measures are not reported here. Eligibility was first verified on the basis of a previously established ASD diagnosis. After providing informed consent, participants completed the questionnaire voluntarily and received no financial compensation. Participants enrolled in more than one degree program were asked to report data with reference to the program they considered their primary course of study or the program in which they had progressed furthest.

A purposive convenience sampling strategy was used to recruit as many eligible autistic students as possible within the University. Study invitations were sent to students whose ASD diagnosis had been formally documented in university records or verified through appropriate diagnostic documentation. 154 individuals submitted documentation to the office for persons with disabilities; however, 8 of them did not answer all the questions while completing the survey, so their results were excluded. The ethics committee approved the study, and personal information was not compromised.

3. Results

The present analysis focuses on findings related to physical health. The most frequently reported previous diagnosis was Asperger syndrome (66.9%, $n = 95$). The next most frequently reported diagnoses were atypical autism (17.6%, $n = 25$) and autism spectrum disorder without further specification (11.3%, $n = 16$). The distribution of reported autism-spectrum diagnoses is presented in Table 2.

Most participants reported receiving an autism-spectrum diagnosis between the ages of 9 and 12 years, corresponding to grades 4–6 of primary education (71.8%, $n = 102$). An additional 35 participants (24.6%) reported receiving a diagnosis between the ages of 12 and 14 years, corresponding to grades 7–8 of primary education. Two participants (1.4%) reported receiving a diagnosis after the age of 20 years. Single participants reported diagnoses in the age ranges of 3–7 years, 7–9 years, 15–18 years, 19 years, and 20 years. No participant in the study reported receiving an ASD diagnosis between the ages of 2 and 3 years. Participants were asked to report diagnosed health conditions. Multiple responses were permitted because participants could report more than one health condition. Sixty-six participants (46.5%) reported no health problems. Food intolerances were reported by 26 participants (18.3%). Diabetes was reported by 25 participants (17.6%), while thyroid disease was reported by 15 participants (10.6%). Asthma was reported by 15

Table 2. Reported autism-spectrum diagnoses among participants ($N = 142$)

Autism spectrum diagnosis*	N	%
Asperger syndrome	95	66.9
Autism spectrum disorder	16	11.3
Childhood autism	1	0.7
Pervasive developmental disorder, unspecified	1	0.7
Atypical autism	25	17.6
One or more, but the specific diagnosis is unknown	4	2.8

*Diagnostic labels reflect previously established diagnoses reported or documented by participants and may correspond to earlier diagnostic classification systems.

participants (10.6%), skin conditions by 10 (7.0%), visual impairment by 5 (3.5%), and epilepsy or another neurological condition by 1 participant (0.7%).

Other health problems were reported by 23 participants (16.2%). Participants selecting the 'Other' category were invited to specify the condition in an open-text field. Open-text responses included polycystic ovary syndrome (PCOS), insulin resistance, gastroesophageal reflux, migraine, irritable bowel syndrome, and Crohn's disease. The distribution of self-reported health conditions is presented in Table 3.

Participants who reported food intolerances were asked to specify the type of intolerance. Gluten-related intolerance was reported by 26 participants. This finding should be interpreted descriptively and does not establish an association between ASD and gluten-related disorders. Thirteen participants additionally reported lactose intolerance. Single participants reported allergies to menthol, hen's eggs, and peanuts. Three female participants reported that gluten- or lactose-related intolerance developed during first pregnancy and persisted thereafter. These preliminary findings warrant further investigation in larger and more representative samples.

A total of 100 participants (70.4%) reported following a gluten-free diet and using dietary supplements. In the total sample, 60 participants (42.3%)

reported vitamin D3 supplementation, 32 (22.5%) magnesium supplementation, 16 (11.3%) vitamin E supplementation, and 15 (10.6%) vitamin C supplementation.

4. Discussion of results

The present study examined self-reported physical health conditions and health-related behaviors among Generation Z university students on the autism spectrum. Clinical presentation and support needs may change across the life span, with substantial variability in developmental trajectories among autistic individuals. Outcomes are influenced by multiple factors, including individual cognitive profiles, support needs, co-occurring conditions, and access to appropriate interventions and accommodations (Wojtoszek, 2023).

Generation Z has reached young adulthood during a period of markedly increased recognition and diagnosis of ASD. Some autistic adults complete higher education, live independently, and participate in the workforce, although barriers within educational and social environments may limit opportunities for full academic and occupational participation. Difficulties in academic participation may be associated with limited access to appropriate support, as well as with co-occurring mental and physical health conditions.

Although research on autistic university students has expanded, important gaps remain, particularly regarding physical health and health-related behaviors in higher-education settings (Muthuka et al., 2026). Research concerning autistic individuals in Poland is available (Zakrocka, 2025), but studies specifically focusing on university students appear to remain limited.

The present study contributes to this limited evidence base by examining autistic students enrolled in three degree programs, most of whom (83.1%) were pursuing their first university degree. This is relevant because many participants were navigating higher education for the first time. Participants represented all years of study and a range of residential settings differing in level of urbanization.

Table 3. Self-reported health conditions among autistic university students (N = 142)

Health problems	N	%
Food intolerances	26	18.3
Thyroid disease	15	10.6
Skin disease	10	7.0
Asthma	15	10.6
Epilepsy or another neurological disease	1	0.7
Diabetes	25	17.6
Visual impairment	5	3.5
Mobility impairment	0	0
Hearing impairment	0	0
Other disability	1	0.7
Other health problem	23	16.2
I have no health problems	66	46.5

Multiple responses were permitted; therefore, percentages do not sum to 100%.

The most frequently reported previous diagnosis was Asperger syndrome. Similar diagnostic labels have been reported in studies of autistic university populations conducted under earlier or transitional classification frameworks (Baños, 2022; Fukushima et al., 2025; Vincent, 2026). The present findings do not permit conclusions regarding cognitive ability. Earlier diagnostic descriptions of Asperger syndrome generally referred to autistic characteristics occurring without intellectual disability; however, cognitive profiles remain highly heterogeneous. Most participants reported receiving an ASD diagnosis between the ages of 9 and 12 years, corresponding to grades 4–6 of primary education. This pattern may be compared with reports of diagnostic timing in other European populations (Esqueda Villegas et al., 2026; Sacco, 2022).

More than half of participants reported at least one physical health condition. Among the conditions reported in the present sample were food intolerances, diabetes, thyroid disease, and asthma. Previous studies have also examined associations between ASD and these health conditions (Cortese, 2022; Gong, 2023; Hancock, 2026; Xu, 2018).

Open-text responses also included conditions that occur in the general population, such as polycystic ovary syndrome (PCOS) (Bravo-Muñoz, 2025) and insulin resistance (Guevara-Ramírez, 2025). Dietary factors may be relevant to the management of selected metabolic, gastrointestinal, and endocrine conditions; however, their role varies substantially across diagnoses and should not be generalized.

Some participants reported gluten-related intolerance (Bjørklund, 2024). This observation is descriptive and should not be interpreted as confirming a specific association between ASD and gluten-related disorders. These findings should be interpreted cautiously because the sample was drawn from a single university and was not designed to provide population-level prevalence estimates.

Larger, multi-center studies are needed to determine whether the patterns observed in this sample are replicated in other autistic university populations. The present study did not assess the effectiveness of magnesium, vitamin B6, or other supplements (Indika et al., 2023); therefore, no conclusions regarding

their effects on cognitive or behavioral outcomes can be drawn. Previous research has investigated associations between nutritional status and cognitive functioning, but evidence supporting routine vitamin supplementation for cognitive improvement in ASD remains insufficient (Indika et al., 2023).

Nutritional deficiencies may adversely affect general health; however, their specific relationship with ASD-related characteristics requires further investigation. The potential effects of probiotic and microbiome-targeted interventions in ASD remain an active area of research, but current evidence is not sufficient to support definitive clinical conclusions.

The present cross-sectional, self-report study does not permit conclusions regarding the effects of diet on health outcomes among autistic Generation Z students.

A substantial proportion of participants reported dietary gluten-free modification and supplement use; however, the study did not assess nutritional knowledge or the clinical appropriateness of these practices. Because existing evidence regarding dietary interventions and supplementation in ASD remains inconclusive, further well-controlled studies are needed to evaluate specific health outcomes and clinically indicated interventions.

Limitations

Several limitations should be considered when interpreting the present findings. First, the study was conducted at a single university and used a purposive convenience sample, which limits the generalizability of the results. Second, health conditions and health-related behaviors were self-reported and were not independently verified using medical records or clinical assessments. Third, the cross-sectional design precludes conclusions regarding causality or temporal relationships. Fourth, the sample was predominantly female, which limits the extent to which the findings can be generalized to autistic male students or other gender groups. Finally, the questionnaire was researcher-developed, and its psychometric properties were not reported in the present study.

Conclusions

The present study provides preliminary descriptive data on self-reported physical health conditions and health-related behaviors among Generation Z university students on the autism spectrum. Participants reported a range of physical health conditions, as well as frequent use of dietary modifications and nutritional supplements. However, the study design does

not permit conclusions regarding the prevalence of these conditions in the broader autistic population or the effectiveness of dietary or supplementation practices. The findings highlight the need for larger, multi-center studies using clinically verified health data and standardized measures. Universities may also benefit from integrating health-related considerations into broader systems of educational and psychosocial support for autistic students.

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