

Autism Awareness Levels of University Students and Their Relationship with Various Variables

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Abstract

This cross-sectional quantitative study examined university students' awareness of autism spectrum disorder (ASD). The sample consisted of 354 students from different academic departments at a public university in Türkiye. Data were collected using the Autism Awareness Scale and a Demographic Information Form and analyzed through descriptive statistics, Pearson correlation, and independent-samples t-tests. Findings indicated relatively high awareness in social interaction, communication, and restricted and repetitive behaviors, whereas knowledge was lower regarding physical characteristics and early warning signs. Core behavioral knowledge was positively associated with peer relationships and early diagnosis indicators. Gender differences were minimal, except for higher early warning scores among females. Prior interaction with individuals with autism and ASD-related coursework were associated with higher awareness across multiple domains, while students without formal education scored higher on physical characteristics. Overall, the findings highlight the importance of direct experience and structured education in improving autism awareness among university students in higher education settings.

Keywords: Autism awareness; university students; early diagnosis.

1. Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental condition that emerges in early developmental stages and is characterized by persistent difficulties in social interaction and communication, accompanied by restricted and repetitive patterns of behavior (American Psychiatric Association [APA], 2013). Over the past several decades, the prevalence of ASD has increased markedly. Early studies reported an estimated prevalence of approximately 1 in 500 individuals (Williams et al., 2006), whereas subsequent research indicated a rise to 1 in 161 (Elsabbagh et al., 2012). Data from the Centers for Disease Control and Prevention (CDC) demonstrate an accelerated increase in ASD prevalence among children aged 4 and 8 years in the United States. According to the most recent estimates, ASD is currently identified in

approximately 1 in 31 eight-year-old children (CDC, 2022). The CDC's 2025 Autism and Developmental Disabilities Monitoring (ADDM) report further indicates a continued upward trend in ASD prevalence. Importantly, this increase appears to be associated less with a true rise in incidence and more with enhanced public awareness, broader implementation of diagnostic practices, and improved access to health and educational services. In particular, higher rates of early childhood screening and diagnosis are closely linked to increased awareness of ASD symptoms among parents, educators, and health professionals.

In Türkiye, recent initiatives conducted within the framework of the Second National Autism Action Plan (2023–2030), together with informational and advocacy-oriented efforts led by civil society organizations, have aimed to enhance societal awareness of ASD (Republic of Türkiye Ministry of Family and Social Services, 2023). Globally, numerous awareness-raising activities targeting ASD are implemented each year. World Autism Awareness Day (April 2) and World Autism Awareness Month (April) represent institutionalized global initiatives. Within this context, large-scale campaigns such as the “Light It Up Blue” initiative led by Autism Speaks have gained visibility through the illumination of culturally and symbolically significant landmarks in blue across different regions of the world. The Empire State Building in New York serves as a prominent example of such global practices. Similarly, in Türkiye, symbolic awareness events have been organized, including the illumination of the Konya Tropical Butterfly Garden and the Göreme Roman Castle in Nevşehir with blue lighting to promote public awareness of autism.

Autism spectrum disorder was first defined as a diagnostic category distinct from schizophrenia in the DSM-III (1980). Following this classification, autism-related research began to increase worldwide. In Türkiye, the first theses on this topic were published in 1990 (Gümüşçü, 1990; Pişkin, 1990). Studies focusing specifically on early childhood autism, however, did not emerge until 2015 (Akın & Akıncı-Düzel, 2023). Despite growing scholarly interest, the country continues to face limitations in accessing comprehensive screening data capable of providing reliable prevalence estimates. Research examining autism awareness levels among parents of preschool-aged children has gained momentum, particularly in light of the critical role of early diagnosis (Bozdağ et al., 2025). In addition, studies addressing autism awareness training among healthcare professionals have been reported in the literature (Abanoz et al., 2025). Several investigations have also examined autism awareness among specific university populations, including medical students, vocational school students, and preservice science teachers (Kurt et al., 2023; Macaroğlu-Akgül & Mertoğlu, 2020; Pirinççi et al., 2019). Nevertheless, no study has yet comparatively examined autism awareness levels across different academic units within the broader university student population. Accordingly, the present study aims to determine the level of autism awareness among university students.

2. Methods

2.1. Assessment Instruments

Data were collected using the Autism Awareness Scale and a Demographic Information Form.

2.1.1. Autism Awareness Scale

Autism awareness was assessed using the Autism Awareness Scale developed by Yazıcı and Karsantık (2023), a 32-item, five-point Likert-type instrument comprising seven dimensions. The scale demonstrated strong psychometric properties, with a confirmed seven-factor structure and high internal consistency ($\alpha = .92$), indicating that it is a reliable and valid measure of autism awareness in adults

2.2. Participants and Procedure

Following approval from the Bayburt University Social and Human Sciences Ethics Committee and institutional permission granted by Bayburt University, data were collected via an online questionnaire administered through Google Forms. The study was conducted in accordance with the principles of the Declaration of Helsinki, and informed consent was obtained electronically from all participants prior to participation. Participation was voluntary, and anonymity was ensured throughout the data collection process. A total of 354 university students participated in the study. Regarding gender, 72.6% of the participants were female ($n = 257$), 27.1% were male ($n = 96$), and 0.3% identified as another gender ($n = 1$). In terms of the presence of a relative with a disability, 34.7% of the participants ($n = 123$) reported having a relative with a disability outside the household, whereas 65.3% ($n = 231$) reported no such relative. With respect to prior interaction with an individual with autism, 45.5% of the participants ($n = 161$) reported having prior interaction, while 54.5% ($n = 193$) reported no prior interaction. Regarding participation in autism-related activities, 15.8% of the participants ($n = 56$) reported having participated in such activities, whereas 84.2% ($n = 298$) reported no participation. Finally, concerning receiving autism-related education as part of university coursework, 24.0% of the participants ($n = 85$) reported receiving autism-related instruction in at least one university course, while 76.0% ($n = 269$) reported no such coursework.

2.3. Data Analysis

Descriptive analyses were conducted to summarize participants' autism awareness levels. Pearson correlation analyses were performed to examine the relationships among the subscales of the Autism Awareness Scale. In addition, independent-samples t tests were carried out to compare autism awareness subscale scores according to gender, the presence of a relative with a disability, prior interaction with an individual with autism, and receipt of autism-related education as part of university coursework.

2.4. Findings

Descriptive analyses indicated moderate to high levels of autism awareness across subscales, with mean scores ranging from 9.2 to 19.7 (e.g., Restricted Interests and Repetitive Behaviors: $M = 19.6$, $SD = 3.9$; Social Interaction and Communication: $M = 19.7$, $SD = 4.0$), and skewness and kurtosis values within ± 1 , supporting the assumption of normality. Pearson correlation analyses revealed a consistent pattern in which Restricted Interests and Repetitive Behaviors and Social Interaction and Communication were strongly and positively associated with Peer Relationships ($r = .508-.558$, $p < .01$) and Early Warning Signs ($r = .562$, $p < .01$), while both subscales showed moderate negative associations with Causes of Autism ($r = -.237$ to $-.264$, $p < .01$) and Physical Characteristics ($r = -.363$ to $-.473$, $p < .01$). In addition, the Core Elements of the Intervention Process subscale was positively correlated with Peer Relationships ($r = .123$, $p < .05$) and Early Warning Signs ($r = .387$, $p < .01$), indicating that greater knowledge of intervention processes was associated with higher overall autism awareness.

Table 1. Independent-Samples t-Test Comparisons of Autism Awareness Subscales Across Participant Characteristics

Autism Awareness Level Subscales		Gender		Presence of a Relative with a Disability		Prior Interaction with an Individual with Autism		Receiving Autism-Related Education as Part of University Coursework	
		F	M	No	Yes	No	Yes	No	Yes
Restricted Interests and Repetitive Behaviors in Autism	<i>n</i>	258	96	231	123	161	193	269	85
	$\bar{x}$	19.7	19.1	19.3	20.2	19.0	20.0	19.2	21.0
	<i>Sd</i>	3.8	4.1	3.8	4.0	3.6	4.1	3.7	4.3
		$t=-1.4$	$p=.18$	$t=-2.1$	$p=.04$	$t=-2.2$	$p=.02$	$t=-3.7$	$p=.00$
Social Interaction and Communication in Autism		F	M	No	Yes	No	Yes	No	Yes
	<i>n</i>	258	96	231	123	161	193	269	85
	$\bar{x}$	19.9	19.2	19.6	20.0	19.1	20.1	19.4	20.7
	<i>Sd</i>	4.0	3.7	4.0	3.9	3.7	4.1	3.8	4.4
		$t=-1.6$	$p=.11$	$t=-0.6$	$p=.54$	$t=-2.8$	$p=.01$	$t=-2.6$	$p=.01$
Causes of Autism		F	M	No	Yes	No	Yes	No	Yes
	<i>n</i>	258	96	231	123	161	193	269	85

	$\bar{x}$	19.0	18.9	18.9	19.0	19.2	18.7	19.0	18.9
	<i>Sd</i>	3.7	3.5	3.7	3.5	3.4	3.8	3.6	3.9
		$t=-0.3$	$p=.79$	$t=-0.3$	$p=.79$	$t=1.40$	$p=.16$	$t=0.22$	$p=.83$
Peer Relationships in Autism		F	M	No	Yes	No	Yes	No	Yes
	<i>n</i>	258	96	231	123	161	193	269	85
	$\bar{x}$	12.0	11.8	12.0	12.0	11.9	12.0	11.8	12.4
	<i>Sd</i>	1.8	1.9	1.9	1.7	1.8	1.9	1.8	1.9
		$t=-1.0$	$p=.30$	$t=0.40$	$p=.69$	$t=-0.6$	$p=.53$	$t=-2.70$	$p=.01$
Core Elements of the Intervention Process in Autism		F	M	No	Yes	No	Yes	No	Yes
	<i>n</i>	258	96	231	123	161	193	269	85
	$\bar{x}$	15.9	15.3	15.6	16.0	15.0	16.3	15.5	16.5
	<i>Sd</i>	2.7	2.6	2.7	2.6	2.3	2.8	2.7	2.6
		$t=-1.8$	$p=.07$	$t=-1.5$	$p=.15$	$t=-4.7$	$p=.00$	$t=-3.0$	$p=.00$
Physical Characteristics in Autism		F	M	No	Yes	No	Yes	No	Yes
	<i>n</i>	258	96	231	123	161	193	269	85
	$\bar{x}$	9.2	9.3	9.1	9.3	9.4	9.0	9.3	8.7
	<i>Sd</i>	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.2
		$t=0.5$	$p=.62$	$t=-0.7$	$p=.50$	$t=1.5$	$p=.13$	$t=2.6$	$p=.01$
Early Warning Signs of Autism		F	M	No	Yes	No	Yes	No	Yes
	<i>n</i>	258	96	231	123	161	193	269	85
	$\bar{x}$	9.6	9.0	9.4	9.6	9.3	9.6	9.3	9.8
	<i>Sd</i>	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.1
		$t=-2.8$	$p=.01$	$t=-0.8$	$p=.42$	$t=-1.5$	$p=.13$	$t=-1.9$	$p=.06$

Note. F = female; M = male; *n* = sample size; $\bar{x}$ = mean; *Sd* = standard deviation; *t* = independent-samples *t* test value; *p* = significance level.

Independent-samples *t*-tests revealed that gender was not associated with autism-related knowledge across most subscales (e.g., Restricted Interests and Repetitive Behaviors: $t = -1.36$, $p = .176$; Social Interaction and Communication: $t = -1.59$, $p = .113$), except Early Warning Signs, where female participants scored significantly higher than males ($t = -2.76$, $p = .006$). Having a relative with a disability was associated with higher scores only in the Restricted

Interests and Repetitive Behaviors subscale ($t = -2.06, p = .040$). In contrast, prior interaction with an individual with autism was associated with higher scores in several subscales, including Restricted Interests and Repetitive Behaviors ($t = -2.24, p = .015$), Social Interaction and Communication ($t = -2.85, p = .005$), and Core Elements of the Intervention Process ($t = -4.69, p < .001$). Similarly, receiving autism-related education as part of university coursework was associated with higher scores across multiple subscales (e.g., Restricted Interests and Repetitive Behaviors: $t = -3.69, p < .001$; Peer Relationships: $t = -2.70, p = .007$). No significant group differences were observed for the Causes of Autism subscale (all $p > .05$), and results for Physical Characteristics were limited, with higher scores observed among participants without formal autism-related coursework ($t = 2.60, p = .010$).

3. Discussion and Conclusion

This study contributes to the growing body of evidence regarding public awareness of ASD. The findings indicate that university students demonstrate relatively high awareness of ASD in the domains of social interaction, communication, and restricted and repetitive behaviors. In contrast, lower mean scores in the subdomains of physical characteristics and early warning signs suggest that participants' awareness remains primarily focused on behavioral and more widely recognized features of autism. Consistent with Dillenburger et al. (2013) and current literature, ASD awareness should not be limited to knowledge of observable behaviors; it should also encompass an understanding of the disorder's complexity, lived experiences, and internal challenges. While the ability of participants to correctly identify core behavioral features is a positive starting point, limited awareness of less well-known aspects of autism highlights a gap between awareness and deeper understanding and acceptance.

Correlational analyses examining relationships among subdomains revealed that autism awareness is multidimensional and interrelated. Notably, restricted and repetitive behaviors and social interaction and communication were strongly and positively associated with peer relationships and early warning signs, suggesting that knowledge of core features develops in parallel with social functioning and early diagnostic awareness. Comparisons based on gender revealed no significant differences except for the early warning signs subdomain, indicating that overall autism awareness is largely independent of gender. Higher scores among female participants on early warning signs are consistent with prior studies suggesting greater sensitivity to developmental risk indicators among women (Mori & Cigala, 2016). This may reflect gender-related differences in emotional awareness across the lifespan (Karsantik & Yazıcı, 2026).

Prior interaction with individuals with autism and participation in ASD-related university coursework were associated with higher awareness across multiple subdomains. These findings align with Allport's Contact Theory (1954), which posits that attitudes toward different groups

can improve through direct and meaningful contact. Structured coursework provides information-based contact, reducing misconceptions and fostering more comprehensive awareness, while having a relative with a disability offers continuous, natural exposure that allows students to observe the social and behavioral aspects of autism in daily life. Semi-structured interviews conducted by Huws and Jones (2010) support these findings. The study also found that participants' knowledge of ASD was sometimes limited to specific beliefs and not necessarily grounded in direct experience or factual information. Researchers have emphasized that direct interaction is the most effective way to enhance autism knowledge and correct misconceptions. Accordingly, both structured education and personal experience contribute to more accurate and comprehensive understanding of autism.

Differences observed in the subdomains of core elements of the intervention process, social interaction, communication, and restricted and repetitive behaviors suggest that both direct experience and structured education play important roles in awareness development. Interestingly, participants without formal ASD coursework scored higher in the physical characteristics subdomain, possibly reflecting the emphasis of formal education on behavioral and developmental features rather than stereotypical physical traits, thereby reducing overgeneralizations. Overall, the findings indicate that university students' autism awareness is meaningfully shaped by education, experience, and direct contact, highlighting the importance of integrating ASD-related courses and practical applications into higher education curricula.

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