

# The Interplay Between ASD Symptomatology and Camouflaging on the Adjustment to College in Female Students with and without ASD



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## Introduction

- Individuals with ASD may engage in camouflaging behaviors to mask their symptoms, but this may negatively impact college adjustment (Parish-Morris et al., 2017; Schuck et al., 2019; Tubío-Fungueiriño et al., 2021).
- Camouflaging behaviors include mimicking others' body language and monitoring their face and body (Parish-Morris et al., 2017). Individuals may modulate their behavior to the extent that they feel like they are playing a role (Shuck et al., 2019).
- Camouflaging can also involve compensatory behaviors such as building a complex theoretical sense of empathy to make up for a perceived lack in emotional intelligence. These behaviors may contribute to the inability of individuals with ASD to adjust to college, including social and personal-emotional adjustment. This can include meeting the demands of higher education, a new environment, and social groups (Tubío-Fungueiriño et al., 2021).
- Less is known about these concepts with regards to college women with ASD symptomatology.

## Objectives

We sought to address the following research questions:

- Are there differences between those scoring above threshold of ASD symptomatology compared to those scoring below threshold on camouflaging behaviors, social adjustment, and personal-emotional adjustment to college?
- What are the relations among our study variables?
- Do ASD symptomatology and camouflaging predict social and personal-emotional adjustment to college?

## Methods

- Following IRB approval, 102 women participated in this study (54.9% Caucasian). Most participants were in their first or second year of college (86.3%). T-Scores from the Social Responsiveness Scale (SRS-2) showed 51 students with autistic traits (Mage=18.84) and 51 students without autistic traits (Mage=18.43).
- Participants completed the **Social Responsiveness Scale-2 (SRS-2)**, which measures levels of social impairment in relation to ASD Symptomatology (Constantino & Gruber, 2012).
- The **Camouflaging Autistic Traits Questionnaire (CAT-Q)** was used to measure camouflaging behaviors, such as compensation in which individuals compensate for difficulties in situations, masking as in hiding autistic characteristics, and assimilation or changing oneself to fit into a social group (Hull et al., 2018).
- Levels of adjustment to college were measured using the **Student Adaptation to College Questionnaire (SACQ)** a 67-item measure that assesses students' adjustment on 4 dimensions: academic adjustment assesses how well the student manages the academic demands of school, social adjustment captures the degree of integration into the social milieu of college, whereas personal-emotional adjustment reflects students' well-being. Lastly, institutional attachment captures how much a student identifies with their university. Institutional attachment scores were included in the total scores but were not examined separately (Baker & Siryk, 1999).

## Results

**Table 1**  
Participant Characteristics

	Overall (N = 102)	Without ASD Symptomatology (N = 51)	With ASD Symptomatology (N = 51)	t/ x <sup>2</sup>	p	d/phi
Age	18.64	18.43	18.84	1.64	.105	.32
Year in School				5.57	.13	.23
Freshmen	66.67%	64.71%	68.63%			
Sophomores	19.61%	25.49%	13.73%			
Juniors	6.86%	7.84%	5.88%			
Seniors	6.86%	1.96%	11.76%			
Race				6.85	.23	.26
White/Caucasian	54.90%	54.90%	54.90%			
Black/African American	3.92%	1.96%	5.88%			
Asian/Asian American	16.67%	11.76%	21.57%			
Hispanic/Latinx	8.82%	13.72%	3.92%			
More than one race	14.7%	17.65%	11.76%			
Other race	.01%	0%	1.96%			

**Table 2**  
Correlations Among Study Variables

Variable	1	2	3	4
ASD Symptomatology	-			
Camouflaging	.759***	-		
Social Adjustment	-.545***	-.443***	-	
Personal Emotional Adjustment	-.680***	-.636***	.506***	-

Note. \*\*\* =  $p < .001$

**Figure 2: Predictive Abilities of Camouflaging and ASD Symptomatology on College Adjustment**  
( $-0.486, p < .001$ )

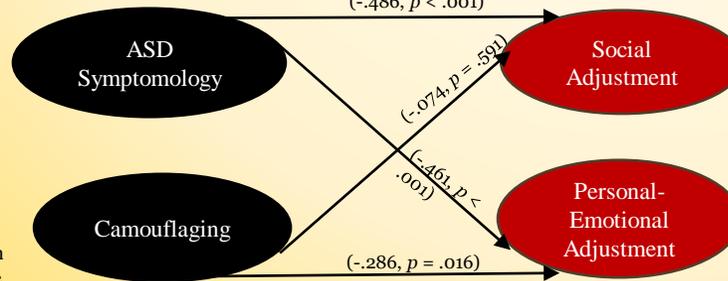
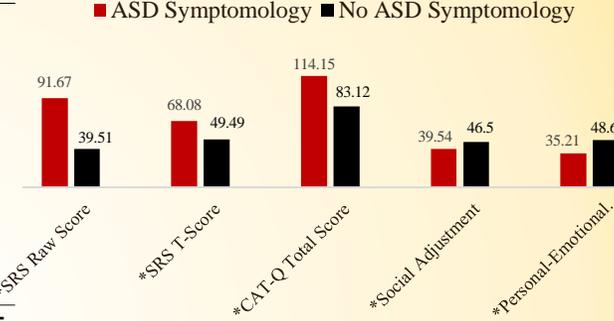


Figure 1: Mean Test Scores for Participants with and Without ASD Symptomatology



- Female students with ASD symptomatology display significantly more camouflaging than students without ASD symptomatology (i.e CAT-Q scores)  $t(88) = 8.00, p < .001$ .
- ASD symptomatology is positively associated with camouflaging,  $r(89) = 0.76, p < .001$ , but negatively associated with social and personal-emotional adjustment,  $r(89) = -.545, -.680, p < .001$ .
- Camouflaging is negatively associated with social and personal-emotional adjustment to college,  $r(89) = -.443, -.636 p < .001$ .
- For our regression analysis, the overall model was found to be significant,  $F(2, 87) = 42.62, p < .001$ , adjusted  $R^2 = 0.483$ . Specifically, ASD symptomatology ( $\beta = -0.461, p < .001$ ) and camouflaging ( $\beta = -0.286, p = .016$ ) were found to be significant predictors of personal emotional adjustment to college.
- In addition, ASD symptomatology ( $\beta = -0.486, p < .001$ ) and camouflaging ( $\beta = -0.074, p = .016$ ) were found to be significant predictors of social adjustment to college,  $F(2, 87) = 18.35, p < .001$ , adjusted  $R^2 = 0.281$ .

## Conclusions and Future Directions

- Our results corroborate previous studies which show individuals with ASD symptomatology may engage in camouflaging behaviors more than individuals without ASD symptomatology, which have both been found to negatively impact college adjustment (Ferri et al., 2018; Parish-Morris et al., 2017; Zener 2019).
- In addition, our results highlight that camouflaging can lead to difficulties in both social and personal-emotional adjustment to college.
- Given these findings, creating environments where individuals with autism feel accepted might reduce the need to engage in camouflaging behaviors, and thus improve adjustment to college.
- This finding indicates that while camouflaging likely impacts social adjustment to college in individuals with ASD, there are likely other factors, such as alexithymia and anxiety, that would warrant more research.
- For example, anxiety may also strongly affect the presentation of camouflage, since previous studies have indicated that individuals with ASD may engage in camouflaging to avoid social anxiety (Ferri et al., 2018; Hull et al., 2020). Therefore, future studies could further explore this connection between anxiety, camouflaging, and ASD.

Although we use person first language, we recognize and respect those who prefer identity first language. When possible, we avoid the word disorder.