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Bridging autistic traits and self-efficacy: the mediating roles of camouflaging strategies and fear of evaluation

BACKGROUND

Autism spectrum disorder exists on a continuum, with individuals at one extreme meeting clinical diagnostic criteria, while others display various subclinical autistic traits and social functioning impairments. This study explores the complex relationships between autistic traits, camouflaging behaviors, fears of negative and positive evaluation, and self-efficacy in adults.

PARTICIPANTS AND PROCEDURE

Drawing on a sample of 373 individuals diverse in gender and ethnicity, the paper investigates how camouflaging subscales – compensation, masking, and assimilation – and evaluation fears mediate these relationships. Although participants were diverse in gender identity, the sample was predominantly White, highly educated, and self-selected via social media recruitment, which may limit generalizability to more socioeconomically and ethnically diverse autistic populations.

RESULTS

The results indicated that autistic traits were significantly correlated with fear of negative evaluation, camouflaging strategies, fear of positive evaluation, and reduced self-

efficacy. Importantly, assimilation emerged as a key camouflaging strategy that, through fear of positive evaluation, mediates the negative impact of autistic traits on self-efficacy.

CONCLUSIONS

The findings illuminate the psychological costs of camouflaging, particularly how persistent efforts to “fit in” can elevate anxiety about social judgments and undermine confidence in social competence. The study contextualizes these results within social identity theory and the minority stress model, emphasizing the influence of stigma and social expectations on autistic individuals’ psychological well-being. These insights underline the importance of recognizing camouflaging’s dual role: essential for social integration yet potentially detrimental to mental health. The paper highlights implications for clinical assessment and interventions targeting self-efficacy and social anxiety in autistic populations.

KEY WORDS

self-efficacy; social anxiety; autistic traits; camouflaging; fear of evaluation

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BACKGROUND

Autism spectrum disorder (ASD) is a highly heritable developmental condition characterized by persistent social-communication difficulties and restricted, repetitive behaviors (Hirota & King, 2023). Rather than a binary diagnosis, ASD exists on a continuum: some individuals meet clinical criteria, while others display various subclinical autistic traits. Although these subclinical individuals do not meet diagnostic thresholds, they nonetheless exhibit social functioning impairments. For example, many demonstrate difficulties with theory of mind, which limits their ability to infer others' thoughts, beliefs, or intentions (Le et al., 2024). Both diagnosed and subclinical individuals may also exhibit atypical language use, including literal interpretations, pragmatic conversational difficulties (e.g., taking turns, figurative speech comprehension), and diminished sensitivity to nonverbal cues (e.g., tone of voice or facial expressions) (Hirota & King, 2023; Wang et al., 2023). Consequently, autistic characteristics are broadly distributed and can subtly affect communication even in the absence of an ASD diagnosis.

Social camouflaging (i.e., masking, compensation, assimilation) comprises strategies people with autism (PWA) use, either consciously or unconsciously, to conceal or compensate for their autism-related behaviors and appear more neurotypical during social interactions (Cook et al., 2021; Hull et al., 2017). These strategies include mimicking neurotypical peers' social behaviors and expressions, using scripted conversational phrases, and suppressing or concealing perceived atypical actions (Bargiela et al., 2016; Hull et al., 2017). Research has consistently found that females with autism tend to engage in camouflaging more frequently and intensively than autistic males, which has been proposed as a female-specific autism phenotype and may contribute to females being underdiagnosed or diagnosed later than males (Hull et al., 2020; Milner et al., 2023). PWA commonly report camouflaging to fit in socially, make friends, feel safe, avoid negative judgments or stigma, and as a practical strategy to navigate situations with high social expectations (e.g., academia or work) (Cage & Troxell-Whitman, 2019; Hull et al., 2017).

Camouflaging by PWA has been implicated in a wide variety of negative mental health outcomes. Researchers have found that short- and long-term consequences of camouflaging include psychological exhaustion and threats to self-perception (Hull et al., 2017).

Bradley et al. (2021) found that the amount of time autistic individuals spent camouflaging is one of the central risk factors for poor mental health outcomes among people with ASD and autistic traits; as

camouflaging increases, so does the risk for adverse psychological effects.

Beck et al. (2020) found that for women with autistic traits (regardless of being fully diagnosed with autism or not), those who utilized camouflaging reported much greater psychological distress than their non-camouflaging peers. Regarding gender differences, Schuck et al. (2019) found that camouflaging as a psychological strategy was more likely to be used by women with ASD than men; this may explain why so many women with ASD are not diagnosed or are misdiagnosed (Gould & Ashton-Smith, 2011). Both the psychological danger of camouflaging and its role in obscuring diagnostic accuracy highlight the harmful consequences it can pose for individuals with autistic traits.

Previous literature has revealed associations between camouflaging behaviors and mental health and interpersonal difficulties. Continuous engagement in camouflaging may be exhausting for individuals with autistic traits, potentially leading to further psychological issues such as anxiety, stress, depression, and suicidality (Cassidy et al., 2023; Ross et al., 2023). However, the persistence of camouflaging behaviors may stem from several factors, including the stigmatization and discrimination towards autistic individuals. Many theories – particularly the social identity theory and the minority stress model – discuss how the social dynamics between autistic and neurotypical individuals shape the lived experiences of those with autism (Rivera & Bennetto, 2023). Social identity theory suggests that a person's social identity is shaped both by the traits they personally identify with and by their membership in certain groups, as well as by the traits and group memberships that distinguish them from groups they do not typically associate with (Tajfel & Turner, 1979). In terms of individuals with autism, research has found that autistic individuals experience social identity differently compared to neurotypical individuals (Rivera & Bennetto, 2023). Autistic individuals are more likely to report dehumanization and stigma due to how they are portrayed in media, research, and by neurotypical individuals (Perry et al., 2022). In line with the identity theory, Tajfel and Turner (2004) suggest that when a group is facing stigmatization, members may seek to regain a positive identity by distancing themselves from the group they belong to (autistic trait communities) and attempting to "pass" in the out-group that is of "higher status" (neurotypical communities). The minority stress model further explains the act of camouflaging by discussing how minority stress is a product of one's environmental circumstances and minority status (Rivera & Bennetto, 2023). Minority stress is further described as mental health concerns in stigmatized groups which come from acts of prejudice and discrimination that are displayed in hostile social environments (Rive-

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ra & Bennetto, 2023). Autistic individuals who display a stigmatized minority identity are more likely to rely on camouflaging behaviors; however, these behaviors can exude shame and restrict individuals who display autistic traits to connect or relate to their communities (Perry et al., 2022).

Social anxiety is a significant factor motivating individuals with autistic traits to engage in camouflaging behaviors. Autistic individuals often adopt camouflaging strategies to avoid social judgment and reduce social stigma by concealing their autistic traits and mimicking neurotypical behaviors (Lei et al., 2024). According to the cognitive model of social anxiety disorder (SAD) proposed by Clark and Wells (1995), social and communication difficulties within autistic individuals may be perceived as social-evaluative threats, leading to stress. As a result, autistic individuals may engage in safety behaviors – such as camouflaging – to prevent feared outcomes (Lei et al., 2024). One such feared outcome is negative social judgment, as reflected in the fear of negative evaluation (FNE), a core component of social anxiety that involves apprehension about being judged unfavorably by others (Zhang et al., 2023). In addition to FNE, recent research highlights the role of fear of positive evaluation (FPE) – the discomfort associated with receiving positive feedback – which is also associated with SAD. Individuals may interpret praise or social approval as increasing others' expectations, leading to anxiety about failing to meet those elevated expectations in the future (Zhang et al., 2023). For individuals with autistic traits, FPE may be particularly relevant following successful camouflaging: having concealed their traits, they may fear being unable to replicate such success in future social interactions. In the current study, we hypothesize that FPE may mediate the relationship between camouflaging and poor psychological well-being in individuals with autistic traits. Specifically, FPE may reduce self-efficacy by fostering doubts about one's ability to consistently maintain a camouflaged persona, which in turn may contribute to chronic stress, depression, anxiety, and other forms of psychological distress (Jia & Yue, 2023; Pyszkowska, 2025; Zhang et al., 2023).

The purpose of this study was to examine (1) the correlation between autistic traits, FNE, camouflaging strategies, FPE, and subjective beliefs of self-efficacy in adults with AT, and (2) the possible mechanism between AT and self-efficacy through a serial mediation model.

Based on the literature discussed, the following study hypotheses are proposed: (1) camouflaging strategies, FPE, and self-efficacy are significantly associated with AT; (2) each camouflaging strategy and FPE sequentially mediates the relationship between AT and self-efficacy (AT → each camouflaging strategy → FPE → self-efficacy).

PARTICIPANTS AND PROCEDURE

ETHICS STATEMENT

This research was conducted in accordance with recognized ethical standards and guidelines. Ethical approval for the study was obtained from the Institutional Review Board (IRB) of the City University of New York, approval number 2022-0273-QC. All procedures involving human participants followed the ethical standards of the institutional and/or national research committee and the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Written informed consent was obtained from all participants prior to data collection, and they were informed about the voluntary nature of participation and their right to withdraw at any time without penalty. The privacy, confidentiality, and welfare of all research participants were prioritized and protected throughout every stage of the project. All responses were collected anonymously via a secure online platform, and no identifying information was stored with survey data.

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PARTICIPANTS

A sample of 373 participants (50.8% female, 36.8% male, 12.4% non-binary) ranging in age from 18 to over 41 years old was recruited online via social media platforms. Participants were residing in various countries at the time of the study. The inclusion criteria mandated that participants be at least 18 years of age and fluent in English. A majority of individuals in the present sample self-identified their ethnicity as Caucasian (76.1%), although the sample was ethnically diverse, with the next most frequently endorsed ethnicity being Asian (8.1%), and 9.4% being from multiple races. The majority (80%) of participants had completed post-secondary education (i.e., completed some college, obtained an associate, undergraduate, or graduate university degree). Taken together, these characteristics indicate that the present sample was relatively homogeneous, with over three-quarters of participants identifying as White and the majority having completed post-secondary education. This profile likely reflects the online recruitment strategy and may limit the extent to which the findings generalize to autistic individuals from racially minoritized groups or with lower educational attainment. The majority of participants were either single and never married (59.4%) or married or in a relationship (32.5%), with the remainder separated, divorced, or widowed. Although the majority of participants reported that they had never experienced a psychological disorder as diagnosed by a physician or psychologist (34.7%), 33.9% reported having experienced more than one psychological problem, 16.7% reported that

Table 1*Demographic characteristics of the sample*

Variable	Frequency	Percentage (%)	Variable	Frequency	Percentage (%)
Age			Diagnosis		
18-25	216	58.1	Anxiety	34	9.1
26-30	70	18.8	Autism spectrum disorder	11	3.0
31-40	64	17.2	Depression	62	16.7
41 or above	22	5.9	More than one of the above	126	33.9
Gender			None of the above	129	34.7
Female	189	50.8	Personality disorder	7	1.9
Male	137	36.8	Schizophrenia	3	0.8
Non-binary	46	12.4	Medication		
Marital status			No	223	59.9
In a relationship but never married	11	3.0	Yes	149	40.1
Married or in a relationship	121	32.5	Employment status		
Separated, divorced or widowed	8	2.2	Employed, working 1-39 hours/week	153	41.1
Single, never married	221	59.4	Employed, working 40+ hours/week	91	24.5
Education			Not employed, looking for work	11	3.0
Less than high school	11	3.0	Not employed, not looking for work	79	21.2
High school degree or equivalent	63	16.9	Disabled, not able to work	24	6.5
Some college but no degree	112	30.1	Retired	2	0.5
Associate degree	23	6.2	Other/unemployed	12	3.2
Bachelor's degree	104	28.0			
Graduate degree	59	15.9			
Ethnicity					
Asian	30	8.1			
Black or African American	4	1.1			
From multiple races	35	9.4			
Latino	12	3.2			
Native Hawaiian or other Pacific Islander	2	0.5			
Other	6	1.6			
White	283	76.1			

they had experienced depression, 9.1% reported anxiety, and fewer than 3% reported autism spectrum disorder, personality disorder, or schizophrenia. Demographic details are presented in Table 1.

MEASURES

The Adult Autism Spectrum Quotient (AQ; Baron-Cohen et al., 2001). The Autism-Spectrum Quotient (AQ) is a 50-item self-report questionnaire that quantifies autistic traits in neurotypical adults. The items are grouped into five separate trait dimensions named attention switching, attention to detail, social skill, imagination, and communication, each of which has 10 items. Each item is responded to using

a four-point Likert rating scale, ranging from 1 (*definitely disagree*) to 4 (*definitely agree*). Half the items are reverse scored. For example, an agreement with the item “When I talk on the phone, I’m not sure when it’s my turn to speak” would be scored in the direction of an autistic trait, whereas disagreement with the item “I would rather go to the theatre than a museum” would be scored in the opposite direction. The total score ranges from 50 to 200. The internal consistency of items in all five domains as reflected by Cronbach’s α were reported to be in the moderate to high range (Baron-Cohen et al., 2001). In the current study, Cronbach’s α for the full scale was .84.

Camouflaging Autistic Traits Questionnaire (CAT-Q; Hull et al., 2019). The Camouflaging Autistic Traits Questionnaire (CAT-Q) is a 25-item self-report measure developed by Hull et al. (2019). The CAT-Q is designed to assess social camouflaging behaviors in adults. The 25 items touch on 3 subcategories: 9 statements relating to compensation (e.g., “When I am interacting with someone, I deliberately copy their body language or facial expressions”), 8 relating to masking (e.g., “I monitor my body language or facial expressions so that I appear relaxed”), and 8 relating to assimilation (e.g., “I rarely feel the need to put on an act in order to get through a social situation”). Participants were asked to respond to the statements on a 7-point Likert scale ranging from 0 (*strongly disagree*) to 7 (*strongly agree*). Five items were reverse-scored, resulting in a total score range of 25-175. The CAT-Q has demonstrated a high internal consistency with Cronbach’s $\alpha = .94$ for the total scale, $\alpha = .91$ for compensation, $\alpha = .85$ for masking, and $\alpha = .92$ for assimilation subcategories (Hull et al., 2019). In the present study, the CAT-Q was found to have excellent internal consistency (Cronbach’s $\alpha = .91$).

Self-efficacy was determined by combining the scores obtained by each individual on the Interpersonal Communication Competence Scale and Rosenberg’s Self-Esteem Scale. The internal consistency (Cronbach’s α) of the two scales combined was .89.

Interpersonal Communication Competence Scale-Short Form (ICCS-SF; Rubin & Martin, 1994). The Interpersonal Communication Competence Scale (ICCS) is a 30-item scale used to measure a variety of interpersonal skills that support the achievement of communication goals. The scale assesses ten dimensions of interpersonal communication competence labeled self-disclosure, empathy, social relaxation, assertiveness, altercentrism, interaction management, expressiveness, supportiveness, immediacy, and environmental control. The ICCS-SF consists of ten items, each measuring one of the dimensions of interpersonal communication competence, rated on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The correlation between the 10- and 30-item measures was reported to be .86 ($p < .001$), with the internal consistency of the

ICCS-SF being .63 (Rubin & Martin, 1994). The overall reliability of the ICCS-sf in the present study was found to be .77.

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1979). The Rosenberg Self-Esteem Scale (RSE) consists of 10 items and measures self-esteem. Participants provide their responses on a 4-point Likert scale including *strongly agree*, *agree*, *disagree*, and *strongly disagree*. Items 2, 5, 6, 8, and 9 on the scale are reverse-scored, with responses coded as follows: *strongly disagree* – 3, *disagree* – 2, *agree* – 1, and *strongly agree* – 0. Total scores range from 0 to 30, with higher scores indicating higher self-esteem. Previous studies have reported internal reliability for the RSE ranging from .81 to .90 (Robins et al., 2001; Schmitt & Allik, 2005). In the present study, the internal consistency (Cronbach’s α) of the scale was found to be .92.

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PROCEDURE

The present study was initiated following ethics approval from the IRB. The study’s specified inclusion criteria included being over 18 years of age and being fluent in written English. All the scales assessing the study variables, along with a consent form and a demographic information sheet, were compiled into one package using Microsoft Forms. Participants were recruited from the general population via online social media websites, including Facebook, Instagram, LinkedIn, and Reddit. Participants responded to the study invitation by clicking on a link, which directed them to the online study survey. First, a brief overview of the study was provided, and then, if participants provided consent to participate, they obtained access to the survey. The survey began with a series of demographic questions followed by questions assessing the study variables. Participation took approximately 20 minutes.

DATA ANALYSIS

All the analyses were conducted using IBM SPSS version 27.0. Descriptive statistics were used to summarize demographic characteristics of participants. Pearson’s correlation coefficient was used to examine the correlations between the study variables. Harman’s single-factor test was used to evaluate the common method bias derived from self-reported data (Podsakoff et al., 2003). The variance inflation factor (VIF) was used to test for multicollinearity (Hair et al., 2010).

The SPSS PROCESS macro (Models 6 and 80) developed by Hayes (2022) was used to conduct serial mediation analysis. All effects are reported with 95% confidence intervals (CIs). The bootstrapping method with 5000 resamples of the data was used to test the

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robustness of mediating effects, with a 95% CI that did not contain zero indicating a significant effect (Hayes, 2022). We did not include demographic or clinical covariates (e.g., age, gender, psychological history) in the primary mediation models in order to preserve statistical power and model parsimony.

TESTING FOR COMMON METHOD BIAS

Harman’s single-factor test revealed that common method bias is not a problem in this study as the single factor extracted explained only 18.3% of the total variances, which is below the recommended threshold of 50% (Shiau & Luo, 2012).
Prior to conducting the regression-based mediation analyses, we examined standard assumptions of normality, linearity, homoscedasticity, and independence of errors. Visual inspection of residual plots and normal probability plots indicated no serious deviations from these assumptions, and standardized residuals fell within acceptable ranges, supporting the use of linear models.

TESTING FOR MULTI-COLLINEARITY

Collinearity diagnostics showed that VIFs for autistic traits, fear of negative evaluation, camouflaging, fear of positive evaluation, and communicative competence were 1.40, 1.46, 1.73, and 1.36, respectively, all of which are below the threshold of 5 (Hair et al., 2010). These results indicate that multicollinearity may not affect our estimates. Given the cross-sectional nature of the data, these mediation analyses are interpreted as tests of indirect associations rather than evidence of causal processes.
Internal consistency of all self-report scales was evaluated using Cronbach’s α in the present sample.

Reliability estimates ranged from acceptable to excellent, with $\alpha = .84$ for autistic traits (AQ total), $\alpha = .91$ for camouflaging (CAT-Q total), $\alpha = .77$ for interpersonal communication competence (ICCS-SF), $\alpha = .92$ for self-esteem (RSE), and $\alpha = .89$ for the combined self-efficacy composite.

RESULTS

DESCRIPTIVE STATISTICS AND CORRELATIONS

The means and standard deviations along with the correlations among the study variables are displayed in Table 2. Correlation analysis revealed significant associations among these variables. Autistic traits showed positive correlations with fear of negative evaluation ($r = .33$), compensation ($r = .46$), masking ($r = .12$), assimilation ($r = .62$), total camouflaging ($r = .52$), and fear of positive evaluation ($r = .52$). AT was negatively correlated with self-efficacy ($r = -.54$). Fear of negative evaluation (FNE) was positively correlated with compensation ($r = .30$), masking ($r = .45$), assimilation ($r = .54$), camouflaging ($r = .51$), and fear of positive evaluation ($r = .35$), and showed a negative correlation with self-efficacy ($r = -.57$). Compensation was positively correlated with masking ($r = .53$), assimilation ($r = .53$), camouflaging ($r = .87$), and fear of positive evaluation ($r = .29$), and was negatively correlated with self-efficacy ($r = -.30$). Masking showed positive associations with assimilation ($r = .41$), camouflaging ($r = .76$), and fear of positive evaluation ($r = .21$), as well as a negative correlation with self-efficacy ($r = -.18$). Assimilation was strongly positively correlated with camouflaging ($r = .80$) and fear of positive evaluation ($r = .57$), and negatively correlated with self-efficacy ($r = -.71$). The total camouflaging score was positively correlated with fear of positive

Table 2

Means, standard deviations, and correlations among study variables

Variables	Mean	SD	AT	FNE	COMP	MASK	ASSIM	CAM	FPE
AT	24.30	8.00							
FNE	26.54	9.11	.33						
COMP	32.90	12.70	.46	.30					
MASK	35.84	8.97	.12	.45	.53				
ASSIM	35.01	11.02	.62	.54	.53	.41			
CAM	103.75	26.69	.52	.51	.87	.76	.80		
FPE	38.46	17.46	.52	.35	.29	.21	.57	.44	
SELFEFF	47.90	11.44	-.54	-.57	-.30	-.18	-.71	-.50	-.54

Note. AT – autistic traits; FNE – fear of negative evaluation; FPE – fear of positive evaluation; CAM – camouflaging; COMP – compensation; ASSIM – assimilation; MASK – masking; SELFEFF – self-efficacy.

evaluation ($r = .44$) and negatively correlated with self-efficacy ($r = -.50$). Finally, FPE was negatively correlated with self-efficacy ($r = -.54$).

MEDIATION ANALYSES

To investigate the relationship between autistic traits (AT) and self-efficacy, with sequential mediation by FNE, camouflaging (CAM), and FPE, a PROCESS Model 6 analysis was conducted on the data. The initial regression indicated that autistic traits were positively associated with greater FNE ($B = 0.38$, $SE = 0.06$, $p < .001$). Subsequently, both AT ($B = 1.30$, $SE = 0.14$, $p < .001$) and FNE ($B = 1.13$, $SE = 0.13$, $p < .001$) significantly predicted higher levels of camouflaging. In the next model, AT ($B = 0.32$, $SE = 0.11$, $p = .005$), FNE ($B = 0.50$, $SE = 0.10$, $p < .001$), and CAM ($B = 0.15$, $SE = 0.04$, $p < .001$) each independently and positively predicted FPE.

When predicting self-efficacy, higher autistic traits predicted lower self-efficacy both directly ($B = -0.45$, $SE = 0.06$, $p < .001$) and indirectly. All three mediators also showed negative associations with self-efficacy: FNE ($B = -0.40$, $SE = 0.06$, $p < .001$), CAM ($B = -0.02$, $SE = 0.02$, n.s.), and FPE ($B = -0.18$, $SE = 0.03$, $p < .001$). The total effect of autistic traits on self-efficacy was significant and negative ($B = -0.78$, $SE = 0.06$, $p < .001$), with the direct effect remaining significant after accounting for mediators. The combined indirect effect of all pathways from AT to self-efficacy was also significant (indirect effect = -0.33 , $BootSE = 0.06$, 95% CI $[-0.44, -0.22]$), confirming partial mediation.

Breaking down the indirect effects revealed that the pathway $AT \rightarrow FNE \rightarrow$ self-efficacy was the most robust (effect = -0.15), followed by routes involving FPE, camouflaging, and their combinations. Specifically, the pathways through FNE alone, through FPE alone, and sequentially through FNE–CAM–FPE all significantly contributed to the total indirect effect, as none of their bootstrap confidence intervals included zero. These findings indicate that higher autistic traits are associated with lower self-efficacy, partly due to increased social-evaluative fears and compensatory camouflaging behaviors.

To clarify the roles of compensation (COMP), masking (MASK), and assimilation (ASSIM) – the three subscales of camouflaging – in connecting AT to self-efficacy (SELFEFF) through FPE, PROCESS Model 80 was applied to the data. The analysis revealed that AT was positively associated with each camouflaging subscale, with the strongest effect observed for assimilation ($B = 0.86$, $p < .001$), followed by compensation ($B = 0.73$, $p < .001$), and a weaker but significant association with masking ($B = 0.14$, $p = .016$). When examining FPE as a downstream mediator, only assimilation emerged as a significant positive predictor of FPE ($B = 0.93$, $p < .001$), whereas

compensation and masking showed no direct associations with FPE in the multivariate model.

Furthermore, self-efficacy was negatively associated with AT (direct effect $B = -0.25$, $p < .001$), and the effect of AT on self-efficacy was mediated through multiple pathways. Notably, assimilation had the largest negative indirect effect on self-efficacy via FPE (indirect effect through ASSIM then FPE = -0.50 , 95% CI $[-0.62, -0.39]$), while indirect effects through compensation and masking were negligible, with their confidence intervals including zero, indicating non-significance. Specifically, the pathway from AT to self-efficacy through assimilation and subsequently FPE accounted for a substantial portion of the overall indirect effect. This suggests that among the camouflaging subscales, assimilation operates as the critical mediator in the serial path from autistic traits to increased fear of positive evaluation, and ultimately to reduced self-efficacy.

The total effect of AT on self-efficacy was significant and negative ($B = -0.78$, $SE = 0.06$, $p < .001$). The direct effect, adjusting for all mediators, remained significant ($B = -0.25$, $SE = 0.07$, $p < .001$), indicating partial mediation. The total indirect effect was also significant (indirect effect = -0.52 , $BootSE = 0.07$, 95% CI $[-0.65, -0.39]$). This indirect effect was primarily driven by the assimilation pathway and its downstream effect via FPE. Results of the mediation analyses are displayed in Table 3 and Figures 1 and 2.

In summary, assimilation is the camouflaging dimension most responsible for transmitting the effect of autistic traits on self-efficacy through fear of positive evaluation. Compensation and masking do not substantially mediate this pathway, highlighting the unique relevance of assimilation strategies in this psychological process.

DISCUSSION

The present study had three aims. First, we examined how autistic traits relate to self-efficacy, operationalized as the combination of self-reported social competence and self-esteem. Second, we tested whether camouflaging factors (assimilation, masking, and compensation) and fear of positive evaluation each mediated the link between autistic traits and self-efficacy. Third, we evaluated a serial mediation model in which camouflaging factors and fear of positive evaluation sequentially transmit the effect of autistic traits on self-efficacy. The results indicated that higher autistic traits were associated with lower self-efficacy. In our models, this association was statistically accounted for, in part, by higher levels of assimilation-type camouflaging and fear of positive evaluation, although the cross-sectional design precludes causal conclusions about these indirect paths. Several indirect effects were statistically significant, but their

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Table 3

Total, direct, and indirect effects of autistic traits on self-efficacy

Pathway	Effect	SE	t	p	LLCI	ULCI
Total effect	−0.78	0.06	−12.47	< .001	−0.90	−0.66
Direct effect	−0.45	0.06	−7.41	< .001	−0.57	−0.33
Indirect effects						
AT → FNE → SELFEFF	−0.15	0.03			−0.22	−0.09
AT → CAM → SELFEFF	−0.03	0.03			−0.10	0.03
AT → FPE → SELFEFF	−0.06	0.02			−0.10	−0.02
AT → FNE → CAM → SELFEFF	−0.01	0.01			−0.03	0.01
AT → FNE → FPE → SELFEFF	−0.03	0.01			−0.06	−0.02
AT → CAM → FPE → SELFEFF	−0.03	0.01			−0.06	−0.02
AT → FNE → CAM → FPE → SELFEFF	−0.01	0.00			−0.0222	−0.00
Direct effect AT → SELFEFF	−0.25	0.07	−3.79	< .001	−0.39	−0.12
Total indirect effect	−0.52	0.06			−0.65	−0.40
AT → COMP → SELFEFF	0.07	0.03			0.01	0.14
AT → MASK → SELFEFF	0.01	0.01			−0.01	0.03
AT → ASSIM → SELFEFF	−0.50	0.06			−0.62	−0.39
AT → FPE → SELFEFF	0.00	0.02			−0.03	0.04
AT → COMP → FPE → SELFEFF	0.00	0.01			−0.02	0.02
AT → MASK → FPE → SELFEFF	0.00	0.00			−0.00	0.01
AT → ASSIM → FPE → SELFEFF	−0.10	0.03			−0.16	−0.06

Note. AT – autistic traits; CAM – camouflaging; FNE – fear of negative evaluation; COMP – compensation; ASSIM – assimilation; MASK – masking; FPE – fear of positive evaluation; SELFEFF – self-efficacy. All indirect effects are based on 5,000 bootstrap samples. Confidence intervals not including zero indicate statistical significance.

absolute magnitudes were in the small to moderate range. This suggests that, in practical terms, camouflaging and fears of evaluation explain a meaningful yet partial proportion of the association between autistic traits and self-efficacy, consistent with a multifactorial account of psychological adjustment.

The findings of the present research both support and extend those of previous studies. Our results indicate that autistic traits may influence self-reported social competence and self-esteem. Emotional deficits common in ASD include decreased empathy (Cascia & Barr, 2017; Klapwijk et al., 2016) and impairments in theory of mind abilities such as emotional recognition (Uljarevic & Hamilton, 2013), which are essential for creating positive interactions and maintaining meaningful relationships. Individuals with ASD also exhibit poor non-verbal communication skills, including abnormalities in eye contact (Hirsch et al., 2022), further weakening social competence. Autistic traits have been found to negatively impact self-esteem as well (Khan et al., 2024). Individuals with ASD have been found to experience high levels of bullying due to their differences in behavior and social skills (Fer-

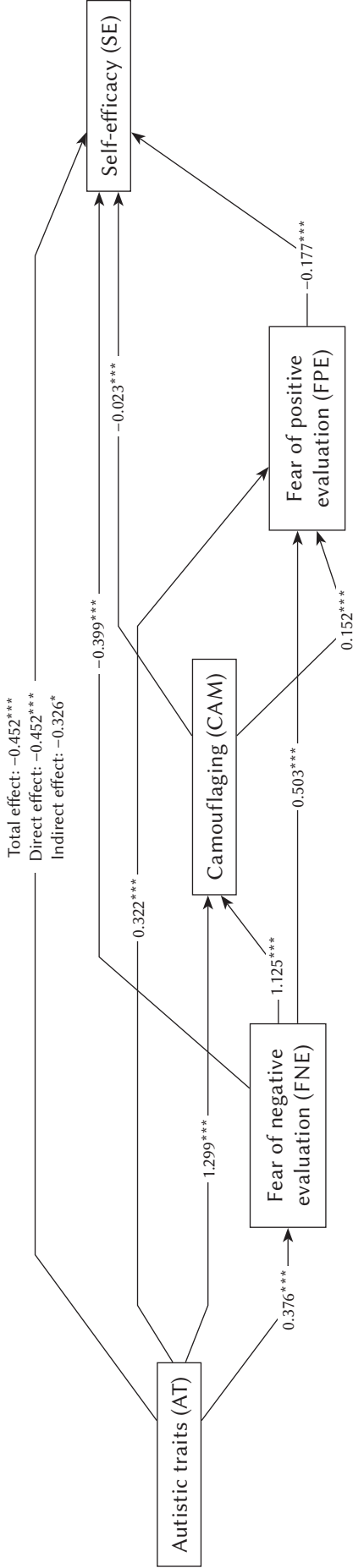
rigno et al., 2022), leading to a negative self-image. Additionally, individuals with ASD may experience internalizing symptoms (depression, anxiety, rumination) as a result of negative peer experiences or evaluations (Henderson et al., 2015; McCauley et al., 2019), which considerably impact levels of self-esteem.

Our results from the serial mediation model are consistent with the hypothesis that autistic traits are associated with lower self-efficacy both directly and indirectly through camouflaging factors and fear of positive evaluation. Specifically, our study shows that autistic traits are associated with higher assimilation, which, in turn, relates to greater fear of positive evaluation, and both are associated with lower self-efficacy. These patterns of indirect association should not be interpreted as evidence of temporal or causal ordering.

In summary, assimilation appears to be the camouflaging dimension most responsible for transmitting the effect of autistic traits on self-efficacy through fear of positive evaluation. Compensation and masking do not substantially mediate this pathway, highlighting the unique relevance of assimilation strategies in this

Figure 1

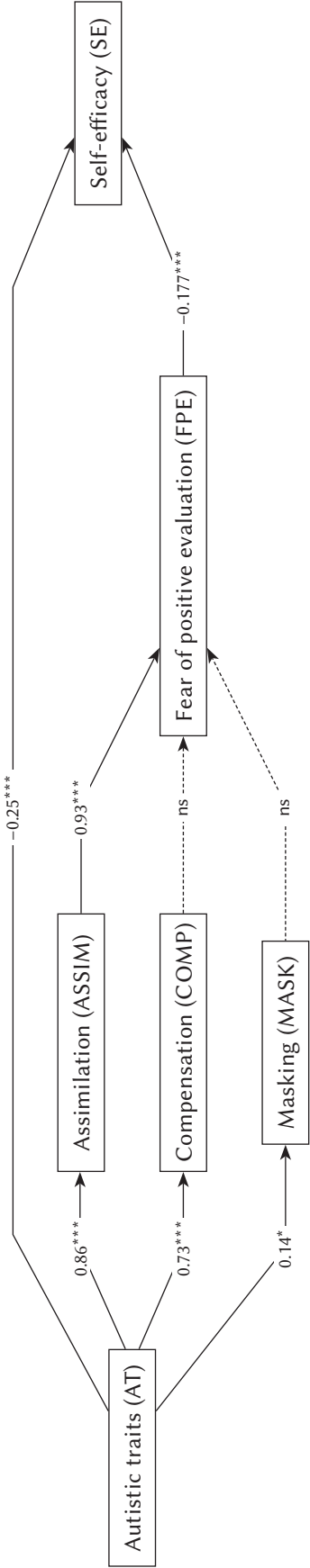
Sequential mediation of the relationship between autistic traits and self-efficacy by fear of negative evaluation, camouflaging, and fear of positive evaluation



Note. Standardized coefficients shown. * $p < .05$, *** $p < .001$.

Figure 2

Differential mediation pathways of camouflaging subscales



Note. Only significant paths are shown. * $p < .05$, *** $p < .001$. Compensation and masking paths were nonsignificant.

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psychological process. The relatively large indirect effect through assimilation and fear of positive evaluation indicates that these processes may be particularly salient targets for intervention, while recognizing that they account for only part of the overall variance in self-efficacy. One possible explanation is that assimilation, by definition, involves efforts to blend in and minimize visible difference from neurotypical peers, which may heighten sensitivity to social approval and fears of failing to meet others' expectations. In contrast, compensation and masking may involve more specific skill-based adjustments or surface-level presentation changes that are less closely linked to global self-evaluative concerns, which could explain their weaker associations with fear of positive evaluation and self-efficacy in this sample.

Camouflaging involves hiding one's autism or finding ways to overcome difficulties in order to fit in during social situations. According to a study conducted with 58 individuals, researchers examined the role of theory of mind in relation to self-reported camouflaging and its component parts in autistic teenagers, as well as the cognitive components of camouflaging in autistic adolescents (Hull et al., 2020). Autistic adolescents with stronger executive functioning may be more effective at masking their autism more effectively than those who exhibit weaker executive functioning. Executive functioning includes planning, memory, and goal-directed behavior. Adolescents' mental health and social development may be affected by this, among other factors (Hull et al., 2020). Results indicated that variations in adolescent camouflaging behavior may be due to individual differences in executive function capacity (Hull et al., 2020). Researchers have also found that camouflaging can adversely impact an individual's mental health. In a study of 305 individuals with ASD, Hull et al. (2021) examined associations between self-reported camouflaging and generalized anxiety, depression, and social anxiety, and found that camouflaging was significantly positively correlated with all three outcomes. Camouflaging has also been suggested to contribute to burnout, thereby lowering quality of life in autistic adults. The effort necessary to blend in can impair a person's capacity to manage unpleasant emotions and exacerbate pre-existing mental health conditions. Autistic adults who conceal themselves more report feeling less integrated into society and having higher rates of suicidality. Lower self-esteem and fewer personal ties may be associated with camouflaging more frequently (Hull et al., 2021). Together, these findings suggest that camouflaging plays an important role in mental health and overall well-being.

Many autistic individuals view camouflaging as a positive way of living life among their peers. Hull and Mandy (2019) noted that autistic individuals often engage in camouflaging as a means to build

friendships and connect with others. They explained that some people camouflage their autism during initial social encounters to make a positive impression and potentially develop friendships. Drawing on this work, it can be understood that autistic individuals may view camouflaging as a strategy to foster meaningful relationships and to lead a life that aligns more closely with societal norms. Additionally, many believe that, to secure a better job or lead a stable life, camouflaging is necessary. Many young girls with autism also believe they will not make long-lasting friendships if they do not camouflage. Schuck et al. (2019) reported that females with ASD tend to engage in camouflaging – masking their autistic traits – more frequently than males. This behavior may help decrease social anxiety, enhance self-esteem, and promote greater social interaction overall.

Clinically, these findings suggest several potential targets for intervention. First, interventions for autistic adults and individuals with elevated autistic traits might benefit from explicitly addressing the costs and functions of assimilation-type camouflaging, helping clients to differentiate between adaptive social skill use and self-effacing conformity motivated by fear of evaluation. Second, integrating strategies from cognitive-behavioral and compassion-focused approaches to reduce fear of positive evaluation (e.g., examining beliefs about others' expectations, promoting acceptance of praise, and decoupling performance from self-worth) may help to buffer the impact of camouflaging on self-efficacy. Finally, strengths-based work on social identity and autistic pride could counteract internalized stigma highlighted by social identity and minority stress frameworks, thereby supporting more stable self-efficacy in social contexts.

STRENGTHS AND LIMITATIONS

To the best of our knowledge, this is the first study to examine the direct and indirect influence of autistic traits on perceived social competence and self-esteem. Despite these strengths, several limitations should be noted. First, the sample was drawn from self-selected online volunteers who were largely White and highly educated. The over-representation of participants with post-secondary education and White ethnicity may constrain the generalizability of our results to autistic individuals and those with autistic traits from more diverse racial, cultural, and educational backgrounds. Second, the study used a cross-sectional design, so the temporal ordering implied by the serial mediation models cannot be confirmed. As such, we cannot infer that autistic traits or camouflaging processes causally lead to changes in self-efficacy; the indirect effects should be interpreted as correlational. Third, we did not control for potential confounding variables such as age, gender, or history of psycholog-

ical diagnoses in the mediation models. These factors may influence both camouflaging and self-efficacy and could partially account for the observed associations; future studies should incorporate theoretically relevant covariates. In addition to sample composition and cross-sectional design, several other limitations warrant consideration. All constructs were assessed via self-report questionnaires, which may be influenced by response biases and may not fully capture behavioral manifestations of camouflaging or social competence. Although Harman's single-factor test suggested that common method variance was unlikely to be a serious concern in the present data, reliance on self-report measures collected at a single time point still raises the possibility of shared method bias. Future research could reduce this risk by temporally separating assessments of predictors and outcomes, incorporating informant or behavioral measures of social functioning, and using multimethod approaches to assess camouflaging and self-efficacy. Finally, the absence of longitudinal follow-up prevents us from examining how autistic traits, camouflaging, and fears of evaluation co-evolve over time or whether changes in these processes prospectively predict changes in self-efficacy. The current research brings new insight into the potential mechanisms by which autistic traits and camouflaging influence cognitions and psychological well-being. A significant contribution of this study is the sequential pathway of camouflaging and fear of positive evaluation in explaining the link between autistic traits and lowered social competence.

DISCLOSURES

This research received no external funding. The study was approved by the Ethics Committee of the City University of New York (Approval No. 2022-0273-QC). The authors declare no conflict of interest.

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