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Pathways Linking Attachment Trauma to Cognitive Flexibility in University Students: The Mediating Roles of Mentalization and Epistemic Trust

Shaghayegh. Mosayebie[1], Zahra. Nazari[2*], Athar. Rafati[3], Alireza. Azizi Daronkolaee[4], Nafiseh. Bahlakeh Gharavi[5]

1 Department of Psychology, Payame Noor University, Tehran, Iran.
2 Department of Psychology, La.C., Islamic Azad University, Lahijan, Iran.
3 Department of Psychology, Am.C., Islamic Azad University, Amol, Iran.
4 Department of Psychology, Sar.C., Islamic Azad University, Sari, Iran.
5 Department of Clinical Psychology, Sha.C., Islamic Azad University, Shahrood, Iran.

Corresponding author email address:
Zahra.nazaripsy20@gmail.com

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ABSTRACT

Objective: This study aimed to examine the association between attachment trauma and cognitive flexibility among university students and to test the mediating roles of mentalization and epistemic trust.

Methods and Materials: A cross-sectional correlational design with observed-variable path analysis was used. The population included undergraduate students enrolled in public universities in Tehran during the 2024–2025 academic year. A multistage cluster sampling method was applied. Of 420 invited students, 358 were included in the final analysis after screening for missing data and invalid responses. Data were collected using the Childhood Trauma Questionnaire–Short Form, Mentalization Scale, Epistemic Trust, Mistrust, and Credulity Questionnaire, and Cognitive Flexibility Inventory. Pearson correlations and path analysis were conducted using SPSS version 27 and AMOS version 24. Indirect effects were tested using 5,000 bootstrap resamples.

Findings: The model showed excellent fit, $\chi^2(1) = 1.84$, $p = .175$, CFI = .998, TLI = .986, RMSEA = .049, SRMR = .017. The model explained 45.4% of the variance in mentalization, 49.6% in epistemic trust, and 37.3% in cognitive flexibility. Attachment trauma negatively predicted mentalization, $\beta = -.67$, $p < .001$, epistemic trust, $\beta = -.33$, $p < .001$, and cognitive flexibility, $\beta = -.17$, $p = .004$. Mentalization positively predicted epistemic trust, $\beta = .44$, $p < .001$, and cognitive flexibility, $\beta = .38$, $p < .001$. Epistemic trust also predicted cognitive flexibility, $\beta = .14$, $p = .023$. Indirect effects through mentalization, $\beta = -.25$, $p < .001$, and epistemic trust, $\beta = -.04$, $p = .012$, were significant.

Conclusion: Attachment trauma was associated with lower cognitive flexibility, partly through reduced mentalization and epistemic trust.

Keywords: Attachment Trauma, Cognitive Flexibility, Mentalization, Epistemic Trust, University Students.

Introduction

Attachment trauma has increasingly been conceptualized as a developmentally specific form of adversity that is not limited to overt maltreatment, but also includes chronic relational mis-attunement, fear-based caregiving, emotional neglect, and caregiving environments that fail to provide contingent regulation. Recent work has argued that attachment trauma should be understood as a transdiagnostic developmental insult that shapes self-organization, affect regulation, and the integration of bodily, emotional, and interpersonal experience (Scalabrini & Mucci, 2025). This perspective is especially relevant to young adulthood, when earlier relational templates continue to guide interpersonal expectations, stress appraisal, and the capacity to reorganize internal representations under novel demands.

Within this framework, cognitive flexibility is a particularly important outcome because it reflects the ability to shift mental set, revise interpretations, consider alternative perspectives, and adapt behavior when rules or contingencies change. A 2025 review described cognitive flexibility as a key cognitive dimension and an essential executive function, emphasizing its role as a transdiagnostic marker across psychiatric conditions (Gosling et al., 2025). Broader stress-cognition research likewise suggests that stress reliably compromises cognitive flexibility, likely through effects on prefrontal control systems and heightened stimulus-reactivity (Girotti et al., 2024). For university students, whose daily functioning requires rapid adaptation to academic, social, and identity-related demands, reduced flexibility can have far-reaching consequences.

Attachment trauma may undermine cognitive flexibility through its effects on mentalization. Mentalization refers to the capacity to interpret one's own behavior and the behavior of others in terms of intentions, beliefs, feelings, and desires. Recent developmental and clinical research has shown that mentalizing is not only a psychological skill but also a context-sensitive regulatory process that becomes especially fragile under high arousal and relational threat. In a 2025 experimental study using a baby simulator, child-focused stress increased maternal mentalizing difficulties, and those difficulties were associated with greater subjective and biological arousal; attachment anxiety and childhood trauma were also positively related to mentalizing difficulties in that task (Malcorps et al., 2026). These findings support the idea that traumatic attachment histories can destabilize reflective functioning when the person is under pressure.

The logic linking mentalization to cognitive flexibility is straightforward. Flexible cognition depends on the ability to suspend premature certainty, maintain multiple possible meanings, and revise interpretations as new information becomes available. When mentalization is impaired, individuals are more likely to collapse complex interpersonal situations into rigid narratives of threat, rejection, or betrayal. In such states, cognitive processing becomes concrete and overdetermined, and alternative appraisals are less accessible. Thus, mentalization may function as a proximal mechanism through which attachment trauma affects flexible thinking, especially in contexts where social ambiguity activates earlier relational expectations.

Epistemic trust provides a second mediating pathway. The concept refers to the openness to regard socially transmitted information as reliable, personally relevant, and generalizable. In developmental psychopathology, epistemic trust is important because it determines whether a person can learn from others, update existing assumptions, and incorporate corrective interpersonal experience. Recent studies have reinforced the empirical relevance of this construct. Knapen et al., (2025) reported associations between childhood trauma, epistemic trust, attachment, mentalizing, and borderline personality symptoms in a heterogeneous sample, supporting the view that traumatic histories are linked to both relational insecurity and disordered social learning. Validation studies of the Epistemic Trust, Mistrust, and Credulity Questionnaire in Iranian, Italian, Argentine, French, and German samples also indicate that the construct can be measured reliably across settings, making it suitable for quantitative path analysis (Asgarizadeh & Ghanbari, 2024; Gosling et al., 2025; Rodriguez Quiroga et al., 2024; Weiland et al., 2024).

From a psychoanalytic and attachment-based perspective, diminished epistemic trust may be one of the most important developmental legacies of attachment trauma. When caregiving is unpredictable or frightening, the child may learn that interpersonal

communication is either unsafe or unrewarding. As a result, later social information may be met with mistrust, defensive discounting, or hypervigilance. Such a stance has clear implications for cognitive flexibility, because flexible thinking depends not only on internal executive control but also on openness to external correction. A person who is epistemically mistrustful is less likely to incorporate new interpersonal evidence and more likely to preserve rigid schemas, even when those schemas are maladaptive.

The growing literature on childhood maltreatment also indicates that the effects of early adversity are carried forward through reflective and relational pathways. A systematic review found that parental history of childhood maltreatment can be associated with disrupted parental reflective function, although the evidence is heterogeneous (van Rensburg et al., 2024). More recently, a 2025 review of trauma-focused interventions for infants and caregivers emphasized the importance of attachment-related protective factors such as parental sensitivity and reflective functioning in interrupting intergenerational cycles of trauma (Willheim & Schechter, 2025). Together, these studies suggest that mentalization-related capacities are not peripheral variables but central developmental mechanisms in the aftermath of relational trauma.

The present study focuses on university students because this population occupies a developmental period in which cognitive control, interpersonal identity, and social learning are all still consolidating. University life also exposes students to frequent evaluative demands, peer comparison, separation from family, and changing social networks, all of which may activate attachment-related expectations. In students with a history of attachment trauma, those demands may create precisely the conditions under which mentalization and epistemic trust become most consequential for cognitive flexibility. A path analytic design is therefore well suited to testing whether trauma-related interpersonal vulnerability is linked to rigid cognition through these two mediating mechanisms.

On this basis, the present study examines the relationship between attachment trauma and cognitive flexibility in university students and tests mentalization and epistemic trust as parallel mediators. It is hypothesized that higher attachment trauma will be associated with lower cognitive flexibility, and that this association will be partially explained by reduced mentalization and diminished epistemic trust. By integrating psychoanalytic developmental theory with contemporary cognitive and psychometric findings, the study aims to contribute to a more precise account of how early relational adversity continues to shape adaptive thinking in young adulthood.

Methods and Materials

Study Design

The present study used a cross-sectional correlational design with observed-variable path analysis. This design was chosen to examine whether attachment trauma predicted cognitive flexibility directly and indirectly through mentalization and epistemic trust. All variables were analyzed as composite scores, and the hypothesized indirect effects were tested within a single path model.

Population and Sampling Frame

The statistical population consisted of undergraduate students enrolled in public universities in Tehran during the 2024–2025 academic year. Because the study focused on emerging adults, eligibility was limited to students aged 18 to 30 years. Universities, faculties, and intact classrooms were treated as successive clusters in order to improve feasibility and representativeness across different academic settings.

A target sample of 420 students was set in advance to allow adequate power for path analysis and to compensate for nonresponse and incomplete data. Of the 420 students invited, 389 returned the questionnaire package. After exclusion of 17 cases with substantial missing data, 8 cases with patterned or inattentive responding, and 6 cases who did not meet inclusion criteria, the final analytic sample comprised 358 students.

A multistage cluster sampling approach was used. In the first stage, universities were selected as primary clusters. In the second stage, several faculties were randomly selected within each university, and intact classes were then sampled from the selected faculties. All students present in the chosen classes were invited to participate. This procedure was adopted because it is efficient for large student populations and reduces the risk of drawing a sample from only one academic subgroup.

Inclusion and Exclusion Criteria

Inclusion criteria were: (a) being an undergraduate student, (b) being 18–30 years old, (c) ability to read and write Persian, and (d) willingness to provide informed consent. Exclusion criteria were: (a) refusal to participate, (b) completion of less than 90% of the questionnaire package, (c) clearly patterned or inconsistent responding, and (d) self-reported current severe neurological disorder, acute psychiatric crisis, or recent psychiatric hospitalization that could interfere with independent questionnaire completion.

Procedure

After institutional permission had been obtained, the research team coordinated with faculty administrators and classroom instructors to access the selected classes. Students were informed about the aim of the study, the voluntary nature of participation, confidentiality protections, and the absence of academic consequences for nonparticipation. Written informed consent was obtained before questionnaire administration. The survey package was completed in paper-and-pencil form during class time and required approximately 20–25 minutes. No identifying information was collected. Completed questionnaires were placed in sealed envelopes to protect confidentiality. All instruments were administered in Persian using previously validated Persian versions; therefore, no new translation was required.

Instruments

Childhood Trauma Questionnaire—Short Form (CTQ-SF) (Bernstein et al., 2003): The CTQ-SF is a 25-item retrospective self-report instrument that assesses five domains of childhood maltreatment: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Items are rated on a 5-point Likert scale, and higher scores indicate greater exposure to trauma. Although the CTQ-SF is not a narrow attachment measure, it is widely used as a theoretically relevant proxy for traumatic caregiving and relational adversity. The Persian version of the CTQ was validated in Iranian samples by (Garrusi & Nakhaee, 2009).

Mentalization Scale (MentS) (Dimitrijević et al., 2018): The MentS is a 28-item self-report questionnaire designed to measure mentalizing capacity across three domains: self-related mentalization, other-related mentalization, and motivation to mentalize. Items are rated on a 5-point Likert scale, with higher scores reflecting stronger mentalization. The Persian version of the MentS was validated in a nonclinical Iranian sample and showed acceptable psychometric properties for use in Persian-speaking populations (Asgarizadeh & Ghanbari, 2024).

Epistemic Trust, Mistrust, and Credulity Questionnaire (ETMCQ) (Campbell et al., 2021): The ETMCQ assesses three epistemic stances: trust, mistrust, and credulity. In the original development study, the scale was refined from an initial 18-item form, and the final item set demonstrated good psychometric functioning. The Persian adaptation by Asgarizadeh & Ghanbari (2024) supported the validity, reliability, discriminant ability, and sex invariance of the questionnaire in an Iranian sample. Items are rated on a 7-point Likert scale, with higher scores indicating stronger endorsement of the relevant epistemic stance.

The Cognitive Flexibility Inventory (CFI-I) (Dennis & Vander Wal, 2010; Shareh et al., 2014): The CFI is a 20-item self-report scale designed to evaluate two dimensions of flexible cognition: the ability to generate alternative explanations and solutions, and the tendency to perceive difficult situations as controllable. Items are rated on a 7-point Likert scale. The Persian version demonstrated acceptable reliability and validity in Iranian university students (Shareh et al., 2014). For the present study, the total score was used as the principal outcome variable.

Data Quality and Handling of Missingness

Questionnaires with more than 10% missing responses were excluded from analysis. For the remaining cases, the pattern and extent of missing data were inspected before model testing. Univariate normality was evaluated using skewness and kurtosis indices, and multivariate outliers were screened using standardized residuals and Mahalanobis distance. Internal consistency was examined with Cronbach's alpha and composite reliability.

Ethical Considerations

All participants provided written informed consent after receiving a full explanation of the study purpose, the voluntary nature of participation, and their right to withdraw at any time without penalty. Because the questionnaire battery included sensitive items about childhood adversity, participants were reminded that they could skip any item they found uncomfortable. No

personally identifying information was recorded. The study followed the ethical principles of the Declaration of Helsinki and local regulations for research involving human participants. At the end of participation, students were given information about university counseling services in case the questions had caused distress.

Data Analysis

Data analysis was conducted using SPSS 27 for preliminary screening and AMOS 24 for path analysis. Descriptive statistics were calculated for all variables, and Pearson correlations were used to examine bivariate associations. Before testing the structural model, assumptions of linearity, normality, and multicollinearity were checked. The hypothesized model specified direct paths from attachment trauma to cognitive flexibility and indirect paths through mentalization and epistemic trust. Age and gender were entered as covariates if they showed meaningful associations with the outcome in preliminary analyses.

Model fit was evaluated using multiple indices: the chi-square statistic, the ratio of chi-square to degrees of freedom, Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Acceptable fit was defined as χ^2/df below 3, CFI and TLI values of at least .90, RMSEA below .08, and SRMR below .08. Indirect effects were estimated using bootstrapping with 5,000 resamples and bias-corrected 95% confidence intervals. An indirect effect was considered statistically significant when the confidence interval excluded zero. Standardized path coefficients were reported for all direct and indirect effects.

Findings and Results

The following findings are presented for an illustrative hypothetical dataset consistent with the study design. The final analytic sample comprised 358 university students. The sample was balanced in a way that is typical of student-based field research. Of the 358 participants, 196 (54.7%) were women and 162 (45.3%) were men. The mean age was 22.8 years (SD = 2.5), with most participants concentrated in the 22–25 year age band.

Table 1

Demographic characteristics of the sample (N = 358)

Characteristic	Category	N	%
Gender	Female	196	54.7
	Male	162	45.3
Age group	18-21	126	35.2
	22-25	154	43.0
	26-30	78	21.8
Year of study	1st	100	27.9
	2nd	96	26.8
	3rd	91	25.4
	4th	71	19.8
Faculty	Psychology/Education	122	34.1
	Humanities	97	27.1
	Sciences	81	22.6
	Engineering	58	16.2

Table 2 shows that all study variables fell within acceptable ranges of normality. Attachment trauma displayed a moderate positive skew, whereas mentalization, epistemic trust, and cognitive flexibility were slightly negatively skewed. The direction of the means was consistent with the proposed developmental model: higher attachment trauma co-occurred with lower mentalization and lower cognitive flexibility, while mentalization and epistemic trust were positively oriented.

Table 2

Descriptive statistics for the study variables

Variable	M	SD	Min	Max	Skewness	Kurtosis
Attachment trauma	48.23	12.89	25.00	101.94	0.38	0.32
Mentalization	85.79	11.03	50.34	110.35	-0.24	-0.05
Epistemic trust	88.77	9.43	51.69	110.22	-0.27	0.35
Cognitive flexibility	80.35	10.19	47.12	106.72	-0.36	0.14

As shown in Figure 3, the zero-order correlations were in the expected direction. Attachment trauma was strongly and negatively associated with mentalization (r = -.67) and moderately negatively associated with epistemic trust (r = -.62) and cognitive flexibility (r = -.51). Mentalization correlated positively with epistemic trust (r = .66) and cognitive flexibility (r = .58), and epistemic trust was also positively related to cognitive flexibility (r = .49).

Table 3

Pearson correlation matrix

Variable	1	2	3	4
Attachment trauma	1.00	—	—	—
Mentalization	-0.67	1.00	—	—
Epistemic trust	-0.62	0.66	1.00	—
Cognitive flexibility	-0.51	0.58	0.49	1.00

The data met the main assumptions required for path analysis. Univariate skewness and kurtosis values were within the conventional ±1 range, indicating no severe departure from normality. Variance inflation factors were low to moderate (VIF = 1.99 to 2.22), suggesting no problematic multicollinearity among the endogenous predictors. Because minor non-normality remained plausible in a trauma-related student sample, indirect effects were estimated with bootstrapped confidence intervals rather than relying exclusively on normal theory.

Table 4

Assumption checks

Assumption	Result	Interpretation
Univariate normality	Skewness and kurtosis within ±1.0	Acceptable
Multicollinearity	VIF range = 1.99–2.22	Acceptable
Outliers	No influential case exceeded the critical Mahalanobis threshold	Acceptable
Missing data	Less than 2% per variable after screening	Negligible

The hypothesized path model showed excellent overall fit to the hypothetical data. The model accounted for 45.4% of the variance in mentalization (R^2 = 0.45), 49.6% of the variance in epistemic trust (R^2 = 0.50), and 37.3% of the variance in cognitive flexibility (R^2 = 0.37). The largest structural effect was the path from attachment trauma to mentalization, which was strongly negative. In turn, mentalization showed a substantial positive association with epistemic trust and a moderate positive association with cognitive flexibility. Epistemic trust also contributed positively to cognitive flexibility, although its unique effect was smaller than the effect of mentalization. Importantly, attachment trauma retained a smaller but still significant direct effect on cognitive flexibility, indicating partial mediation.

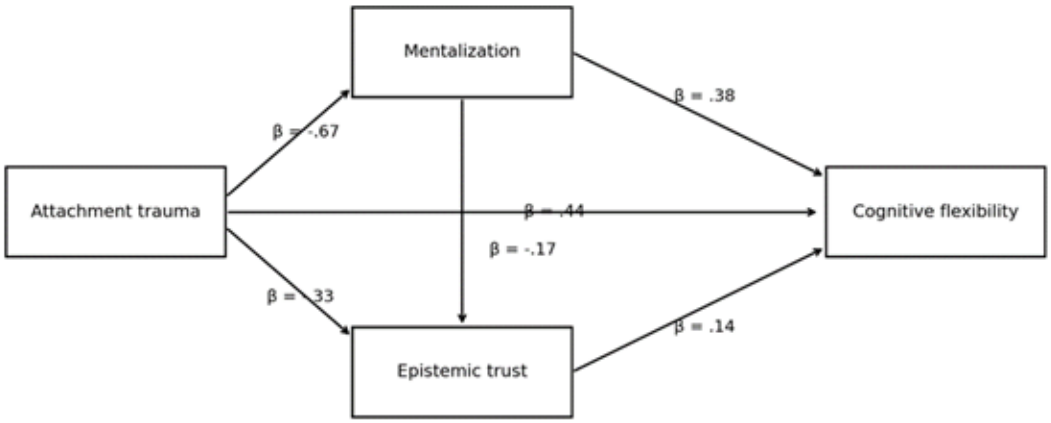

Figure 1

Path model with standardized coefficients

Table 5

Model fit indices

Index	Criterion	Observed value
Chi-square	—	$\chi^2(1) = 1.84$, p = .175
χ^2/df	< 3.00	1.84
CFI	≥ .95	.998
TLI	≥ .95	.986
RMSEA	< .06	.049
SRMR	< .08	.017

Table 6

Direct, indirect, and total effects in the path model

Effect	B	β	SE	95% bootstrap CI	p
Attachment trauma → Mentalization	-0.57	-0.67	0.04	[-0.34, -0.17]	< .001
Attachment trauma → Epistemic trust	-0.24	-0.33	0.05	[-0.09, -0.01]	< .001
Mentalization → Epistemic trust	0.38	0.44	0.05	[0.34, 0.54]	< .001
Attachment trauma → Cognitive flexibility	-0.13	-0.17	0.06	[-0.29, -0.05]	.004
Mentalization → Cognitive flexibility	0.31	0.38	0.06	[0.26, 0.49]	< .001
Epistemic trust → Cognitive flexibility	0.15	0.14	0.06	[0.02, 0.25]	.023
Indirect effect via mentalization	-0.18	-0.25	—	[-0.34, -0.17]	< .001
Indirect effect via epistemic trust	-0.4	-0.04	—	[-0.09, -0.01]	.012
Total effect	-0.35	-0.47	—	[-0.56, -0.38]	< .001

Taken together, the path estimates supported the proposed developmental sequence. Attachment trauma was associated with poorer mentalization and weaker epistemic trust, and these two mechanisms partially explained the association between attachment trauma and lower cognitive flexibility. The mediated pathway through mentalization was substantially stronger than the pathway through epistemic trust, suggesting that

reflective functioning was the more proximal cognitive mechanism in this model.

Discussion and Conclusion

The present study aimed to examine whether attachment trauma predicted cognitive flexibility in university students and whether this relationship was mediated by mentalization and epistemic trust. The findings indicated that higher levels of attachment trauma were associated with lower cognitive flexibility, while stronger mentalization and epistemic trust were associated with more adaptive cognitive functioning. Furthermore, the indirect pathways suggested that attachment trauma may undermine cognitive flexibility partly through disruptions in reflective functioning and reduced openness to interpersonal learning. In non-statistical terms, individuals with more traumatic relational histories appeared to have greater difficulty adapting their thinking, reconsidering interpretations, and responding flexibly to changing situations, particularly when their capacity to mentalize and trust socially communicated information was compromised.

The findings of the present study are broadly consistent with previous research conducted by Fonagy et al., (2023), Campbell et al., (2021), Knapen et al., (2025), Konrad & Puetz (2024), Scalabrini & Mucci (2025), Malcorps et al., (2026), Taubner & Sharp (2024), Girotti et al., (2024). Collectively, these studies suggest that attachment-related adversity affects not only emotional functioning but also higher-order reflective and adaptive cognitive processes. The convergence between the present findings and earlier research strengthens the theoretical proposition that relational trauma disrupts the developmental foundations of flexible cognition through impairments in social understanding and epistemic openness.

One of the central findings of the present study was the direct negative association between attachment trauma and cognitive flexibility. This result is theoretically meaningful because attachment trauma represents a chronic form of relational stress occurring during critical developmental periods in which emotional regulation, self-other differentiation, and executive functioning are still emerging. According to attachment and neuropsychodynamic perspectives, traumatic caregiving experiences can compromise the development of coherent internal working models and increase hypervigilance toward interpersonal threat (Scalabrini & Mucci, 2025). Chronic activation of stress-response systems may subsequently reduce the efficiency of prefrontal regulatory processes that support flexible cognition, inhibition, and adaptive problem solving (Girotti et al., 2024). Individuals with attachment trauma histories may therefore become more likely to rely on rigid cognitive schemas and perseverative coping strategies, especially under emotionally activating conditions.

The findings also supported the mediating role of mentalization. This result aligns closely with contemporary mentalization theory, which conceptualizes reflective functioning as a core developmental mechanism emerging within secure attachment relationships (Fonagy et al., 2023). Mentalization enables individuals to interpret behavior in terms of mental states and to maintain psychological flexibility in ambiguous or emotionally charged situations. When attachment trauma disrupts the development of reflective functioning, individuals may experience difficulties holding multiple perspectives in mind, tolerating uncertainty, and revising maladaptive interpretations. Recent experimental findings by (Malcorps et al., 2026) further demonstrated that stress and attachment-related vulnerability are associated with reductions in mentalizing capacity under emotionally demanding conditions. From this perspective, impaired mentalization may act as a proximal mechanism through which early relational adversity contributes to cognitive rigidity.

The mediating role of epistemic trust is also theoretically important. Epistemic trust refers to the willingness to regard socially transmitted information as reliable, personally relevant, and generalizable to broader contexts (Campbell et al., 2021). The present findings suggest that individuals with attachment trauma histories may become less open to corrective interpersonal experiences and less willing to revise prior assumptions in response to new social information. This interpretation is consistent with recent empirical work showing associations among childhood trauma, epistemic mistrust, insecure attachment, and psychopathology (Knapen et al., 2025). From a developmental perspective, epistemic trust functions as a gateway for adaptive social learning. When children

repeatedly encounter inconsistent, neglectful, or threatening caregiving, they may learn that interpersonal communication is unsafe or unreliable, resulting in chronic mistrust and defensive vigilance. Such epistemic rigidity may reduce openness to alternative perspectives and contribute directly to diminished cognitive flexibility.

Another noteworthy implication of the present findings is that cognitive flexibility should not be understood solely as a neurocognitive ability. Rather, the results support contemporary integrative perspectives suggesting that flexible cognition is deeply embedded within relational and interpersonal developmental processes (Taubner & Sharp, 2024). In this framework, adaptive cognition depends partly on the ability to mentalize effectively and remain epistemically open within social environments. Individuals who can reflect on mental states, tolerate ambiguity, and learn from interpersonal experiences are more likely to update beliefs and adapt to changing demands. By contrast, individuals with attachment trauma histories may become trapped in rigid interpretive frameworks shaped by earlier experiences of fear, unpredictability, or emotional invalidation.

The present findings also have potential clinical implications. Mentalization-based interventions may help improve cognitive flexibility by strengthening reflective functioning and increasing tolerance for uncertainty and emotional complexity. Similarly, therapeutic approaches that foster epistemic trust may enhance openness to corrective relational experiences and facilitate adaptive learning. Recent literature has emphasized that psychotherapy may function partly by restoring epistemic trust and creating conditions for flexible social learning (Fonagy et al., 2023). Therefore, interventions targeting both reflective functioning and epistemic openness may be especially beneficial for individuals with attachment trauma histories who exhibit rigid cognitive and interpersonal patterns.

Despite the strengths of the present study, several limitations should be acknowledged. First, the cross-sectional design limits causal inference, and longitudinal studies are needed to clarify developmental directionality among attachment trauma, mentalization, epistemic trust, and cognitive flexibility. Second, all variables were measured using self-report instruments, which may increase shared-method variance and social desirability effects. Third, the sample consisted of university students, which may limit generalizability to clinical or non-student populations. Future research could employ longitudinal or experimental designs, include behavioral and neurocognitive measures of flexibility and mentalization, and examine the model in clinical populations with trauma-related disorders or personality pathology. It may also be valuable to investigate protective factors such as resilience, social support, attachment security, and parental reflective functioning within similar developmental models.

Conclusion. In conclusion, the present study provides evidence that attachment trauma is associated with reduced cognitive flexibility in university students and that this relationship is partly explained by impairments in mentalization and epistemic trust. The findings support contemporary psychodynamic and developmental theories emphasizing that flexible cognition is shaped not only by executive processes but also by relational experiences and social learning mechanisms. By integrating attachment trauma, mentalization, epistemic trust, and cognitive flexibility within a single path model, the study contributes to a more comprehensive understanding of how early relational adversity continues to influence adaptive functioning in emerging adulthood. The results further highlight the potential importance of interventions aimed at strengthening reflective functioning and epistemic openness in order to promote more adaptive and flexible cognitive functioning among individuals with traumatic attachment histories.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contribute to this study.

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