

Association Between Early Maladaptive Schemas and Developmental Crisis Among Young Adults: Mediating Role of Cognitive Flexibility

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Abstract

Background: Analysing the relationship between early maladaptive schemas (EMSs) and developmental crises is critical for advancing targeted interventions; however, the psychological mechanisms underpinning these processes remain largely unexplored. Growing evidence indicates that cognitive flexibility potentially acts as a mediator in this relationship.

Purpose: Grounded in the schema therapy conceptual model by Young et al. (2003), the present study investigates the mediating effect of cognitive flexibility between EMS and developmental crisis, offering insights for cognitive-based interventions.

Method: A total sample of 200 participants (male = 87, female = 113), aged 18–25 years ($M = 20.4$, $SD = 1.84$), were recruited using purposive sampling. The Young Schema Questionnaire–Short Form (YSQ-S2), the Developmental Crisis Questionnaire (DCQ) and the Cognitive Flexibility Scale (CFS) were administered.

Result: Pearson product–moment correlation revealed a positive association between EMS and developmental crises, with the most robust relationship observed for the Disconnection and Rejection domain of EMS. Mediation analysis revealed that cognitive flexibility partially mediates the relationship between EMS 1 and developmental crises, while fully mediates the relationship for EMS 2 and 5 with developmental crises, buffering their impact, thereby reducing developmental crises among young adults.

Conclusion: These findings deepen our knowledge of how cognitive patterns influence developmental challenges, delivering practical implications for creating targeted, schema incorporated interventions to strengthen resilience and support mental health in young adults.

Keywords

Cognitive flexibility, developmental crisis, early maladaptive schemas (EMS), young adults

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Introduction

The current landscape of developmental crisis research reveals a crucial gap in understanding young adulthood's developmental crisis, which remains underexplored compared to adolescent crisis and midlife crisis.^{1–4} This transitional period is characterised by psychological challenges, uncertainty, self-doubt and struggle to align one's real identity with their future aspirations.^{5,6} Its successful resolution is critical for personal growth and adult development.^{7,8}

Recent data indicate that approximately 75% of young adults experience significant developmental crises characterised by intense psychological turbulence.^{9–11} These manifest as career uncertainty, identity confusion, self-doubt and relationship instability, intensified by contemporary factors such as

economic instability, technological changes and ever-growing societal expectations. Socio-economic factors, cultural influences and limited support access exacerbate these challenges disproportionately affecting marginalised groups.^{12,13}

Unresolved crises can cause lasting mental health, relational and career implications, with nearly 30% reporting persistent psychological challenges into their mid-thirties,¹⁴ highlighting a critical need for targeted intervention strategies.

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Early Maladaptive Schemas (EMSs) and Developmental Crisis

Cognitive processes are central to developmental crises, shaping how young adults perceive and respond to challenges during life transitions. Young adults filter experiences through cognitive frameworks. Those with maladaptive schemas from early experiences may perceive information through distortions, such as catastrophising, overgeneralisation and others, which intensifies the crisis and impairs adaptive coping.^{6,15} Maladaptive cognitive patterns hinder successful navigation of these transitions, reinforcing existing schemas and affecting psychological well-being.¹⁶ Understanding these mechanisms is essential for investigating the relationship between early maladaptive schemas (EMSs) and developmental crises.

EMSs represent deep-seated cognitive patterns originating from unmet childhood emotional needs or negative experiences.¹⁷ These schemas form rigid, self-perpetuating beliefs comprising memories, emotions and cognitions. Young's model identifies five primary domains of EMSs: Disconnection/Rejection, Impaired Autonomy, Impaired Limits, Other-Directedness and Over Vigilance/Inhibition.

Research consistently demonstrates that EMSs significantly impair developmental outcomes, particularly during young adulthood.¹⁸ For example, a Disconnection/Rejection

schema may cause relational challenges to be interpreted as proof of unworthiness, intensifying emotional instability. Activated EMSs foster negative self-perception, hinder adult transition and promote maladaptive coping such as avoidance or self-criticism.^{16,19} As a result, the interplay between EMS and developmental crises can lead to extended periods of distress, reduced self-esteem and greater difficulty navigating life changes.

Cognitive Flexibility as a Mediator

Cognitive flexibility is a critical mediator between EMSs and how young adults navigate developmental crises.²⁰ Defined as the capacity to modify thinking and behaviour to novel information, difficulties or shifting conditions, it involves shifting perspectives and adjusting emotional or cognitive reactions.^{21,22}

Cognitive flexibility is essential, as it determines how an individual responds to schema activation during stressful transitions.^{23,24} This capacity enables individuals to break free from rigid, schema-driven thought patterns such as a punitive schema, prompting severe self-criticism and instead reframe challenges as learning opportunities, thereby reducing the emotional burden.^{24,25} By facilitating this cognitive reappraisal, even when schemas are activated, higher flexibility

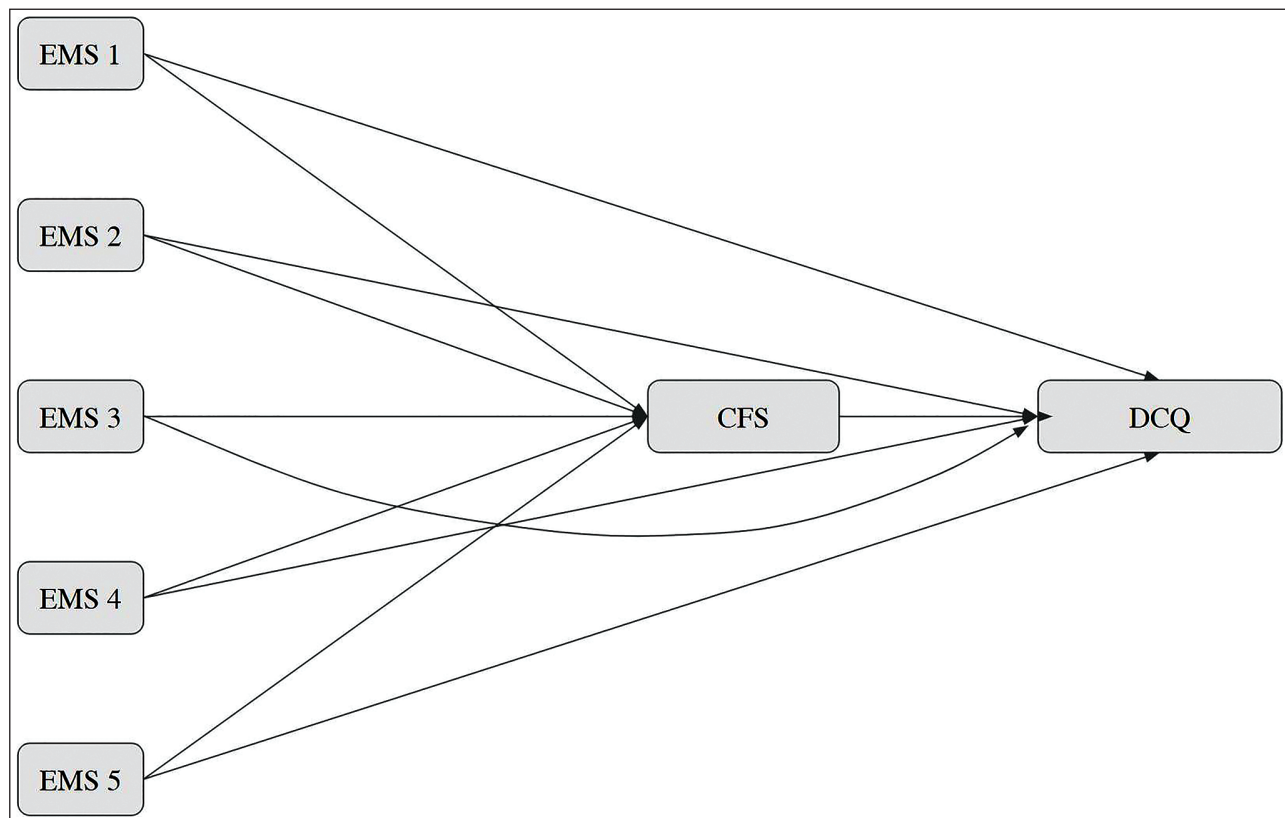


Figure 1. Hypothesised Mediation Model.

fosters greater emotional resilience, promoting adaptive coping strategies and ultimately alleviating the detrimental impact of EMSs on a young adult's developmental phase.

While a comprehensive literature review highlights that cognitive flexibility contributes to the variance between EMSs and developmental challenges,²⁰ the specific pathways through which it attenuates these crises remain inadequately explored. Existing research is fragmented, often focused on short-term outcomes or clinical populations, leaving a gap in understanding its broader role for young adults. This highlights a substantial knowledge gap regarding the complex interplay between EMSs, developmental crises and cognitive flexibility.

Therefore, the present study aims to investigate the association between EMSs and developmental crises in young adults, especially investigating the mediating role of cognitive flexibility. This will provide an integrated framework for understanding how to modify early maladaptive patterns and improve management of developmental tasks, offering critical perspectives for targeted cognitive-based interventions.

Objectives

1. To examine the relationship between EMSs, developmental crisis and cognitive flexibility among young adults.
2. To examine the mediating role of cognitive flexibility in the relationship between EMSs and developmental crisis among young adults.

Hypotheses (Figure 1)

H_1 : EMSs will be positively associated with developmental crises and negatively associated with cognitive flexibility among young adults.

H_2 : Cognitive flexibility will negatively mediate the relationship between EMSs and developmental crises among young adults.

Method

Participants

A total of 200 participants aged between 18 and 25 years ($M = 20.4$, $SD = 1.84$), consisting of 87 males (43.5%) and 113 females (56.5%), were recruited for the present study using purposive sampling. Participants for the study will be selected based on the following inclusion criteria:

- Aged between 18–25 years old
- Attending a college or university under a regular programme

Individuals who fulfil the following criteria will be excluded from the scope of the study:

- Individuals identified with major psychiatric disorders.
- Individuals with chronic illnesses significantly impacting daily functioning or psychological well-being will be excluded.
- Individuals with diagnosed neurological disorders that may influence cognitive function or emotional regulation will be excluded.

Research Design

The present study employed a correlational research design to examine the relationships between EMSs, developmental crisis and cognitive flexibility. Through this design, the study also aims to deepen insights into the ways in which cognitive flexibility may influence the relationship between EMSs and the experience of developmental crises in young adults.

Measures

1. Developmental Crisis Questionnaire (DCQ-12; 26): It is a 12-item measure designed to assess the common features of adult developmental crises across three dimensions: Disconnection and Distress, Lack of Clarity and Control and Transition and Turning Point. Participants rate each item on a 5-point Likert scale, ranging from '1' (strongly disagree) to '5' (strongly agree), with higher scores indicating a greater perception of crisis. The DCQ-12 allows for both continuous and categorical scoring, with a threshold score of 42 indicating the presence of a developmental crisis. In the present study, the total score of the DCQ-12 was used to represent the overall perception of developmental crisis. The scale has demonstrated strong psychometric properties, including high reliability, with Cronbach's alpha coefficients ranging from 0.72 to 0.79 across individual factors and the overall scale. Additionally, the DCQ-12 has shown test-retest stability ranging from 0.78 to 0.89, ensuring consistency in its application across time.²⁶
2. Young Schema Questionnaire–Short Form (YSQ-S2; 27): It is a 75-item self-report measure to assess 15 EMSs. Participants rate each item on a 6-point Likert scale, ranging from '1' (Completely untrue of me) to '6' (Describes me perfectly), with higher scores reflecting stronger schema valence and more deeply ingrained maladaptive core beliefs. The YSQ-S2 is structured into 15 subscales: Emotional Deprivation, Abandonment, Mistrust/Abuse, Social Isolation, Defectiveness/Shame, Dependence/Incompetence, Failure to Achieve, Vulnerability to Harm and Illness, Enmeshment, Subjugation, Self-Sacrifice, Emotional Inhibition, Unrelenting Standards, Entitlement/Grandiosity and Insufficient Self-Control/Self-Discipline. These subscales are categorised under five

major EMS domains: Disconnection and Rejection (EMS 1), Impaired Autonomy and Performance (EMS 2), Impaired Limits (EMS 3), Other-Directedness (EMS 4) and Over Vigilance and Inhibition (EMS 5). This study used the total score of each EMS domain to gauge the intensity of maladaptive schemas. The YSQ-S2 has demonstrated strong psychometric properties, with established construct validity²⁷ and high reliability for both clinical and research use.²⁸ The scale exhibits a Cronbach's alpha of 0.84, indicating strong internal consistency.²⁹

3. Cognitive Flexibility Scale (CFS; 30): It is a 12-item self-report measure to assess an individual's cognitive flexibility. Participants rate each item on a 6-point Likert scale, ranging from '1' (strongly disagree) to '6' (strongly agree), with higher scores indicating greater cognitive flexibility. Unlike other measures, the CFS does not include subscales and its total score reflects the overall level of cognitive flexibility. This study used the total score to evaluate the participant's cognitive adaptability. The CFS has demonstrated high internal consistency, with Cronbach's alpha ranging from 0.76 to 0.77. It also exhibits good concurrent and construct validity and high test-retest reliability ($r = 0.83$) over a two-week period, supporting its robust psychometric properties for both research and clinical use.³⁰

Procedure

Ethical clearance was granted by the Institutional Review Board (IRB Approval No. 24923223003) following ethical guidelines established by the Research Conduct and Ethics Committee before data collection. Each participant in the study completed an informed consent process before participation, emphasising confidentiality measures, potential risks and benefits, including their right to withdraw from the study at any stage without facing any penalties. Initially, participants were provided with a page detailing the study's objectives and content; following, they indicated their voluntary agreement to participate by signing the informed consent. Next, participants completed a demographic questionnaire to capture relevant background information. Participants next proceeded to fill out a series of self-report measures. These scales were administered in a hard copy format. No identifying information was collected and care was taken to preserve participants' anonymity. Participants were reassured that their responses would remain confidential and only be used for research purposes.

Data Analysis

The data were analysed using Jamovi software to meet the research objectives. Descriptive statistics were calculated for demographics and key variables, including frequency, percentage, mean and standard deviation. Pearson

product-moment correlation was employed to examine relationships among developmental crises, EMSs and cognitive flexibility. Mediation analysis was carried out to further examine if cognitive flexibility mediates the relationship between EMSs and developmental crises, providing insights aligned with the study's goals.

Result

The descriptive results for this study ($N = 200$) presented in Table 1 indicated that participants' ages ranged from 18 to 25 years, with 18–20 years being the most common (50%, $n = 100$) and 21–25 years also common (50%, $n = 100$). Gender distribution displayed 56.5% females ($n = 113$) and 43.5% males ($n = 87$). With reference to education, most of the participants, that is 64% ($n = 128$) were graduates, while 36% ($n = 76$) completed postgraduate. Socioeconomically, 58.5% ($n = 117$) were upper class, 39% ($n = 78$) middle class and 2.5% ($n = 5$) lower class. Family structures included nuclear (70%, $n = 140$), joint (26.5%, $n = 53$) and single parent households (3.5%, $n = 7$).

Pearson product-moment correlation was used to examine the relationships between EMSs, developmental crisis and cognitive flexibility. As presented in Table 2, developmental crisis was positively correlated with Disconnection and Rejection (EMS 1) ($r = 0.44$, $p < .001$), Impaired Autonomy and Performance (EMS 2) ($r = 0.31$, $p < .001$), Impaired Limits (EMS 3) ($r = 0.223$, $p < .01$), Other-Directedness (EMS 4) ($r = 0.23$, $p < .05$) and Over Vigilance and Inhibition (EMS 5) ($r = 0.17$, $p < .05$), which indicates that individuals experiencing higher developmental distress are prone to have stronger EMSs. Interestingly, the study yielded the strongest

Table 1. Descriptive Characteristics of the Sample ($N = 200$).

	Variables	<i>n</i>	%
Age (years)	18–20	100	50
	21–25	100	50
Gender	Male	87	43.5
	Female	113	56.5
Education level	Graduate	128	64
	Postgraduate	76	36
Perceived socio-economic status	Lower	5	2.5
	Middle	78	39
	Upper	117	58.5
Family type	Nuclear	140	70
	Single parent	7	3.5
	Joint	53	26.5

Notes. $N = 200$.

Demographic characteristics include age (in years), gender, education level, perceived socio-economic status and family type.

Table 2. Summary Table of Descriptive Statistics and Inter-correlation Between Sub-dimensions of Early Maladaptive Schemas, Developmental Crisis and Cognitive Flexibility for Young Adults (N = 200).

<i>M</i>		<i>SD</i>	EMS 1	EMS 2	EMS 3	EMS 4	EMS 5	DCQ Scores	CFS Scores
EMS 1	4.55	5.43	—						
EMS 2	2.21	3.62	0.63***	—					
EMS 3	2.06	2.32	0.52***	0.45***	—				
EMS 4	2.23	2.36	0.55***	0.49***	0.46***	—			
EMS 5	2.83	2.72	0.53***	0.38***	0.58***	0.55***	—		
DCQ scores	36.8	6.79	0.44***	0.31***	0.22**	0.23*	0.17*	—	
CFS scores	52.0	8.32	-0.43***	-0.38***	0.28***	-0.19**	0.10	-0.65***	—

Notes: N = 200. DCQ = Developmental Crisis Questionnaire, EMS 1 = Disconnection and Rejection, EMS 2 = Impaired Autonomy and Performance, EMS 3 = Impaired Limits, EMS 4 = Other-directedness, EMS 5 = Over Vigilance and Inhibition, CFS = Cognitive Flexibility Scale.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3. Analysis of Indirect, Component, Direct and Total Effect in Mediation Analysis (N = 200).

		95% C.I. (a)						
Type	Effect	Estimate	SE	Lower	Upper	β	<i>z</i>	<i>p</i>
Indirect	EMS 1 $\Rightarrow$ CFS score $\Rightarrow$ DCQ score	0.2974	0.0730	0.1544	0.4405	0.23773	4.075	<.001***
	EMS 2 $\Rightarrow$ CFS score $\Rightarrow$ DCQ score	0.1944	0.0928	0.0124	0.3763	0.10354	2.094	.036*
	EMS 3 $\Rightarrow$ CFS score $\Rightarrow$ DCQ score	0.2611	0.1420	-0.0171	0.5394	0.08926	1.839	.066
	EMS 4 $\Rightarrow$ CFS score $\Rightarrow$ DCQ score	-0.0930	0.1384	-0.3642	0.1782	-0.03224	-0.672	.502
	EMS 5 $\Rightarrow$ CFS score $\Rightarrow$ DCQ score	-0.3430	0.1276	-0.5932	-0.0928	-0.13759	-2.687	.007*
Component	EMS 1 $\Rightarrow$ CFS score	-0.6174	0.1380	-0.8878	-0.3470	-0.40275	-4.475	<.001***
	CFS score $\Rightarrow$ DCQ score	-0.4817	0.0488	-0.5775	-0.3860	-0.59027	-9.864	<.001***
	EMS 2 $\Rightarrow$ CFS score	-0.4035	0.1883	-0.7726	-0.0344	-0.17542	-2.143	.032*
	EMS 3 $\Rightarrow$ CFS score	-0.5421	0.2895	-1.1095	0.0254	-0.15121	-1.872	.061
	EMS 4 $\Rightarrow$ CFS score	0.1930	0.2865	-0.3686	0.7546	0.05462	0.673	.501
Direct	EMS 5 $\Rightarrow$ CFS score	0.7120	0.2549	0.2124	1.2117	0.23310	2.793	.005*
	EMS 1 $\Rightarrow$ DCQ score	0.2645	0.1000	0.0686	0.4604	0.21138	2.646	.008*
	EMS 2 $\Rightarrow$ DCQ score	-0.0866	0.1316	-0.3445	0.1712	-0.04616	-0.659	.510
	EMS 3 $\Rightarrow$ DCQ score	-0.2156	0.2017	-0.6109	0.1798	-0.07368	-1.069	.285
	EMS 4 $\Rightarrow$ DCQ score	0.0681	0.1981	-0.3203	0.4564	0.02360	0.343	.731
Total	EMS 5 $\Rightarrow$ DCQ score	0.1255	0.1795	-0.2263	0.4773	0.05035	0.699	.484
	EMS 1 $\Rightarrow$ DCQ score	0.5619	0.1165	0.3336	0.7902	0.44911	4.824	<.001***
	EMS 2 $\Rightarrow$ DCQ score	0.1077	0.1590	-0.2039	0.4193	0.05739	0.678	.498
	EMS 3 $\Rightarrow$ DCQ score	0.0456	0.2444	-0.4335	0.5247	0.01558	0.186	.852
	EMS 4 $\Rightarrow$ DCQ score	-0.0249	0.2419	-0.4990	0.4492	-0.00864	-0.103	.918
	EMS 5 $\Rightarrow$ DCQ score	-0.2175	0.2152	-0.6393	0.2043	-0.08724	-1.011	.312

Notes: N = 200. EMS 1 = Disconnection and Rejection, EMS 2 = Impaired Autonomy and Performance, EMS 3 = Impaired Limits, EMS 4 = Other-directedness, EMS 5 = Over Vigilance and Inhibition, CFS = Cognitive Flexibility Scale, DCQ = Developmental Crisis Questionnaire. SE = Standard Error, β = Standardised Beta Coefficient, CI = Confidence Interval. Indirect effects represent the influence of EMS on DCQ scores mediated by CFS scores. Direct effects represent the direct influence of EMS on DCQ scores. Total effects represent the sum of direct and indirect effects.

Confidence intervals computed with method: Standard (Delta method).

Betas are completely standardised effect sizes.

relationship between developmental crisis and Disconnection and Rejection (EMS 1). Cognitive flexibility, on the other hand, was negatively correlated with developmental crisis ($r = -0.65, p < .001$), indicating that individuals with greater cognitive flexibility experience milder developmental crisis. Similarly, cognitive flexibility was found, to be negatively correlated with Disconnection and Rejection (EMS 1) ($r = -0.43, p < .001$), Impaired Autonomy and Performance (EMS 2) ($r = -0.38, p < .001$) and Other-Directedness (EMS 4) ($r = -0.19, p < .01$), indicating that higher cognitive flexibility, are associated with low levels of EMSs. The results reveal a significant association between EMSs, cognitive flexibility and developmental crises, whereas maladaptive schemas intensify distress and cognitive flexibility, acting as a buffer against crises during young adulthood.

The results of mediational analysis, as summarised in the above Table 3, highlight the indirect, component, direct and total effects of EMSs on developmental crises, with cognitive flexibility serving as a mediator. The mediation model, as depicted below, in Figure 2, demonstrates that for EMS 1 (Disconnection and Rejection), a significant direct effect on developmental crisis ($\beta = 0.211, p = .008$) at the 0.05 level of significance and a significant indirect effect through cognitive flexibility ($\beta = 0.237, p < .001$) at the 0.05 level of significance. This suggests that cognitive flexibility partially mediates the relationship between EMS 1 and developmental crisis.

For EMS 2 (Impaired Autonomy and Performance), the direct effect on developmental crisis was not significant ($\beta = -0.046, p = .510$) at the 0.05 level of significance, whereas the indirect effect using cognitive flexibility came out to be significant ($\beta = 0.103, p = .036$) at the 0.05 level of significance, suggesting a full mediation, wherein cognitive flexibility completely mediates, the relationship between EMS 2 and developmental crisis. In contrast, the mediational analysis for EMS 3 (Impaired Limits) revealed that neither the direct effect ($\beta = -0.073, p = .285$) nor the indirect effect via cognitive flexibility ($\beta = 0.089, p = .066$) showed statistical significance at the 0.05 level of significance, indicating the absence of any meaningful direct or mediated relationship.

Similarly, for EMS 4 (Other-Directedness), the direct effect ($\beta = 0.023, p = .731$) and indirect effect through cognitive flexibility ($\beta = -0.032, p = .502$) were not significant at the 0.05 level of significance, further suggesting no significant mediation or direct impact. Final for EMS 5 (Over Vigilance and Inhibition), the direct effect on developmental crisis was not significant ($\beta = 0.050, p = .484$) at the 0.05 level of significance; however, the indirect effect via cognitive flexibility was statistically significant ($\beta = -0.137, p = .007$) at the 0.05 level of significance. This finding suggested a full mediation, where higher levels of EMS 5 reduce cognitive flexibility, which in turn increases developmental crises. Overall, these results emphasise the crucial role of cognitive

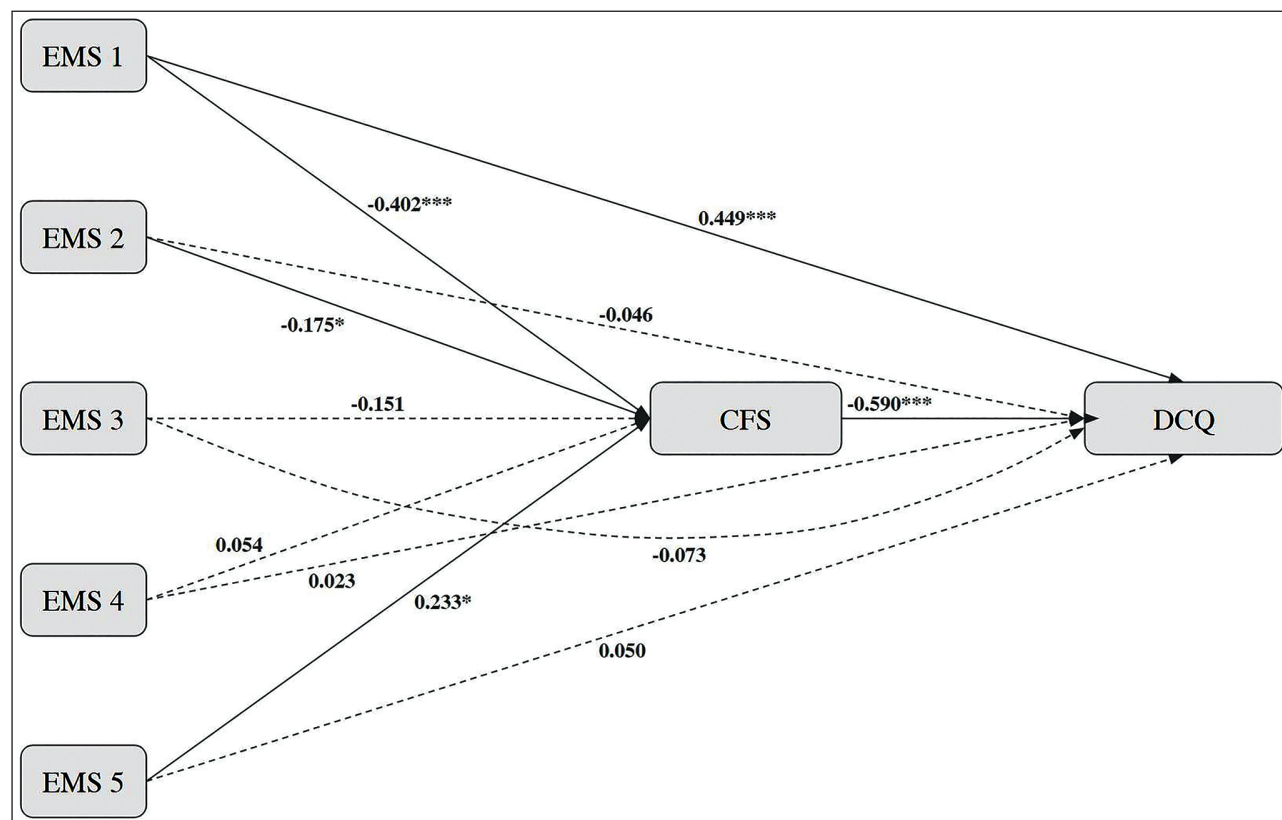


Figure 2. Mediational Model Between EMSs, Developmental Crisis and Cognitive Flexibility.

flexibility in mediating the effects of specific EMSs on developmental crises, particularly in cases where full mediation was observed.

Discussion

The current investigation sheds light on the complex interplay between EMSs and cognitive flexibility in predicting developmental crises during young adulthood. Based on Young et al.'s (2003) schema therapy model, the current investigation focused on how Disconnection and Rejection (EMS1), Impaired Autonomy and Performance (EMS2) and Other-Directedness (EMS4)—stemming from unmet childhood needs—exacerbate difficulties during life transitions.¹⁸ These results are consistent with previous studies indicating that unresolved childhood emotional needs often reemerge during key developmental phases, such as identity exploration, autonomy development and relationship formation.^{6,18} However, individuals with higher cognitive flexibility appear less vulnerable to crisis symptoms, even when maladaptive schemas are active. This may be because cognitively flexible individuals can reframe perspectives, tolerate uncertainty and adaptively manage stress, thereby reducing the effect of rigid, schema-driven interpretations.³⁰ Fundamentally, they are less likely to be overwhelmed by negative self-perceptions or relational anxieties, allowing them to navigate developmental challenges more effectively. These results extend earlier work,^{11,24} reinforcing that while EMSs heighten crisis risk during transitions, cognitive flexibility serves as a protective factor, promoting resilience in emerging adulthood.

Mediation analyses further revealed domain-specific pathways. Cognitive flexibility partially mediates the impact of Disconnection and Rejection schemas (EMS1), suggesting that while emotional wounds may persist, adaptive thinking can reduce their harm. More notably, it fully neutralised the effects of Impaired Autonomy and Performance (EMS2) and Other-Directedness (EMS4), indicating that flexible cognition can completely counteract these schemas' negative influence. This supports schema therapy's core premise: EMSs, rooted in unmet childhood needs, drive dysfunctional patterns unless met with adaptive coping strategies.¹⁷ Cognitive flexibility, as a dynamic skill, enables such coping by facilitating schema reappraisal and reducing its hold on psychological functioning. These results echo past studies on cognitive flexibility's role in stress adaptation and emotion regulation^{24,30,31} and align with schema therapy's focus on cultivating cognitive-emotional flexibility to weaken maladaptive schemas.²⁰ Together, these findings underscore cognitive flexibility as both a compensatory and protective mechanism, highlighting its clinical potential in mitigating schema-related vulnerabilities during emerging adulthood.^{7,11}

In the current study, schemas such as Over Vigilance/Inhibition and Other-Directedness did not predict

developmental crisis because they are less relevant during emerging adulthood. Various studies have also indicated that these schemas develop strongly in later adulthood, when role demands and social responsibility intensify.^{32,33}

By confirming the protective role of cognitive flexibility, this study adds to growing evidence that interventions enhancing cognitive flexibility can help individuals with EMS better manage developmental crises. Integrating cognitive flexibility training into schema therapy may strengthen its effectiveness by promoting more adaptable thinking and responses. This can support individuals in reframing distressing experiences, reducing EMS impact and developing healthier coping strategies. The findings highlight the complex interaction between EMS and cognitive flexibility and their combined influence on how individuals navigate developmental challenges. They underscore the need for interventions that both modify maladaptive cognitive patterns and build cognitive flexibility to strengthen adaptive functioning and emotional stability during life transitions.

These findings also gain added significance when examined through the lens of Indian cultural dynamics. In collectivistic culture, schemas of disconnection, impaired autonomy and other-directedness may be intensified by societal pressures associated with academic excellence, career expectations and social responsibilities. However, there are some protective factors also, such as adaptability, cooperative support and family support can strengthen cognitive flexibility, acting as a buffer against the crises. Hence, interventions which are sensitive to these cultural realities and combine schema modification with flexibility training are more likely to be impactful in mitigating developmental crises.

Limitations and Future Directions

Several constraints were identified in the current study, which impacted the findings and interpretations. The first limitation is the study's cross-sectional nature, which limits our ability to draw causal conclusions, as it delivers only the relationship between variables. Using a longitudinal method would offer greater insights into these variables and their influence on EMS and cognitive flexibility on developmental crises over time. Self-report measures used in this study introduced potential biases such as social desirability, self-perception inaccuracies and the length of the questionnaires proved to be tedious for the participants, affecting the accuracy of the results, especially when participants underreport or overestimate their EMSs, such as emotional deprivation, mistrust or feelings of failure and cognitive flexibility. The sample was confined to young adults aged 18–25 years and restrictions were placed on most of the population belonging to the university and Delhi NCR brought in a generalisability effect on the findings. The study can be further expanded by including a more diverse population regarding age and cultural background in future research. This study is also limited to the variables EMS and cognitive flexibility, neglecting the role of

social, cultural and environmental influences in understanding developmental crises.

Implications

The present study further proposes important implications regarding mental health interventions and educational frameworks targeting young adults. First, the significant relationship between EMS, developmental crises and cognitive flexibility emphasised the necessity for individualised treatment approaches that address maladaptive schemas and enhance cognitive adaptability. The findings can inform the design of prevention and intervention programs to build resilience and adaptive coping strategies in young adults during critical developmental transitions. Second, the research provides a foundation for developing psychoeducation initiatives and support systems in educational and clinical settings, ultimately contributing to better mental health outcomes and personal growth among young adults.

Conclusion

In conclusion, this study adds to the growing body of research on the psychosocial factors influencing developmental crises during young adulthood. By examining how cognitive flexibility mediates the impact of maladaptive schemas on developmental challenges, the research provides valuable insights into the cognitive and emotional factors influencing young adults during critical life transitions. These findings highlight the importance of addressing maladaptive thought patterns and promoting cognitive adaptability to enhance resilience and well-being. This study contributes to the growing body of knowledge on young adult mental health, offering a foundation for future research and intervention development.

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Authors' Contribution

Dr Shefali Mishra contributed to the conceptualisation, research design, supervision and critical revision of the manuscript. Ms Sneha Ray was responsible for data collection, analysis and drafting of the manuscript. Both authors reviewed and approved the final version of the manuscript.

Statement of Ethics

The study was approved by the IRB of Christ University. Informed consent was obtained from all participants and confidentiality was maintained throughout the research process.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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Patient Consent

Informed consent was obtained from all participants involved in this study. Participation was voluntary and respondents were made aware of their right to withdraw at any time without penalty.

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References

1. Singh S and Singh AP. Validation of the factor structure of the parent-adolescent relationship scale in the Indian context. *Soc Cult Hum Behav* 2021; 2(2). DOI: 10.54729/2789-8296.1055
2. Giuntella O, McManus S, Mujcic R, et al. The midlife crisis. *Economica* 2022; 90(357): 65–110. DOI: 10.1111/ecca.12452
3. Edwards D, Carrier J, Csontos J, et al. Crisis responses for children and young people: A systematic review of effectiveness, experiences and service organisation (CAMH-Crisis). *Child Adolesc Ment Health* 2023; 29(1): 70–83. DOI: 10.1111/camh.12639
4. Balamurugan G, Vijayarani M and Radhakrishnan G. Midlife crisis. *Indian J Psychiatr Nurs* 2024; 21(2): 160–166. DOI: 10.4103/iopn.iopn_96_24
5. Arnett JJ. *Emerging adulthood: The winding road from the late teens through the twenties*. 2nd ed. Oxford University Press, 2014. DOI: 10.1093/acprof:oso/9780199929382.001.0001

6. Faraji H and Özen ZD. The relationship between early maladaptive schemas, separation anxiety and emerging adult individuation level. *Toros Univ İİSBF Sos Bilim Derg* 2022; 9(17): 51–79. DOI: 10.54709/iisbf.1176829
7. Arnett JJ. Emerging adulthood: A theory of development from the late teens through the twenties. *Am Psychol*. 2000; 55(5): 469–480. DOI: 10.1037/0003-066X.55.5.469
8. Erikson EH. *Identity: Youth and crisis*. New York: W.W. Norton & Company, 1968. DOI: 10.1002/bs.3830140209
9. Wood D, Crapnell T, Lau L, et al. Emerging adulthood as a critical stage in the life course. *LCHD* 2017; 123–43. DOI: 10.1007/978-3-319-47143-3_6
10. Agarwal S, Guntuku SC, Robinson OC, et al. Examining the phenomenon of quarter-life crisis through artificial intelligence and the language of Twitter. *Front Psychol* 2020; 11: 341. DOI: 10.3389/fpsyg.2020.00341
11. Hasyim FF, Setyowibowo H and Purba FD. Factors contributing to quarter-life crisis in early adulthood: A systematic literature review. *Psychol Res Behav Manag* 2023; 17: 1–12. DOI: 10.2147/PRBM.S438866
12. Robinson OC, Cimporescu M and Thompson T. Wellbeing, developmental crisis, and residential status in the year after graduating from higher education: A 12-month longitudinal study. *J Adult Dev* 2021; 28(5): 1–11. DOI: 10.1007/s10804-020-09361-1
13. World Health Organization. Rapid evidence synthesis on developmental crises in young adults. Geneva: WHO. 2023. Available from: <https://www.who.int/europe/publications/m/item/rapid-evidence-synthesis-mental-health-social-inclusion-young-people-european-region-draft-for-consultation>
14. Bach B, Lockwood G and Young JE. A new look at the schema therapy model: Organization and role of early maladaptive schemas. *Clin Psychol Psychother* 2018; 25(6): 859–870. DOI: 10.1002/cpp.2310
15. Pilkington PD, Bishop A and Younan R. Early maladaptive schemas and psychological distress: A meta-analysis. *Clin Psychol Rev* 2021; 87: 102037. DOI: 10.1016/j.cpr.2021.102037
16. Thimm JC. Relationships between early maladaptive schemas and psychosocial developmental task resolution. *Clin Psychol Eur* 2017; 2(1): 1–15. DOI: 10.1002/cpp.647
17. Young JE, Klosko JS and Weishaar ME. *Schema therapy: A practitioner's guide*. Guilford Press, 2003. Available from: <https://www.guilford.com/excerpts/young.pdf>
18. Kaya Y and Aydin A. The mediating role of early maladaptive schemas in the relationship between attachment and mental health symptoms of university students. *J Adult Dev* 2021; 28(5): DOI: 10.1007/s10804-020-09352-2
19. Robinson OC, Wright GRT and Smith JA. The holistic phase model of early adult crisis. *J Adult Dev* 2013; 20(1): 27–37. DOI: 10.1007/s10804-013-9153-y
20. Zafar J, Malik S, Tariq S, et al. Impact of early maladaptive schemas on behavioral problems of young adults: Mediating role of cognitive flexibility. *J Popul Ther Clin Pharmacol* 2024; 31(3): 200–213. DOI: 10.53555/jptcp.v31i3.4660
21. Lin CE. Cognitive flexibility. *Encyclopedia of Autism Spectrum Disorders*. 2021. DOI: 10.1007/978-3-319-91280-6_1991
22. Yıldız AE and Boyacı M. Cognitive flexibility and positivity as predictors of career future in university students. *Turk Psychol Couns Guid J* 2020; 10(57): 297–320.
23. Sassenberg K, Winter K, Becker D, et al. Flexibility mindsets: Reducing biases that result from spontaneous processing. *Eur Rev Soc Psychol* 2021; 33(1): 171–213. DOI: 10.1080/10463283.2021.1959124
24. Mohammadkhani S, Foroutan A, Akbari M, et al. Emotional schemas and psychological distress: Mediating role of resilience and cognitive flexibility. *Iran J Psychiatry* 2022; 17(3): 284–293. DOI: 10.18502/ijps.v17i3.9728
25. Hohl K and Dolcos S. Measuring cognitive flexibility: A brief review of neuropsychological, self-report, and neuroscientific approaches. *Front Hum Neurosci* 2024; 18. DOI: 10.3389/fnhum.2024.1331960
26. Petrov N, Robinson OC and Arnett JJ. The developmental crisis questionnaire (DCQ-12): Psychometric development and validation. *J Adult Dev* 2022; 29: 265–278. DOI: 10.1007/s10804-022-09403-w
27. Welburn K, Coristine M, Dagg P, et al. The schema questionnaire—short form: Factor analysis and relationship between schemas and symptoms. *CORT* 2002; 6: 519–530. DOI: 10.1023/A:1016231902020
28. Walter G, Meyer C and Ohanian V. Psychometric properties of the long and short versions of the young schema questionnaire: Core beliefs among bulimic and comparison women. *CORT* 2001; 25: 137–147. DOI: 10.1023/A:1026487018110
29. Young JE and Brown G. *Young Schema Questionnaire—Short Form (YSQ-S2)*. Schema Therapy Institute, 2003. Available from: https://www.youthadtoolbox.org.au/sites/default/files/documents_global/Handout%20for%20schema%20workshop.pdf
30. Martin M and Rubin R. A new measure of cognitive flexibility. *Psychol Rep* 1995; 76(2): 623–626. DOI: 10.2466/pr0.1995.76.2.623
31. Ahmad S and Khan M. Impact of early maladaptive schemas on behavioral problems of young adults: Mediating role of cognitive flexibility. *J Popul Ther Clin Pharmacol* 2020. DOI: 10.53555/jptcp.v31i3.4660
32. Calvete E, Orue I and Hankin BL. Early maladaptive schemas and social anxiety in adolescents: The mediating role of anxious automatic thoughts. *J Anxiety Disord* 2013; 27(3): 278–288. DOI: 10.1016/j.janxdis.2013.02.011
33. Petrocelli JV, Glaser BA, Calhoun GB, et al. Early maladaptive schemas of personality disorder subtypes. *J Pers Disord* 2001; 15(6): 546–559. DOI: 10.1521/pedi.15.6.546.19188