

## Early maladaptive schemas and their influence on adolescent mental health in the Moroccan context

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### Abstract

Early maladaptive schemas (EMS), which are enduring and dysfunctional cognitive patterns, have been associated with the psychological well-being of young people. They are crucial in both the development and persistence of psychological distress, notably including symptoms of anxiety and depression. The present study seeks to identify the maladaptive schemes and their influence on mental health in adolescents and young adults (aged 14 – 24 years) in Morocco. The study was carried out in August–November and December 2020. Furthermore, the Young Schema Questionnaire-Short Form (YSQ-SF) assessed 13 EMS was used for the current investigation, and completed by 79 adolescents. (74.7% (n=59) are male compared to 25.3% (n=20) are female). The representability of respondents having developed an EMS+ shows that these values fluctuate between minimums of 54.4% and 59.5% displayed respectively for the EMS (imperfection), EMS (Failure) and a maximum of 100% recorded for the EMS (Distrust). Additionally, it was observed that females exhibited greater levels of schemas in comparison to males. Typically, young adolescents exhibit a presence of all types of maladaptive schemas. Conducting studies with larger and more diverse samples would enhance the generalizability of the findings and provide a more nuanced understanding of the impact of EMS on adolescent mental health across different segments of the population. This study has highlighted the profound influence that EMS can have on the mental health and well-being of adolescents, underscoring the importance of cultural context in shaping these schemas and their outcomes.

**Keywords:** Early maladaptive schema, mental health, adolescent, Risk factor, personality difficulties.

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### 1. Introduction

Personality disorders and difficulties are widely prevalent both in the general population and among those seeking psychological assistance [1-3]. In light of this, Young [4-5] introduced the concept of early maladaptive schemas (EMS) to describe the fundamental issues and complexities faced by patients with personality disorders and difficulties, and he also developed schema therapy (ST) to treat these conditions. As a definition, Early maladaptive schemas (EMS) are broad, pervasive, and dysfunctional thought patterns regarding oneself, the world, and interpersonal relationships. These schemas typically form during childhood and continue to develop into adolescence. Schema therapy posits that early maladaptive schemas (EMS) are dysfunctional and key to the psychopathology of mental disorders [6]. and can result in various psychological issues, including depression, loneliness, addictions, and psychosomatic disorders [7]. Schemas are composed of enduring and profound cognitive structures that establish guidelines for the storage, encoding, selection, and retrieval

of information [8]. They are characterized by their stability, longevity, and significant dysfunctionality, mainly because they tend to resist changes. Furthermore, EMS are deep-seated cognitive and emotional patterns established in childhood that continue to affect behavior, emotions, and relationships during adolescence. They often emerge from negative experiences. As well, Recent research has concentrated on the deep structure of cognitive vulnerability, particularly focusing on early maladaptive schemas (EMS). Various studies have shown that EMS is predictive of depression in adolescents [9]. On the other hand, Schemas are shaped by an individual's genetic predisposition and their interactions with key figures like teachers, parents, and siblings in their environment. This results in a set of beliefs and perceptions about oneself and others, influencing how situations are interpreted and assessed [10]. Therefore, when the schemas are activated, they focus attention and they serve as cognitive felt throughout the mechanism of information's treatment [11]. In this sense, Young and colleagues developed a list of EMS that encompass a range of themes

frequently observed in individuals experiencing personality issues and disorders [12]. Hence, according to Young and Klosko (1994), 15 early maladaptive schemas exist [13]. However, the questionnaire used in this study: The questionnaire early maladaptive schemas short version of Young translated by Rusinek & Hautekéete to Frensh (2000) 13 schemas [14]. We used a set of 13 schemas in our analysis: (1) Abandonment: Five items are focused on the sentiment that valued interpersonal connections are always destined to end. (2) Mistrust: Five items focusing on distrust in others. (3) Emotional deprivation: Five items are centered on grievances about past and present experiences regarding the absence of emotional exchange, consideration, and affection from others (4) Social isolation: Five items addressing feelings of isolation, the rejection by others, and difficulty in engaging in social relationships. (5) Dependence: Five items focusing on the dependence on others for understanding events and taking actions. (6) Vulnerability: Five items concerning the apprehension of imminent catastrophe. (7) Insufficient self-control: Seven items related to tendencies of quick irritability, reluctance to complete tasks, and resistance to acting against one's own will. (8) Self-sacrifice: Five items focused on excessive dedication to others. (9) Emotional inhibition: Five items concerning the difficulty in expressing emotions. (10) Unrelenting standards: Five items centering on the pursuit of self-perfection and dissatisfaction with one's actions. (11) Incompetence: Five items focusing on the belief of having lower abilities and success compared to others (12) Enmeshment; Five items related to the difficulty in detaching from the opinions and influences of parents and partners. (13) Fear of loss of control: Five items related to the fear of impulsive reactions that could physically or morally harm others. Thus, Examining the influence of the EMS in Moroccan adolescents is crucial. This study aimed to explore the impact of the EMS on mental health over time within a cohort of Moroccan adolescents. These schemas shape an adolescent's worldview, influencing their reactions to stressors and interpersonal interactions. Addressing and modifying these schemas through therapy and other interventions can be crucial for improving adolescent mental health and well-being. Ultimately, the purpose of the present study was to identify and analyze the EMS and their influence on adolescent's mental health.

## 2. Materials and methods

### 2.1. Participants

This comparative cross-sectional study took place from August to December 2020, involving two centers: the "Children's Social Welfare Center" in Meknes City and the "Bab-Khoukha Care Facility" in Fez City, central northern Morocco. It included 79 participants, comprising 59 young men and 20 young women, with ages ranging from 15 to 24 years and an average age of 19.34 years. These subjects were chosen due to their challenging social and family circumstances.

### 2.2. EMS self-assessment scale and procedure

To this end, we have used in this study; the translated short version of early maladaptive schemas of Young (EMS) by Rusinek, S. and Hautekéete, M. (2000) [14]. The questionnaire includes 26 items and evaluates 13 schemas. The questionnaire included statements like "I'm afraid of losing control of my actions." Respondents are asked to rate

each statement on a scale from 1 to 6, where a higher score indicates a stronger agreement with the statement. The purpose of this questionnaire was to facilitate and accelerate the screening process among individuals. The 13 schemas are split into five domains: Impaired Autonomy and Performance, Disconnection and Rejection, Impaired Limits, Over-vigilance and Inhibition, and Other Directedness. Jointly, 13 patterns were studied: Abandonment, insufficient self-control, mistrust, vulnerability, dependence, emotional deprivation, Social isolation, imperfection, failure, Self-sacrifice, Unrelenting standards, It's all down to me, fear of loss of control.

### 2.3. Data analyses

The data has been examined using the quantitative program SPSS v.20.

## 3. Results

Our study summarizes the correlation results on two axes after rotation schematized in table 1. Furthermore, the result from the Principal Component Analysis, using Varimax rotation with Kaiser normalization, shows a clear distinction between two components in the EMS. Component 1 predominantly correlates with schemas related to personal inadequacy and control, such as imperfection, failure, and fear of loss of control. In contrast, Component 2 aligns more with relational and emotional issues, including mistrust, vulnerability, and dependence. This differentiation suggests that EMS in individuals can be broadly categorized into these two groups, each with distinct focuses and implications for psychological health and interventions. The projection of the EMS within the space defined by axes 1 and 2 revealed two distinct groups. The first group, located on the positive side of axis 1, includes variables such as imperfection, failure, entitlement, and fear of losing control. The second group, situated on the positive side of axis 2, consists of SPIs like mistrust and high demands. It's important to note that these two groups are exclusively independent, as shown in Figure 1. The study on EMS categories reports that the total score is the sum of scores for each EMS, with an average of  $60.68 \pm 1.01$  (minimum=40; maximum=78) and a median of 62. The distribution is Gaussian with skewness of 0.311 and kurtosis of 0.585. The Z-score transformation revealed that individuals with Z-scores less than -1 are considered normal, those between -1 and +1 are to be monitored, and those above +1 are at risk. The analysis presented in Figure 2 showed that 17.72% of the subjects are displaying the behavior, 21.52% are considered normal, and 60.76% are cases to be monitored as they could potentially develop normal or pathological profiles. The chart below Figure 3 shows the projection results of the modalities of the variables sex, age, and EMS categories. This graph highlights two main groups:

- The first, on the positive side of axis 1, consists of male adolescents over the age of 20 with personality issues and disorders.
- The second group, on the negative side of axis 1, includes female respondents between 18 and 19 years old who do not exhibit any behavioral problems.

Thus, in this section, we evaluated 79 cases with an average age of 19.39 years, of which 74.7% were male, in terms of their personality levels. The findings reveal that 17.72% of the individuals display behavior indicative of the

early maladaptive schemas, while 21.52% appear to have normal tendencies. However, 60.76% are cases that need to be monitored as they could either remain normal or develop pathological conditions.

#### 4. Discussion

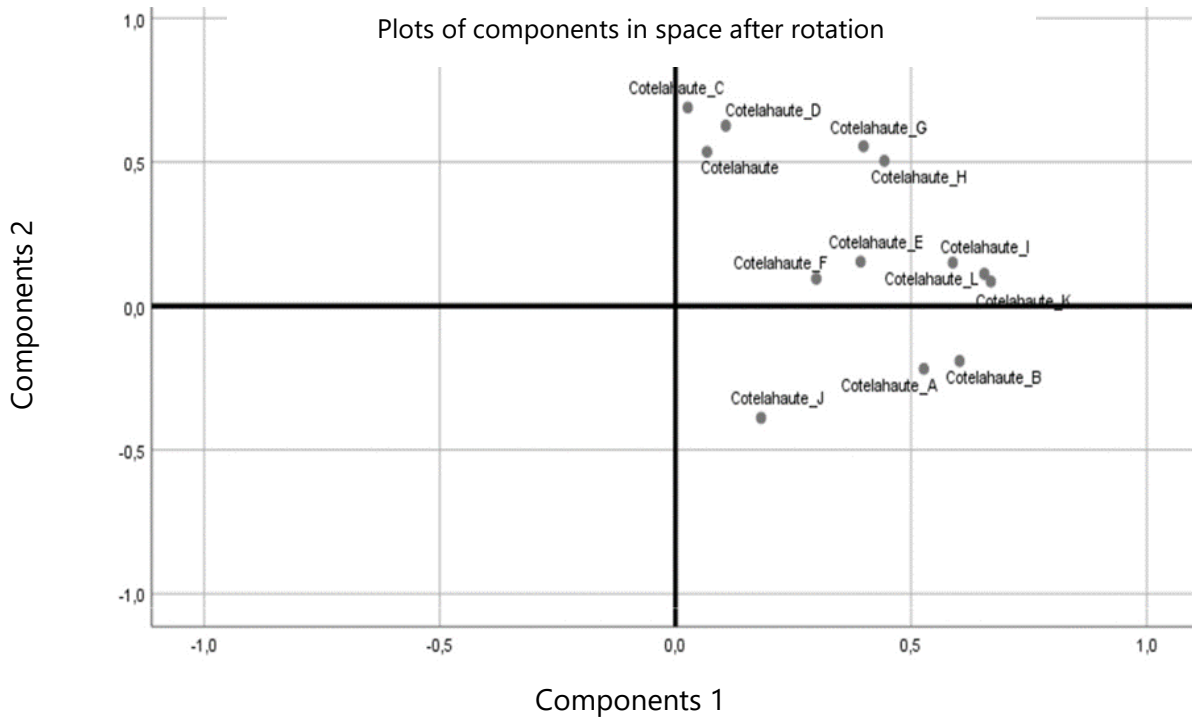
The purpose of the present investigation was to identify and clarify the influence of EMS on adolescents' mental health. Overall, our results in table 1 suggest that different sets of early maladaptive schemas (EMS) are associated with distinct aspects of mental health in adolescents. Schemas like imperfection, failure, and fear of loss of control (Component 1) may relate to issues of self-esteem and personal adequacy, impacting adolescent mental health in terms of anxiety, depression, and self-perception. On the other hand, schemas related to mistrust, vulnerability, and dependence (Component 2) could influence relational and emotional well-being, affecting trust, attachment, and interpersonal relationships. Further, a number of other scholars, have asserted that certain mental disorders are marked by particular EMS [15-18]. For example, Bernstein (2002) [16] hinted that borderline personality disorder is especially Related to abandonment, mistrust/abuse, insufficient self-control schemas, defectiveness/shame, social isolation, and emotional deprivation. As shown in Figure 1, represents a Principal Component Analysis (PCA) scatterplot, commonly used in psychological research to identify underlying patterns in data, in this case, early maladaptive schemas (EMS) in adolescents. Each point (labeled A to J) likely represents different EMS factors. The plot shows how these factors are distributed along two principal components, which are combinations of the original variables that explain the maximum amount of variance. The distribution of points suggests that certain schemas tend to cluster together. For adolescents, this indicates that specific groups of maladaptive thoughts and behaviors are correlated and could potentially be targeted together in therapeutic interventions to improve mental health outcomes. Without specific details on the labels, a more in-depth interpretation would require additional context from the study. Additionally, figure 1, representing a PCA of EMS in adolescents, could suggest that adolescents tend to experience clusters of cognitive and emotional patterns. The effects on mental health might include an increased risk for certain psychological disorders, such as anxiety or depression if the schemas are maladaptive. Previous studies showed that, EMS were found to have a moderate positive correlation with interpersonal problems. Moreover, EMS is most profoundly connected with interpersonal issues including EMS in the rejection domain together with failure, negativity, subjugation, and vulnerability to harm [19]. As well demonstrated in the results of the study of Thimm, J.C., and Chang, M. (2022), which suggest strong associations between EMS and mental disorders [4]. Alternatively, results from Figure 2 showed a Gaussian distribution of EMS scores among adolescents implying that while a portion of this population is functioning within normal psychological parameters, there is a significant middle group that merits close observation. This group could potentially shift toward healthier mental states or, conversely, toward more problematic ones. A smaller percentage are identified as at risk and are more likely to experience negative mental health outcomes.

The study's findings stress the importance of targeted mental health interventions for adolescents who are at risk or require monitoring, as early maladaptive schemas are linked to various mental health issues, including depression, anxiety, and relationship problems. A study proved by Tariq, A., (2021) [20], indicating a strong association between EMS and anxiety. Additionally, they also proved that, when different schema domains were examined separately, anxiety was shown to have considerably vigorous connections with the schema domains of other-directedness ( $r = 0.49$ ), disconnection/rejection ( $r = 0.50$ ), and impaired autonomy/performance ( $r = 0.47$ ). [20]. The negativity/pessimism schema involves negative expectations for the future, anxiety about making serious mistakes, an unrealistic negative view of the future, and proneness to rumination [6]. Pessimism is generally related to negative feelings and distress [21]. Concerning the link between early maladaptive schemas (EMS) and specific mental health conditions, depression was the most frequently studied disorder in the research, with Borderline Personality Disorder (BPD) and Obsessive-Compulsive Disorder (OCD) also receiving significant attention. [12]. Whereas, results as shown in Figure 3 indicating two main groups based on personality issues and gender suggest that there may be gender-specific patterns in the development of personality-related challenges in adolescents. Males over 20 may be more represented in personality complexities, while females aged 18-19 may show fewer psychological disorders. Previous studies, Tariq, A., (2021) [20], suggest that females were found to have higher schemas of hypervigilance and other-directedness and associated anxiety symptoms compared to males [20]. These findings can inform targeted mental health interventions, indicating a potential need for age and gender-specific strategies to support the mental well-being of adolescents. The impact on mental health services could involve early screening and customized interventions for at-risk groups. Furthermore, our study results, showing that a small percentage of adolescents are developing maladaptive behaviors while the majority are categorized as normal or in need of monitoring, highlight the nuanced spectrum of adolescent mental health. The lack of correlation with age or gender suggests these schemas are broadly applicable across the adolescent demographic. This has implications for mental health strategies, emphasizing the need for universal screening and early intervention programs. Addressing EMS in adolescents is crucial as it can influence long-term psychological outcomes and the development of mental health disorders. The identification of these clusters can help in developing focused therapeutic approaches to improve mental health outcomes for adolescents by targeting interconnected schemas rather than treating them as isolated issues. On the other hand, as an effective means of treatment, schema therapy (ST) can play a crucial role in addressing mental disorders in adolescents. It focuses on identifying and modifying early maladaptive schemas, which are deep-rooted and dysfunctional patterns of thinking and behavior formed in childhood. By targeting these schemas, ST aims to reduce symptoms of various mental disorders, enhance coping mechanisms, and improve overall mental health.

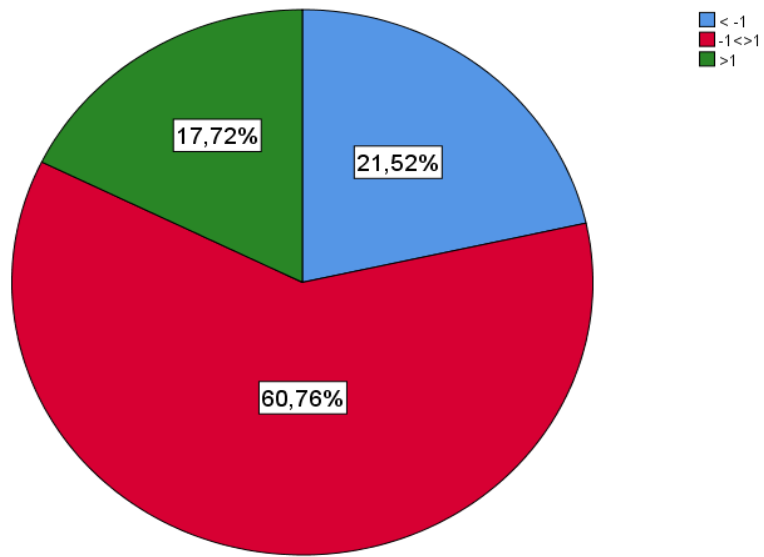
**Table 1:** Component Matrix

Schemas	1	2
Abandonment	,351	-,410
insufficient self-control	,319	,473
mistrust	,397	,492
vulnerability	,402	-,561
Dependence	,434	-,463
emotional deprivation	,413	,088
Social isolation	,301	,086
Imperfection	,639	-,243
failure	,648	-,176
Self-sacrifice	,574	,199
Unrelenting standards	-,063	,424
It's all down to me	,605	,298
Fear of loss of control	,608	,268

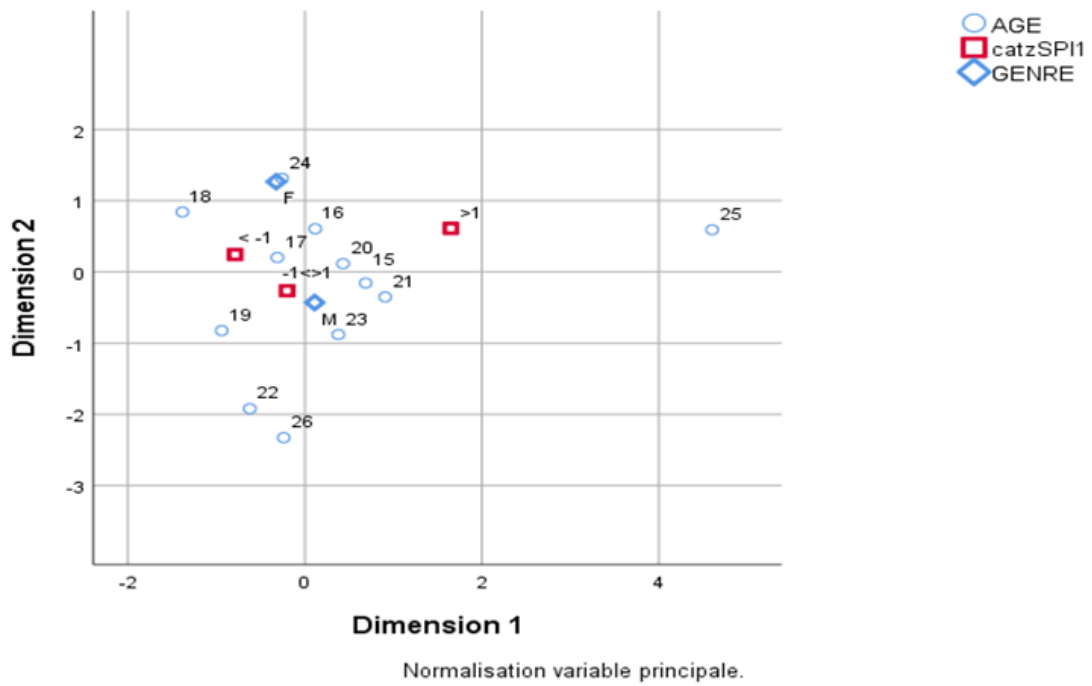
Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser normalization.  
 a. Rotation converged in 3 iterations.



**Figure 1:** Projection of Subdimensions in Principal Component Analysis (PCA)



**Figure 2:** Distribution of respondents according to EMS categories



**Figure 3:** Projection of modalities in PMC\*

This therapeutic approach is particularly beneficial for adolescents as it addresses underlying cognitive and emotional patterns during a critical developmental phase, fostering long-term psychological resilience and well-being. Finally, in light of the notable variations in how early maladaptive schemas EMS relate to interpersonal problems and influencing adolescents mental health, future research could benefit from adopting multimodal assessment methods. Addressing EMS in adolescents is crucial as it can influence long-term psychological outcomes and the development of mental health disorders.

## 5. Conclusions

This paper has examined the profound influence of EMS on adolescent mental health. The investigation into EMS has underscored their significant impact on the mental health of adolescents. Our research has illuminated the nuanced ways in which these schemas contribute to various psychological outcomes. We found that EMS are influential in the developmental trajectory of adolescents' mental health, potentially leading to a range of psychopathological conditions. Therefore, early and tailored interventions like schema therapy are vital to mitigate the adverse effects of EMS and support the mental well-being of young individuals during this pivotal stage of growth.

## 6. Limitations and Future Directions

The limitations of this study on the influence of early maladaptive schemas on adolescent mental health may include a sample size that may not be representative of the broader adolescent population. The cross-sectional nature of the study limits the ability to establish causality or observe changes over time. The reliance on self-report measures may introduce bias. Additionally, cultural, socioeconomic, and environmental factors could not be fully controlled for and may have impacted the findings. Future research could expand on these areas to deepen the understanding of EMS in adolescents.

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