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UNPACKING THE LONGITUDINAL INTERPLAY BETWEEN EMOTIONAL ABUSE, FAMILY DYSFUNCTION AND DEPRESSION IN ADOLESCENTS

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Abstract

Adolescence represents a sensitive developmental period, during which individuals are particularly vulnerable to the long-term effects of adverse interpersonal experiences. Within this context, family dynamics and early emotional experiences play a pivotal role in shaping psychological adjustment and mental health outcomes. Emotional abuse (EA), in particular, has been consistently linked to increased risk for depressive symptoms (DS), yet the mechanisms through which it influences adolescent mental health over time remain insufficiently understood. To address these gaps, the present longitudinal study examined the temporal associations among EA, family function (FF), and DS across three time points spanning one year. Data were collected at baseline, six months later, and twelve months later from a large community sample of 1,887 Italian adolescents (mean age = 15.44 years, SD = 1.09). EA was measured using the EA subscale of the Childhood Trauma Questionnaire–Short Form, FF was assessed via the General Functioning Subscale of the McMaster Family Assessment Device, and DS was measured with the depression subscale of the Depression Anxiety Stress Scales–21. Structural equation modeling was used to investigate bidirectional relationships and potential mediation effects, which showed excellent fit to the data ($\chi^2(312)=462.401$, $p<.001$; $\chi^2/df=1.482$; CFI=.996; RMSEA=.016, 90% CI [.013–.019]; SRMR=.017). The results revealed that EA at T1 and T2 significantly predicted both FF and DS at T2 and T3, respectively. FF at T1 and T2 significantly predicted DS at T2 and T3, respectively. FF did not predict EA, and DS did not predict either EA or FF. Mediation analyses indicated that EA at T1 indirectly influenced DS at T3 through its effects on EA, FF and DS at T2. Similarly, FF at T1 indirectly predicted DS at T3 via FF and DS at T2, but not through EA at T2. Finally, DS at T1 showed no indirect effects on DS at T3. Taken together, these findings underscore the central role of FF as a key mechanism linking EA to the development of DS during adolescence. From a clinical and preventive standpoint, the results highlight the importance of early identification of emotionally abusive experiences and the implementation of interventions aimed at fostering supportive family environments, enhancing communication, and promoting adaptive emotional relationships. Strengthening FF during adolescence may be particularly critical for mitigating the long-term risk of DS and promoting psychological resilience.

Keywords: *Emotional abuse, family functioning, depression, adolescents, longitudinal study.*

1. Introduction

Adolescence is a sensitive developmental period marked by heightened emotional reactivity, changing social relationships, and the formation of core personality traits (Best & Ban, 2021; Chen et al., 2023). Supportive family environments, characterized by emotional recognition, open communication, and stress management, are crucial for resilience, identity formation, and coping, whereas suboptimal family functioning (FF) increases vulnerability to psychological distress (Best & Ban, 2021). Emotional abuse (EA), including verbal attacks, manipulation, humiliation, and withholding support, has been linked to lower self-esteem, reduced emotional security, heightened risk for anxiety, depression, shame, and chronic helplessness, and disturbances in family relationships (Cohen & Thakur, 2021; Rost, Gossmann, Fegert, Ziegenhain, & Köhler-Dauner, 2024). Poorer FF, including low emotional support, persistent conflict, or inconsistent parenting, can exacerbate these risks, limiting adolescents' coping abilities and promoting persistent depressive symptoms (DS) (Huang, Hu, Yao, & Peng, 2022). Adolescent depression is a growing public health concern, with prevalence rising faster than in adults, often manifesting in fatigue, appetite changes, and insomnia (Daly, 2022). Cognitive and family systems models suggest that EA undermines

family cohesion and communication, reducing emotional support and reinforcing maladaptive beliefs and coping strategies, which increase vulnerability to DS over time (Chen, Wang, & Yang, 2023; Feeny et al., 2009). Based on this framework, FF may act as a mediator between EA and adolescent depression, highlighting the need for longitudinal research to clarify temporal pathways linking early family adversity to depressive outcomes.

1.1. Objectives

Using a three-wave longitudinal design, this study examined temporal associations among EA, FF, and DS in adolescents to better understand DS trajectories. Although prior research links EA and FF to adolescent mental health, longitudinal evidence on their interplay and the mediating role of FF is limited. We investigated temporal relationships between (1) EA and FF, (2) EA and DS, and (3) FF and DS, and tested mediation pathways to clarify how EA and FF contribute to adolescent DS (see Figure 1).

2. Method

2.1. Participants and procedures

The study recruited adolescents aged 14–17 from North, Central, and South Italy using a three-wave longitudinal design over one year (T1: Nov 2023, T2: May 2024, T3: Nov 2024). Data were collected via a 15-minute online survey on Google Forms by 30 trained research assistants (10 per region) in collaboration with schools. Informed consent was obtained from adolescents and their legal guardians. At T1, 1,887 of 1,979 eligible students participated (95.4% response rate), with retention rates of 93.7% at T2 and 91.7% at T3. The study adhered to the Declaration of Helsinki and Italian Association of Psychology (AIP) ethical standards, with formal approval obtained.

2.2. Measures

2.2.1. Emotional abuse. EA was measured using the Italian version of the EA subscale of the Childhood Trauma Questionnaire-Short Form (CTQ-SF) (Sacchi, Vieno, & Simonelli, 2018), comprising five items rated on a 5-point Likert scale (1 = never true, 5 = very often true), with higher scores indicating greater abuse. Internal consistency across waves was high (α = .87–.89).

2.2.2. Family functioning. FF was assessed with the Italian version of the General Functioning Subscale of the McMaster Family Assessment Device (FAD) (Roncone et al., 1998), consisting of 12 items rated on a 4-point Likert scale (1 = strongly agree, 4 = strongly disagree), with higher scores reflecting poorer FF. Reliability was strong across waves (α = .90–.91).

2.2.3. Depression. The Italian adaptation of the Depression Anxiety Stress Scales-21 (DASS-21) (Bottesi et al., 2015) was administered using only the depression subscale, which consisting of seven items rated on a 4-point Likert scale (0 = did not apply, 3 = applied very much/most of the time), with higher scores indicating more severe DS. Internal consistency was high across waves (α = .87–.88).

2.3. Data analysis

Statistical analyses were conducted using SPSS and RStudio. Descriptive statistics and Pearson correlations were first calculated to examine demographic and linear relationships across T1–T3. A three-wave SEM approach was used to examine autoregressive and cross-lagged paths, with sex included as a covariate. Residuals were allowed to correlate within waves, and a parceling strategy grouped items into three indicators per latent construct to reduce measurement error. Maximum likelihood estimation and FIML handled missing data, with model fit evaluated using χ^2, χ^2/df (<3), CFI (≥.90), RMSEA (≤.10), and SRMR (≤.08). Mediation analyses were exploratory within the SEM framework, with EA and FF at T1 as predictors, all T2 constructs as potential mediators, and DS at T3 as the outcome. Six indirect paths were tested, controlling for sex, autoregressive and cross-lagged paths, and within-wave residuals. Indirect effects were estimated using bias-corrected bootstrap (5,000 iterations).

3. Results

3.1. Preliminary analyses

Table 1 summarizes descriptive statistics for all study variables across the three waves, including participant demographics and the means and standard deviations for each variable at every time point.

Table 1. Descriptive statistics of the variables.

	Time 1 (*N* = 1.887)	**Time 2 (*N* = 1.769)**	**Time 3 (*N* = 1.622)**
	%	**%**	**%**
Sex			
Boys	49.8	49.8	49.9
Girls	50.2	50.2	50.1
Gender Identity			
Cisgender Girls	47.3	47.0	47.4
Cisgender Boys	42.7	43.1	42.8
Transgender Girls	2.4	2.3	2.3
Transgender Boys	4.5	4.4	4.3
Non-Binary	3.1	3.2	3.2
Ethnicity Identity			
Asian	4.6	4.7	4.5
Black	8.7	9.1	9.0
Latinx	5.5	5.4	5.7
Multi-ethnic	7.3	7.3	7.2
White	73.9	73.5	73.6
Maternal Education			
Elementary School	22.2	22.6	22.4
Middle School	33.3	33.2	33.6
High School Diploma	32.6	32.5	32.4
Bachelor's Degree	8.3	8.0	7.9
Postgraduate Degree	3.6	3.7	3.7
Paternal Education			
Elementary School	21.0	21.5	21.1
Middle School	31.3	31.0	31.4
High School Diploma	35.5	35.2	35.0
Bachelor's Degree	10.4	10.5	10.6
Postgraduate Degree	1.8	1.9	1.9
Variable	**M (SD)**	**M (SD)**	**M (SD)**
EA	9.22 (4.07)	9.23 (4.08)	9.36 (4.16)
FF	24.29 (10.10)	24.26 (10.20)	24.41 (9.46)
Depression	5.04 (3.31)	5.10 (3.61)	5.19 (3.41)
Age	15.44 (1.09)	-	-

Note. EA = Emotional Abuse; FF = Family Functioning; T1 = Time 1; T2 = Time 2; T3 = Time 3.

Table 2 shows the correlations among the study variables. Pearson analyses indicated moderate and stable associations between EA, FF, and DS across the three waves (r = .27–.62). Cross-variable correlations demonstrated consistent, significant relationships at each time point, supporting the hypothesized links among the constructs.

Table 2. Descriptive analyses and correlations.

Variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. EA T1	-								
2. EA T2	.61*	-							
3. EA T3	.55*	.62*	-						
4. FF T1	.41*	.32*	.28*	-					
5. FF T2	.36*	.38*	.29*	.58*	-				
6. FF T3	.33*	.34*	.36*	.44*	.55*	-			
7. Depression T1	.42*	.33*	.27*	.40*	.32*	.28*	-		
8. Depression T2	.39*	.42*	.34*	.38*	.41*	.32*	.45*	-	
9. Depression T3	.36*	.36*	.38*	.35*	.36*	.40*	.35*	.40*	-

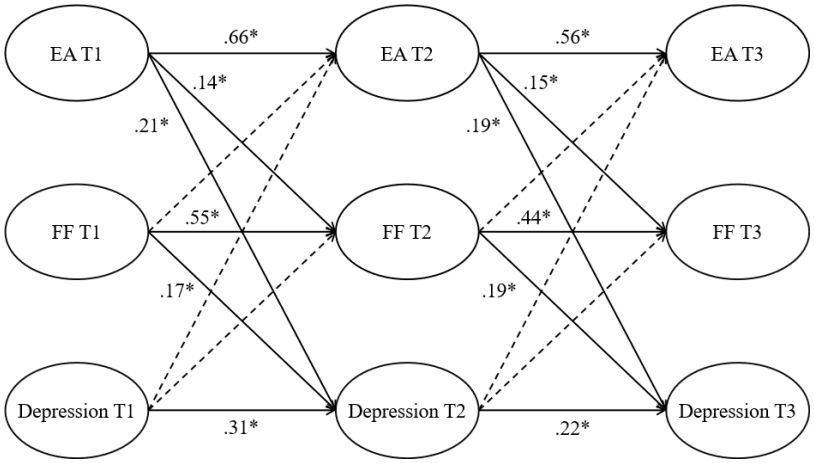
Note. $p < .01$. EA = Emotional Abuse; T1 = Time 1; T2 = Time 2; T3 = Time 3.

3.2. Three-wave SEM analysis

The model fit was excellent: $\chi^2(312) = 462.401$, $\chi^2/df = 1.482$, CFI = .996, RMSEA = .016, SRMR = .017. T1 EA predicted poorer FF and higher DS at T2; T2 EA predicted poorer FF and higher DS at T3. FF at T1 and T2 predicted higher DS at subsequent waves. No paths from FF → EA or

DS → EA/FF were observed. Within-wave residual covariances were positive and significant across all waves (all p < .001), supporting meaningful cross-sectional relationships.

Figure 1. Three-wave SEM model.



Note. *p < .01, **p < .001. Standardized coefficients are presented. Dotted lines represent non-significant paths. EA = Emotional Abuse; T1 = Time 1; T2 = Time 2; T3 = Time 3. Parcels and mediation effects are not shown for clarity purposes.

3.3. Mediation effects

Six indirect paths were tested using bias-corrected bootstrap (5,000 iterations), controlling for sex, autoregressive, cross-lagged, and residual correlations. Significant indirect effects included:

- T1 EA → T2 EA → T3 DS (β = .13, p < .001);
- T1 EA → T2 FF → T3 DS (β = .03, p < .001);
- T1 EA → T2 DS → T3 DS (β = .05, p < .001);
- T1 FF → T2 FF → T3 DS (β = .10, p < .001);
- T1 FF → T2 DS → T3 DS (β = .04, p < .001).
- T2 EA did not mediate the FF → DS pathway (β = .01, p = .25), consistent with SEM findings. Overall, these effects suggest incremental, temporally consistent influences of EA and FF on DS.

4. Discussion

The findings provide new insights into the longitudinal interplay among EA, FF, and DS in adolescents. EA was longitudinally associated with higher DS, consistent with prior research linking verbal abuse, manipulation, and humiliation to lower self-esteem and emotional insecurity (Chen et al., 2023; Ness, 2023; Reich & Schatzberg, 2023). Importantly, FF acted as a mediator in this relationship: higher EA at T1 predicted poorer FF at T2, which in turn was associated with elevated DS at T3 (Dai & Wang, 2015; Zhang et al., 2024). These results extend cognitive models of depression, showing that environmental factors such as FF interact with cognitive vulnerabilities to shape depressive trajectories (Fu et al., 2021; Huang et al., 2022). Indirect effects, though modest (β = .03–.13), were statistically robust, suggesting that cumulative disruptions in FF or prior DS may incrementally contribute to later depressive outcomes. FF, characterized by poor communication, low emotional support, or unresolved conflict, further amplifies risk by limiting adolescents' coping resources and emotional regulation (Huang et al., 2022; Zhang et al., 2024). The results also underscore a dynamic, temporally interdependent cascade: EA can trigger FF disruptions, which then contribute to DS, reflecting interactive rather than deterministic mechanisms. Overall, these findings highlight the importance of considering adolescents' environmental context in understanding depression, demonstrating that EA and FF are intertwined contributors to DS over time. From a clinical perspective, they suggest that interventions targeting FF and family-based support could help mitigate depressive trajectories among youth exposed to EA (Huang et al., 2022; Zhang et al., 2024). The results highlight the critical role of mental health professionals in detecting early signs of EA and maladaptive FF in adolescents. Interventions for DS may benefit from targeting both cognitive vulnerabilities and FF, potentially disrupting the pathways through which EA contributes to later DS. Promoting emotional support, emotion regulation skills, and increasing parental awareness of EA are key targets. Future research should examine additional factors influencing the pathways, such as peer relationships, anxiety, and stress, to better understand broader adolescent emotional adjustment. Studies in diverse populations and with extended longitudinal designs could clarify the stability, generalizability, and developmental shifts in these mechanisms over time.

5. Conclusion

In sum, the study underscores the complex, interrelated associations among FF, EA, and DS in adolescents. Findings show that higher EA is longitudinally linked to poorer FF and increased DS, while lower FF predicts later DS. These patterns reflect risk associations rather than deterministic outcomes. Early interventions aimed at enhancing emotional support and improving family dynamics may help mitigate the long-term impact of EA. Overall, the study provides insight into how adverse early experiences relate to adolescent psychopathology and informs future research and therapeutic strategies targeting both individual and family-level processes.

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