

The relationship between Resolution of Marital Conflict and Adolescents' Depressive Symptoms: The mediating role of Mother-Adolescent Bonding

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Abstract

This study examined whether mother–adolescent bonding mediates the association between resolution of marital conflict and adolescents’ depressive symptoms among secondary school students in Benishangul Gumuz Region, Ethiopia. An explanatory correlational design was employed among Grade 9 and Grade 10 students recruited through multistage-stratified and purposive sampling from two government high schools. The final sample consisted of 845 adolescents (48.6% male), all living with their biological parents, with a mean age of 15.98 years ($SD = 0.75$). Adolescents completed validated measures assessing perceived parental conflict resolution, mother–adolescent bonding, and depressive symptoms. Covariance-based structural equation modeling was used to evaluate direct and indirect relationships. Results supported all hypothesized pathways. Resolution of marital conflict was negatively associated with adolescents’ depressive symptoms, and positively associated with mother–adolescent bonding. Mother–adolescent bonding was negatively associated with depressive symptoms. The indirect effect indicated that mother–adolescent bonding significantly mediated the relationship between marital conflict resolution and depressive symptoms. Model fit indices demonstrated acceptable fit. Overall, the findings highlight the importance of conflict resolution and supportive mother–adolescent relationships in reducing depressive symptoms among Ethiopian adolescents. Strengthening family relational processes may serve as an important target for mental health promotion and intervention efforts in secondary school populations.

Introduction

Adolescence is a critical developmental period marked by rapid biological, psychological, and social changes. During adolescence the prevalence of mental health problems such as depressive symptoms rises substantially. **Adolescents’ depressive symptoms** are defined as the survey-measured cognitive, affective, and somatic symptoms such as persistent sadness, loss of interest, feelings of worthlessness, and related functional impairments. Depression affects an estimated **17.5% of youth under 25 years in the world** and often begins during adolescence, leading to significant impairment in academic, social, and emotional functioning if unaddressed (1). In Ethiopia, pooled estimates suggest that **the prevalence of youth depression is high (around 36%)**, with variability across regions and contexts (1).

Family environments play an important role in shaping adolescent emotional development. Among many determinants, **marital conflict** within the family has emerged as a strong correlate of youth maladjustment, including internalizing problems such as depression and anxiety (2). Marital conflict encompasses repeated disagreements, hostility, and unresolved disputes between parents, with potential spillover effects on children’s emotional climate(3). **Resolution of Marital Conflict** refers to the effectiveness of conflict management, communication quality, and resolution strategies that reduce hostility and promote mutual understanding (4). Constructive resolution is theorized to foster family stability, whereas poor resolution indicates recurring hostile interactions. Although explicit national prevalence data on marital conflict in Ethiopia are limited, local studies in Durbete town, Amhara Region indicate that **marital conflict is frequent among couples**, with numerous instances of inter-parental

disputes occurring monthly and contributing to stress and psychological distress within families(5). Given the cultural importance of marriage and family cohesion in Ethiopian society, such conflict likely represents a significant, yet under-researched risk context for adolescent affective outcomes.

The mechanisms linking marital conflict and adolescent depressive symptoms remain an area of intense scientific inquiry. According to **Emotional Security Theory (EST)**, repeated or poorly resolved inter-parental conflict threatens children's sense of safety and stability within the family system, thereby undermining their emotional security (6). Emotional security refers to a child's perception that family relationships are predictable, supportive, and a source of comfort. Threats to this sense of security activate stress responses and may contribute to emotional and behavioral maladjustment (7). Within this framework, conflict between caregivers is believed to create emotional insecurity in the family, which in turn increases vulnerability to depressive symptoms in adolescents. EST has been empirically supported across multiple contexts, showing that **greater family conflict is prospectively associated with depressive symptoms via emotional insecurity**, including diminished perceptions of safety and support in family relationships (2).

A second key family process is **parent-adolescent bonding**, particularly the quality of the mother-adolescent relationship. **Mother-Adolescent Bonding** denotes the emotional connection between the adolescent and their mother, including warmth, communication quality, mutual respect, and responsiveness (8). Higher bonding reflects stronger emotional security and support. Strong emotional bonds with primary caregivers serve as protective factors by providing emotional support, promoting secure attachment, and mitigating the adverse effects of external stressors (9). Conversely, lower bonding is linked with higher internalizing symptoms. Meta-analytic evidence indicates a **moderate positive correlation** between parent-adolescent conflict and adolescent depression, underscoring the importance of relational quality in mental health outcomes (10). In contexts where marital conflict is present, supportive mother-adolescent relationships may buffer adolescents against depressive outcomes by reinforcing emotional security and daily stress regulation.

In the Ethiopian context, family cohesion and intergenerational bonds have particular sociocultural salience, as families are often extended, multigenerational, and central to social identity. However, rapid socioeconomic change, inter-ethnic conflict, and psychosocial stressors may strain family functioning and parent-adolescent communication, contributing to emotional and behavioral problems in adolescents (11). Studying these dynamics in **secondary school adolescents (Grades 9 and 10)** is especially important because this age group is navigating critical educational transitions, social expectations, and identity formation. In regions such as **Benishangul Gumuz**, where educational access and youth supports may be limited and exposure to broader stressors (economic, environmental, conflict-related) is pronounced, understanding family and relational determinants of adolescent depression has both academic and public health significance.

Despite extensive research globally, **few studies in Ethiopia** have examined how marital conflict and parent-adolescent relational processes jointly influence adolescent depressive outcomes. Furthermore,

many studies outside Ethiopia have not distinguished between *interparental conflict resolution* and *mother-adolescent bonding* as separate and potentially mediating pathways to adolescents' depression. Using **covariance-based structural equation modeling (CB-SEM)**, the current research investigated these associations in a sample of secondary school adolescents from Benishangul Gumuz, all of whom live with their *biological (non-divorced) parents*. Adolescents from divorced families were excluded to avoid confounding effects related to divorce-specific anxiety and family reorganization. Specifically, the study tested the following **hypotheses (See figure 1)**:

H1: There is a statistically significant **negative relationship** between resolution of marital conflict and adolescents' depressive symptoms.

H2: There is a statistically significant **positive relationship** between resolution of marital conflict and mother-adolescent bonding.

H3: There is a statistically significant **negative relationship** between mother-adolescent bonding and adolescents' depressive symptoms.

H4: **Mother-adolescent bonding mediates** the relationship between resolution of marital conflict and adolescents' depressive symptoms.

Methods

Research Design and sample size determination

Explanatory type of correlational research design(12) was conducted among 9th and 10th graders at the following high schools: Hoha Number Two and Assosa Senior Secondary School, in Assosa Woreda of Benishangul Gumuz Region of Ethiopia. We recruited a sample from grade 9 and 10 (male and female) living with their intact/biological parents from government high schools to minimize source bias and to avoid the possibility of having age-heterogeneous samples.

Subsequently, using Bentler and Chou's guideline (13) guideline and given that only adolescents were studied as a single group, the minimum sample size requirements were $5 \text{ (ratio)} \times 163 \text{ (the number of free parameters)} \times 1 \text{ (number of groups)} = 815$. Considering 10% of contingency, a sample of $896.5 = 897$ adolescents were selected from the target population, the two schools from which the sample for this study was selected. Of the total of 897 questionnaires, 881 questionnaires were completed and returned.

Participants

A combination of multistage-stratified random sampling and purposive sampling techniques were employed to select the sample from Asossa Woreda Senior Secondary Schools. We used stratified sampling considering that adolescents' age is likely to vary depending on their grade levels. We also used purposive sampling because we are interested in adolescents living with both biological parents.

Therefore, using the above strategies and the sample size requirement for SEM, we selected an initial sample of 897 participants, but 16 adolescents refused to return the questionnaire, and the data for 36 cases were outliers, so excluded from the further analysis, resulting in final sample of 845.

Measures

Resolution of marital conflict

The Resolution dimensions of the Children's Perception of Inter-parental Conflict Scale (14) was used to measure adolescents'-retrospective report of how much parents use resolution tactics in the past. Adolescents completed 6 items of the Resolution dimension of the Children's Perception of Interparental Conflict scale (CPIC) on a 5-point scale ranging from 1 (never) to 5 (always) endorsed using the following data points: 1=*Never*, 2=*Barely*, 3=*Very often*, 4=*Most often*, and 5=*Always*. Sample items include "*When my parents have an argument they usually work it out*". Items were coded so that higher scores indicated higher degrees of conflict resolution ranging from 1 to 5.

Research showed that the CPIC has high reliability among early to late adolescents. For example, Gong and Paulson (15) found reliability of 0.89 for resolution subscales. The internal consistency reliability of the resolution scale in the current study was .862, which is over the required limit of 0.7(16).

Mother-adolescent Bonding

The care subscale of the Parental Bonding Instrument (PBI), developed by Parker, Tupling and Brown (17) was employed to measure adolescents' perception of parent-adolescent bonding. It consists of 12 statements. Sample items include "*my mother spoke to me in a warm and friendly voice*".

In this study, adolescents were asked to recall the current level of care they experienced from their mothers. Adolescents responded on a five-point Likert scale ranging from 1 (very unlike) to 5 (very like) for the mother version of the scale. Specifically, the following anchors were used: very unlike, moderately unlike, undecided, moderately like, and very like.

Studies show high reliability indexes (alpha coefficients) for the maternal care scales (0.90)(18). The reliability of the mother version of the instrument in the current study was .717.

Adolescents' depressive symptoms

Adolescents' present-tense self-reported depressive symptoms were measured with the Depression subscale of DASS-21, the shortened version of DASS (19). The depression subscale comprises seven items assessing symptoms of depression. The depression scale assesses dysphoria, hopelessness,

devaluation of life, self-deprecation, lack of interest or involvement, anhedonia, and inertia. Several previous authors have used the subscales partly (20,21).

A five-point Likert scale ranging from 1 ('did not apply to me at all') to 5 ('applied to me very much, or most of the time') was used, with the following anchors: '1=Did not apply to me at all; 2=Did not apply to me; 3=Applied to me to some degree or some of the time; 4=Applied to me a considerable degree or a good part of the time; and 5=Applied to me very much or most of the time'. Sample Items include '*I couldn't seem to experience any positive feeling at all*').

The depression subscale was validated in adolescent population. It demonstrated high internal consistency in a recent study among American adolescents (Depression $\alpha=0.92$) (24). The internal consistency reliability of the depression subscale of DASS-21 in the current study was .932.

Data Analysis Methods

We passed through a number of steps before performing the data analysis. First, we assessed demographic characteristics of participants using frequency, mean, standard deviation and range. Second, we used Pearson's coefficients to assess the strength and direction of the correlations. Third, we employed covariance based-structural equation modeling to assess the mediating role of mother-adolescent bonding in the relationship between resolution of marital conflict and adolescents' depressive symptoms. Resolution of marital conflict was the independent variable, while depressive symptoms and mother-adolescent bonding constitute the dependent and mediator variables, respectively. We estimated the parameters using Maximum Likelihood, because the data for the three variables was univariate normal: Frequency of marital conflict (skewness=-.206, kurtosis=-.534); Family cohesion (skewness=.428, kurtosis=-.371); and Depressive symptoms (skewness=-.396, kurtosis=-.761). These variables are normal because all Skewness values were less than +1(25) and all Kurtosis values were less than +7 (26,27). We evaluated model adequacy using multiple indices(27) including the chi-square (χ^2) statistics, Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Tucker-Lewis Index (TLI), Goodness-of-fit Index (GFI) and Standardized Root Mean Square Residual (SRMR). Models with non-significant χ^2 values, CFI > .90, RMSEA values < .08, and SRMR < .06 were considered to have an acceptable fit (28).

Finally, we examined indirect effects using Bias-corrected bootstrapping methodology with 5,000 bootstrap samples in AMOS-version 23(29). We used bootstrapping because it estimates indirect effects through empirical sampling distributions by calculating confidence intervals, and if zero is not included in the interval we rejected the null hypothesis of no indirect effect (30).

Results

Participant characteristics

Participants were 845 adolescents recruited from grade 9 and 10 at two secondary schools in April 2024. The sample of students consisting of 411 (48.6%) male and 434 (51.4%) female respondents participated in the study ($N = 845$). On average, participants were 15.98 years old ($SD = .753$) and were primarily drawn from Asossa Senior Secondary School (756 (89.5%)) and Hoha Number Two Secondary School (89 (10.5%)) from grade 9 (49.3%) and 10(50.7%).

Correlations among continuous variables

As a preliminary analysis, descriptive and correlation analysis were performed using SPSS version-24. Descriptive statistics for depression revealed an overall mean score of 24.973 ($SD = 6.356$). The mean and standard deviations of participants' scores for the remaining variables in the study were as follows: Resolution of marital conflict ($M = 21.422$; $SD = 4.912$); and mother-adolescent bonding ($M = 19.725$; $SD = 6.674$). The results showed that frequency of marital conflict was positively correlated with adolescents' depressive symptom ($r = .342^{**}$, $p < 0.01$) and family cohesion ($r = .122^{**}$, $p < 0.01$). Moreover, family cohesion was positively related to depressive symptoms ($r = .308^{**}$, $p < 0.01$).

Model Fit

The hypothesized structural model was assessed through multiple fit indices to determine the adequacy of its representation of the observed data. The chi-square statistic was significant, $\chi^2 = 737.308$, $p < .001$, which is typical in models with large samples and does not necessarily indicate model misfit. The chi-square divided by degrees of freedom ratio ($CMIN/DF = 5.716$) fell within the range commonly considered acceptable for complex theoretical models, suggesting an adequate balance between model complexity and fit.

In addition, the Root-Mean-Square Error of Approximation (RMSEA) value of .075 indicates a reasonable degree of approximation in the population, with values below .08 generally reflecting adequate fit. The Standardized Root Mean Square Residual (SRMR) value of .0907 was slightly above the more conservative cutoff of .08 yet still within a range often interpreted as acceptable in behavioral studies involving multiple latent constructs. Incremental fit indices were strong, with Comparative Fit Index (CFI) = .920 and Tucker-Lewis Index (TLI) = .905, both exceeding the conventional threshold of .90, indicating that the hypothesized model provides a substantially better fit than a null model. Collectively, these indices suggest that the overall model provided an acceptable fit to the data and is suitable for interpreting the structural paths.

Results of the Structural Model

The first hypothesis (H_1) proposed that greater resolution of marital conflict would be associated with fewer depressive symptoms in adolescents. Results supported this hypothesis, with a significant negative effect ($\beta = -.191$, $SE = .046$, $T = 4.142$, 95% CI [.095, .202], $p < .001$). This indicates that when

marital conflicts are resolved effectively and constructively, adolescents report lower levels of depressive symptoms (See Table 1).

The second hypothesis (H₂) predicted that resolution of marital conflict would be positively related to mother–adolescent bonding. This hypothesis was also supported, with a significant positive path coefficient ($\beta = .352$, $SE = .039$, $T = 7.325$, 95% CI [.095, .202], $p < .0001$).

The third hypothesis (H₃) proposed that mother–adolescent bonding would be negatively associated with adolescents’ depressive symptoms. The results strongly supported this hypothesis, with a significant negative effect ($\beta = -.399$, $SE = .062$, $T = 7.938$, 95% CI [.095, .202], $p < .0001$).

The fourth hypothesis(H₄) stated that mother–adolescent bonding would mediate the relationship between resolution of marital conflict and adolescents’ depressive symptoms. Mediation analysis supported this hypothesis, revealing a significant indirect effect ($\beta = .141$, $SE = .027$, $T = 7.938$, 95% CI [.095, .202], $p = .000$).

Table 1
Direct and Indirect Effects between Study Variables

Hypothesis	Direct Effect					Indirect Effect			Conclusion
	β	B	SE	CR	P	B	P(SE)	BCCI	
H ₁	– .191	– .192	.046	4.142	***				Accepted
H ₂	.352	.284	.039	7.325	***				Accepted
H ₃	– .399	– .495	.062	7.938	***				Accepted
H ₄						.141	.000(.027)	.095, .202	Partial mediation
Note: β = Standardized coefficient; B= Unstandardized coefficient; SE= Standard error; CR= Critical ratio; BCCI= Bootstrapped lower and upper limit of the 95% confidence interval; p =level of significance; *** $p < 0.001$									

Discussion

This study examined the relationships among resolution of marital conflict, mother–adolescent bonding, and adolescents’ depressive symptoms among Grade 9 and 10 students in Assosa Town, Benishangul Gumuz Region, Ethiopia. The findings supported all four hypotheses: (1) resolution of marital conflict was negatively associated with adolescents’ depressive symptoms, (2) resolution of marital conflict was positively associated with mother–adolescent bonding, (3) mother–adolescent bonding was negatively associated with adolescents’ depressive symptoms, and (4) mother–adolescent bonding mediated the association between marital conflict resolution and adolescents’ depressive symptoms.

Resolution of Marital Conflict and Depressive Symptoms

Consistent with Hypothesis 1, our study found a significant negative association between adolescents' perceptions of resolution of marital conflict and their depressive symptoms. This means that when parents manage disagreements calmly and cooperatively, adolescents report fewer depressive experiences. Although the effect size ($\beta = -.191$) is modest, it is theoretically meaningful given the multifaceted nature of adolescent depression and the developmental vulnerability of this age group.

This finding closely aligns with studies showing that constructive interparental conflict resolution protects adolescents from internalizing problems. For example, a meta-analytic evidence demonstrates that destructive marital conflict consistently predicts greater adolescent depression, while constructive conflict behaviors such as negotiation and compromise serve a protective role(31). Similarly, research indicates that adolescents exposed to well-resolved parental conflict demonstrate lower emotional distress and better long-term adjustment(32).

Resolution of Marital Conflict and Mother–Adolescent Bonding

Supporting Hypothesis 2, the present study found a statistically significant positive association between adolescents' perceptions of constructive parental conflict resolution and their sense of bonding with their mothers ($\beta = .352$). This indicates that when adolescents observe their parents resolving conflict cooperatively and respectfully, they are more likely to experience stronger emotional closeness, warmth, and supportive connection with their mothers.

Recent empirical studies support this view. For example, research shows that constructive conflict behaviors (e.g., negotiation, perspective-taking) predict greater parental warmth and responsiveness (33), which in turn strengthen parent–child attachment. A recent meta-analysis further concluded that constructive marital interactions have moderate, reliable positive effects on parenting quality and parent–child emotional closeness across diverse cultural contexts(34).

Mother–Adolescent Bonding and Depressive Symptoms

Hypothesis 3

examined the association between mother–adolescent bonding and adolescent depressive symptoms, and results demonstrated a significant negative relationship. This indicates that adolescents who perceive higher levels of maternal care, warmth, and responsiveness report significantly fewer depressive symptoms. The magnitude of the effect ($\beta = -.399$) is moderate and suggests that maternal bonding is a powerful protective factor for adolescent emotional well-being in the Ethiopian context.

This finding aligns closely with recent meta-analytic evidence that confirms parent–child warmth and emotional support are among the strongest relational predictors of lower depressive symptoms in adolescents across diverse cultural settings(35). Similarly, a large-scale study reported that adolescents with strong maternal attachment exhibit significantly fewer depressive symptoms (36), highlighting the role of maternal emotional availability in buffering against internalizing problems.

Mediating Role of Mother–Adolescent Bonding

Supporting Hypothesis 4, mother–adolescent bonding significantly mediated the link between resolution of marital conflict and depressive symptoms. This mediated pathway underscores the importance of relational processes in family dynamics. It indicates that when marital conflict is resolved constructively, it appears to facilitate closer and more supportive mother–adolescent relationships, which in turn is associated with lower depressive symptoms in adolescents. The partial mediation observed suggests that marital conflict resolution influences adolescent well-being not only directly but also indirectly through improvements in parent–adolescents relational quality.

This pathway supports core tenets of Emotional Security Theory (EST), which emphasizes that children’s emotional security spans across various family relationships. Parental conflict can undermine security across these relationships, but constructive conflict resolution can help maintain adolescents’ sense of trust in parental relationships. Research has similarly found that emotional insecurity about the family system partially mediates associations between family conflict and adolescent maladjustment (38). In EST, emotional security serves as a bridge between interparental functioning and child outcomes. When marital conflict is resolved constructively, children maintain a sense of security, which strengthens their attachment and communication with parents. This secure relational environment, in turn, supports healthy emotional development and reduces vulnerability to depression.

Conclusion

This study examined how resolution of marital conflict influences adolescents’ depressive symptoms both directly and indirectly through mother–adolescent bonding among Grade 9 and 10 students in Assosa Woreda of the Benishangul-Gumuz Region, Ethiopia. The results demonstrated that marital conflict resolution was associated with lower levels of adolescent depression, stronger mother–adolescent bonding, and a significant indirect effect through improved relational security. These findings support Emotional Security Theory by showing that adolescents’ emotional well-being is shaped not only by the presence of marital conflict but by how parents manage disagreements. They also extend previous research by demonstrating that these mechanisms operate within an Ethiopian cultural context characterized by close family ties and high value placed on relational harmony.

The study highlights the importance of promoting constructive conflict resolution skills among parents and strengthening caregiver–adolescent bonding as viable pathways for improving adolescent mental health. In regions such as Benishangul-Gumuz, where families serve as the primary source of emotional

support and formal mental health services are limited, interventions that reinforce family communication, conflict resolution, and parental emotional responsiveness may be particularly impactful. Schools, community organizations, and health services should integrate family-based mental health promotion programs to address adolescents' emotional needs more effectively.

While the findings contribute valuable evidence, the cross-sectional design restricts causal inference, and the reliance on self-report measures may introduce bias. Future research should incorporate longitudinal designs, include fathers and extended family members, and explore culturally specific conflict management strategies. Despite these limitations, this study underscores the centrality of family relational processes in shaping adolescent well-being and provides a foundation for culturally informed policies and interventions aimed at reducing depressive symptoms among Ethiopian adolescents.

Declarations

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Author Contributions

TD: Conceptualization, Writing Original draft, Methodology, Data collection, Data Analysis, Report writing.

DA: Supervision, Validation, Writing, Reviewing and Editing.

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Data availability

The raw data used in this study are available upon request from the corresponding author

Ethics approval and consent to participate

Ethical approval for this study was obtained from the Ethical Review Committee (ERC) of Addis Ababa University School of Psychology. Informed written consent was obtained from each participant after providing a clear explanation of the study's purpose and objectives. Participants were assured that their participation was voluntary and that they had the right to withdraw at any time without any negative consequences. Written informed consent was sought and obtained from their parents for adolescent girls under 18 years old. To ensure confidentiality, participants' identities were kept anonymous, and personal information was treated with strict confidentiality throughout the study. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national

research committee, and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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Figures

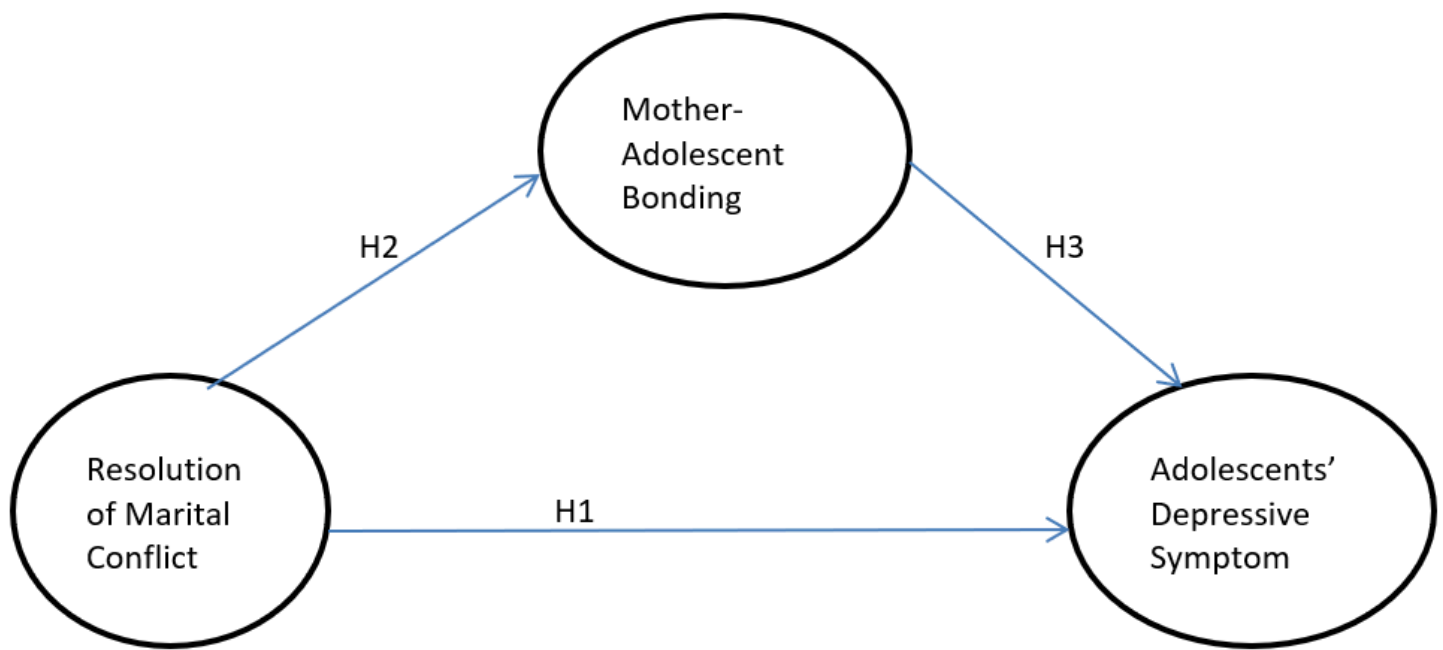


Figure 1

Diagrammatic Representation of the research hypothesis