Social Support as a Moderator Between Adverse Childhood Experiences and Depression Among Young Adults: A Systematic Review

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Depression among young adults remains a growing concern, with early-life adversity identified as a key contributing factor. Adverse Childhood Experiences (ACEs) have been consistently associated with increased risk of depressive symptoms. However, differences in individual outcomes suggest the influence of protective factors, particularly social support. The current study systematically reviews quantitative evidence from observational studies, including cross sectional and correlational designs, examining the role of social support in influencing the relationship between ACEs and depressive symptoms. A structured search was conducted using PsycINFO, supplemented by manual searches which covered publications from 2015 to 2025. The findings indicate inconsistent evidence regarding the influence of social support with some studies demonstrating a buffering effect while others report a limited effect. Additionally, existing research is largely concentrated in Western and selected Asian contexts, with limited representation from culturally diverse settings.

Keywords: Adverse Childhood Experiences; Depression; Social Support; Moderation

Introduction

Depression affects about 6% of the world's adult population, with young adults being particularly vulnerable (World Health Organization, 2025). This global burden of depression suggests the need to understand the factors that might be protecting individuals from depression or increasing their risk. Adverse Childhood Experiences (ACEs) can have a long-lasting impact on an individual's psychological, emotional and overall well-being throughout their life (Roh et al., 2015; Ren et al., 2023; Brown et al., 2025). ACEs, which include abuse, neglect, and household dysfunction, are known risk factors that contribute to the development of depressive symptoms throughout a person's life (Pinto-Cortez et al., 2023; Wu et al., 2023). Social support has been identified as an important protective factor, with research suggesting that it can reduce the negative mental health outcomes which are commonly linked to ACEs (Templeton et al., 2024; Boyer et al., 2025; Chavez et al., 2025; Aldomini et al., 2025; Brown et al., 2025). Individuals who have experienced ACEs can develop depressive symptoms if they do not receive social support. In literature, the extent to which social support moderates the relationship between ACEs and depressive symptoms, especially in diverse cultural contexts such as Mauritius, remains underexplored.

Research highlights the role of early-life stressors, particularly ACEs, as significant predictors of later-life depression and related mental health problems (Templeton et al., 2024; Ren et al., 2023; Rogers et al., 2023). ACEs are defined as potentially traumatic events that occurred before the age of 18, including three broad categories: abuse (emotional, physical, or sexual), neglect (emotional or physical), and household dysfunction (parental separation, substance abuse, or domestic violence) (Grummitt et al., 2022). Despite the clear relationship between ACEs and depressive symptoms, it is important to note that not all individuals experiencing early adversity develop depression or other related mental health problems, suggesting that protective factors act as a buffer to reduce this risk (Rogers et al., 2023; Nowak et al., 2022).

Social Support as a Moderator

After an initial overview of related work, specific prior work on exposure to early adversity, such as abuse, neglect, or household dysfunction, was found- often linked to the development of depressive symptoms in adulthood. However, the presence of social support may act as a protective factor, buffering the negative impact of ACEs on mental health outcomes. Social support, defined as the perceived ability and adequacy of emotional, informational, and practical assistance from significant others, family, and friends (Drageset, 2021), has emerged as one such key factor (Brown et al., 2025; Aldomini et al., 2025). Research suggests that stronger social support can help lessen the negative effects of ACEs on mental health by promoting resilience and better coping mechanisms (Aldomini et al., 2025; Nowak et al., 2022; Wu et al., 2023; Brown et al., 2025). However, the extent to which social support moderates the relationship between ACEs and the risk of depression remains inconsistent. Some studies demonstrate a strong buffering effect (Aldomini et al., 2025; Nowak et al., 2022; Wu et al., 2023), while others found limited or no moderation (Babatunde et al.,2022; Wang et al., 2020). Furthermore, most existing research has been conducted in Western countries, such as Canada and Eastern countries, such as China, with limited focus on culturally diverse countries, such as Mauritius, where family

and support systems may function differently. This literature contribution will lead to a better understanding of how findings from this study can be adapted and implemented in diverse cultural contexts.

Problem Statement

Despite the substantial evidence linking ACEs to depressive symptoms, the evidence regarding the role of social support as a moderating factor remains unclear and inconsistent across the literature. Existing research has presented mixed findings, with some studies identifying social support as having a buffering effect while others reported limited or no effect. Furthermore, the current literature has been predominantly based on cross-sectional and correlational designs conducted in Western and certain Eastern countries, raising concerns about the generalizability and cultural applicability of findings. There is a lack of synthesis that critically evaluates these inconsistencies within the literature. Therefore, a systematic review is necessary to consolidate existing evidence to examine the extent to which social support moderates the relationship between ACEs and depressive symptoms and identify gaps related to cultural representation.

Research Methods

Identification

The combinations of keywords were processed using Boolean operators (see Table 1) across one primary database: PsycINFO. In addition, a manual search technique was applied, with relevant articles handpicked from databases, including Google Scholar, to ensure comprehensive coverage of the literature up to November 2025.

Based on these systematic searches, a total of 952 potential articles were identified from the selected databases.

As shown in Table 1, four main keywords were identified: *Adverse Childhood Experiences (ACEs), Depression, Social Support, and moderation analysis*. To enrich these keywords, synonyms, related terms, and variations were identified from sources including Medical Subject Headings (MeSH), online thesauruses, keywords from past studies, and suggestions generated by databases such as Scopus.

Through this process, several related keywords were included, such as childhood trauma, Childhood maltreatment, childhood adversity, moderation, perceived social support, and depressive symptoms.

Screening

The study applied inclusion and exclusion criteria to guide the screening process. Studies were included if they involved young adults aged between 18 and 30 years, often referred to as emerging adulthood, which represents a critical phase marked by heightened vulnerability to depressive symptoms. Focusing on this age group would allow for greater comparability across studies by minimising developmental variability present in adolescents and older adults. Eligible studies examined one or more forms of ACEs, including abuse, neglect, or household dysfunction. Both clinical and community-based populations were considered. Only studies employing validated instruments to assess ACEs were included. In addition, eligible studies were required to compare differing levels of social support (e.g., high versus low) and to report outcomes related to depressive symptoms or clinically diagnosed depression, assessed using standardised measures such as the Patient Health Questionnaire-9 (PHQ-9) or the Beck Depression Inventory (BDI).

Furthermore, only quantitative observational studies, including cross-sectional and

longitudinal studies, were included, while case studies, reviews, commentaries, systematic reviews, and meta-analyses were excluded to ensure the inclusion of primary empirical evidence. The review was restricted to studies published in English between 2015 and 2025.

Eligibility

The eligibility stage is where the retrieved articles were manually reviewed to ensure that all remaining articles (after the screening process) met the inclusion criteria. This process was conducted by carefully reading the titles and abstracts of the articles to determine their suitability for the review.

During this stage, several articles were excluded for reasons such as focusing on other analyses rather than moderation analysis, involving populations outside the scope of ACEs, being review papers rather than empirical studies, or lacking clearly defined methodology and results sections. After applying these criteria, a total of 75 articles were deemed eligible for inclusion in this systematic review.

Following this, a full-text review was conducted for the remaining articles to assess their methodological quality, relevance, and alignment with the research objectives. This process was conducted by one reviewer. After this detailed examination, 14 articles were found to fully meet the eligibility criteria and were included in the final systematic review.

Inclusion

Data from each study were extracted manually. An Excel sheet was created, and the data collected for this review included characteristics of the study, the author of the study, and the year of publication. Relevant information from the study was also retrieved, such as methods (sample size, study design), participants' demographic background, statistical analyses (effect size, and analyses used in the studies) and key findings of the studies.

All results compatible with the outcome domains (ACEs, depression, and social support) were sought from each eligible study. When multiple results or analyses were available within the same domain, the study's primary reported analysis or the measure most consistent with other included studies was selected to maintain comparability.

Table 1

Boolean Operators Search

Name of Database	Search String
PsycINFO	("Adverse Childhood Experiences" OR "Childhood Trauma" OR "Childhood Abuse" OR "Childhood Neglect" OR "Childhood Maltreatment" OR "Childhood Adversity") AND ("depression" OR "depressed" OR "depressive") AND ("moderator" OR "moderate" OR "moderating")
Google Scholar	("Adverse Childhood Experiences" OR "Childhood Trauma" OR "Childhood Abuse" OR "Childhood Neglect" OR "Childhood Maltreatment" OR "Childhood Adversity") AND ("depression" OR "depressed" OR

	"depressive")	AND
	("moderator"	OR
	"moderate"	OR
	"moderating")	

Results

Most studies, as synthesized in Table 2, have been conducted in Western countries (64.3%) while there remains a significant population gap concerning the specific context of Small Island Developing States (SIDS) and the unique, multi-cultural context of Mauritius. The current findings on the moderating effect of social support lack external validity and generalisability to young Mauritian adults. This research is needed to establish a local baseline data and confirm the prevalence and strength of the relationship between ACEs, social support and depressive symptoms in this previously unstudied demographic.

Table 2 outlines two gaps in terms of sample size and the questionnaires used. As per G*Power, the sample size of the current study should be 74. 78.6% of the studies conducted had a sample size of more than 300. A large sample size might affect the reliability of reported effect sizes (Andrade, 2020), and it can be difficult to detect effects that are not clinically meaningful. This over-representation of large samples leaves a gap in the measurement precision, contextual interpretation, and the mechanism behind social support as a buffer to ACEs. Using a smaller sample size will aim to provide a more valid measurement of social support and to dig into the mechanisms that large samples often miss (Andrade, 2020).
Additionally, the studies conducted across diverse linguistic and cultural contexts, such as China, Chile, and the US, rely on self-report measures to assess ACEs, social support, and depression, but they do not specifically mention if these measures were culturally adapted, translated and/or tested for measurement invariance. The failure to mention these might question the reliability of the results by suggesting that the instruments might not be measuring the same construct in the same way across all populations.

The literature reviewed in Table 2 above acknowledges the protective role of social or family support, but few of these studies explicitly mention their findings within an established framework, such as the diathesis-stress model (21.43%) or resilience theory (0%). Notably, 28.6% of studies did not use any theoretical framework. This lack of a theoretical framework limits a deeper understanding of the mechanisms through which social support moderates the effects of ACEs. Among the studies that did use a theoretical framework, most of them employed the stress-buffering theory to explain the moderating role of social or family support on the relationship between ACEs and mental health outcomes. This theory has limitations in terms of the perspective it provides on the reduction of stress. The stress-buffering model focuses only on the benefits of receiving support. However, research now shows that negative social support can not only fail to buffer stress but can also exacerbate negative outcomes, as seen in Table 2. The stress-buffering model does not take into account the destructive role of unhelpful or harmful social interactions and does not separate the types of stressors (Lam, 2024). This model is also largely tested in Western, individualistic societies where cultures might differ from Small Island Developing States (SIDS) like Mauritius and fails to account for how cultural norms dictate who provides support and how it is received, suggesting its limited application universally. As a matter of fact, this research will aim to include other theoretical frameworks which could offer a more comprehensive understanding of the

protective processes. The reliance on one single theoretical approach restricts the understanding of how social and/or social support operate within diverse cultural contexts. This study will therefore use the stress-buffering along with other theoretical frameworks to better understand the processes through which social support influences the psychological outcomes of individuals exposed to ACEs.

Figure 1
PRISMA flow diagram of study

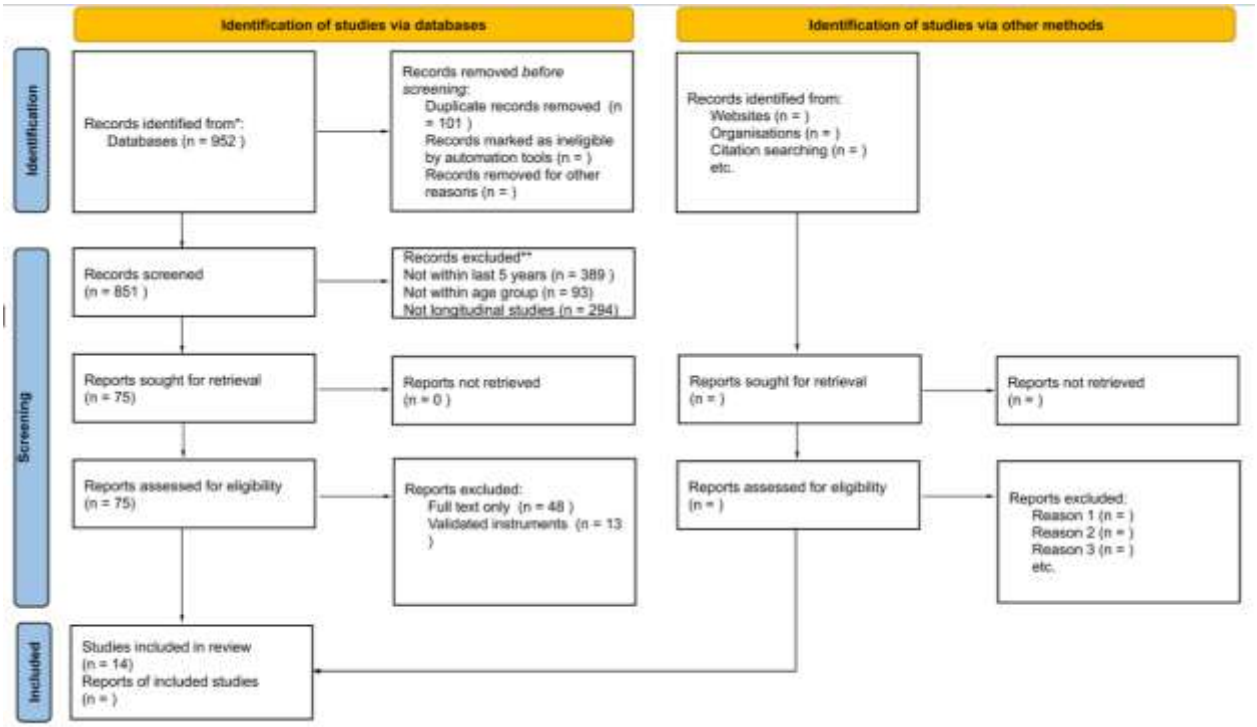

Table 1
Studies included in the synthesis

Authors	Year	Title	Country	Study Design	Sample Size	Moderator	Results
Aldomini et al.	2025	The Moderating Role of Social Support on the Impact of Adverse Childhood Experiences on Life Satisfaction and Mental Health in Adulthood	US/Canada	Cross-sectional	10,194	Social support	Positive social support reduced the negative effects of ACEs on mental health and life satisfaction, while negative support (especially rejection) worsened these effects.
Babatunde et al.	2022	Association between Number of Adverse Childhood Experiences and Depression Among Older Adults is Moderated by Race	US	Cross-sectional	60,122	Race	More ACEs were linked to higher depression, and this relationship was strongest among Hispanic older adults.
Pinto-Cortez et al.	2023	Adverse Childhood Experiences and Psychopathology in Adolescents from Northern Chile: The Moderating Role of Attachment Style	Chile	Cross-sectional	154	Attachment style	Abandonment anxiety strengthened the relationship between ACEs and psychopathology, while lower abandonment anxiety appeared protective.
Wu et al.	2023	Adverse Childhood Experiences, Family Support, and Depression: Evidence from Internal Migrants in China	China	Cross-sectional	1,326	Family support	Higher family support weakened the relationship between ACEs and depression.
Nowak et al.	2022	Social Support Moderates the Relation Between	US	Cross-sectional	682	Social support	Social support reduced the impact of childhood

Authors	Year	Title	Country	Study Design	Sample Size	Moderator	Results
		Childhood Trauma and Prenatal Depressive Symptoms in Adolescent Mothers					trauma on prenatal depression among adolescent mothers.
Rogers et al.	2023	The Impact of Childhood Trauma on Problematic Alcohol and Drug Use Trajectories and the Moderating Role of Social Support	US	Longitudinal	1,404	Social support	Social support reduced the impact of childhood trauma on problematic alcohol and drug use over time.
Brown et al.	2025	The Moderating Role of Social Support on the Cortisol Stress Response of Expectant Fathers Exposed to Adverse Childhood Experiences	US	Cross-sectional	38	Social support	Social support buffered the physiological stress response among expectant fathers with high ACEs.
Lemon et al.	2022	Depressive Symptoms in Relation to Adverse Childhood Experiences, Discrimination, Hope, and Social Support in a Diverse Sample of College Students	US	Cross-sectional	666	Hope and social support	Hope, but not social support, moderated the relationship between discrimination and depression among Asian students.
Wang et al.	2020	Association Between Childhood Trauma and Depression: A Moderated Mediation Analysis Among	China	Cross-sectional	404	Resilience	Resilience weakened the impact of childhood trauma on neuroticism, reducing its indirect effect on depression.

Authors	Year	Title	Country	Study Design	Sample Size	Moderator	Results
		Normative Chinese College Students					
Nowalis et al.	2022	Attachment as a Moderator in the Relation Between Child Maltreatment and Symptoms of Depression	China*	Cross-sectional	203	Attachment	Higher anxious attachment strengthened the relationship between child maltreatment and depressive symptoms.
Guangbo et al.	2022	Positive Childhood Experiences Can Moderate the Impact of Adverse Childhood Experiences on Adolescent Depression and Anxiety	China	Cross-sectional	6,363	Positive childhood experiences	Positive childhood experiences reduced the impact of ACEs on depression and anxiety.
Miloseva et al.	2017	Perceived Social Support as a Moderator Between Negative Life Events and Depression in Adolescence	North Macedonia	Cross-sectional	412	Perceived social support	Social support buffered the effect of stressful life events on depression among adolescents with subclinical depressive symptoms.
Hickey et al.	2017	The Relationship Between Perceived Family Support and Depressive Symptoms in Adolescence: What is the Moderating Role of Coping Strategies and Gender?	Ireland	Cross-sectional	6,062	Coping strategies and gender	Coping strategies and gender influenced how family support affected depressive symptoms, with some coping styles being protective and others increasing risk.
Calandri et al.	2019	Empathy and Depression Among	Italy	Cross-sectional	386	Parental support	Paternal support reduced the

Authors	Year	Title	Country	Study Design	Sample Size	Moderator	Results
		Early Adolescents: The Moderating Role of Parental Support					association between cognitive empathy and depression among highly empathetic adolescents.

Discussion

It is evident from this review that a substantial body of literature supports the association between ACEs and depressive symptoms among young adults. Across the studies reviewed, higher exposure to ACEs was linked to increased psychological vulnerability and depressive symptoms. These findings support the existing evidence that early-life adversity plays a critical role in shaping mental health outcomes.

This review further highlights the role of social support as a potential protective factor in decreasing the negative psychological outcomes associated with ACEs. Several studies demonstrated that higher levels of perceived social support weakened the relationship between ACEs and depressive symptoms, in line with the stress-buffering model. Individuals who reported strong emotional, familial or peer support appeared to exhibit better coping mechanisms. These findings suggest that social support fosters resilience and adaptive functioning in the face of early adversity.

However, findings regarding the moderating role of social support remain inconsistent across the literature. While some studies reported a strong buffering effect, others found limited or no moderation. This inconsistency may be attributed to the presence of other moderating variables such as resilience, attachment style, and coping strategies. Moreover, some studies also highlighted that negative forms of social support, such as rejection or unsupportive relationships, may exacerbate the impact of ACEs, showing that the quality of social support is as important as its presence.

Another important finding from this review is the influence of cultural context on the relationship between ACEs, social support and depressive symptoms. The majority of studies were conducted in Western and Eastern countries with limited representation from culturally diverse contexts such as Mauritius. Cultural norms surrounding family structures and help-seeking behaviours may shape how social support is perceived. In collectivist cultures, family support may play a more central role, whereas in individualistic cultures, individual-based support may be more prominent. Therefore, the generalisability of existing findings to the Mauritian context remains limited, highlighting the need for cultural research.

This review also identifies the importance of integrating theoretical frameworks to better understand the mechanisms underlying these relationships. While the stress-buffering model has been widely used to explain how social support mitigates the effects of stress, it does not fully take into account or capture the complexity of these interactions. The inclusion of the resilience theory and the diathesis-stress model offers amore comprehensive framework, explaining how individual vulnerabilities interact with environmental factors to influence psychological outcomes.

In addition, methodological variation across studies present challenges in synthesizing the findings. Differences in sample size, measurement tools and analytical approaches make it difficult to directly compare the results. Although validated instruments such as ACE-Q, PHQ-9 and MSPSS are commonly used, not all studies report cultural adaptation, which raises concerns about the validity of cross-cultural comparisons.

Overall, this review underscores the relationship between ACEs, social support and depressive symptoms. While ACEs are associated with increased risk for depression,

social support emerges as a crucial protective factor. The inconsistencies in the literature combined with cultural limitations, highlight the need for further research in underrepresented populations.

Limitations

The main strength of the present review lies in its focused examination of the moderating role of social support in the relationship between ACEs and depressive symptoms among young adults, while also identifying key population, methodological and theoretical gaps within the literature. By synthesising findings across multiple studies, this review highlights inconsistencies in the buffering effect of social support and emphasises the need to consider cultural context when interpreting these relationships. Furthermore, this review incorporates several theoretical frameworks to better understand the mechanisms through which social support may influence psychological outcomes following early adversity.

However, this review only included studies published between 2015 and 2025, which may not fully capture earlier research in this field. This review was restricted to articles published in English, potentially excluding relevant studies conducted in other languages and limiting the global representation of findings.

Conclusion

Given the global burden of depression among young adults and the impact of ACEs on mental health, there is a need to better understand the factors that might mitigate these negative outcomes. This review highlights that while ACEs are associated with increased depressive symptoms, social support emerges as a potential protective factor, although its moderating role remains unclear across studies.

The current literature suggests that strengthening social support systems may play a crucial role in reducing the psychological impact of early-life adversity. However, the variability in findings indicates that social support is not universally protective and that its effectiveness depends on factors such as quality, type and cultural context.

This review provides a foundation for future research by identifying gaps, particularly the lack of studies conducted in culturally diverse populations such as Mauritius, the limited use of theoretical frameworks, and methodological inconsistencies concerning culture across studies.

Therefore, future research should prioritise culturally adapted methodologies and the integration of multiple theoretical frameworks to better capture the complexity of these relationships. The findings are expected to inform mental health professionals, policy makers and community stakeholders in designing targeted, culturally sensitive interventions aimed at strengthening social support systems among young adults exposed to ACEs

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