

Childhood Trauma and Adult Mental Health among University Students: Social Support as a ModeratorAmmara Sajid¹, Arslan Khalid^{2*}, Khizra Iqbal³**Abstract**

Adverse childhood experiences play a significant role in the development of mental health issues throughout the life span. The current study was conducted to examine the moderating role of social support in the association between adverse childhood experiences and mental health issues. The study was based on a cross-sectional design and comprised a sample of university students ($N=213$) with an age range of 18 to 30 years, approached through a convenience sampling technique. The childhood trauma questionnaire (CHQ), the mental health inventory (MHI), and the multidimensional scale for perceived social support (MSPSS) were administered. The findings of the study revealed that childhood adverse events were significantly positively associated with anxiety, depression, and loss of behavioral control. On the other hand, childhood trauma showed a negative association with social support, general positive affect, emotional ties, and life satisfaction. Furthermore, the interaction between childhood trauma and social support significantly predicted anxiety, depression, and loss of behavioral control, while adversely predicting general positive affect and life satisfaction, although, the relationship between childhood trauma and emotional ties was not moderated by social support. Additionally, levels of childhood trauma, anxiety, depression, and loss of control were higher in female students than in male students. In contrast, male students showed a high level of social support, general positive affect, emotional ties, and life satisfaction as compared to females. Overall findings uncover the role of social support in association with adverse psychological effects of childhood trauma and positive mental health outcomes.

Keywords: Childhood Trauma, Mental Health, Social Support, Students

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Introduction

The basis of early childhood development is crucial for mental health; however, negative life experiences leave an impact that persists till adulthood and later life (Shonkoff et al., 2021). Individuals who experienced trauma are susceptible to several behavioral issues and mental health challenges. It is imperative to understand the protective factors to deal with such issues. Childhood trauma comprises several adverse experiences (ACEs) that lead to severe consequences for mental health outcomes. Regardless, social support acts as a buffer to prevent these effects.

If adverse experiences in childhood remain unaddressed, they may lead to risk factors and adversity in the form of long-term

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emotional and behavioral problems. This knowledge has important implications for public health and clinical interventions (Khalid et al., 2025). Adverse childhood experiences included as neglect, domestic violence, and physical or emotional abuse and witnessing violence. Childhood trauma has been defined as the exposure of a child's developing mind deliberately or otherwise to emotionally painful, distressing, or life-threatening experiences (Felitti et al., 1998). A large body of research has demonstrated high correlations between the aggregation of such exposures to trauma and adult mental health problems.

Mental health is a multidimensional construct that encompasses emotional, psychological, and social well-being. It is defined as a state of well-being in which an individual recognizes their own potential and capabilities to cope with normal stresses of life, work productively, and make a healthy contribution to the community (WHO, 2022). Individuals exposed to childhood trauma are at significantly higher risk for developing a spectrum of psychiatric conditions, including major depressive disorder, anxiety disorders, PTSD, and substance use disorders (Dánielsdóttir, et al, 2024; Herzog & Schmahl, 2018). Disruption of neurobiological development, insecure attachment styles, and adoption of maladaptive coping mechanisms persist into adulthood and are thought to be causes of this connection (Teicher & Samson, 2016).

The link between childhood trauma and adult psychopathology is well-established; however, not every individual who experiences early adversity develops a mental health disorder. Variability in outcomes depends on crucial factors that buffer the deleterious effects of trauma. Social support is identified as perceived or real availability of emotional, informational, and instrumental assistance from a social network, including family, friends, and

community (Cohen & Wills, 1985; Li et al., 2016). Social support acts as a moderator, reducing the negative correlation between childhood trauma and poor mental health in adulthood. Supportive network interrupts the chain of early adversity to psychopathology by providing tangible resources, validating experiences, encouraging adaptive coping strategies, and creating a sense of belonging (Brown & Welc, 2024). Research showed people who perceived social support are likely to be resilient when faced with stressors stemming from prior trauma (Downey & Crummy, 2022).

Numerous studies showed childhood trauma has a lasting effect on adult mental health, especially regarding correlation with depressive illness and other outcomes. A meta-analysis examining the moderating effect of social support and found a significant correlation between childhood abuse and adult depression. Results demonstrated that social support serves as a mitigating factor, diminishing the correlation between childhood maltreatment and depressive symptoms in those with high levels of peer and familial support. Perceived social support is also emphasized as a protective factor against symptoms of complex trauma (Zhang et al., 2023). According to research, regular emotional support from peers and caregivers effectively reduces depressive symptoms and promotes psychological resilience in later life (Masten et al., 2021). Another study using a sample of college students investigated the mechanisms relating childhood adversity to adult depressive symptoms. According to findings, social support plays a crucial mediating role in this relationship. In particular, those who suffered abuse and unfavorable experiences as children expressed less support from peers and family, which led to more depressive symptoms as adults (Luo et al., 2025). Moreover, a systematic review offered strong proof of the protective role of social support

in the relationship between childhood trauma and adult suicidal thoughts (Hu et al., 2023). Childhood trauma is recognized as a significant risk factor for adverse mental health outcomes in adulthood. Empirical evidence demonstrates that early adverse experiences are associated with increased vulnerability to depression, anxiety, and related disorders. On the other hand, social support is identified as a protective factor that promotes resilience and mitigates the psychological impact of stress. Despite of existing literature on association between childhood trauma and mental health consequences, the current study extended this with several underlying factors within Pakistani context, where family dynamics, gender roles and help seeking behaviors differs from western culture and context. As in Pakistan, childhood adversity often occurs within normalized hierarchical family structures and disclosure of trauma related distress is constrained by stigma especially for females. In this context, childhood trauma and perceived social support were examined empirically. Therefore, to fill the knowledge gap, following objectives of the studies are formulated (a) to investigate the relationships between childhood trauma, social support, and mental health among students (b) to explore the moderating role of social support in relation between childhood trauma and mental health in students(c) to assess differences on gender basis. These goals led to hypotheses as (1) there will be significant correlation found between childhood trauma, social support, and mental health in students; (2) Social support will moderate the relationship between childhood trauma and mental health in students; and (3) childhood trauma, social support and mental health will differ in terms of gender.

Method

Study Design, Sample and Procedure

A quantitative study with a cross-sectional design was employed to investigate the

phenomenon. The participants consisted of 213 adults ($n = 97$ females, $n = 116$ males) selected from the Islamia University of Bahawalpur and Khawaja Fareed University, Punjab, Pakistan. The age range of participants was from 18 to 30 years ($M = 24.0$, $SD = 3.46$). A convenience sampling method was selected to approach and recruit the participants. The collection of data was commenced from September 2024 to March 2025. Both online and in-person survey was conducted for data collection. Informed consent was presented to the participants, which consisted of detailed information, including the purpose of the study and their willingness to participate. Participants were instructed to fill booklet consisted of measurement tools. The estimated time was 15 to 20 minutes for completion of data collection forms, and confidentiality was ensured for participants.

Instruments

Childhood Trauma Questionnaire (CHQ)

The CHQ is developed to assess severity of adverse events in childhood such as emotional, physical, sexual abuse and neglect. The measure consisted on 25 items with five point likert format range from not ever true to very often true. The CTQ exhibited strong reliability as Cronbach alpha is .94 (Bernstein & Fink, 1998).

Mental Health Inventory (MHI-38)

The MHI-38 is widely used measure designed to assess different domains of mental health. It consisted on subscales includes depression, anxiety, loss of behavioral control, positive affect, emotional ties and life satisfaction. Likert type format assesses the frequency and intensity of experiences. MHI-38 is six point Likert scale and for some items, contains five point scoring format. Internal consistency for the scale is .83 to .94 across domains (Veit & Ware, 1983).

Multidimensional Scale of Perceived Social Support (MSPSS)

The MSPSS is self-report scale consisted of 12 items assessing perceived social support in three domains; family, peers and significant others. Each subscale is represented on very strongly disagree to very strongly agree likert format on seven points. Higher score indicates more social support. MSPSS showed strong internal consistency with Cronbach alpha .85 for subscales (Zimet et al., 1988).

Data Analysis

After the completion of data collection. Data were checked for missing values before analysis. Data analysis was performed by using IBM SPSS. Statistical significance was set at an alpha level of .05. Both descriptive and inferential statistics were carried out for statistical analysis. Prior to conducting hierarchical multiple regression analysis, mean centering of predicting variable

(childhood trauma and perceived social support) was done. An interaction term was created by multiplication of centered predictor and moderator variables. Data was also checked for Multicollinearity prior to moderation analysis which showed variance inflation factors (VIF) in acceptable range (<5). For standardized regression coefficients, confidence interval was (β), 95% and p value were reported for all main and interaction effect. To interpret the interaction effect simple slop analysis was conducted. Perceived social support (SD= -1 low level) associated with poor mental health and (SD= +1 high level) associated with weak or no poor mental health, indicating a buffering association of social support.

Ethical Considerations

Permission to conduct the research study was granted by the Ethical Research Committee of The Islamia University of Bahawalpur.

Results

Table 1

Descriptive Statistics for Study Variables (N=213)

Variables	Category	Frequency (%) / Mean \pm SD
Gender	Male	116 (54.5)
	Female	97 (45.5)
Age Group (Years)	18-20 Years	165 (77.5)
	21-30 Years	48 (22.5)
Education	BS	175 (82.2)
	M.Phil	38 (17.8)
CHQ	-	47.92 \pm 11.49
SS	-	58.47 \pm 19.57
ANX	-	31.66 \pm 4.92
DEP	-	13.17 \pm 3.27
LOBC	-	30.72 \pm 5.06
GPA	-	35.74 \pm 5.32
ET	-	6.94 \pm 2.38
LS	-	3.64 \pm 1.78

Note: CHQ= Childhood trauma; SS= Social support; ANX=Anxiety; DEP=Depression; LOBC=loss of behavioral control; GPA= General positive Affect; ET= Emotion Ties; LS= Life Satisfaction

Table 1 presents the frequencies and percentages of the demographic variable, with Mean and Standard deviation of the study variables.

Table 2

Matrix of Correlation Coefficient on the Scales and subscales (N=213)

Scales	CHQ	SS	ANX	DEP	LOBS	GPA	ET	LS
CHQ	-							
SS	-.65**	-						
ANX	.79**	-.44**	-					
DEP	.94**	-.60**	.86**	-				
LOBC	.67**	-.38**	.89**	.73**	-			
GPA	-.73**	.34**	-.85**	-.78**	-.69**	-		
ET	-.59**	.86**	-.41**	-.57**	-.38**	.37**	-	
LS	-.77**	.57**	-.72**	-.81**	-.62**	.58**	.50**	-

Note: CHQ= Childhood trauma; SS= Social support; ANX=Anxiety; DEP=Depression; LOBC=loss of behavioral control; GPA= General positive Affect; ET= Emotion Ties; LS= Life Satisfaction

Table 2 indicates the correlations between Childhood trauma and sub scales of mental health inventory. The findings reveal that Childhood trauma positively associated with Anxiety, Depression, and Loss of Behavioral control, while significantly and negatively correlated with social support, General positive affect, Emotional ties, and satisfaction with life. Similarly, Social support shows significantly positive association with General positive affect, Emotional ties, and Life satisfaction, while significantly and negatively associated with Anxiety, Depression, and Loss of behavioral control. Anxiety is significantly and positively correlated with Depression and

Loss of behavioral control, while significantly and negatively correlated with social support, General positive affect, Emotional ties, and Life satisfaction. Depression significantly correlated with Loss of behavioral control, while negatively correlated with social support, General positive affect, Emotional ties, and Life satisfaction. Loss of Behavioral Control is significantly and negatively correlated with social support and other subscales of mental health. General positive effect is significantly positively correlated with Emotional ties and Life satisfaction. Furthermore, Emotional ties and Life satisfaction were significantly and positively correlated with each other.

Table 3*Moderation Analysis on Social Support between Childhood Trauma and Mental Health (N=213)*

Variables	B	SE(β)	t	p	R ² Change	F	p
For Anxiety as outcome variable (dependent variable)							
Constant	24.32	2.03	11.98	.000			
CHQ	.14	.03	4.41	.000	.10	83.86	.000
SS	-.21	.02	-7.28	.000			
CHQ*SS	.005	.001	9.15	.000			
For Depression as outcome variable (dependent variable)							
Constant	5.62	.62	8.95	.000			
CHQ	.16	.01	16.73	.000	.04	178.84	.000
SS	-.10	.009	-11.94	.000			
CHQ*SS	.002	.0002	13.37	.000			
For Loss of Behavioral Control as outcome variable (dependent variable)							
Constant	23.46	2.87	8.16	.000			
CHQ	.14	.04	3.13	.002	.05	24.95	.000
SS	-.16	.04	-3.96	.000			
CHQ*SS	.004	.001	4.99	.000			
For General Positive Affects as outcome variable (dependent variable)							
Constant	44.55	2.41	18.41	.000			
CHQ	-.14	.03	-3.64	.000	.11	79.16	.000
SS	.22	.03	6.33	.000			
CHQ*SS	-.006	.001	-8.89	.000			
For Emotional Ties as outcome variable (dependent variable)							
Constant	.88	.98	.90	.368			
CHQ	.003	.01	.20	.835	.002	1.98	.160
SS	.11	.01	8.32	.000			
CHQ*SS	-.0004	.0003	-1.40	.160			
For Life Satisfaction as outcome variable (dependent variable)							
Constant	5.64	.86	6.50	.085			
CHQ	-.06	.01	-4.41	.000	.03	18.67	.000
SS	.06	.01	4.83	.000			
CHQ*SS	-.001	.0002	-4.32	.000			

Note: CHQ= Childhood trauma; SS= Social support; ANX=Anxiety; DEP=Depression; LOBC=loss of behavioral control; GPA= General positive Affect; ET= Emotion Ties; LS= Life Satisfaction

Table 3 shows the results of the moderation analysis, using social support as a moderator, childhood trauma as an independent variable, while anxiety, depression, loss of behavioral control, general positive affect, emotional ties, and life satisfaction as outcome variables. Results indicated that childhood trauma significantly and positively predicted anxiety ($\beta = .14, p < .001$), depression ($\beta =$

$.16, p < .001$), and loss of behavioral control ($\beta = .14, p < .001$). While, significant negatively predicting general positive affect ($\beta = -.14, p < .001$) and life satisfaction; ($\beta = -.06, p < .001$) it also did not significantly predict emotional ties ($\beta = .003, p > .001$). Similarly, social support significantly and negatively predicts anxiety ($\beta = -.21, p < .001$), depression ($\beta = -.10, p < .001$), and loss of behavioral

control ($\beta = -.16, p < .001$) while significantly and positively predicting general positive affect ($\beta = .22, p < .001$), emotional ties ($\beta = .11, p < .001$), and life satisfaction ($\beta = .06, p < .001$). Furthermore, interaction between childhood trauma and social support significantly and positively predicting the anxiety ($\beta = .005, p > .001$), and 10.3% variance ($\Delta R^2 = .10$), depression ($\beta = .002, p > .001$), and 4.7% variance ($\Delta R^2 = .04$), and loss of behavioral control ($\beta = .004, p > .001$), and 5.8%

variance ($\Delta R^2 = .05$). On the other hand, interaction between childhood trauma and social support significantly and negatively predicting general positive affect ($\beta = -.006, p > .001$) and 1.8% variance ($\Delta R^2 = .11$), and life satisfaction ($\beta = -.001, p > .001$) with 3.2% variance ($\Delta R^2 = .03$). Which shows that social support moderates the relationship between childhood trauma and subscales of mental health except for emotional ties.

Table 4

t-test for Gender Differences in Study Variables ($N=213$)

Variables	<i>M</i> ± <i>SD</i>		<i>t</i>	<i>p</i>	Cohen's <i>d</i>
	Male ($n=116$)	Female ($n=97$)			
CHQ	44.20±9.56	52.36±12.05	-5.511	.000	.76
SS	62.95±17.44	53.12±20.69	3.760	.000	.52
ANX	30.45±5.09	33.10±4.30	-4.064	.000	.56
DEP	12.13±3.31	14.42±2.76	-5.427	.000	.75
LOBC	29.91±5.15	31.70±4.78	-2.617	.010	.36
GPA	37.12±5.61	34.09±4.46	4.301	.000	.59
ET	7.47±2.37	6.32±2.24	3.596	.000	.49
LS	3.94±1.72	3.28±1.79	2.743	.007	.38

Note: CHQ= Childhood trauma; SS= Social support; ANX=Anxiety; DEP=Depression; LOBC=loss of behavioral control; GPA= General positive Affect; ET= Emotion Ties; LS= Life Satisfaction

Table 4 represents results for comparison of Childhood trauma, Social Support, Anxiety, Depression, loss of Behavioral Control, General positive affect, Emotional ties, and life satisfaction between male and female students. Results showed that the prevalence of Childhood trauma ($t = -5.51, p < .05$, Cohen's $d = .76$), Anxiety ($t = -4.06, p < .05$, Cohen's $d = .56$), Depression ($t = -5.42, p < .05$, Cohen's $d = .75$), and Loss of behavioral Control ($t = -2.61, p < .05$,

Cohen's $d = .36$) are significantly higher in female students than in male students. Similarly, the levels of Social Support ($t = 3.76, p < .05$, Cohen's $d = .52$), general positive affect ($t = 4.30, p < .05$, Cohen's $d = .59$), Emotional ties ($t = 3.59, p < .05$, Cohen's $d = .49$), and life satisfaction ($t = 2.74, p < .05$, Cohen's $d = .38$) are significantly higher in male students than those of female students.

Discussion

The present study was conducted to explore how childhood adversities influenced mental health in adulthood particularly in students. Findings provide new evidence in the Pakistani cultural context and are in concordance with previous research related

to the complex association between childhood adversity and psychological health. Findings showed a significant correlation between childhood trauma and mental health results. Students, reporting greater childhood trauma scores had decreased psychological well-being and

reported poor mental health. As hypothesis stated significant relationship exists between levels of childhood trauma, social support, and mental health among adult students. Negative mental health outcomes, including anxiety, depression, and loss of behavioral control, were found to be significantly and positively correlated with childhood trauma. A particularly strong positive association was observed between childhood trauma and depression. Although these constructs are conceptually distinct, their overlap may be partially attributable to shared emotional content and culturally patterned expressions of distress. The findings suggest substantial shared variance between retrospective exposure to childhood trauma and current mental health symptomatology. On the other hand, positive aspects of mental health, such as life satisfaction, emotional connections, and general positive affect substantially inversely connected with childhood trauma. Findings consistent with earlier research indicate that childhood trauma is linked to psychological distress and decline in general well-being (Merrick et al., 2019). Another study findings showed consistency with prior research that showed association of adversity in early life with long-term mental health struggles (Van Assche et al., 2020; Teicher & Samson, 2016).

Social support came out as an important moderator for the association. Individuals with high social support showed better mental health adjustment despite having experienced childhood trauma, while those with lower social support showed greater psychological distress. According to Cohen and Wills' (1985) theory on the stress-buffering hypothesis, findings suggested that strong social support associated in buffering the ill effects of stress and trauma.

Moderation analysis reported that an association between university students' mental health and childhood trauma is moderated by social support. Results

indicated that childhood trauma positively predicted anxiety, depression and loss of control. On contrary, negatively predicting general positive affect and life satisfaction. It also did not significantly predict emotional ties. Similarly, social support significantly and negatively predicts anxiety, depression and loss of behavioral control. While positively predicting general positive affect, emotional ties and life satisfaction. Findings for interaction effect showed interaction between childhood trauma and social support significantly and positively predicting the anxiety, depression and loss of behavioral. On the other hand, interaction between childhood trauma and social support significantly and negatively predicting general positive affect and life satisfaction. Which shows that social support moderates the relationship between childhood trauma and subscales of mental health except for emotional ties. Additional study also in accordance with findings that social support associated with decreasing trauma effects (Karatzias et al., 2022).

The findings showed no interaction effect of social support between childhood trauma and emotional tie. As both tools measure interpersonal connection, they do so with different levels of detail. The social support is more about the who and how much of support from family and friends, whereas the emotional ties scale captures the internal feeling of being bonded to others. This distinction is especially important in a Pakistani context (Khan & Arif, 2019). For many, if someone has emotional closeness, has support. It's not just a safety net waiting to be used; it's a core part of how people stay mentally healthy. This unique cultural perspective is likely why the data shows moderation effects for other mental health categories, but stays consistent for emotional ties.

Findings related to gender differences revealed significant outcomes. Amongst

gender incidence of adverse experiences was higher in females. Level of anxiety, depression, and loss of behavioral control were also higher in female students as compared to male students. Likewise, social support, general positive affect, emotional ties, and satisfaction with life were higher in male than female students. These findings are in line with the study that reported a higher level of anxiety and depression persists in female students as compared to male students (Nelson et al., 2017).

Conclusion

In conclusion positive association was found between childhood trauma and anxiety, depression, and loss of behavioral control in students; on the other hand negative association was reported with social support, general positive affect, emotional ties, and life satisfaction. Therefore, the key findings showed that social support as a moderator exhibits weaker associations between childhood trauma and mental health outcomes. These dynamics will help determine target interventions, such as support-oriented therapies and preventive measures to deal with issues and to provide psychosocial support to reduce the risk of poor mental health in individuals exposed to adverse experiences.

Limitations and Recommendations

Sample size must be increased for external validity, and for diversity, participants should be recruited from the general population as well. Cross sectional design limits the temporal connection and casual inferences. Future study should address these limitations by employing multimethod assessments to more rigorously examine the complex relationship between variables. To reduce overlapping structurally distinct interpersonal construct with alterative analysis approach should be consider in future. Other factors, such as individual differences and psychosocial factors, must be discovered in future studies. Strategies and

interventions to improve mental health and well-being of individuals must be considered.

Ethics Statement

The study was conducted in accordance with the APA Ethical guidelines. Informed consent was obtained from all participants.

Contribution of Authors

Ammara Sajid: Conceptualization, Investigation, Methodology, Data Curation, Formal Analysis, Writing – Original Draft
Arslan Khalid: Methodology, Supervision, Writing - Reviewing & Editing
Khizra Iqbal: Methodology, Writing - Reviewing & Editing

Conflict of Interest

There is no conflict of interest declared by the authors.

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Data Availability Statement

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [A.K.] upon the reasonable request.

References

- Bernstein, D. P., & Fink, L. (1998). *Childhood Trauma Questionnaire: A retrospective self-report manual*. San Antonio, TX: The Psychological Corporation.
- Brown, S., & Welc, B. (2024). The impact of social support and social network characteristics on trauma symptoms among violence-exposed women with substance use disorders. *Substance Use & Misuse*, *60*(1), 1–10. <https://doi.org/10.1080/10826084.2024.2403128>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310–357. doi.org/10.1037/0033-2909.98.2.310

- Danielsdóttir, H. B., Aspelund, T., Shen, Q., Halldorsdottir, T., Jakobsdóttir, J., Song, H., Lu, D., Kuja-Halkola, R., Larsson, H., Fall, K., Magnusson, P. K. E., Fang, F., Bergstedt, J., & Valdimarsdóttir, U. A. (2024). Adverse childhood experiences and adult mental health outcomes. *JAMA Psychiatry*, *81*(6), 586–594. <https://doi.org/10.1001/jamapsychiatry.2024.0039>
- Downey, C., & Crummy, A. (2022). The impact of childhood trauma on children's wellbeing and adult behavior. *European Journal of Trauma & Dissociation*, *6*(1), 100237. <https://doi.org/10.1016/j.ejtd.2021.100237>
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, *14*(4), 245-258. [doi.org/10.1016/S0749-3797\(98\)00017-8](https://doi.org/10.1016/S0749-3797(98)00017-8)
- Herzog, J. I., & Schmahl, C. (2018). Adverse childhood experiences and the consequences on neurobiological, psychosocial, and somatic conditions across the lifespan. *Frontiers in Psychiatry*, *9*, 420. <https://doi.org/10.3389/fpsy.2018.00420>
- Hu, F.-H., Zhao, D.-Y., Fu, X.-L., Zhang, W.-Q., Tang, W., Hu, S.-Q., Shen, W.-Q., & Chen, H.-L. (2023). Effects of social support on suicide-related behaviors in patients with severe mental illness: A systematic review and meta-analysis. *Journal of Affective Disorders*, *328*, 324–333. <https://doi.org/10.1016/j.jad.2023.02.070>
- Karatzias, T., Shevlin, M., Ford, J. D., Fyvie, C., Grandison, G., Hyland, P., & Cloitre, M. (2022). Childhood trauma, attachment orientation, and complex PTSD (CPTSD) symptoms in a clinical sample: Implications for treatment. *Development and Psychopathology*, *34*(3), 1192–1197. <https://doi.org/10.1017/S0954579420001509>
- Khalid, A., Ghaffari, A. S., Iqbal, K., & Su, Y. (2025). Mediating role of coping strategies in the relationship between death anxiety and insomnia among patients with non-communicable diseases: A gender perspective. *Scientific Reports*, *15*(1). <https://doi.org/10.1038/s41598-025-99348-3>
- Khan, M. J., & Arif, A. (2019). Role of social support as predictor of mental health among university students. *Journal of Research and Reflections in Education*, *13*(1), 1–11. <http://www.ue.edu.pk/jrre>
- Li, M., D'Arcy, C., & Meng, X. (2016). Maltreatment in childhood substantially increases the risk of adult depression and anxiety in prospective cohort studies: systematic review, meta-analysis, and proportional attributable fractions. *Psychological Medicine*, *46*(4), 717–730. <https://doi.org/10.1017/S0033291715002743>
- Luo, Q., Xu, Q., Zhu, L., Liao, J., Liang, X., Xia, J., Lin, X., & Peng, H. (2025). Social support and depressive symptoms: The role of childhood maltreatment and brain activity in a moderated mediation model. *Social Cognitive and Affective*

- Neuroscience*, 20(1), nsaf077. <https://doi.org/10.1093/scan/nsaf077>
- Masten, A. S., Lucke, C. M., Nelson, K. M., & Stallworthy, I. C. (2021). Resilience in development and psychopathology: Multisystem perspectives. *Annual Review of Clinical Psychology*, 17, 521–549. <https://doi.org/10.1146/annurev-clinpsy-081219-120307>
- Merrick, M. T., Ford, D. C., Ports, K. A., Guinn, A. S., Chen, J., Klevens, J., Metzler, M., Jones, C. M., Simon, T. R., Daniel, V. M., Ottley, P., & Mercy, J. A. (2019). Vital signs: Estimated proportion of adult health problems attributable to adverse childhood experiences and implications for prevention - 25 states, 2015-2017. *MMWR. Morbidity and Mortality Weekly Report*, 68(44), 999–1005. <https://doi.org/10.15585/mmwr.mm6844e1>
- Nelson, J., Klumparendt, A., Doebler, P., & Ehring, T. (2017). Childhood maltreatment and characteristics of adult depression: meta-analysis. *The British Journal of Psychiatry: The Journal of Mental Science*, 210(2), 96–104. <https://doi.org/10.1192/bjp.bp.115.180752>
- Shonkoff, J. P., Slopen, N., & Williams, D. R. (2021). Early childhood adversity, toxic stress, and the impacts of racism on the foundations of health. *Annual Review of Public Health*, 42, 115–134. <https://doi.org/10.1146/annurev-publhealth-090419-101940>
- Teicher, M. H., & Samson, J. A. (2016). Annual Research Review: Enduring neurobiological effects of childhood abuse and neglect. *Journal of Child Psychology and Psychiatry*, 57(3), 241–266. <https://doi.org/10.1111/jcpp.12470>
- Van Assche, L., Van de Ven, L., Vandenbulcke, M., & Luyten, P. (2020). Ghosts from the past? The association between childhood interpersonal trauma, attachment and anxiety and depression in late life. *Aging & Mental Health*, 24(6), 898–905. <https://doi.org/10.1080/13607863.2019.1571017>
- Veit, C. T., & Ware, J. E. (1983). The structure of psychological distress and well-being in general populations. *Journal of Consulting and Clinical Psychology*, 51(5), 730–742. <https://doi.org/10.1037/0022-006X.51.5.730>
- World Health Organization. (2022). *Mental health: Strengthening our response*. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
- Zhang, Q., Zhang, Q., Ran, G., Ran, G., & Liang, Y. (2023). Childhood abuse and depression in emerging adults: The mediating role of regulatory emotional self-efficacy and the moderating role of subjective social status. *Journal of Adult Development*, 31(3), 1–11. <https://doi.org/10.1007/s10804-023-09463-6>
- Zimet, G. D.; Dahlem, N. W.; Zimet, S. G.; & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52(1), 30-41.