



Psychosocial Determinants of Adaptive Coping in University Students: The Role of Social Support and Emotional Regulation

¹Urooj Bibi²Muhammad Ilyas³Kalsoom Rahman⁴Laiba Ahmed¹⁻⁴Riphah International University Islamabad, Pakistan

Article Details:

Received on 29 Dec, 2025

Accepted on 25 Jan, 2026

Published on 26 Jan, 2026

Corresponding Authors*:

Muhammad Ilyas

Abstract

Perceived social support (PSS) serves as a key psychosocial determinant that influences emotional regulation among university students. This cross-sectional study examined the relationships between family, friend, and significant other support and emotional regulation strategies specifically, cognitive reappraisal and expressive suppression while also exploring the influences of demographic factors including gender, birth order, and socioeconomic status. Participants included 256 students from Riphah International University, recruited via convenient sampling. Pearson correlation analyses revealed strong positive associations between PSS sources and cognitive reappraisal (family: $r = .73$, $p < .001$; friend: $r = .75$, $p < .001$; significant other: $r = .73$, $p < .001$) as well as expressive suppression (family: $r = .63$, $p < .001$; friend: $r = .61$, $p < .001$; significant other: $r = .57$, $p < .001$). Multiple regression analyses indicated that cognitive reappraisal was significantly predicted by family support ($\beta = .24$, $p < .001$), friend support ($\beta = .37$, $p < .001$), and significant other support ($\beta = .25$, $p < .001$). Expressive suppression was significantly predicted by family support ($\beta = .37$, $p < .001$) and friend support ($\beta = .28$, $p < .001$) but not by significant other support ($\beta = .16$, $p > .05$). Gender differences emerged in cognitive reappraisal, with males scoring higher than females. Second-born students reported higher levels of both cognitive reappraisal and expressive suppression than first-born students. Socioeconomic status was associated with emotion regulation, with upper-class students demonstrating higher scores on both strategies than middle- and lower-class peers. These findings highlight the pivotal role of social support in fostering adaptive emotion regulation and support the development of targeted interventions to promote university students' emotional well-being.

Keywords: Social Support, Emotional Regulation, Cognitive Reappraisal, Expressive Suppression



Introduction

University life represents a critical developmental period marked by substantial psychological, social, and emotional transitions. During this phase, students are required to navigate academic pressures, evolving interpersonal relationships, identity formation, and increasing independence (Azmitia et al., 2013). While these experiences can foster personal growth, they also expose students to considerable stress, making effective coping and emotional management essential for psychological well-being and academic adjustment (Moreira & Canavarro., 2019). In this context, adaptive coping is increasingly understood as a psychosocial process shaped by both internal regulatory capacities and external support systems (Raposo & Francisco, 2022).

Among the various psychological mechanisms that contribute to adaptive coping, emotional regulation plays a central role. Emotion regulation refers to the processes through which individuals influence the experience, expression, and modulation of their emotions (Cano et al., 2020; (Lopes et al., 2005). Gross's process model of emotion regulation highlights two commonly studied strategies: cognitive reappraisal, which involves reframing a situation to alter its emotional impact, and expressive suppression, which entails inhibiting the outward expression of emotions (Zhou et al., 2023; Holt-Lunstad, 2021). Cognitive reappraisal is generally considered a more adaptive strategy, as it is associated with better psychological adjustment, whereas expressive suppression has been linked to emotional disengagement and increased psychological distress, particularly when used rigidly or excessively (Kim et al., 2024). However, the selection and effectiveness of these strategies do not occur in isolation and are significantly shaped by an individual's social environment.

One of the most influential psychosocial resources in this regard is perceived social support (Bolger & Eckenrode, 1991). Social support encompasses the emotional, informational, and instrumental assistance individuals perceive from significant people in their lives, including family members, friends, and significant others. For university students, these sources of support can serve as protective buffers against stress and can facilitate healthier emotional processing (Cage et al., 2021). Family support often provides a sense of stability and security, friend support contributes to shared understanding and belonging, while significant-other support may offer emotional intimacy and validation (Cano et al., 2020). Importantly, these sources of support may not function uniformly; each may differentially influence how students regulate their emotions and cope with challenges (Charalambous, 2019).

Existing literature suggests that higher levels of perceived social support are associated with more adaptive emotional regulation strategies, particularly cognitive reappraisal (Chukwuemeka & Obioha, 2023). Supportive social environments encourage open emotional expression, cognitive flexibility, and constructive reinterpretation of stressful experiences (Karam et al., 2023). Conversely, limited or inconsistent support may contribute to greater reliance on expressive suppression, especially in cultural contexts where emotional restraint is socially reinforced. Despite growing interest in the relationship between social support and emotion regulation, there was a need to examine how distinct sources of social support uniquely contribute to specific emotion regulation strategies among university students.

In addition to psychosocial factors, demographic variables such as gender (Zhang et al., 2018), birth order, and socioeconomic status have been found to influence emotion



regulation patterns (Blakemore & Mills, 2013). Gender-based socialization often shapes emotional expression and regulation tendencies, with males and females differing in the strategies they employ (Zang et al., 2025; Lopez et al., 2023). Similarly, birth order has been associated with variations in emotional responsiveness, responsibility, and coping styles, potentially affecting emotion regulation (Sharma et al., 2025; Suberviola, 2025). Socioeconomic status further contextualizes emotional experiences by shaping access to resources, exposure to stressors, and perceptions of control, all of which may influence regulatory strategies (Maurer et al., 2023; Barrett et al., 2000). However, findings across studies remain inconsistent, highlighting the need for further empirical investigation within specific cultural and educational contexts.

Within the Pakistani university context, empirical research examining the shared role of social support sources and emotion regulation strategies remains limited while cultural norms surrounding family cohesion, emotional expression, and interpersonal dependence may uniquely shape how students perceive support and regulate emotions (Guimond, 2007). Therefore, the present study examined the psychosocial determinants of adaptive coping among university students by investigating the role of perceived social support from family, friends, and significant others in relation to emotion regulation strategies. Additionally, the study seeks to identify the predictive contribution of different sources of social support to these strategies and to explore differences in emotion regulation across gender, birth order, and socioeconomic status (Kim et al., 2024).

Objectives of the Study

1. To examine the relationship between family, friend, and significant-other social support and emotion regulation strategies among university students.
2. To determine the differential predictive effects of family, friend, and significant-other support on cognitive reappraisal.
3. To determine the differential predictive effects of family, friend, and significant-other support on expressive suppression.
4. To examine differences in emotion regulation strategies across gender, birth order, and socioeconomic status.

Hypotheses of the Study

H1: Family, friend, and significant-other social support will be positively associated with cognitive reappraisal and expressive suppression among university students.

H2: Family, friend, and significant-other social support will significantly predict cognitive reappraisal among university students.

H3: Family and friend social support will significantly predict expressive suppression, whereas significant-others support will not be a significant predictor.

H4: Male and female university students will differ significantly in emotion regulation strategies.

H5: First-born and second-born university students will differ significantly in emotion regulation strategies.

H6: Emotion regulation strategies will differ significantly across socioeconomic status group.

Methods

Research Design

The present study employed a cross-sectional survey research design using a quantitative approach for data collection and analysis.



Sampling Technique and Sample Size

Using Convenient sampling, a sample of 256 university students was selected from entire population of 713 by using Taro Yamane's formula. The sample included both male and female students (52.3% were male and 47.7% were female) enrolled in different academic programs at Riphah International University, Malakand Campus, Khyber Pakhtunkhwa. Students who were currently enrolled at the university level and willing to participate were included in the study. Participants with reported mental or cognitive impairment were excluded.

Operational Definitions and Research Instruments

Perceived Social Support: It is a type of care that comes from family, friends, coworkers, and medical professionals, exerts profound impact on not only well-being of individuals but also on overall personality structure. Perceived social support scale was used for assessing students perceived social support level. It is a widely used instrument to measure PSS across different domains (Zimet, Dahlem, Zimet, & Farley, 1988). It has high internal consistency (Cronbach's alpha ranging from .84 to .92) and test-retest reliability ($r = .85$).

Emotional Regulation Questionnaire (ERQ): Refers to the processes individuals use to manage and modify their emotional responses. The Emotion Regulation Questionnaire (ERQ) developed by Gross and John (2003) was used to measure emotion regulation strategies. The ERQ consists of 10 items assessing cognitive reappraisal and expressive suppression. The scale shows acceptable internal consistency, with Cronbach's alpha values of .79 for cognitive reappraisal and .73 for expressive suppression.

Ethical Considerations

The study was approved by ethics committee of Riphah International University. Written consent was taken from every participant. They were entirely voluntary, and their information are kept confidential. The participants were advised of their freedom and have informed about their right to withdraw at any time during the study. No physical or psychological harm was given to participants. Participants were also assured that they have the right to know the finding of the research after the study completion.

Results

Table 1: *Pearson Correlation between Family, Friend, Significant-Other Support and Cognitive Reappraisal among University Students*

Variables	M	SD	n	1	2	3	4
Family	16.50	7.85	256	--			
Friend	15.37	7.71	256	.77**	--		
Significant Other	16.82	7.81	256	.79**	.77**	--	
R-ER	22.74	10.05	256	.73**	.75**	.73**	--

Note. M = Mean, SD = Standard Deviation, R-ER = Reappraisal Emotional Regulation, ** $p < .01$, *** $p < .001$.

Table 1 shows positive correlations between social support and Cognitive Reappraisal: Family ($r = .730$, $p < .01$), Friend ($r = .750$, $p < .01$), and Significant Other ($r = .730$, $p < .01$). Strong correlations were also observed among support sources: Family-Friend ($r = .765$, $p < .01$), Family-Significant Other ($r = .796$, $p < .01$), and Friend-Significant Other ($r = .768$, $p < .01$).



Table 2: Pearson Correlation between Family, Friend, and Significant-Other Support and Expressive Suppression among University Students

Variables	M	SD	n	1	2	3	4
Family	16.50	7.85	256	--			
Friend	15.37	7.71	256	.77**	--		
Significant Other	16.82	7.81	256	.80**	.77**	--	
ES-ER	16.66	5.88	256	.63**	.61**	.57**	--

Note. ES-ER = Expressive Suppression, ** $p < .01$, *** $p < .001$.

As shown in Table 2, Family, Friend, and Significant-Other support were all positively correlated with Expressive Suppression: Family ($r = .633$, $p < .01$), Friend ($r = .612$, $p < .01$), and Significant Other ($r = .571$, $p < .01$). Strong inter-correlations were also observed among support sources: Family-Friend ($r = .765$, $p < .01$), Family-Significant Other ($r = .796$, $p < .01$), and Friend-Significant Other ($r = .768$, $p < .01$).

Table 3: Multiple Linear Regression Predicting Cognitive Reappraisal from Family, Friend, and Significant-Other Support (N=256)

Variable	B	β	SE	t	p	95% CI	
						UL	LL
Constants	4.87		.93	5.25	<.001	[6.79, 3.04]	
Family	.31	.24	.19	3.68	<.001	[.49, .14]	
Friend	.49	.37	.18	5.81	<.001	[.75, .32]	
Significant Other	.32	.25	.19	3.79	<.001	[.59, .25]	
R		.80					
R ²		.64					
ΔR^2		.65					
F		150.45			<.001		

Note. N = 256, *** $p < .001$.

Table 3 Shows the impact of Family, Friend and Significant Others on cognitive Reappraisal ER among university students. The value of R^2 is .64 shows that the predictor variables explained 64% variance in the outcome variable with $F(3, 252) = 150.45$, $p < .001$. The findings showed that ER is positively predicted by Family Support ($\beta = .24$, $p < .001$), Friend Support ($\beta = .37$, $p < .001$) and Significant Others ($\beta = .25$, $p < .001$).

Table 4: Multiple regression showing Perceived Social Support as the predictor of Suppression Emotional Regulation (N=256)

Variable	B	β	SE	t	p	95% CI	
						UL	LL
Constants	8.15		.67	11.86	<.001	[9.48, 6.71]	
Family	.38	.37	.16	4.35	<.001	[.40, .25]	
Friend	.22	.28	.16	3.55	<.001	[.34, .19]	
Significant Other	.15	.16	.16	.70	.485	[.27, -.18]	
R		.66					
R ²		.44					
ΔR^2		.44					
F		66.34			<.001		

Note. N = 256, *** $p < .001$.



Table 4 Shows the impact of Family, Friend and Significant Others on Suppression ER. The value of R^2 is .44. It shows that the support explained 44% variance in suppression with $F(3, 252) = 66.34, p < .001$. The findings revealed that ER is positively predicted by Family ($\beta = .37, p < .001$) and Friend ($\beta = .28, p < .001$) whereas Significant Others has non-significant effect on ER ($\beta = .16, p > .05$).

Table 5: *Independent Samples t-Test Comparing Cognitive Reappraisal and Expressive Suppression Scores between Male and Female Students*

Variables	Male		Female		$t(254)$	p	Cohen's d
	M	SD	M	SD			
CR	24.02	10.00	21.34	9.95	2.15	.032*	0.3
ES	16.28	6.66	17.09	4.88	-1.11	.270	0.3

Note; PSS = Perceived Social Support, ER = Emotional Regulation

Table 5 shows a significant gender difference in Cognitive Reappraisal, $t(254) = 2.152, p = .032$, with males ($M = 24.02, SD = 10.00$) scoring higher than females ($M = 21.34, SD = 9.95$). Expressive Suppression did not differ significantly between males ($M = 16.28, SD = 6.66$) and females ($M = 17.09, SD = 4.88$), $t(254) = -1.106, p = .270$. The value of Cohen's d is 0.3 ($d < .80$) indicates medium effect size.

Table 6: *Independent Samples t-Test Comparing Cognitive Reappraisal and Expressive Suppression Scores between First-Born and Second-Born Students*

Variables	First		Second		$t(254)$	p	Cohen's d
	M	SD	M	SD			
CR	18.40	8.81	29.86	7.63	-10.61	<.001	1.5
ES	14.46	5.13	20.28	5.23	-8.74	<.001	1.4

Note; CR = Cognitive Reappraisal, ES = Expressive Suppression

Table 6 shows significant differences between first-born and second-born students. Second-born students scored higher on Cognitive Reappraisal ($M = 29.86, SD = 7.63$) compared to first-born students ($M = 18.40, SD = 8.81$), $t(254) = -10.607, p < .001$, with a very large effect size (Cohen's $d = 1.50$). Similarly, Expressive Suppression was higher in second-born students ($M = 20.28, SD = 5.23$) than first-born students ($M = 14.46, SD = 5.13$), $t(254) = -8.741, p < .001$, also showing a large effect size (Cohen's $d = 1.13$).

Table 7: *Mean Differences Across Socioeconomic Status in terms of Cognitive Reappraisal and Expressive Suppression*

Planned Contrast Comparison				
Variables	$F(2,253)$	η^2	Socioeconomic Status (M, SD)	Socioeconomic Status (M, SD)
CR	4.11*	.03	Lower Class (20.53, 9.80)	Middle Class* (22.46, 10.01)
			Middle Class (22.46, 10.01)	Upper Class* (26.78, 9.63)
ES	6.92**	.05	Lower Class (15.40, 5.22)	Middle Class** (16.32, 6.05)
			Middle Class (16.32, 6.05)	Upper Class** (19.86, 4.75)



Note; NS = Not Significant

Table 7 indicates significant differences across socioeconomic status for both emotion regulation strategies. Cognitive reappraisal differed significantly across SES groups, $F(2,253) = 4.11$, $p < .05$, $\eta^2 = .03$. Post hoc comparisons showed that upper-class students reported significantly higher cognitive reappraisal scores than both middle- and lower-class students, following the pattern: Lower < Middle* < Upper*. Similarly, expressive suppression showed significant variation across SES groups, $F(2,253) = 6.92$, $p < .01$, $\eta^2 = .05$. Tukey post hoc analysis revealed that upper-class students scored significantly higher on expressive suppression compared to middle- and lower-class students, with the trend: Lower < Middle** < Upper**.

Discussion

The current study investigated the relationships between perceived social support and emotion regulation strategies, as well as the influence of gender, birth order, and socioeconomic status on these processes among university students.

Consistent with previous literature, perceived social support from family, friends, and significant others was positively associated with adaptive emotion regulation tendencies (Karam et al., 2023b). Prior research has found that stronger social support networks facilitate more effective emotion regulation and psychological well-being among students, as individuals with supportive relationships can reinterpret stressors and manage emotional experiences more flexibly (Lopez et al., 2023b). Such findings align with broad models of social support as a buffer against emotional distress and a promoter of emotional resilience (Renna et al., 2017).

However, some research suggests that the influence of social support on emotion regulation is conditional, varying by context and stress levels (Chukwuemeka & Obioha, 2023). For example, studies indicate that although social support can buffer negative impacts of maladaptive strategies, it may also attenuate the benefits of adaptive strategies like cognitive reappraisal under certain stress conditions (Urano & Ikeda, 2020). This nuance implies that support alone does not always guarantee better regulation; how it interacts with individual coping contexts matters (Folkman et al., 1986; Marroquín & Nolen-Hoeksema, 2015).

The relationship between social support and expressive suppression in this study generally reflects supportive findings from broader research showing that social resources can shape expressive behaviors, particularly in social or academic environments where emotional control is culturally valued (Lopez et al., 2023b). Still, research also cautions that expressive suppression is not always adaptive in some contexts it has been linked with increased psychological distress when social support is low or inconsistent (Chukwuemeka & Obioha, 2023). Thus, while support can facilitate emotional expression or suppression depending on the situation, its effects are not universally beneficial (Durlak et al., 2011; Forsblom et al., 2021).

Demographic factors further differentiated emotion regulation patterns (Doménech-Betoret et al., 2017). Gender differences observed in this study where males and females showed distinct regulation tendencies align with evidence that socialization processes contribute to how individuals manage emotions (Masumoto et al., 2016). Gender roles and expectations (Cage et al., 2021; Charalambous, 2020), particularly within educational settings, may influence the choice of regulation strategies (Urano & Ikeda, 2020). Conversely, some research reports minimal gender differences in expressive or



control strategies when contextual factors are accounted for, suggesting that gender effects can be nuanced and not always robust across populations (Zhang et al., 2018; D'Arbeloff et al., 2018).

Birth order differences in emotional regulation observed in this study are consistent with developmental theories suggesting that later-born children may benefit from learning social and emotional skills from older siblings, supporting more adaptive regulation (Chukwuemeka & Obioha, 2023). Family dynamics and sibling interactions provide experiences that enrich regulatory capacities over time (Canizares et al., 2024; Rueger et al., 2014). Although less frequently studied in adult populations, models of sibling influence have shown that later-born children often develop distinct socio-emotional competencies that reflect this learning process (Sanchis-Sanchis et al., 2020).

Socioeconomic status also emerged as an important contextual variable shaping emotion regulation (Herd et al., 2020). Students from higher SES backgrounds tended to exhibit more adaptive regulation strategies, which mirrors broader research showing that greater socioeconomic resources provide access to supportive environments and emotional resources that enhance regulatory skills (Crandall et al., 2015). Yet, some recent evidence suggests that the relationship between SES and emotional functioning can be moderated by parenting and cultural norms (Troy et al., 2016), indicating that higher SES does not uniformly translate into better emotional outcomes without supportive developmental environments (Brockman et al., 2016; Wang et al., 2022; Gnilka et al., 2012).

Taken together, this study underscores that perceived social support is an integral psychosocial resource for emotion regulation among university students (Karam et al., 2023a), and that demographic characteristics add complexity to these relationships (Maurer et al., 2023). Supportive studies highlight the facilitating role of social resources, while more nuanced research clarifies that support interacts dynamically with individual, contextual, and cultural factors in shaping emotion regulation outcomes (Moreira & Canavarro, 2019; Raposo & Francisco, 2022; Sanchis-Sanchis et al., 2020).

Conclusion

This study highlights the pivotal role of perceived social support in shaping students' emotional regulation. Findings suggest that support from family, friends, and significant others significantly contributes to how students manage and control their emotions. Gender, birth order, and socioeconomic status also influence emotional regulation, indicating that demographic factors interact with social support in meaningful ways. Although the study provides valuable insights, the limited sample size (N = 256) may restrict generalizability. Future research with larger and more diverse samples is recommended to further explore these relationships.

References

- Al-Hawtali, A. M., Zaib, K., & Al-Hossini, A. S. (2025). Voices in exile: Postcolonial identity and Muslim immigrant experience in Abdulrazak Gurnah's *Admiring Silence*. *Academy of Education and Social Sciences Review*, 5(4), 579-588.
- Azmitia, M., Syed, M., & Radmacher, K. (2013). Finding your niche: Identity and emotional support in emerging adults' adjustment to the transition to college. *Journal of Research on Adolescence*, 23(4), 744-761. <https://doi.org/10.1111/jora.12037>



- Barrett, L. F., Lane, R. D., Sechrest, L., & Schwartz, G. E. (2000). Sex Differences in emotional awareness. *Personality and Social Psychology Bulletin*, 26(9), 1027–1035. <https://doi.org/10.1177/01461672002611001>
- Bolger, N., & Eckenrode, J. (1991). Social relationships, personality, and anxiety during a major stressful event. *Journal of Personality and Social Psychology*, 61(3), 440–449. <https://doi.org/10.1037/0022-3514.61.3.440>
- Blakemore, S.-J., & Mills, K. L. (2014). Is adolescence a sensitive period for sociocultural processing? *Annual Review of Psychology*, 65(1), 187–207. <https://doi.org/10.1146/annurev-psych-010213-115202>
- Brockman, R., Ciarrochi, J., Parker, P., & Kashdan, T. (2016). Emotion regulation strategies in daily life: mindfulness, cognitive reappraisal and emotion suppression. *Cognitive Behaviour Therapy*, 46(2), 91–113. <https://doi.org/10.1080/16506073.2016.1218926>
- Cage, E., Jones, E., Ryan, G., Hughes, G., & Spanner, L. (2021). Student mental health and transitions into, through and out of university: Student and staff perspectives. *Journal of Further and Higher Education*, 1–14. <https://doi.org/10.1080/0309877X.2021.1875203>
- Cano, M. Á., Castro, F. G., De La Rosa, M., Amaro, H., Vega, W. A., Sánchez, M., Rojas, P., Ramírez-Ortiz, D., Taskin, T., Prado, G., Schwartz, S. J., Córdova, D., Salas-Wright, C. P., & De Dios, M. A. (2020). Depressive Symptoms and Resilience among Hispanic Emerging Adults: Examining the Moderating Effects of Mindfulness, Distress Tolerance, Emotion Regulation, Family Cohesion, and Social Support. *Behavioral Medicine*, 46(3–4), 245–257. <https://doi.org/10.1080/08964289.2020.1712646>
- Charalambous, M. (2019). Variation in transition to university of life science students: exploring the role of academic and social self-efficacy. *Journal of Further and Higher Education*, 44(10), 1419–1432. <https://doi.org/10.1080/0309877X.2019.1690642>
- Chukwuemeka, N. A., & Obioha, C. W. (2023). Emotion regulation strategies on psychological distress and psychological well-being of caregivers of mentally challenged children: moderating role of social support. *Psychology Health & Medicine*, 29(1), 79–91. <https://doi.org/10.1080/13548506.2023.2289473>
- Crandall, A., Ghazarian, S. R., Day, R. D., & Riley, A. W. (2015). Maternal Emotion regulation and adolescent Behaviors: the mediating role of family functioning and parenting. *Journal of Youth and Adolescence*, 45(11), 2321–2335. <https://doi.org/10.1007/s10964-015-0400-3>
- D'Arbeloff, T. C., Freedy, K. R., Knodt, A. R., Radtke, S. R., Brigidi, B. D., & Hariri, A. R. (2018). Emotion regulation and the experience of future negative mood: The importance of assessing social support. *Frontiers in Psychology*, 9, 2287. <https://doi.org/10.3389/fpsyg.2018.02287>
- Doménech-Betoret, F., Abellán-Roselló, L., & Gómez-Artiga, A. (2017). Self-Efficacy, Satisfaction, and Academic Achievement: The Mediator role of Students' Expectancy-Value Beliefs. *Frontiers in Psychology*, 8, 1193. <https://doi.org/10.3389/fpsyg.2017.01193>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing student's social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Folkman, S., Lazarus, R. S., Gruen, R. J., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology*, 50(3), 571–579. <https://doi.org/10.1037/0022-3514.50.3.571>



- Forsblom, L., Pekrun, R., Loderer, K., & Peixoto, F. (2021). Cognitive appraisals, achievement emotions, and students' math achievement: A longitudinal analysis. *Journal of Educational Psychology*, 114(2), 346–367. <https://doi.org/10.1037/edu0000671>
- Gnilka, P. B., Ashby, J. S., & Noble, C. M. (2012). Multidimensional perfectionism and anxiety: Differences among individuals with perfectionism and tests of a coping mediation model. *Journal of Counseling & Development*, 90(4), 427–436. <https://doi.org/10.1002/j.1556-6676.2012.00054.x>
- Guimond, S. (2007). Psychological Similarities and Differences between Women and Men across Cultures. *Social and Personality Psychology Compass*, 2(1), 494–510. <https://doi.org/10.1111/j.1751-9004.2007.00036.x>
- Herd, T., Briant, A., King-Casas, B., & Kim-Spoon, J. (2021). Associations between developmental patterns of negative parenting and emotion regulation development across adolescence. *Emotion*, 22(2), 270–282. <https://doi.org/10.1037/em0000997>
- Herd, T., King-Casas, B., & Kim-Spoon, J. (2020). Developmental Changes in Emotion Regulation during Adolescence: Associations with Socioeconomic Risk and Family Emotional Context. *Journal of Youth and Adolescence*, 49(7), 1545–1557. <https://doi.org/10.1007/s10964-020-01193-2>
- Holt-Lunstad, J. (2021). The major health implications of social connection. *Current Directions in Psychological Science*, 30(3), 251–259. <https://doi.org/10.1177/0963721421999630>
- Karam, J., Fekih-Romdhane, F., Fawaz, M., Malaeb, D., Obeid, S., & Hallit, S. (2023a). The moderating effect of emotion regulation in the association between social support and religiosity and psychological distress in adults. *BMC Psychology*, 11(1), 120. <https://doi.org/10.1186/s40359-023-01160-z>
- Karam, J., Fekih-Romdhane, F., Fawaz, M., Malaeb, D., Obeid, S., & Hallit, S. (2023). The moderating effect of emotion regulation in the association between social support and religiosity and psychological distress in adults. *BMC Psychology*, 11(1), 120. <https://doi.org/10.1186/s40359-023-01160-z>
- Kim, Y., Kim, S., & Yoon, S. (2024). Emotion malleability beliefs matter in emotion regulation: A comprehensive review and meta-analysis. *Cognition & Emotion*, 38(6), 841–856. <https://doi.org/10.1080/02699931.2024.2334833>
- Lopes, P. N., Salovey, P., Côté, S., Beers, M., & Petty, R. E. (Ed.). (2005). Emotion Regulation Abilities and the Quality of Social Interaction. *Emotion*, 5(1), 113–118. <https://doi.org/10.1037/1528-3542.5.1.113>
- Lopez, R. B., Courtney, A. L., Liang, D., Swinchoski, A., Goodson, P., & Denny, B. T. (2023). Social support and adaptive emotion regulation: Links between social network measures, emotion regulation strategy use, and health. *Emotion*, 24(1), 130–138. <https://doi.org/10.1037/em00001242>
- Masumoto, K., Taishi, N., & Shiozaki, M. (2016). Age and Gender Differences in Relationships Among Emotion Regulation, Mood, and Mental Health. *Gerontology and Geriatric Medicine*, 2. <https://doi.org/10.1177/2333721416637022>
- Marroquín, B., and Nolen-Hoeksema, S. (2015). Emotion regulation and depressive symptoms: close relationships as social context and influence. *J. Pers. Soc. Psychol.* 109, 836–855. <https://doi.org/10.1037/pspi0000034>
- Maurer, J., Meyrose, A., Kaman, A., Mauz, E., Ravens-Sieberer, U., & Reiss, F. (2023). Socioeconomic Status, Protective Factors, and Mental Health Problems in Transition



- from Adolescence to Emerging Adulthood: Results of the Longitudinal BELLA Study. *Child Psychiatry & Human Development*, 56(3), 649–660. <https://doi.org/10.1007/s10578-023-01582-1>
- Moreira, H., & Canavarro, M. C. (2019). Mindful Parenting is Associated with Adolescents' Difficulties in Emotion Regulation Through Adolescents' Psychological Inflexibility and self-Compassion. *Journal of Youth and Adolescence*, 49(1), 192–211. <https://doi.org/10.1007/s10964-019-01133-9>
- Raposo, B., & Francisco, R. (2022). Emotional (dys)Regulation and Family Environment in (non)Clinical Adolescents' Internalizing Problems: The Mediating Role of Well-Being. *Frontiers in Psychology*, 13, 703762. <https://doi.org/10.3389/fpsyg.2022.703762>
- Renna, M. E., Quintero, J. M., Fresco, D. M., & Mennin, D. S. (2017). Emotion Regulation Therapy: A Mechanism-Targeted Treatment for Disorders of Distress. *Frontiers in Psychology*, 8, 98. <https://doi.org/10.3389/fpsyg.2017.00098>
- Regehr, C., Glancy, D., & Pitts, A. (2012). Interventions to reduce stress in university students: A review and meta-analysis. *Journal of Affective Disorders*, 148(1), 1–11. <https://doi.org/10.1016/j.jad.2012.11.026>
- Sanchis-Sanchis, A., Grau, M. D., Moliner, A., & Morales-Murillo, C. P. (2020). Effects of age and gender in emotion regulation of children and Adolescents. *Frontiers in Psychology*, 11, 946. <https://doi.org/10.3389/fpsyg.2020.00946>
- Sharma, P., Sharma, P., & Begum, S. (2025). Birth order differences in emotional intelligence and its impact on interpersonal relationships. Zenodo (CERN European Organization for Nuclear Research). <https://doi.org/10.5281/zenodo.17165554>
- Suberviola, I. (2025). An emotional competence in higher education: an multidimensional study on gender, academic discipline and educational stage. *European Journal of Psychology of Education*, 41(1). <https://doi.org/10.1007/s10212-025-01054-1>
- Troy, A. S., Ford, B. Q., McRae, K., Zorolia, P., & Mauss, I. B. (2016). Change the things you can: Emotion regulation is more beneficial for people from lower than from higher socioeconomic status. *Emotion*, 17(1), 141–154. <https://doi.org/10.1037/em00000210>
- Urano, Y., & Ikeda, T. (2020). Perceived social support moderates the association between emotion regulation and psychological distress: a cross-sectional study among Japanese adults. *Psychology Health & Medicine*, 26(10), 1195–1205. <https://doi.org/10.1080/13548506.2020.1802051>
- Wang, W., Nepal, S., Huckins, J. F., Hernandez, L., Vojdanovski, V., Mack, D., Plomp, J., Pillai, A., Obuchi, M., Dasilva, A., Murphy, E., Hedlund, E., Dartmouth College, Rogers, C., Meyer, M., & Campbell, A. (2022). First-Gen Lens: Assessing Mental Health of First-Generation Students across Their First Year at College Using Mobile Sensing. In *Proc ACM Interact Mob Wearable Ubiquitous Technol* (No. 2; Vol. 6, pp. 1–2). <https://doi.org/10.1145/3543194>
- Zang, Z., Dolcos, F., Hohl, K., Bogdan, P. C., & Dolcos, S. (2025). The role of sex differences in the link between Emotion Regulation and Psychological Well-Being during a major mental health crisis. *Behavioral Sciences*, 15(5), 636. <https://doi.org/10.3390/bs15050636>
- Zhang, M., Zhang, J., Zhang, F., Zhang, L., & Feng, D. (2018). Prevalence of psychological distress and the effects of resilience and perceived social support among Chinese college students: Does gender make a difference? *Psychiatry Research*, 267, 409–413. <https://doi.org/10.1016/j.psychres.2018.06.038>



Zhou, S., Wu, Y., & Xu, X. (2023). Linking cognitive reappraisal and expressive suppression to Mindfulness: a Three-Level Meta-Analysis. *International Journal of Environmental Research and Public Health*, 20(2), 1241. <https://doi.org/10.3390/ijerph20021241>