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The Association of Emotion Regulation Strategies with Psychological and Physical Health among Low-Income Families

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ABSTRACT

Background*: Due to poverty youths from poor families' struggle mostly in matters, concerning emotional self-control and this will major in either way affect psychological or physical well-being. There is a need to have better ways to manage stress that well known to have severe impacts on the human being. However, relatively little known about how these strategies affect the wellbeing of disadvantaged adolescents particularly in terms of their mental and physical health.* ***Aim****: The study sought to examine the association of emotion regulation strategies with psychological and physical health among adolescents from low-income families.* ***Method****: In this cross-sectional descriptive design, 500 adolescents of low-income families were included. Self-reported questionnaires assessed emotion regulation strategies, psychological health and physical health indices. Cross-tabulations along with comparisons and regression tests performed to compare the relations between the variables.* ***Results****: Adaptive strategies was positively correlated with psychological health, with $r = 0.25$, $p < 0.01$) while poor physical health was significantly predicted by maladaptive strategies with $\beta = -0.146$, $p = 0.001$). Therefore, regression analyses showed that there was significant amount of variance in psychological and physical health indices that was explained by the ER strategies; $F(4, 268) = 22.28$, $p < .001$; $\eta^2 = .258$, $p < .001$.* ***Conclusion****: Consequently, the results support the need for developing and advocating for efficient regulation of emotion to improve psychological and physical well-being of students from low-income families. Such findings indicate that enhancing the mechanism in this category of people may help enhance their general quality of life.*

Introduction

Adolescence is a critical developmental stage characterized by intense emotional experiences and the emergence of complex emotional regulation abilities (Schmidt et al., 2021; Breaux et al., 2022; Ratliff et al., 2023). During this period, adolescents begin to refine their ability to manage and respond to emotional challenges, which plays a significant role in their overall well-being. Emotion regulation is a multidimensional construct, encompassing strategies used to modulate emotional experiences, such as reappraisal, suppression, and acceptance (Lu et al., 2021; Yin et al., 2022). These strategies vary in their effectiveness and shaped by both individual and contextual factors, including family environment, socioeconomic status, and access to supportive resources (Paschke et al., 2021; DiClemente & Richards, 2022). Adolescents from low-income families may face additional challenges in developing and utilizing adaptive emotion regulation strategies, given the external stressors they encounter on a daily basis (Roberts et al., 2022).

Low-income families often experience financial instability, limited access to healthcare, and inadequate social support systems, which can exacerbate stress and contribute to the development of maladaptive coping mechanisms (Greene et al., 2021; Yang et al., 2023). For adolescents in these environments, the absence of protective factors such as emotional support, positive role models, or resources for mental health intervention can result in heightened emotional vulnerability. The ability to regulate emotions effectively in such contexts becomes essential, as it influences not only their emotional well-being but also their physical health outcomes (Noroña-Zhou & Tung, 2021). Riazi et al. (2023), suggests that inadequate emotion regulation strategies can lead to a range of psychological difficulties, including depression, anxiety, and emotional dysregulation, which are more prevalent in low-income adolescent populations.

Psychological health often compromised when adolescents lack the tools effectively manage negative emotions (Goodman et al., 2021; Batool et al., 2022). The psychological stress experienced by low-income adolescents can lead to the development of mental health issues, such as anxiety, depression, and low self-esteem. Furthermore, poor emotion regulation can make it more difficult for adolescents to cope with daily stressors, resulting in emotional and behavioral challenges that may interfere with academic performance and social relationships (Stojek et al., 2021; Lozada et al., 2022). It increasingly recognized that adolescents' emotional experiences deeply intertwined with their psychological health, and the ability to regulate these emotions may buffer against the negative effects of external stressors, particularly in disadvantaged populations (Yuan et al., 2022).

In addition to psychological well-being, emotion regulation strategies have implications for physical health outcomes in adolescents (Longhi et al., 2021). Poor emotional regulation can manifest in physical symptoms, including sleep disturbances, fatigue, and increased vulnerability to chronic health conditions. Adolescents who struggle with emotional dysregulation are more likely to engage in health-compromising behaviors, such as poor nutrition, lack of physical activity, and substance use (Shorer et al., 2021; Doan et al., 2022). Furthermore, chronic emotional stress can activate physiological stress responses, which may contribute to long-term health problems, including cardiovascular issues, weakened immune function, and other stress-related disorders. The relationship between emotion regulation and physical health is especially critical in low-income adolescents, who may lack access to adequate healthcare and preventive services (Muñoz-Navarro et al., 2021).

The connection between emotion regulation and both psychological and physical health underscores the importance of understanding how adolescents in low-income families navigate

emotional challenges (Millonado Valdez & Daep Datu, 2021). Given the environmental and societal stressors, these adolescents face, it is crucial to explore how emotion regulation strategies can serve as protective factors or risk factors for their well-being (Gülay Ogelman & Fetihi 2021; Duprey et al., 2023; Rahman et al., 2025). Effective emotion regulation may serve as a buffer against the adverse effects of stress, while maladaptive strategies may exacerbate existing vulnerabilities. By examining the ways in which emotion regulation influences both mental and physical health, it can better understand the complex interplay between emotional processes and overall adolescent health in low-income contexts (Wadsworth et al., 2022; Akram et al., 2024).

While emotion regulation strategies studied in various populations, there remains a need for research specifically focusing on low-income adolescents, who may face unique challenges in emotional development (Leung et al., 2022). Understanding how these adolescents manage their emotions and how these strategies relate to their psychological and physical health outcomes can provide valuable insights for interventions aimed at supporting emotional development in this vulnerable group. By focusing on this demographic, there is a need to work toward creating targeted strategies that enhance emotion regulation skills, ultimately improving the quality of life and health outcomes for adolescents from low-income families (Zimmerman et al., 2021; Batool et al., 2022).

Low-income adolescents challenged differently emotionally and environmentally, and they fail to develop coping mechanisms for emotions that affect their psychological and physical well-being. According to the study and the experiences from the field, successful regulation of emotions is a part of healthy functioning, especially in vulnerable populations (Sorsdahl et al., 2024; Batool et al., 2025). This particular study aims at examining the correlation between emotion regulation strategies and health in this population because such information will help in advancing understanding of how emotional processes impact this population's mental as well as physical wellbeing. Thus, the objective of this study concerns the exploration of the protective and risk factors in the context of adolescent emotional self-regulation and low-income families. It is in this context that the study intends to contribute with the identification of relevant findings that may inform the design of preventive and facilitating strategies in the emotional growth and psychologists' help seeking by middle-aged women. It hoped that the elucidation of the link between emotion regulation and health or illness might ultimately enhance coping in this vulnerable adolescent population while enhancing the quality of life experiences for adolescent from low-income families.

Method

The current study used a quantitative cross-sectional research approach in an effort to examine the relationship between emotion regulation strategies and psychological and physical health of adolescents coming from low-income families in the big cities of Pakistan. The target population of study was 300 adolescents between 10-19 years old and was a purposive non-probability sample. This paper used a sample of 200 respondents to achieve high statistical power for analysis and the sample size calculated using G Power. The inclusion criteria targeted low income earning families' adolescents between 10 and 19 years while exclusion criteria was having any form of cognitive disability or having a severe terminal disease that would hinder them from participation in research.

A demographic profile employed to obtain personal attributes of the participants as well as their age, gender and socioeconomic status. The study utilized three validated questionnaires: The scales include the Adolescent Emotion Regulation Questionnaire (AERQ) and the Physical Health Questionnaire (PHQ) together with the Youth Self-Report (YSR). The AERQ by Gross and John

in 2003 designed for the measurement of the emotion regulation of adolescents having 10 number of items. The YSR developed by Khan and Avan in 2014 directed to assess the psychological well-being of the adolescents comprised of 112 number of items. The PHQ, completed by Schat in 2005 used to self-assess physical health with the completion of 14 items. All the instruments possessed good reliability: Cronbach & Alphas scores for the current study located in the adequate internal consistency range (0.80–0.86). The internal consistency validity test of these instruments checked by factor analysis and pilot testing to guarantee that the tools were culturally appropriate and presented in a simple straightforward language of the targeted community.

Descriptive analysis performed using the Statistical Package for Social Sciences (SPSS) Version 28. The frequency data were compiled and analyzed descriptively, using measures like mean, standard deviation and actual as well as potential ranges were computed; besides skewness and kurtosis tests were conducted on the data. Descriptive statistics involved frequency distributions, measures of central tendency, variability, and mode descriptive statistics Inferential statistics used were Cronbach's alpha reliability coefficient, Pearson's product-moment correlation coefficient, linear regression F-test, t-test for independent samples, and analysis of variance. Collection of data done with the permission of IRB from National University of Modern Language (NUML) and consent of participants and their parents. Ethnical concerns guaranteed that all the participants' form and anonymity upheld during the study process. Ethical requirements followed in the study and the used tools were culturally suitable and understandable when translated.

Results

Table 1 demographic, it is evident that a greater majority of the individuals are from nuclear families, 63.6%, and within the age of 10-14years 76.6%. In gender distribution, there are more female (60.6%) than male (39.4%) participants and the income of most of the participants fall in the range 50001—100000 (40.8%) Participants who claimed to come from a family of 2 or 3 siblings dominates the sample frame (31.2%) The father's occupation mainly involves respondents who are not engaged in any paid work (70%), most of the respondents (97.4 %) reported information about themselves (N = 487).

Table 1: ***Demographical Information of the study participants. (N=500)***

Variable	Categories	F	%
Family Structure			
	joint family system	182	36.4
	Nuclear Family System	318	63.6
Age			
	11 – 14	383	76.6
	15 – 18	104	20.8
	18 – 22	13	2.6
Gender			
	Male	197	39.4
	Female	303	60.6
Total income (yearly)			
	0 - 50,000	162	32.4
	50,001 - 100,000	204	40.8
	100,001 - 150,000	134	26.8
Birth order			
	First born/ Eldest	178	35.6

	Second born	153	30.6
	third Born	110	22.0
	Forth born	30	6.0
	Last born/ Youngest	29	5.8
Siblings			
	.00	3	.6
	1.00	34	6.8
	2.00	73	14.6
	3.00	81	16.2
	4.00	95	19.0
	5.00	82	16.4
	6.00	64	12.8
	7.00	31	6.2
	8.00	16	3.2
	9.00	12	2.4
	10.00	5	1.0
	11.00	1	.2
	12.00	3	.6
Father occupation			
	Working	150	30.0
	Non-Working	350	70.0
Total earning members			
	1.00	179	35.8
	2.00	166	33.2
	3.00	101	20.2
	4.00	43	8.6
	5.00	8	1.6
	6.00	2	.4
	7.00	1	.2
Informer			
	Self	487	97.4
	Other	13	2.6

Note: *f* =frequency, % = personage

Table 2 of correlation analysis in fact revealed significant correlation coefficients for the psychological and emotion regulation strategies that were beyond the level of statistical significance. On the analytical correlations between the psychological and the behavioral outcomes, and between the emotion regulation strategies and behavioral outcomes the results also showed negative correlations.

Table 2: ***Correlation between use of adaptive emotion regulation strategies and physical health outcomes among adolescents from low-income families (N = 500).***

Variables	**M**	**S.D**	**Psychological**	**Emotion**	**Behavior**
Psychological	21.22	4.14	-	.25**	-.12**
Emotion	32.99	7.05	-	-	-.14**
Behavior	43.61	20.97	-	-	-

** = highly significant at .01

* = Significant at .05

Table 3 brings out the regression findings regarding the chosen emotion regulation strategies and psychological well-being of low-income adolescents. The analysis of the model indicates that emotion regulation correlates positively with psychological health; moreover, teaching emotion regulation increases psychological health ($\eta^2 = .258$, $p < .001$). For emotion regulation, the constant value was 15.909 and regression coefficient value was 0.131 (SE = 0.022). The results of this study indicate that better changes in emotion significantly related to improve psychological functioning in this population.

Table 3: ***Association of emotion regulation strategies with psychological health among adolescents from low-income families (N = 500*****).**

Variable	B	SE.B	B	T	p
(Constant)	15.909	.742		21.437	.000
Emotion	.131	.022	.258	5.954	.000

Graph 1The regression analysis of traits results in the form of scatter plot reveal negative correlation between emotion regulation strategies and emotion with slight slope showing male adolescents more negative correlation than the female ones. The data points for male curved with a steeper slope depicting a more significant decline and for the females have a less defined curve.

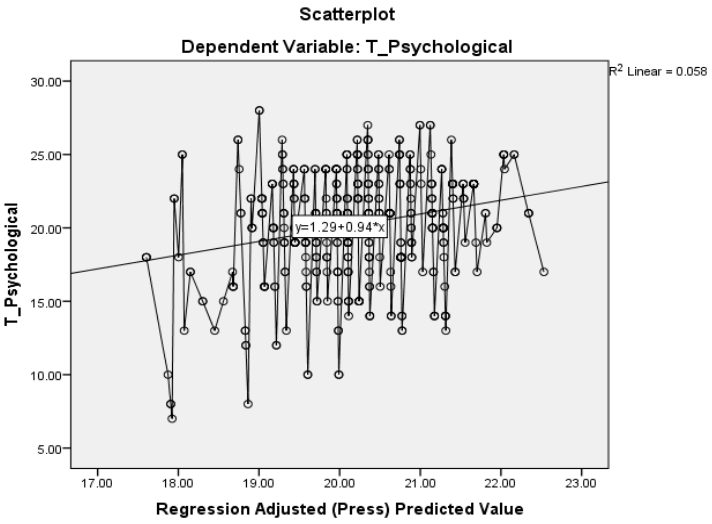
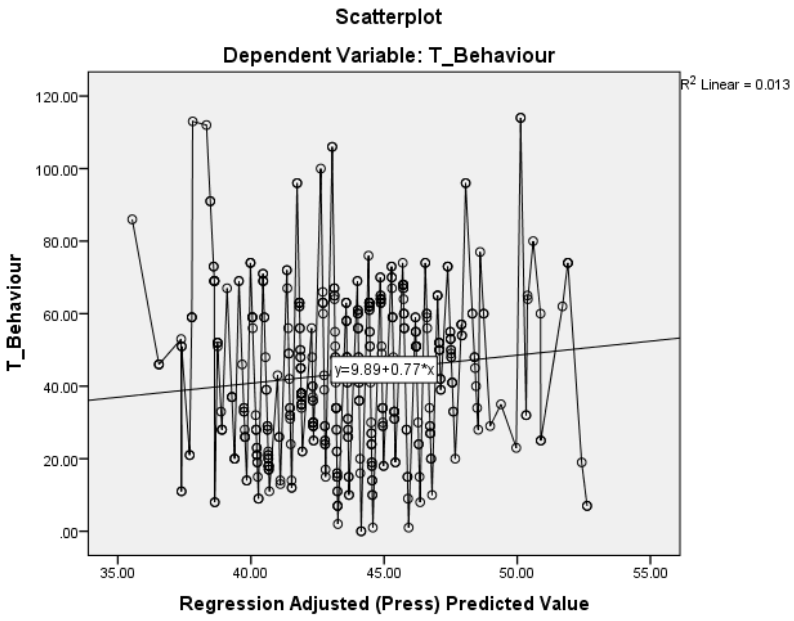


Table 4 shows the multiple regression results for predictors of stress reactivity, physical symptoms, and physical distress, using the sample of adolescents from low income families. The results show that there is a moderate negative correlation between emotion regulation and physical health ($\beta = -0.146$, $p = 0.001$) demonstrating that greater use of maladaptive strategies of emotion regulation is linked to poorer levels of health. The constant value was 57.950 and the regression coefficient of emotion regulation was -0.434 (SE = 0.132). Such findings imply that poor ER might affect their physical health of such individuals in this population.

Table 4: ***Association of emotion regulation strategies with physical health outcomes in adolescents from low-income families (N = 500*****).**

Variable	B	SE.B	β	t	p
(Constant)	57.950	4.451		13.021	.000
Emotion	-.434	.132	-.146	-3.294	.001

Graph 2 the regression analysis also shows that there is an inverse relationship between emotion regulation and physical health, such that greater maladaptive emotion regulation linked with worse physical health. The specifics of the trend imply that as the level of emotion regulation goes up, the level of physical health goes down in this group of adolescents.



Discussion

In turn, the findings of this research suggest that there is a positive correlation between emotion regulation modes and psychological and somatic health in teenagers from relevant families. This result is consistent with past studies investigating mental well-being in terms of the kind of emotion regulation strategies, where findings show that higher levels of adaptive emotion regulation are associated with better psychological health. Cognitive reappraisal and acceptance of emotion found to positively related with better function, lower level of anxiety, and favorable psychological health in different samples of population (Aldao et al., 2021; Batool et al., 2025). Similarly, the present study found a positive correlation between emotion regulation and psychological well-being; analysis of regression results revealed that emotion regulation significantly enhanced psychological well-being in adolescents from low-income families ($\eta^2 = .258$, $p < .001$). Such results indicate the need for enhancing the use of adaptive emotion regulation skills as a way of enhancing the psychological health among this population.

Nevertheless, at the same time, the study also points to a moderate negative correlation between each of the maladaptive emotion regulation strategy and physical health. The present finding aligns with this notion that rumination and suppression defined as poor emotion regulation related to greater physical symptoms and distress (Kraft et al., 2023; Rahman et al., 2025). In the current study, it was discovered that adolescent who used maladaptive strategies of emotion regulation had poorer physical health outcomes since emotion regulation was found to have a moderate negative relationship with physical health ($\beta = -0.146$, $p = 0.001$). Indeed, the detrimental effects of maladaptive strategies on physical health are self-explanatory; they noted that poor regulation of emotion make a person's physiological stress worse, make them more prone to chronic diseases, and lead to negative health outcomes in adolescents (Lin et al., 2024). This calls for prevention programs that address the areas of poor emotion regulation skills to mitigate those effects on the physical health.

The relationships demonstrated here between different patterns of psychological/emotional regulation directions in this study add to the growing concept in the holistic principle that Emotional health cannot separated from physical health. Since adolescents with better ER [emotional regulation] indices indicated better mental health, it may presumed that getting an improved ER could act as an important buffer that might shield against both psychological

adversities and physical illnesses. Other researchers in the stress field have noted that emotion regulation is an important moderator in the relationship between stress and health (Tsujimoto rt al., 2024). The current study extends this line of research by showing that teaching emotion regulation skills to adolescents from low-income families can enhance both psychological well-being, and physical health since stress and maladaptive coping strategies negatively affect the latter.

The regression analysis findings specifically deserve the male adolescents' less favorable trend in decreased physical health when they used maladaptive emotion regulation largely. On this basis, the findings are consistent with literature that has claimed that gender may mediate whether emotion regulation strategies have positive or negative health implications. For example, some research has also used to establish that males are more likely to engage in maladaptive forms of emotion regulation like suppression; which results to poor physical/mental health (Slovak et al., 2023). For example, viewing the current study's scatter plot in terms of the steepness of the line connecting the means, one might superimpose on it the slope found on previous work, indicating that emotion regulation might be more important for male than for female adolescents because they show greater vulnerability for physical ill being due to poor health coping.

First, it is important to consider that the present study contributes to the understanding of specific correlates of hope in adolescents from low-income families. Adaptive emotion regulation to psychological health counts while maladaptive regulation negatively influences the physical health of patients, this makes it crucial to increase the use of emotion regulation skills in therapy. Pedrini et al., (2022) 's research is in congruence with this approach and his paper suggested the integration of emotion regulation training in school based mental health programs to boost up the students' resilience and better mental health. Further, to physical health, this study raises the possibility that emotion regulation needs to target in a health-promoting framework for adolescents. Said measures may help thus enhance adolescents' psychological and physical health in the end especially where the adolescents' background is unfavorable.

Limitation

A major weakness of this research is that, the data collected is shaded with perceived self-generated data, in that some participants may give what perceived socially acceptable data while others may give data that are in line with their memory capabilities. Furthermore, this study has restricted the cross-sectional structure. It is not amenable to making causal relation based on effectiveness of different emotion regulation strategy and health.

Recommendation

They should also attempt to use more longitudinal and prospective designs in order to extend knowledge on the results of its training for the improvement of both psychological and physical health. Furthermore, it was possible to adopt more concrete acute/chronic health status markers to increase the validity of the outcomes.

Conclusion

The outcome of this study underlines that emotion regulation strategies have the potential to define the state of psychological and physical health of adolescents from low-income families. Appropriate emotional regulation had a beneficial correlation with Subjective wellbeing and appropriate measures of clinical psychopathology had beneficial correlation with Physical health.

Such findings pose the need to encourage samples that enhance healthy regulation of emotions as a way of enhancing both psychological and health among this special group of people. Subsequent studies that identify the temporal relationships as well as the manner through which these approaches influence the longer-terms outcomes of these strategies are required.

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