

Mediating Role of Self-Silencing in the Relationship Between Emotion Regulation and Eating Problems in Young Adults

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The present study intended to identify the mediating role of Self-silencing in association with emotion regulation and eating problems among 212 university students (Male 49%; Female 51%) between ages 17-26 years ($M = 20.77$, $SD = 1.89$) selected through Purposive sampling technique. The measures comprised demographic Performa, Difficulty in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), Self-Silencing Scale (SSS; Ashraf & Saleem, 2020), and Eating Problems Scale (EPS; Naeem et al., 2020). Simple Mediation analysis showed that self-silencing significantly partially mediates the relationship between DERS and EPS. The study's findings have vital ramifications for psychologists and counselors to provide tailor-made intervention focusing on effective emotion-regulation and assertive training as well as to offer proactive efforts to prevent eating problems in young adults.

Keywords. Emotion regulation, self-silencing, eating problems, university students

Young adults, age range started from late teens to thirties, are particularly at a vulnerable time in their development as they are still experiencing cognitive, social, and emotional development which might explain why one out of every five is affected a serious mental illness (Neinstein & Irwin, 2013). Colleges and universities bring an extraordinary brand of pressure to an individual's life with regards to academic, social, and personal stressors (Alloy et al., 2012). There are academic challenges, monetary crises, monetary emergencies, and new living courses of action, getting married or having children (Sironi,

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2018). During this period, young adults may face a variety of changes in their surrounding environment that can lead to a new perspective and sense of self (Walsh, 2014). They have to confront various challenges almost on daily due to which young adults experience variety of emotions (Arnett, 2020). In this critical situation, it holds significance for young adults to manage those emotions in a healthy and adaptive way. Dealing with emotions is a process of regulating, modifying, and changing emotions in a way that helps and facilitates them in attaining their desirable goals (Duffy, 2019; Tsujimoto et al., 2024; Vitale & Bonaiuto, 2024).

Effective Emotion Regulation (ER) is essential for young adults as in this stage of life ER play a vital role in their progress by dealing with the daily basis stressors and intense emotional experience effectively (Gomez et al., 2018). When an individual may not able to deal effectively with these stressors, they are more likely to be vulnerable to develop psychological problems especially those related to self-regulation i.e. emotion, sleep, and eating patterns (Mezuk et al., 2017; Walsh, 2014). Emotions are like irresistible forces that have a sweeping influence on our behaviors (Cherry & Morin, 2019). People are versatile in dealing with their emotions as basically people have some control over each feature of emotional processing, including how emotions synchronize attention, concentration, the psychological assessments that structure our emotional experience, and the physiological results of emotions (Tyng et al., 2017). These procedures of managing our emotions are commonly termed as ER (Peña-Sarrionandia et al., 2015). According to Rolston et al. (2016), ER is the capacity to oversee and respond to an emotional experience adequately. ER empowers an individual to comprehend their feelings and emotions bringing about directing their actions. Individuals who cannot adequately manage any emotional experience may have various sorts of ER problems (Fteiha & Awwad, 2020).

Leahy et al. (2012) outlined some ER problems, which are commonly found in people including a lack of awareness about one's emotional state, inaccurate labeling and inability to accept emotions by using different ways like ignoring, escaping or avoiding emotions. There are also some behavioral issues like lack of impulse control, in which a person reacts instead of responding; are incapable of viably seeking their needs; and chasing their objectives and life goals when encountering negative emotional experiences (Franco, 2018). According to Bailey (2022), the overall prevalence of emotional dysregulation in general population is 4% to 6%; it is comparatively more prevalent in women due to more intense experience of emotions, ruminating behavior, and frequent environmental invalidation. At the

time of stress, individuals with inadequate emotion processing skills cannot recognize, and deal with their emotions (Fteiha & Awwad, 2020). They try to avoid seeking help and suppress or ignore emotional difficulties that are maintained by an array of unhelpful cognitive, emotional, and behavioral responses including inactivity, avoidance, self-critical thoughts, and frustration. People who try to endure their agony and distress with inadequate ER abilities might evade and escape from potential triggers or suppress their negative emotional states and silence themselves (Hilt et al., 2011). The act of willingly refraining from expressing one's thoughts, emotions, opinions, feelings, and needs, is known as Self-Silencing (SS), which is done in order to maintain relationships, avoid conflict or argument, and fulfilling responsibilities by going beyond to their own choice or wish (Kim, 2019).

Person with SS behavior used to show reluctance in self-expression to stay away from any contention that might lead to relational strain or unease for their partner. These individuals also refrain from articulating their own needs, emotions, desires, or preferences (Kurtis, 2010). According to self-silencing initial theory, the act of SS takes on diverse forms, encompassing externalized self-perception, divided self, self-sacrifice, and silencing the self (Woodward et al., 2019). Although initially the SS phenomena was only attributed to the women but later on empirical studies suggest that SS is exhibited by both gender (Smolak, 2010). In previous literature, there is discrepancy on the point of view that in which gender SS is more prevalent as some studies showed higher prevalence rate in women than men (Emran et al., 2020; Emran et al., 2023; Lutz-Zois et al., 2013; Maji & Dixit, 2019) while some studies' results showed that this phenomenon is more prevalent in men as comparison to women (Jack & Ali, 2010; Ussher & Perz, 2010; Whiffen et al., 2007).

There is growing evidence from different studies to propose that difficulties in ER served as a perpetuating and precipitating factor of assorted health conditions including psychological as well as physical problems. It includes eating disorders (Shouse & Nilsson, 2011), anxiety disorders (Hirsh & Kang, 2016), major depression (Ahmed & Iqbal, 2019), impulse control disorders (Fox et al., 2008) chronic fatigue syndrome, irritable bowel syndrome (Ali et al., 2000), and hypertension (Hambrook et al., 2011). Researchers also examined that when a person with SS behavior doesn't communicate or express their thoughts and emotions, especially negative ones; it can cause emotional distress that regulated by external modes like engaging in unhealthy eating practices that further lead to eating disorders in severe cases (Kim, 2019; Locker et al., 2012).

Overall, men and women strive to cultivate, secure and maintain their relationship by SS behaviors and literature showed that SS is not a healthy strategy for this purpose as it creates hindrance in the experience and expression of emotions that lead to dysfunctioning in all aspects of life (Jack, 2011; Shouse & Nilsson, 2011). Eating problems (EP) are one of the major consequences of SS among men and women and these phenomena are becoming more prevalent in recent years and creating aiding problems in people's lives (Locker et al., 2012).

Eating disorders are characterized as the problems of feeding and weight or shape, and they can be viewed on a spectrum of under- to over-eating (Butler & Heimberg, 2020). It is also conceptualized as severe disturbances in eating-related thoughts, emotions, and behaviors. These eating disturbances, i.e., food restrictions, binge eating, purging, and so forth adversely affect a person's well-being (Mellowspring, 2023). According to a systematic literature review, the 12-month prevalence rate of eating disorders in women and men was 2.2% and 0.7% respectively. Continent-wise prevalence was respectively 4.6 %, 2.2%, and 3.5% for America, Europe, and Asia (Galmiche et al., 2019).

EP are potentially serious conditions that have significant negative impact on individuals' physical and psychological health (Van Eeden et al., 2021). These circumstances have perilous and decimating outcomes on person's all areas of life like personal, social, and occupational life (National Eating Disorders Association, 2018). Although people can develop eating disorders at any stage of life but the most vulnerable time period for developing eating disorders are teen years or young adulthood. According to latest report of 2018, the weighted mean prevalence of eating disorders all around the world is 8.8% in adults and 5.7% in adolescents. Eating disorders affect both genders and are more prevalent among females 3.8% than males 1.5% (Galmiche et al., 2019).

Due to the escalating impact of EP on individuals' ability to function in daily life, there exists a substantial body of research dedicated to uncovering both risk and protective factors for early identification. This study specifically delved into EP within the context of university students as during university years, most students step out independently from their homes and they begin to take their decisions on their own. During this critical transition period of life, young adults make food choices for the first time independently that can be healthy and unhealthy food choices and their food decisions and eating behaviors have a significant impact on their lives (Mezuk et al., 2017). The most common risk factor in eating disorders is emotion dysregulation in which people use unhealthy and maladaptive strategies

as a method to cope from stressful and negative experiences (Lavender et al., 2015; Patel et al., 2016).

This study would mark the significance of ER on psychological problems like SS and EP in young adults. The study aimed to explore ER and SS in young adults and their connection with EP. ER is like a blueprint of our lives because emotions provide the basis for behavior and emotion-regulation helps us to process and organize different important functions. This study intended to show significance of ER in personal, social, and occupational life. In the current study this construct was studied in relation to a relatively new phenomenon known as SS. The researcher will also investigate that either SS would direct and mediate the association between emotion dysregulation or EP since ER issues are connected with difficulties in self-expressiveness and EP.

Because of the seriousness, widespread occurrence, and intricate nature of eating issues among young adults, researchers investigate these problems during their university years, as this period is characterized by numerous challenges and stressors that have significant impact on students' physical as well as on their mental health. The current study also aimed to identify the risk factors or predictors of developing eating disorders in young adults in order to create awareness. The utility of current study findings would be significant for society, university students and counselors that facilitate them to fully understand and comprehend the importance and function of ER and SS. Moreover, it would also help them to develop remedial intervention plans to deal with EP. The constructs of the current study in young adults are not studied yet indigenously, so the current study fills the gaps in the literature of Pakistan by exploring the relationship among DER, SS, and EP in young adults. The aim of the current research was to explore the relationship among ER, SS, and EP in young adults. Moreover, this study will also find out the relationship among ER, SS, and EP with key demographical variables in young adults. It was hypothesized that there would be a positive relationship among DER, SS, and EP in young adults. We also hypothesized that SS would act as a mediator between ER and EP in young adults.

Method

Research Design

The current study employed a correlational research design to investigate the relationship among ER, SS, and EP in young adults. The research model for this study consisted of components design to

measure both the characteristics of the subjects, and the independent and dependent variables. The independent variables were ER and SS (also mediator) and dependent variable was EP. Correlational research is chosen to explore the relationships between variables without manipulation. It is useful for studying real-world phenomena, especially when experimental methods are not feasible. However, it cannot establish causality, only associations.

Participants

The current study gathered data from two government-run and two private university students of Lahore city. A sample of 212 university students (Male 49%; Female 51%) between ages 17-26 years ($M = 20.77$, $SD = 1.89$) were selected through purposive sampling technique. The inclusion criteria to select participants comprised only undergraduate university students (BS level) were included in this research.

Measures

Demographic Sheet

Demographic sheet consisted of various demographic such as, age, gender, university sector, family system, birth order, academic program/year, and education and profession of both father and mother.

Difficulties in Emotion Regulation Scale (DERS)

DERS is a self-report measure consisting of 36 items ($\alpha = .90$), designed to assess an individual's level of difficulty in regulating their emotions. Participants rate their responses on a 5-point Likert scale, ranging from 1 (*Never*) to 5 (*Always*). This scale comprises six factors, including: Non-Acceptance of Emotional Responses, Difficulty in Goal-Directed Behavior, Impulse Control Difficulties, Lack of Emotional Awareness, Limited Access to Emotion Regulation Strategies, and Lack of Emotional Clarity. Scores on this scale can range from 0 to 180, with higher scores indicating greater difficulties in ER.

Self-Silencing Scale (SSS)

Is a 37-items ($\alpha = .91$) indigenous self-report assessment tool designed for evaluating SS behaviors. It employs a 6-point Likert rating

scale, ranging from 0 (*Never*) to 5 (*Almost Always*), and consists of three subscales: Poor Self-concept (16 items, $\alpha = .90$), Care as Self-sacrifice (15 items, $\alpha = .85$), and Self-inhibition (06 items, $\alpha = .70$). The potential score range spans from 0 to 185, with higher scores indicating a greater presence of SS behaviors.

Eating Problems Scale (EPS)

Is a 63-items ($\alpha = .93$) self-report scale is employed to assess EP in university students using a 5-point rating scale, which ranges from 0 (*Never*) to 4 (*Very Often*). It evaluates various EP, including Proneness to Obesity, Anxious-Avoidant Eating, Preoccupation with Body Image, Bulimia Tendencies, and Disorganized Eating. The potential score range spans from 0 to 252, with higher scores indicating a greater presence of EP.

Procedure

First and foremost, permission was obtained from authors before utilizing their indigenous scales for the current study. After this, the researcher approached university authority to seek approval for data collection from different public and govt. sector universities of Lahore via official permission letter. After obtaining the necessary permission, the research team collaborated with university authorities to approach students, assuring them of confidentiality and anonymity. Following their verbal informed consent, participants were tested individually or in groups, typically consisting of seven students on average. They were provided with the research protocol in a paper-and-pencil format, and on average, it took approximately 15 minutes for them to complete the protocol. In the end, all participants also had a debriefing session. Most of the data was collected by visiting different universities personally but due to the COVID-19 pandemic and lockdown, data was collected individually via online resources.

Statistical Analysis

The study utilized the Pearson product-moment correlation method to examine the connections between Difficulty in Emotion Regulation (DER), SS, and EP in university students. Additionally, in the realm of inferential statistics, a Hierarchical Regression analysis was performed, and the bootstrapping approach described by Hayes (2018) was employed to determine whether SS mediates the relationship between DER and EP.

Results

The relationships among DER, SS, and EP were investigated by using the Pearson Product Moment correlation. Table 1 displays a significant positive association among DER, SS, and EP.

Table 1: *Inter-Correlation, Mean, Standard Deviation on Self-Silencing, Difficulty in Emotion Regulation, and Eating Problems (N = 212)*

Variables	<i>M</i>	<i>SD</i>	1	2	3
1. DER	97.82	19.04	-	.65***	.43***
2. SS	95.85	25.75		-	.34***
3. EP	83.98	33.50			-

Note. DER = Difficulty in Emotion Regulation; EP = Eating Problems; SS = Self-Silencing.

*** $p < .001$

Mediation Analysis

The Pearson Product Moment correlation illustrated a significant connection among DER, SS, and EP. Therefore, the mediating role of SS in the connection between difficulties in ER and EP was investigated by using Hayes (2018) bootstrapping approach in order to identify whether the SS mediate the association between DER and EP (Table 2). Figure 1 presents the total effect of ER on EP ($\beta = .75$, $SE = .11$, $p < .001$), which was found to be significant. Additionally, the direct effects of ER on SS ($\beta = 1.01$, $SE = .08$, $p < .001$) and SS on EP ($\beta = .17$, $SE = .09$, $p < .05$) were also significant. The results of this current research indicate that SS significantly and partially mediates the relationship between ER and EP. Even after accounting for SS as a mediator, the beta value is reduced, but *c'* model ($\beta = .58$, $SE = .14$, $p < .001$) remains statistically significant.

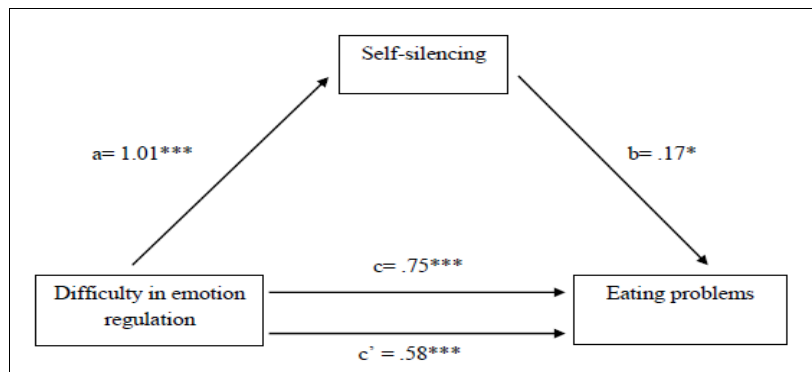
Table 2: Regression Coefficients, Standard Error, and Model Summary Information for the Emotion Regulation, Self-Silencing and Eating Problems

Antecedent	Consequent							
		M (SS)			Y (EP)			
		β	SE	p	β	SE	p	
DER (X)	a	1.01	.08	.001***	c'	.58	.14	.001***
SS (M)		-	-	-	B	.17	.09	.03*
Constant	i	17.18	8.07	.03*	I	7.27	10.98	.50
$R^2 = .42$				$R^2 = .20$				
$F(1, 210) = 154.06, p = .001***$				$F(2, 209) = 25.65, p = .001***$				

Note. DER = Difficulty in Emotion Regulation; SS = Self-Silencing; EP = EP.

* $p < .05$; *** $p < .001$

Figure 1: Mediation Analysis of Self-Silencing in the Relationship Between Difficulties in Emotion Regulation and Eating Problems



Note. This figure shows significant partial mediation of self-silencing in the relationship between emotion dysregulation and eating problems.

Discussion

Numerous research endeavors have been undertaken to gain insights into the characteristics, underlying causes and therapeutic strategies for addressing issues related to self-regulation processes, including ER and eating behavior. These issues have a widespread impact on the lives of many individuals, particularly young adult's

worldwide (Hambrook et al., 2011). In light of these circumstances, it is acknowledged that difficulties in ER and SS are considered significant risk factors associated with the development of EP (Rowell et al., 2016; Shouse & Nilsson, 2011). First of all, this study attempts to explore the relationship among DER, SS, and EP in young adults. Therefore, the primary objective of this study was to specifically investigate the mediating role of SS in the context of difficulties in ER and their impact on EP within the context of Pakistani culture.

The correlation analysis conducted in this study aligns with our hypothesis, indicating a substantial relationship among DER, SS, and EP. This outcome is in line with prior research findings in existing literature. The possible explanation of this relationship as reported by the researchers that when an individual learns from their environment about the encouraging behavior of the suppression of negative emotions, they develop maladaptive beliefs related to the experience and expression of negative thoughts, emotions, and feelings in front of others (Norwood et al., 2011). They believe that the expression of these things is bad and it always brings negative consequences for the individual as well as for others (Hambrook et al., 2011). Research findings showed that these maladaptive beliefs lead to suppression of emotions (emotion dysregulation), thoughts and feelings (SS) that were associated with greater degree of eating disorder symptomatology (Monell et al., 2018; Racine & Wildes, 2013).

One plausible interpretation of these results can be attributed to the cultural and societal customs prevalent in Pakistan's traditional culture. In a predominantly collectivist society like Pakistan, there is a significant emphasis on adhering to established norms, standards, and cultural values. While these values foster interdependence, trust, reliability, and a sense of belonging, they can also exert pressure on individuals to suppress their ideas or actions. It means that collectivistic culture does not give full freedom of speech and expression because that thoughts or ideas might be not socially appropriate or against the social norms and may affect badly their family or group (Ahmed & Iqbal, 2019). According to previous line of literature it is proposed that people in our culture also use ineffective strategies for regulating their emotions expressive suppression etc. which have adverse consequences. According to a Pakistani study on ER, its strategies and outcomes, people more frequently use expressive suppression while interacting with friends and family in order to maintain social harmony resulting in SS (Ramzan & Amjad, 2017). Researcher reported that due to contradiction between the real false-self and the ideal-self due to SS impede the social and moral support that a person gets from their interpersonal relationships. This hindrance in support and healing

process due to SS cause emotional distress that regulated by external modes like engaging in unhealthy eating practices that further lead to eating disorders in severe cases (Kim, 2019).

In another perspective, the people of Pakistan are known to be food lovers. On every occasion, special food arrangements are made. In the entire course of life, they turn to food for every event to get pleasure and reinforcement. Surprisingly this pleasure and reinforcements are hazardous in reality because it leads to unhealthy eating practices especially in youth (Gulwani, 2019).

Lastly, the findings show that SS is a partial mediator between DER and EP. As consistent with these findings, some researchers also reported that SS is fully mediated the relationship between emotional inhibition and regulation difficulties and EP such as emotional eating, binge eating, anorexia nervosa, and bulimia nervosa etc., (Lavender et al., 2015; Maji & Dixit, 2019; Monell et al., 2020). These findings are supported by affect regulation theory of eating disorders, that indicate when people are not able to express themselves i.e. regulate their emotions such as anxiety, sadness, anger etc., it leads to episodes of binge eating also called as emotional eating (Hilt et al., 2011). They used to engage in such emotional binge eating in order to distract themselves from negative affect or to reduce the intensity of aversive emotions. After emotional binge eating episode, people tend to experience excessive anxiety about weight gain. That anxiety further leads to unhealthy behaviors such as laxative use and intentional vomiting that give them a temporary relief from their negative emotions. As escape is brief and usually followed by feelings of guilt, failure, and shame, people fall into the vicious cycle of eating disorders (Carcieri, 2016). They dislodge and direct their negative thoughts, emotions, and feelings onto their body that further exaggerate the risk of developing more EP (Kim, 2019).

Although DER alone may predict EP in young adults, but SS positively makes this association between DER and EP stronger. It is concluded that higher the level of DER along with SS will predict higher level of EP in young adults. It may be due to the fact that with the increasing severity of emotion-regulation difficulties and SS behaviors, young adults turn to eat to fulfill psychological functions, such as avoiding, an escaping as a way to manage or to cope with negative affect associated with their difficult experiences.

Limitations and Suggestions

The current study has several limitations. Firstly, the researcher was unable to gather data from a greater number of participants due to

final examinations and the subsequent semester break. Soon after, it became challenging to get data because of COVID-19 epidemic and lockdown. Even though internet resources were employed for data collection, the researcher scarcely managed to gather 40 to 50 forms in a month. Hence, the current study's sample size was somewhat limited when it came to making broader generalizations about the findings on a larger population. Additionally, the self-report measures employed in this study may have been susceptible to response bias, and the conclusions are primarily drawn from individuals' perceptions. In future research, employing multiple assessment methods could enhance the findings' validity. Furthermore, it's important to note that this study relies on cross-sectional data, making it challenging to definitively establish whether EP are a direct result of emotion dysregulation and SS. Future longitudinal studies can specifically address this question of causality by exploring the relationships among these variables over time. Fourthly, data was collected only from urban areas. For future studies, data from diverse population urban as well as rural areas would be very helpful to compare and contrast the levels of DER, SS, and EP between both samples.

Beside limitation, the current study has certain strengths as the constructs of current study are not studied yet indigenously, so the current study fills the gaps in literature of Pakistan. It's the first study to explore the unique relationship among ER, SS, and EP, and by using a sample that has been overlooked in previous studies of Pakistan. The inclusion of young adults' population as a sample in current study provides important implications as it highlights the importance of the wellbeing of young adults that is linked with the bright future of a nation as young adults are building blocks of any nation's future. Young adults with appropriate skills can optimally contribute to their nation in future so it is important to focus on the development of self-regulation of young adults and equip them with the necessary skills, i.e. effective ER, assertiveness in self-expression etc. These skills or abilities will act as a protective shield against many physiological, psychological, social and occupational problems that can create hurdles for young adults to contribute their part in the progress of society, community, or nation.

Moreover, within this study, a decent sample size, the incorporation of participants of both genders, and more intricate analyses has illuminated both the direct and indirect impacts of SS on emotion dysregulation and EP in young adults. Current study's findings will serve as a preventative approach as the results of the study would create awareness in many parties including young adults, educators, counselors, and psychologists to design and develop proper

intervention programs and strategies to reduce these psychological problems i.e. emotion-dysregulation and SS that further cause problems like eating disorders in young adults. Furthermore, the present study might contribute to enhancing the efficacy of assertiveness training for emotional regulation and expressing oneself that would be helpful to control the increasing prevalence rate of EP in young adults.

Conclusion

From the results yielded in the present study it can be concluded that higher the level of difficulties in emotion-regulation, higher will be the level of SS and EP in Pakistani university students. The findings of the current study reaffirmed that EP among young adults stem from a blend of challenges in self-regulation processes related to emotions and self-expression. These findings of the current study highlighted the importance of effective emotion-regulation for being assertive in self-expression as well as for the wellbeing of young adults. The process of counseling should encompass the broad context of self-regulations and aim to equip individuals with essential skills. These skills include proficient emotion-regulation and assertiveness in self-expression, enabling the effective, and efficient management of life's stressors.

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Received 05 September 2023

Revision received 27 January 2025