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Social Desirability and Cognitive Emotion Regulation as a Predictor of Delibrate Self -Harm Behavior: A Comparative Study

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Abstract

The current study examined the effect of social desirability, cognitive emotion regulation on deliberate self-harm behavior among university students. The object of the study is to investigate the relationship between social desirability, cognitive emotion regulation strategies (i.e: Adaptive and Maladaptive) . Moreover, it was hypothesized to assess the effect social desirability and cognitive emotion regulation on university students who deliberately self-harm theirselves. The sample (n= 218) with age range 16-25 years were collected from different universities of Peshawar KPK through cluster sampling technique. The self-harm inventory was used to screen students with deliberate Self Harm behavior. To assess Adaptive and Maladaptive coping mechanisms Cognitive Emotion Regulation Questionnaire (CERQ) was used, and Marlowe Crowne Social Desirability Scale (MC-SDS) for social desirability. Various statistical techniques such as descriptive statistics, pearson product moment correlation, simple linear regression, multiple linear regression analysis were used. The results of correlation analysis indicated that social desirability has significant positive ($r = .69$, $p < .01$) correlation while significant negative ($r = -.59$, $p < .01$) correlation with adaptive strategies. Additionally social desirability has positive correlation ($r = .49$, $p < .01$) with deliberate self-harm behavior. Moreover the simple linear regression indicated that social desirability ($\beta = .16$, $p < .01$) is significant positive predictor of deliberate self-harm behavior. While multiple linear regression revealed that adaptive cognitive emotion regulation ($\beta = -.01$ $P < .001$) is negative predictor of DSH and Maladaptive CER ($\beta = .07$, $P < .001$) is the positive predictor of DSH. Therefore, to reduce the self-harming behavior strength-based therapies and counseling are designed which focus on the factors such as social desirability and maladaptive coping mechanism. The counseling services provide with different interval to control negative behavior among students.

Keywords: Deliberate Self harm Behavior, Adaptive Cognitive Emotion Regulation, Maladaptive Cognitive Emotion Regulation, Social Desirability

Introduction

In first decades are developed psychological anguish and developing day by day, region leading to disability and impaired functioning and also poor quality of life. So, the mental health has become the public health concern. WHO estimates that over one billion population discovered with mental health concerning anxiety and depression which produce on long term impairment and social handicap and highlight the high prevalence nature of the diseases over all age group (World Health Organization [WHO], 2025). One worry in particular is

self-injurious behaviors [i.e deliberate self-harm (DSH) and non-suicidal self-injury (NSSI)] has arisen as notable due to high incidence among adolescence and strong documented connections with psychological distress and emotional disorders. Self-harm (also called self-injurious behaviour) refers to a general class of behaviors that enforce direct and deliberate hurt to one's body and usually peak in the teen years (Samari et al., 2020; Tang et al., 2025). Among the most common terms used in the literature are deliberate self-harm (DSH) and non-suicidal self-injury (NSSI). A meta-analysis that was conducted in 2010 to 2021 found that a life time prevalence rate of DSH is 27.6%, while the rate of prevalence is higher in a psychiatric population (Xiao et al., 2022). Moreover, Sauleha et al. (2018) reported that, the rate of suicide in Pakistan is 13,377 (7085 females and 6021 males). As per (WHO, 2014) a somebody has 10-20 acts of DSH before the committing Suicide (World Health Organization [WHO], 2014). In addition, those with psychiatric problems tend to exhibit DSH behavior more often (Fernandes et al., 2020). DSH is highly related to psychiatric disorders i.e, Tauma-related disorders, Mood disorder, Anxiety and personality disorders (Wang et al.,2022). Furthermore, display of DSH between the two gender is different i.e, female shows higher level of DSH along with borderline personality disorder than male (Reichl, C., & Kaess, M, 2021). However, in Asia, a higher degree of DSH is performed by men as compared to women (Moloney et al., 2024). Apart from the broader diagnosis of emotion dysregulation, susceptibility to deliberate self-harm (DSH) seems to be affected significantly by some cognitive emotion regulation (CER) techniques. Rumination, catastrophizing, and self-blame are examples of maladaptive CER techniques that have been found time and time again to be linked to higher emotional distress, depression symptoms, and self-harming behavior (Garnefski & Kraaij, 2018). This perseverative or cognitive approach has been related with an increased wants for NSSI, where individuals seek out rapid solutions for receiving relief from overwhelming emotional situations (Mitchell et al., 2023).A longitudinal study conducted by Victor & Klonsky (2014) assessed that rumination is a prospective predictor of increases in the frequency of NSSI, while catastrophizing help ti increase hopelessness which leads to self-harm behavior (Tang et al., 2025). The neurobiological aspect of catastrophizing link with lower prefrontal inhibitory control, and higher-level amygdala activity which ultimately enhance self-harm behavior (Morawetz & Basten, 2024).

Social desirability is the tendency of people to over-reporting of socially approved activities, and under-reporting of socially disapproved or stigmatized activities, which in turn jeopardizes the validity of self-report measures, especially when investigating sensitive psychological constructs, such as mental health and self-harm (Nazari et al., 2024). In the Pakistani context, in terms of the co-relations between social desirability and non-suicidal self-harm was investigated in the context of adolescents, and anti-social behaviour also the findings of Waris and Quratulain (2023), who found that socially desirable responding was significantly associated with self-harm behaviors especially when taken along with low emotion regulation capacities. Social desirability also has a critical role to play in self-reports of emotion control and self-harm. Individuals that score high in terms of social desirability may underreport maladaptive CER and DSH and overreport adaptive characteristics and so, may muddle correlations (Wiglesworth, 2025). Research conducted with university samples has found that social desirability is positively associated with other psychological variables, such as social desirability about DSH can be measured and found that greater numbers of social desirability predicts self-harm (Lee & Iskandar, 2025).

Rational of the Study

Negative reinforcement in the form of emotional relief plays key role in the maintenance of Deliberate Self-Harm Behavior. Despite the increasing consensus DSH is a critical issue of university students in modern era. It is non-fatal behavior and approximately 60.9% said a

history of at least one form of Self Harm Behavior (Mona et al., 2024). Pakistan is low- and middle-income country in the world (WHO, 2014). The country's social and health measure remain consistently poor due to volatile political system and poor governance (Kiani, 2007). Prevalence of common mental disorders (CMDs) puts the figure as high as 34% (Mirza & jenkins, 2004). Despite of increasing ratio of DSH very few studies have been done on it. Most of studies which has been conducted on association of DSH with smoking and recreation drug use (Mona et al., 2024). But the present study focused on university students with probability sampling technique to ensure the prevalence of DSH in general population. Previously some research were done on the patient with mood disorder and the frequency of the DSH in patient (Donaldson et al., 2000; Garnefski et al., 2001). But the current study will be conducted to find the effect of Cognitive Emotion Regulation on DSH among students at universities. Therefore, it will be pivotal to find DSH among general population and to find gateway because an ordinary individual commit DSH without any obvious mental disorder. Further this study will find that how the factors like academic and social well-being help in recognizing social pressure which influence DSH prevalence. Therefore, the nature of the present study qualifies the universities to implement supportive policies to improve the psychological and social well-being of students.

Objectives

- To assess the association between adaptive cognitive emotion regulation, social desirability, deliberate self-harm behavior among university students.
- To assess the association between maladaptive cognitive emotion regulation, social desirability and deliberate self- harm behavior among university students.
- To assess the effect of cognitive emotion regulation on deliberate self-harm behavior among university students.
- To investigate the effect of social desirability on deliberate self -harm behavior among university students.

Hypotheses

- There will be significantly negative association between adaptive cognitive emotion regulation, social desirability and deliberate self-harm behavior among university students.
- There will be significantly positive association between maladaptive cognitive emotion regulation, social desirability and deliberate self-harm behavior among university students.
- Maladaptive cognitive emotion regulation strategies will positively predict deliberate self-harm behavior and adaptive cognitive emotion regulation strategies will negatively predict deliberate self-harm behavior among university students.
- High social desirability will positively predict deliberate self-harm behavior among university students.

Method

Sample

The sample was consisted on university students aged between 18 to 25 years, who are enrolled in undergraduate (BS) to postgraduate (MPhil) programs in various universities located in Peshawar, Khyber Pakhtunkhwa (KPK), Pakistan. The total estimated population of the present study comprised 10,450 university students. To get the most conservative estimate by using Krejcei & Morgan formula (1970) at 95% confidence interval and 5% margin error, a sample of 370 participants were drawn through cluster sampling technique.

An attempt will be made to ensure that the chosen sample is balanced in terms of both gender and academic level.
Formula:

$$S = \frac{X^2\ NP(1-P)}{e\,(N-1)+X^2\ P(1-P)}$$

Research Instruments

Demographic Sheet
The demographic sheet included the following characteristics: age, academic qualification, socioeconomic status, marital status, family system and gender of the participants.

Self-Harm Inventory (SHI)
Self-Harm Inventory is screening tool (Sansone et al., 1998) which consist of 22-items with yes/no responses assessing lifetime history of self-harming behavior. Each item begins with "Have you ever intentionally, or on purpose…" and includes behaviors such as cutting, burning, overdosing, and disordered eating. Each "yes" answer is given one point if the self-harm behavior is present, while 0 score indicate absence of self-harming behavior. The cutoff score is 5 which primarily reflects engagement in mild self-harm and risk-taking behaviors rather than clinical-level psychopathology. Overall score of the scale is 22. Higher the score higher will be deliberate self- harm behavior. The Cronbach's alpha reliability is .78.

Cognitive Emotion Regulation Questionnaire (CERQ)
The Cognitive Emotion Regulation Questionnaire (CERQ) is a self-report instrument constructed by Garnefski et al. (2001), to assess specific cognitive emotion regulation strategies for the individual aged 12 years and above. It assesses how individuals use CERQ strategies in response to negative or life stressors. The scale composed of 36 items with two sub scale such as Adaptive and Maladaptive cognitive emotion regulation. The adaptive cognitive emotion regulation sub scale consists of five strategies such as Acceptance, Positive Refocusing, refocus on planning, Positive reappraisal and Putting into perspective. Whereas a subscale of maladaptive strategies consist 4 further sub categories e.g., Self-blame, Rumination, Catastrophising, and Other blame. Every sub scale is composed of no less than 4 items, with a possible score range between 4 to 20. A higher score on either adaptive cognitve scale or maladaptive cognitive scale reflects an individual's thinking pattern and their response to those thoughts. The scale is based on a 5-point likert formate. The utilizes response options ranging from "almost never" (1) to "almost always" (5). The CERQ's shown excellenet Cronbach's alpha i.e., .0.80

Marlowe-Crowne Social Desirability Scale (MC-SDS)
Marlowe and Crowne in 1960, proposed the Marlowe-Crowne Social Desirability Scale (MC-SDS) which is used to evaluate the tendency of individuals to give answers that are more socially acceptable than accurate. This scale assesses how well people portray themselves, frequently adhering to societal norms, particularly when self-report evaluations of one's own views, attitudes, or behaviors are involved. The scale consist of 33 items with true and false responses. When the reaction to the statements 5, 7, 9, 10, and 13 are "True" add 1 point and add 0 point to the score for each "False" reaction to these statements. Furthemore add 1 point to the score for each "False" reaction to statements 1, 2, 3, 4, 6, 8, 11, and 12 and add 0 point to the score for each "True" reaction to these statements. Moreover, the scale classified into three sub score categories such as of the scoring ranges: lower (0-8), average score (9-19), high score (20-33). The Higher scores suggest a stronger propensity for socially acceptable response. The scale's Cronbach reliability is alpha .88.

Procedure

After getting formal approval from the departmental research committee, the data collection process was started according to laid down ethical guidelines for psychological research. Prior to approaching people, official information about the total number of enrolled sought-after BS and M.Phil enrolled in each selected university was sought from the respective Admissions offices. Subsequently, formal permission to undertake the current research was sought from and obtained the concerned university authorities. Following institutional approval, participants were selected from Universities situated in Khyber Pakhtunkhwa using a simple random sampling technique. First of all, a total sample size of (n = 370), BS and M.Phil students was approached. Students who met the inclusion criteria, i.e., were enrolled in a BS or M.Phil programme (18 to 25 years) and within the defined age range of youth were contacted in classrooms, hostelries and common areas within the universities. Prior to participation, the participants were provided information with regard to the study objective and written informed consent was obtained. Participants informed that their participation was voluntary, their answers were confidential, and that they had the right at any stage to drop out of the research without any negative consequences.

Data were collected using combined questionnaire booklet with all study instruments. Clear instructions were given to ensure response accuracy and honesty and participants were advised to seek clarification if they had difficulties understanding any of the items. As part of the same data collection process screening for deliberate self-harm was done, using the Self Harm inventory (SHI). Participants who scored five or more on the SHI cutoff criteria were identified as deliberate self-harm behavior and kept for further analysis. Based on this screening, 218 participants were kept as deliberately self-harm individuals, but the people who were not selected based on the cutoff score were excluded from further analysis in accordance with the objectives of the study (152 participant).

Following the screening process, responses on Cognitive Emotion Regulation Questionnaire (CERQ), and Marlowe Crowne Social Desirability Scale (MC-SDS) were reviewed. Completed questionnaires were thoroughly checked for missing values and discrepancies between answers. All acceptable responses were then organized and entered into Statistical Package for the Social Sciences (SPSS) for analysis.

Throughout the research process there were strict considerations of ethics. No identity details was obtained from participants and all data were gathered, safely stored and only used for academic purposes.

Results

Table 1

Sociodemographic Characteristics of the Participants (N =218)

Baseline Characteristics	**N**	**%**
Age		
18 – 21	136	62
22 – 25	82	37
Gender		
Male	80	36.7
Female	138	63

Marital Status		
Single	200	91.7
Married	16	7.3
Divorced/Separated	2	9
Education Level		
Intermediate	42	19.3
Bachelor	171	78.4
Master or Above	5	2.3
Socioeconomic Status		
Upper	76	43.9
Upper middle	111	50.9
Lower Middle	24	11.0
Upper Lower	6	2.8
Lower	1	.5
Family System		
Nuclear	126	57.8
Joint	91	41.7
Extended	1	.5

Note: n = frequency, % = percentage

Table 1 shows the demographic characteristics of participants like age range 18- 21, 22- 25 along with this gender both male and female, educational level, marital status and socioeconomic background comprised of upper, upper middle, lower middle, upper lower and lower with the aspect of their percentage.

Table 2

Psychometric Properties for Cognitive Emotion Regulation (CERQ), Deliberate Self Harm (DSH), Five Facet Mindfulness Questionnaire (FFMQ) and Social Desirability (SDS).

Scale	M	SD	Range	Cronbach's Alpha
CERQ	100.6	17.0	58 – 160	.83
DSH	6.98	2.73	4 – 18	.49
SDS	18.83	3.43	8 – 25	.39

Note: CERQ = Cognitive Emotion Regulation, DSH = Deliberate Self Harm, SDS = Social Desirability Scale.

Table 3

Descriptive Statistics and Correlation for Deliberate Self Harm, Social Desirability, and Maladaptive Cognitive Emotion Regulation (N = 218)

Variables	N	M	SD	1	2	3
DSH	218	5.91	1.50	-		
SD.TOT	218	18.83	3.43	.492**	-	
MALCERQ	218	49.82	11.75	.599**	.114	-

Note: DSH = Deliberate Self Harm, SD.TOT = Social Desirability Total, MALCERQ = Maladaptive Cognitive Emotion Regulation Questionnaire. ****p<.001*

Table 4

Descriptive Statistics and Correlation for Deliberate Self Harm, Social Desirability and Adaptive Cognitive Emotion Regulation (N = 218)

Variables	N	M	SD	1	2	3
DSH	218	5.91	1.50	_		
SD	218	18.83	3.43	.69**	_	
ADCERQ	218	41.19	9.52	-.59*	-.39**	_

Note: DSH = Deliberate Self Harm, SD = Social Desirability, ADCERQ = Adaptive Cognitive Emotion Regulation Questionnaire. **P < .01, *P <.05

Table 5

Regression Coefficient of Maladaptive and Adaptive Cognitive Emotion Regulation on Deliberate Self Harm Behavior

Variable	B	SE	t	P	95% CI
Constant	3.60	1.02	3.51	.001	[1.58, 5.62]
MALCERQ	.078	.015	5.16	.001	[.048, .108]
ADCERQ	-.012	.019	-.658	.001	[-.049, -.024]

Note: Content = Deliberate Self Harm, MALCERQ = Maladaptive Cognitive Emotion Regulation, ADCERQ = Adaptive Cognitive Emotion Regulation ****p < .001*

Table 5 shows the impact of Maladaptive Cognitive Emotion regulation and Adaptive Cognitive Emotion Regulation on Deliberate Self Harm behavior among university students. The R^2 value of .11 reveal that predictor explained 11% variance in the outcome variable revealed with F (2, 215) = 13.35, P < .001. The finding revealed that Maladaptive Cognitive Emotion Regulation (β = .078, P < .001) predicted positively Deliberate Self-Harm while,

Adaptive Cognitive Emotion Regulation (β = -.012, P <.001) predicted negatively Deliberate Self-Harm among university students.

Table 6
Regression Coefficient of Social Desirability on Deliberate Self Harm Behavior.

Variables	B	β	SE
Constant	9.317***	_	.982
SD.grp	.88**	.16	.36
R^2	.26		

Note: Constant = Deliberate Self Harm, SD = Social Desirability. ***p < .001, **p< .01.

Table 6 shows that the impact of social desirability on Deliberate Self Harm behavior in university students. The R^2 value of .26 revealed that predictor variable explained 26% variance in the outcome variable with F (1, 216) = 5.86, P < .01. The findings revealed that social desirability positively predict Deliberate Self Harm behavior (β = .16, P < .01).

Discussion

The purpose of the present study was to clarify how prevalent the behavior Deliberate Self-Harm (DSH) is among the college students, and how the social desirability, dispositional mindfulness, and the cognitive emotion control may affect their behavior. The present results revealed that not only maladaptive emotion regulation do play a central role in DSH vulnerability but it also suggests that individuals engage self-injurious behaviors as a coping strategy for managing negative emotional responses which is consistent with the negative reinforcment model of self-harm (Nock, 2009). In particular, maladaptive cognitive emotion regulation (MALCERQ) was shown to be highly and positively associated with DSH, suggesting that increased reliance on dysfunctional methods such as rumination, catastrophising and self-blame is related to increased engagement in self-injurious behaviours. (Garnefski & Kraaij, 2018; Liu et al., 2022). Furthermore, this result is congruent with earlier studies that have indicated a high predictability of self-harm using maladaptive emotion regulation deficits and excess maladaptive emotion regulation techniques (Xu et al., 2025). Conversely, adaptive cognitive emotion regulation (Ad-CERQ) was significantly negatively connected to DSH which shows that persons who utilize healthier coping strategies including acceptance, positive reappraisal and planning are less likely to engage in the self-harm practices (Yuan et al., 2025). The effect of social desirability (SD) was found to be highly complex and culturally influenced. This study's findings suggested that social desirability was positively connected to DSH, which means that those with a higher willingness to abide by socially accepted norms and repress unpleasant feelings, were reporting increased self-harm behavior. All of these results contribute to the literature by showing that social constraints and cognitive emotion regulation, particularly maladaptive cognitive emotion regulation, collaborate to promote self-harm behaviors in a nonclinical university population. The present study provides unique evidence from a socio-cultural context that has not been extensively investigated by other researchers, showing the importance to consider DSH within wider socio-cultural and psychological contexts, although most of the research has focused on clinical samples or adolescents (Fernandes et al., 2020; Wang et. al., 2022). Furthermore, the direct empirical support relative to the study provided by the regression analysis supports the current study which indicated that maladaptive cognitive emotion regulation strategies will be a positive predictor of Deliberate Self-Harm (DSH) while adaptive cognitive emotion regulation strategies will be a negative predictor of DSH among University students.

Limitations

The current study is plagued by various limitations that may limit the strength of the conclusions drawn from the study.

- Due to its cross-sectional nature, the study constrains causal interpretation of the relationships among variables studied since temporal relationships and direction effects cannot be determined.
- The use of self-report measures means that there may have been some scepticism around the possible response biases (for example, social desirability) that may have influenced the responses given by participants.

Recommendations

From a practical perspective, the results have a number of recommendations for the university setting.

- Longitudinal designs are required to further understand temporal precedence and possible causal relationships between mindfulness, cognitive emotion regulation strategies and self-harm behavior. Studies should also recruit more heterogeneous samples to increase external validity.
- Studying the distinct aspects of mindfulness (e.g., non-reactivity, as well as acting with awareness and non-judging), may help to identify which elements of mindfulness are most protective against maladaptive regulation of emotions and risk of self-harm.

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