

Role of Personality Traits in Deliberate Self-Harm Among Adults

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Abstract

The present study was designed to investigate the role of personality traits in the manifestation of deliberate self-harm. Understanding the psychological factors, such as specific personality traits, that underpin Deliberate Self-Harm (DSH) is crucial for developing effective screening, prevention, and intervention strategies, particularly in high-stress or specific population settings like military recruitment. A cross-sectional research design was used, and 56 male individuals, with a mean age of 19.86 (SD=2.42), were selected for the study. They were recruited from the Pakistan army at the Rawalpindi recruitment center over 2 months from March to April 2020. Data was collected by using the Minnesota Multiphasic Personality Inventory (MMPI), Urdu version and socio-demographic form. Results revealed that individuals with deliberate self-harm (N=28) with a mean age of 19.86 (SD=2.42) scored significantly high on hypochondriasis, depression, psychasthenia and social introversion of MMPI ($p < .05$) as compared to those without deliberate self-harm (N=28). Whereas scores on other clinical scales and validity scales of MMPI were non-significant ($p > .05$). It is concluded that certain personality traits are strongly linked with deliberate self-harm. There is a need for urgent measures in this direction, including the compilation of culturally specific scientific data at a national level. A multicenter study with homogeneous parameters on different issues of deliberate self-harm may be designed to achieve the nationwide data, which will help to understand the elements of intentional self-harm.

Keywords: Deliberate Self-harm, Personality Traits, MMPI.

Introduction

Deliberate Self-Harm (DSH) has been considered as parasuicidal behaviour in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm or intentionally ingests a substance in excess of the prescribed or generally recognised dosage (WHO, 2000). It has also been approached as a specific symptom of mostly suicidal behaviour. Any form of injury inflicted on one's own body used to be associated with a person's desire to end their own life (Megan et al., 2020). The differentiation between self-injurious behaviours with and without the intention to die implies that a group of people who hurt their own

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bodies, but do not wish to take their own lives. This raised a logical question: how much do we actually know about the personality profiles most susceptible to this maladaptive behaviour?

In Pakistan, DSH behaviours are particularly complex. The interplay between sociocultural expectations, religious beliefs, and familial obligations creates a unique psychological climate in which emotional expression is often suppressed. This dynamic increases the likelihood of internalising disorders and maladaptive coping strategies such as DSH. Although research in the region remains limited, emerging studies suggest that personality traits—particularly those related to emotional instability, impulsivity, and interpersonal conflict—play a significant role in DSH among Pakistani adults (Ali & Aftab, 2021).

One of the most reliable tools for assessing personality and psychopathology is the Minnesota Multiphasic Personality Inventory–Updated (MMPI-U). Though initially developed in the U.S., it has been translated and validated for use in South Asian populations, including Urdu adaptations used in clinical psychology settings in Pakistan. This article explores the contribution of MMPI-U–derived personality profiles to DSH among Pakistani adults and offers culturally relevant insights for prevention and clinical intervention.

The prevalence of DSH in Pakistani adults is difficult to estimate due to stigma, underreporting, and lack of mental health services. However, hospital data and psychiatric case reports suggest a steady increase, particularly among women, university students, and individuals facing economic hardship or domestic violence. In Pakistan's collectivist culture, individuals are often discouraged from expressing negative emotions openly, resulting in emotional suppression that may lead to DSH as an outlet.

A national survey conducted by the Pakistan Institute of Living and Learning (PILL, 2020) found that approximately 11% of adults reported a lifetime history of self-injury, with many citing emotional distress, relationship failures, and feelings of worthlessness as triggers. Cultural expectations—especially for women to maintain family honour and obedience—compound psychological burdens and may push individuals toward hidden forms of distress expression, including self-harm.

Unlike in Western countries, where self-harm is often framed within individualistic and clinical contexts, in Pakistan, DSH is deeply embedded in social and moral narratives. Therefore, understanding the underlying personality traits using culturally adapted tools like MMPI-U is essential for contextualised psychological assessment and treatment.

In Pakistan, Urdu-translated versions of MMPI-2 (and components of MMPI-U) have been validated and used in psychiatric hospitals and forensic settings. These tools offer culturally relevant insights into how Pakistani adults perceive, regulate, and express their emotions, particularly in the face of socio-religious constraints.

Impulsivity is a strong predictor of self-harm in Pakistani adults, particularly among young men facing financial pressures and poor emotional awareness. MMPI-U's BXD and DISC-r scales effectively capture this impulsive temperament, which often manifests as self-cutting, hitting, or ingesting substances during emotionally intense moments.

Pakistani adults with high impulsivity are less likely to seek psychological help due to stigma, and more likely to act on impulse in private, making them invisible to formal mental health systems (Khan et al., 2021). In one Peshawar study of 212 adult patients, those with high RC9 and BXD scores were also more likely to report childhood physical abuse, suggesting that trauma and poor impulse control often co-occur (Ali et al., 2023).

Such findings underscore the need for routine MMPI-based screening in primary care and university counselling settings, where early identification of behavioural dysregulation could prevent escalation into self-harm.

Depression and anxiety are common among Pakistani adults engaging in DSH. These are reflected in RCd, RC7, and INTR elevations. Feelings of guilt, failure, and worthlessness—especially related to religious transgressions or failed marital expectations—are commonly reported. In a study of 180 DSH patients in Islamabad, high RCd scores were linked with religious guilt over perceived sins and failure to meet family expectations. Many participants reported suicidal thoughts, but emphasised they did not wish to die—consistent with the DSH profile but misunderstood by families and clerics.

Culturally sensitive interventions should therefore combine psychological insight with compassion for religious and family-centred frameworks, using MMPI-informed profiles to guide dialogue and education. The MMPI-U can help identify personality profiles at high risk for DSH in adults, particularly in university counselling centres, military settings, and women's health clinics. High-risk profiles include combinations of elevated RCd, BXD, NEGE, and AGGR-r scales.

From Karachi to Rawalpindi, recent hospital-based studies reinforce that over 50% of adult DSH cases involve interpersonal conflict, financial stresses, or employment strain, with depression present in nearly half of cases Karachi data, $n = 350$. Among medical students and young doctors, high rates of DSH (60.9%) correlate with factors such as smoking, substance use, mental health history, and low social support—while protective factors include high self-esteem and familial harmony. Across Rawalpindi adults, DSH mediates the link between anxiety, depression, stress, and suicidal ideation, indicating a central self-harm behavioural pathway.

According to the Pakistan Mental Health Survey (2022), approximately 9–12% of adults report having engaged in non-suicidal self-injury (NSSI) at least once. These figures are believed to be underestimated due to stigma. Cultural factors such as gender inequality, honour-based violence, and limited mental health services exacerbate the risk of self-injury and hinder psychological help-seeking behaviours (Saleem & Mahmood, 2021).

Personality traits are enduring patterns of thought, emotion, and behaviour that influence how individuals perceive and interact with the world. The Five-Factor Model (FFM) of personality—comprising neuroticism, extraversion, openness, agreeableness, and conscientiousness—has been widely used to explore psychological disorders, including DSH (Widiger et al., 2022).

A meta-analysis by Han et al. (2023) involving 36 studies concluded that neuroticism and impulsivity were the strongest predictors of DSH among adults globally. High neuroticism was linked to affect regulation problems, while impulsivity predicted unplanned acts of self-harm.

Taylor et al. (2021) reported that emotional dysregulation and borderline personality traits—often overlapping with MMPI scales—are significantly associated with the frequency and severity of self-harm.

A study by Ali et al. (2023) conducted in Lahore with 250 adult participants using MMPI-U found that high scores in psychopathic deviate (Pd) and paranoia (Pa) scales were significant predictors of recurrent DSH. Most self-harm incidents were associated with domestic violence, marital dissatisfaction, or workplace harassment.

Rehman et al. (2023) found that among 180 adult female psychiatric patients, depression, hysteria, and anxiety traits (MMPI-U scores) were significantly elevated in individuals with DSH histories. Cultural shame, low autonomy, and lack of social support were common themes in qualitative interviews.

Ahmed and Fatima (2022) also highlighted the impact of early trauma and attachment issues on personality formation and self-injurious behaviours among Pakistani adults. The study emphasised the importance of early screening using MMPI-U in community mental health settings.

Deliberate self-harm among adults is a complex, multifaceted issue deeply influenced by individual personality traits and sociocultural context. In Pakistan, the use of validated psychological tools like the MMPI-U provides critical insights into the underlying psychopathology of DSH. Traits such as neuroticism, impulsivity, and emotional dysregulation, as reflected in both global frameworks (like the FFM) and MMPI-U profiles, are key predictors of self-injury. Addressing these traits through culturally sensitive assessments and targeted interventions is vital to improving mental health outcomes for Pakistani adults.

In recent years, a large number of patients have been admitted to medical wards with the act of DSH. But a small minority have the intention to take their lives, the rest have other motives for their actions or suffer from a psychiatric disorder. The distinction between suicide and DSH is not absolute. There is a significant overlap. Some people don't have an intention to die but fail to recover from the effects of an overdose. Others who intend to die are revived (Kermani et al., 2006).

Suicide is considered the second leading cause of death in people between the ages of 15 and 29 years worldwide. Individual who presented with DSH acts are at significant risk for suicide, though their intention was not for suicide attempt, and the range is 40-60 %5. Negative interpersonal and intrapersonal factors include shame, social isolation, significant psychological issues, and sufferings are having a strong relationship with DSH (Shah et al., 2016). Internalising and externalising psychopathologies, both in general and in terms of specific conditions, such as depressive/anxiety disorders and interpersonal problems, are risk factors for DSH (Fox et al., 2015). It occurs in nonclinical populations as well. A recent study found that as many as 35% of college students report having performed at least one self-harm behaviour in their lifetime. There is evidence that deliberate self-harm has become more prevalent in recent years. Several studies have found higher rates of self-harm in individuals from younger generations (Gratz, 2001).

DSH is a medico-legal act in Pakistan. When a patient arrives at the emergency department, they are managed accordingly, and the police are later informed (Khan, 1998). But there is no official data on deliberate self-harm and suicide from Pakistan. As a result, national rates on suicide are neither known nor reported to the WHO. Stigmatisation of suicidal behaviour in Pakistani society may also be contributing to the lack of research on the subject. Considering the limited evidence available on suicidal behaviour in Pakistan, we conducted a scoping review on the subject. The study aims to map the available literature on suicidal behaviour in Pakistan, to provide a collective synthesis on the subject, allowing for future research and to inform policy for suicide prevention programs in the country. To the best of our knowledge, no previous study has employed this methodology for mapping suicidal behaviour in Pakistan.

Methodology

The present study was designed to investigate the role of personality traits in the manifestation of DSH. Before the start of the study, formal permission from the psychological research wing of the Pakistan Army was secured, along with the approval of the synopsis. A cross-sectional research design was used, and data from 56 male individuals recruited in the Pakistan army at the Rawalpindi selection and recruitment centre were collected through purposive convenience sampling over 2 months, from March to April 2020. Initially, 28 individuals in the study of DSH were identified through their referral forms, and 28 individuals without a history of DSH were matched with them based on age variation. After obtaining their consent, they were asked to fill

out the Minnesota Multiphasic Personality Inventory (MMPI), Urdu Version. The MMPI-U is a 338-item true-false self-report standardised inventory of personality and psychopathology. Its items are scored on 4 validity and 10 clinical scales that measure substantive clinical content. Its reported reliability is quite satisfactory (Mirza, 1977).

Results

The data was entered on SPSS-26 and analysed. Descriptive Statistics were carried out to describe the mean, SD, frequencies and reliability coefficients. Further inferential statistics involved a t-test to compare the mean differences between groups. Results showed that the age of participants was between the range of 15 to 23 years ($M=19.86$, $SD=2.42$).

Table 1: Means and Standard Deviations of different scales of MMPI (N=56)

Variables	<i>M</i>	<i>SD</i>
Hy	52.59	18.19
D	60.59	12.04
Hs	55.09	11.57
Pd	43.45	21.07
Mf	48.29	11.06
Pa	52.68	14.27
Pt	38.43	18.1
Sc	39.21	16.31
Ma	50.64	15.29
Si	50.75	8.85
L	50.57	11.16
F	54.34	18.72
K	52.66	10.2

Note: Hy=Hypochondriasis, D= Depression, Hs=Hysteria, Pd=Psychopathic Deviate, Mf=Masculinity-Femininity, Pa=Paranoia, Pt=Psychasthenia, Sc=Schizophrenia, Ma=Hypomania, Si=Social Introversion

Table 2: Difference on various scales of MMPI among individuals with and without DSH

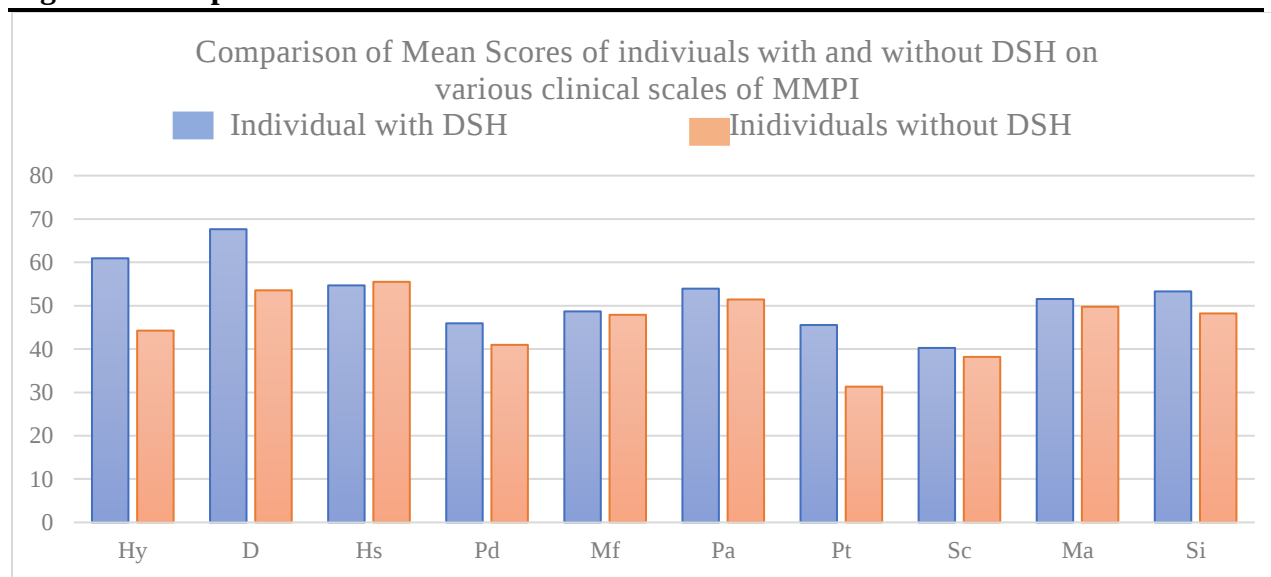
Mean Differences of individuals with and without DSH on various scales of MMPI (N=56)

Variables	With DSH (<i>n</i> =28)		Without DSH (<i>n</i> =28)		<i>t</i>	<i>p</i>	95% CI		Cohen's d
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Hy	60.93	15.734	44.25	16.799	3.83	.000	7.958	25.399	1.025
D	67.64	9.546	53.54	10.053	5.38	.000	8.85	19.36	1.439
Hs	54.68	10.245	55.50	12.946	-.263	.793	-7.07	5.43	0.07
Pd	45.93	20.950	40.96	21.280	.880	.383	-6.35	16.27	0.23
Mf	48.68	10.911	47.89	11.409	.263	.793	-5.19	6.76	0.07
Pa	53.93	14.694	51.43	13.993	.652	.571	-5.18	10.18	0.17
Pt	45.54	12.703	31.32	20.046	3.16	.003	5.22	23.2	0.85
Sc	40.25	14.416	38.18	18.229	.472	.639	-6.73	10.87	0.13
Ma	51.54	13.454	49.75	17.150	.434	.666	-6.47	10.04	0.11
Si	53.29	9.475	48.21	7.529	2.217	.031	.486	9.65	0.59
L	49.61	10.761	51.54	11.663	-.643	.523	-7.94	4.08	0.17
F	53.43	15.852	55.25	21.473	-.361	.710	-11.9	8.29	0.09
K	50.21	9.255	55.11	10.685	-1.83	.073	-10.2	.463	0.49

Note: Hy=Hypochondriasis, D= Depression, Hs=Hysteria, Pd=Psychopathic Deviate, Mf=Masculinity-Femininity, Pa=Paranoia, Pt=Psychasthenia, Sc=Schizophrenia, Ma=Hypomania, Si=Social Introversion

Results indicates the mean differences of individuals with and without DSH on various scales of MMPI. Results indicate that individual with DSH scored significantly high on Hy, D, Pt and Sc scales of MMPI as compared to individuals without DSH. But there are no significant differences on other clinical scales of MMPI and Validity scales. Same mean differences are also presented in graphical form in figure 1.

Figure 1: Comparison of mean scores



Discussion

Discussion of Findings and Theoretical Reasoning

The current study investigated personality factors in young adults with and without Deliberate Self-Harm (DSH) using the MMPI-U (Minnesota Multiphasic Personality Inventory - Urdu version) among candidates at the Army Recruitment Centre, Rawalpindi. The findings affirm several key associations and underscore vulnerabilities within this specific demographic, aligning with existing theoretical frameworks on personality and self-harm. In succeeding paragraphs, there is a detailed discussion on key findings along with a theoretical explanation.

Firstly, a strong association was found between depression and DSH. This finding directly validates the existing literature (e.g., Andover, 2012), which consistently posits that mental health illnesses, particularly depression, are significant predictors of DSH. Theoretically, DSH is often viewed as a maladaptive coping mechanism to alleviate overwhelming negative affect, such as the deep emotional pain, hopelessness, and sadness characteristic of depression (Linehan, 1993). In the context of the cognitive model of self-harm, depressed individuals may have cognitive biases that lead to pessimistic views of the future and low self-worth, making self-harm appear as a justifiable or only viable escape from emotional distress (Beck, 1967).

Secondly, individuals with DSH exhibited high scores on the Hypochondriasis (Hs), Psychasthenia (Pt), and Social Introversion (Si) scales. These elevated scores point to significant risk factors. Specifically, high scores suggest excessive preoccupation with bodily functions and fear of illness. Theoretically, this can be linked to DSH through the concept of somatisation—the manifestation of psychological distress as physical symptoms (Lipowski, 1988). The focus on physical pain or illness may be an indirect, less psychologically threatening way of dealing with underlying

emotional pain, which DSH then acts upon more directly. Similarly, elevated Pt indicates high levels of anxiety, obsessive-compulsive tendencies, self-doubt, and worry. Theoretically, individuals scoring high on Pt may engage in DSH to disrupt or ground themselves from the intense, pervasive anxiety and intrusive thoughts, a concept explained by the emotion regulation model of self-harm (Gratz, 2001).

Another important finding is that having high scores on the Social Interaction (Si) scale implies a tendency toward social withdrawal, discomfort in social situations, and insecurity. Theoretically, this introversion and resulting social isolation often deprive individuals of crucial social support, which is a significant protective factor against DSH. The lack of social resources exacerbates feelings of loneliness and worthlessness, further contributing to self-harming behaviours (Joiner, 2005).

The finding that military recruits appear at high risk of having or developing personality pathology, including features of all DSM-IV personality disorders, is consistent with literature linking personality disorder features to DSH (Langbehn & Pfohl, 1993; Herpertz et al., 1997). Theoretically, personality disorders are defined by maladaptive and pervasive patterns of relating to the environment and self. Traits such as impulsivity (common in Borderline Personality Disorder), emotional dysregulation, and interpersonal difficulties are strongly associated with DSH. For military recruits, the inherent stressors of transitioning into the armed forces, such as intense structure, potential loss of autonomy, and exposure to demanding environments, can exacerbate pre-existing personality vulnerabilities. Furthermore, the expectation of emotional toughness and suppression of vulnerability within the military culture might prevent healthy coping and expression of distress, driving individuals toward covert, maladaptive behaviours like DSH.

The study's success in highlighting the concerns and vulnerabilities of young adults toward DSH is particularly relevant given the local context where high DSH diagnoses have been reported at younger ages in Pakistan (Shahid & Hyder, 2008). This localised finding reinforces the need for culturally sensitive screening and intervention strategies. The conclusion that certain personality traits are strongly linked with DSH necessitates urgent measures. Theoretically, the sociocultural context heavily influences how distress is expressed and perceived. Understanding these specific personality traits within the local cultural framework is essential for developing culturally specific scientific data and interventions that are both effective and acceptable to the population. The recommendation for a multicentre study with homogenous parameters is vital to generate the necessary nationwide data to comprehensively understand and address the multifaceted problem of DSH in Pakistan.

Conclusion

This study successfully established a significant link between Deliberate Self-Harm (DSH) and specific maladaptive personality traits, as measured by the MMPI-U, among young adult military recruitment candidates in Rawalpindi. The findings strongly affirm that mental health vulnerabilities, particularly depression, along with traits reflecting heightened anxiety, social withdrawal, and somatisation (indicated by high scores on psychasthenia, social introversion, and hypochondriasis, respectively), are major risk factors for DSH in this population.

So it is concluded that DSH in young adults presenting at the Army recruitment centre is strongly correlated with a distinct personality profile characterised by internalising distress, emotional dysregulation, and interpersonal difficulties. This profile suggests that these individuals are employing maladaptive coping mechanisms to deal with overwhelming negative affect. This

finding aligns with major theoretical models of self-harm, such as the emotion regulation and interpersonal theories. Furthermore, the heightened risk of developing personality pathology among military recruits underscores a critical need for early psychological screening, given the unique stressors associated with military service. The study serves as a crucial initial step, highlighting the vulnerability of Pakistani youth to DSH, necessitating urgent, culturally informed national action.

Recommendations

Based on the findings and the urgent need to address DSH, the following comprehensive recommendations are proposed:

Integration of Mental Health Screening in Recruitment.

Mandatory Psychological Assessment: Implement mandatory, standardised psychological screening [utilising tools like the MMPI-U (adapted for local culture) and specific DSH screeners] as an integral part of the initial military recruitment and selection process.

Targeted Screening Protocol: Develop a risk stratification protocol where candidates scoring highly on scales such as depression, psychasthenia, hypochondriasis, and social introversion are flagged for immediate, in-depth clinical follow-up before acceptance into service.

Culturally Specific Research and Data Collection

National DSH Database: Establish a national, centralised database for documenting cases of DSH across different settings (clinical, educational, military) to understand its actual prevalence, demographics, and trends in Pakistan.

Multicentre study: Design and execute a multicentre study with homogenous parameters across various regions and institutions to generate culturally specific scientific data regarding the causes, presentation, and management of DSH, moving beyond localised findings.

Intervention and Prevention Strategies

Early Intervention Programs: Develop and implement targeted psychological intervention programs within the military training infrastructure. These programs should focus on emotion regulation skills, interpersonal effectiveness and stress management.

Mental Health Literacy Campaign: Launch a nationwide mental health literacy campaign specifically targeting young adults, educators, and community leaders to reduce stigma surrounding mental illness and self-harm, encouraging help-seeking behaviour.

Training and Capacity Building

Training for Gatekeepers: Provide specialised training to military personnel (officers, recruiters, and medical staff) on identifying warning signs of DSH and personality vulnerability and implementing appropriate referral pathways.

Capacity Building for Clinicians: Invest in the training of more mental health professionals (psychiatrists, psychologists, and counsellors) with expertise in DSH and personality disorders, ensuring services are available and accessible across the country.

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