

Exploring The Correlation Between Self-Harm Tendencies and Risk-Taking Behaviours Among College Students

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Abstract— Self-harm and risk-taking is an increasing concern among college students. Self-harm, which encompasses a range of deliberate, non-suicidal acts of physical harm inflicted on oneself, has received a lot of attention because it is so common among young adults, particularly those in higher education. Concurrently, risk-taking behaviors ranging from substance abuse to reckless driving have been extensively investigated for their effects on psychological well-being and decision-making processes. This research aims to identify the presence of self-harm tendency and risk-taking behavior and their correlation within the college population. A mixed sampling method has been used in this research, initially, the researchers used the Convenience sampling method for selecting college students and secondly, Simple random sampling was used for collecting data. Data were collected among 428 students within the college population. The tools used to collect data were the General Risk Propensity Scale (GRIPs) and Functional Assessment for Self-Mutilation (FASM). The data analysis performed in the study is Spearman correlation which revealed that there is a negative correlation between self-harm and risk-taking behaviour among college students.

Keywords: College students, Non-suicidal self-injury (NSSI), Psychological well-being, Risk-taking behavior, Self-harm.

1. INTRODUCTION

Self-harm phenomena are divided ideally into two mutually exclusive categories: (a) suicidality, which is the deliberate intentional attempt to end one's life, and (b) nonsuicidal self-injury (NSSI), which is the direct infliction of damage on one's own body with the intent to hurt, but not kill, oneself (Klonsky, Victor, & Saffer, 2014). Nonsuicidal self-injury is defined as the 'intentional destruction of one's body tissue without suicidal intent' (Nock and Favazza, 2009). In comparison to earlier versions of the DSM-5, which only acknowledged SIB as a symptom of borderline personality disorder, the DSM-5 recently recognized SIB as an independently diagnosed disorder. It includes within the diagnostic features "repeatedly inflicting shallow, yet painful injuries to the surface of his or her body".

Self-harm is a way of coping with stress. To cope with emotional distress or to leave from numbness, an individual injures themselves physically. Any intentional, non-suicidal behavior that causes bodily harm intending to ease emotional distress is considered self-harm. Since physical pain results in true feelings, it is frequently easier to handle than emotional pain.

An individual's injuries can prove that their emotional suffering is real. Self-harming actions can calm or arouse an individual. However, self-harm only addresses the surface problems; it doesn't address the underlying problems.

Factors that motivate people to self-harm include the need to get out of a difficult situation or unbearable emotional suffering, to ease tension, to convey hostility, to arouse guilt, or to foster a greater sense of concern from others. Examples of self-harming behaviors include – Cutting, and overdosing on medications; Swallowing potentially harmful materials or substances; burning either chemically or physically; Over- or under-medicating, such as when insulin is misused; Punching, hitting, or bruising; Pulling hair, picking at the skin, or banging the head; Episodes of alcohol or drug abuse; or Occasionally overeating or undereating may be intentional acts of self-harm; Dangerous sexual behavior.

1.1. SELF-HARM BEHAVIOR: ADOLESCENTS AS THE PRIMARY CONCERN

The epidemiological investigation showed that NSSI behavior occurs in individuals of all age groups, with adolescents being the group with the highest frequency of occurrence.

Self-harm among adolescents is prevalent, and about 10–20% report self-harm at least once in their lifetime. According

to a recent meta-analysis of 66 studies, lifetime suicide attempts among children and adolescents are 6%, and lifetime nonsuicidal self-injury is 22.1%. In a cross-sectional study conducted in 2021 by Sinha, Srivastava, and Mishra among adolescents in India, about 4.5% and 3.2% of adolescents had deliberate self-harm. A higher likelihood of deliberate self-harm was found among adolescents who experienced parental physical abuse by 49 percent and 61 percent, respectively. According to Fitzgerald and Curtis (2017) and Robinson et al. (2019), women appear to experience NSSI and suicide attempts more frequently than men. Prevalence of self-harm is consistently higher in adolescence compared to adulthood (Nock, 2010; Moran et al, 2012; Swannell, Martin, Page, Hasking & St John, 2014). Hawton, Rodham, Evans, and Weatherall (2002) reported a lifetime prevalence rate of 13.2%. Recent estimations show that the lifetime prevalence of NSSI is 4%–6% in adults and 17%–18% in adolescents. Suicidal thoughts and behaviors as well as future psychological issues are linked to NSSI.

I.II. "DECODING NSSI: NOCK AND PRINSTEIN'S FOUR CATEGORIES"

The FASM items were categorized by Nock and Prinstein into four factors: social-negative reinforcement, automatic-positive reinforcement, automatic-negative reinforcement, and social-positive reinforcement.

The term "automatic-negative reinforcement" describes the use of NSSI to reduce stress or other undesirable internal states. Lloyd-Richardson, Nock, and Prinstein (2009) explained that it can be used as a means of "removing or preventing some undesirable cognitive or emotional state, such as to release stress or to distract from disturbing thoughts." Negative-affect regulation has been linked to automatic negative reinforcement. This function, which is a representation of using NSSI to escape unwanted emotional states, seems to align with the research on practical avoidance.

Automatic-positive reinforcement describes the use of NSSI as a strategy "to generate a desirable physiological state". Creating and achieving an internal state is the intended, reinforcing result of this function instead of trying to eliminate or reduce it as in automatic negative reinforcement. Escaping numbness is linked to the occurrence of these internal states. These two automatic functions are also found in other functions, such as cognitive-affective regulation, that have been considered to be associated with NSSI.

The same negative component as automatic negative reinforcement is found in social negative reinforcement as well—namely, a need for something to be taken away or diminished. On the other hand, the social component corresponds to an outside reinforcement system. The ability to "escape from Interpersonal duties or requirements" is the reinforcement in the current case as a function of NSSI.

Social-positive reinforcement signifies the use of NSSI as a way of obtaining close attention from people or gaining control over material possessions or relationships with others. This function is similar to automatic positive reinforcement in that it produces or achieves a reinforcer instead of eliminating or decreasing one. Here, the reinforcer might be the threat of, the display of, or even the ability to obtain something from other people, such as sympathy, pity, or approval.

I.III. UNDERSTANDING SELF-HARM IN ADOLESCENTS: THE LANGUAGE OF NON-VERBAL COMMUNICATION

Self-harm is primarily associated with two concepts for adolescents: "Social communication" and "Regulating emotions." In that context, adolescents use non-verbal language to send out a signal of communication. They communicate with their bodies.

The body ends up expressing the issues that they are unable to emotionally convey. Therefore, as self-harm becomes recognized as a psychological and social phenomenon, the process of breaking down the idea that it is only a pathology must be broadened. According to a psychic perspective, self-harm also serves as an act that occurs when words fail, and adolescents desire to communicate the difficulties they deal with and the invisible space that their feelings occupy. Therefore, Self-harm can also be seen as a nonverbal means of expressing one's need for support to those around one (Motz, 10).

I.IV. EXPLANATORY MODELS OF SELF-HARM

Biochemical theories for self-harm include assumptions that it could be an increase in endorphin production or a response to reduced serotonergic activity (Audenaert et al. 2001). One theory is that people hurt themselves to produce the generally happy effects of endorphins, which include the suppression of pain and the regulation of emotions.

Psychodynamic theory relates self-destructive behavior to developmental problems that may arise from neglect of children, which may be brought on by rejection and loss (Gallop 2002; Machoian 2001). Self-harming individuals lack a close, empathic relationship with someone they can trust in, so they have nowhere to express their needs and feelings. Their doubts may be exacerbated by subsequent feelings of not being heard or cared for, which may result in a rise in psychological discomfort.

The theory of object relations (Sigrell 2000) addresses how children form internal representations of objects. According to Gallop (2002), kids who experience positive parenting grow up with an internalized sense of themselves as deserving individuals; kids who experience negative parenting may not form that positive sense of self, which can lead to major deficiencies in their ability to self-soothe and a lack of object consistency. Machoian (2001) hypothesized that self-harming behavior could be an attempt to force an individual to comply, an expression of rage towards another person or oneself, or a cry for assistance.

I.V. UNDERSTANDING SELF-HARM: A PSYCHOLOGICAL HYPOTHESIS OVERVIEW

I.V.I. SOCIAL LEARNING HYPOTHESIS

A significant percentage of our behavior is learned by observing those around us (Bandura 1977, 2006). It is also based on strategies the individual has picked up and identified in how they act toward themselves. These strategies include both negative and positive behavioral frameworks. In the wider sense, an individual's choice to engage in self-harm might probably be influenced by what they observe or learn behavior from others. The media can also be a powerful instrument for conveying information about self-harm. Although it's frequently carried out so with the best of intentions, messages about self-harm in the media might lead to a rise in the behavior. For example, recent data indicates a sharp rise in the number of references to selfharm in a variety of media, such as songs, movies, news articles, and online content. (Whitlock, Purington, & Gershkovich, 2009),

I.V.II. SELF-PUNISHMENT HYPOTHESIS

As stated individuals may use self-harm as a coping mechanism to deal with emotional distress. Those who engage in selfinjurious behavior externalize their emotional pain by transforming it into a noticeable physical pain (Gratz, 2003). This might provide more context for how and why the behavior is linked to childhood abuse where studies reveal that teenage selfcriticism acts as a mediator in the relationship between childhood abuse and NSSI. Contemporary qualitative studies examining the potential influence of self-punishment have found that (a) One of the primary justifications self-injurers convey for engaging in the act is self-punishment (Nock & Prinstein 2004), (b) Nearly half of the self-injury episodes have been triggered by the thoughts and feelings of "self-hatred" and "anger at oneself (Nock et al. 2009), (c) When compared with non-injurers, individuals who self-injure report much higher levels of self-criticism (Glassman et al. 2007).

I.V.III. SOCIAL SIGNALLING HYPOTHESIS

The hypothesis outlines the self-injurious behavior as "cries for help" or "means of communication." Understanding the interpersonal functions of self-injury is crucial. To understand, it is essential to answer an important question: Why would individuals choose to selfharm instead of using their voice or other harmless form of communication when interacting with others? It has been identified that individuals communicate or express their distress by self-harming as it seems to work better than gentler ways of expressing oneself, like talking, screaming, or sobbing, to get someone to help. Based on prior studies, it has been suggested that self-harm can occur as a result of a process of escalation, whereby individuals increase the strength of their social signal (such as crying) or switch from verbal to physical forms of communication (such as crying → demonstrating → self-harming), which will become stronger and persistent over time if reinforced (Nock 2008).

I.V.IV. ALTERED PAIN HYPOTHESIS

According to this hypothesis, these individuals have a greater threshold for pain reactivity, which allows them to repeatedly self-harm that other people would consider “painful”. People who self-harm generally state that they experience little or no pain when they self-harm (Nock & Prinstein 2005). The exact cause of this paradoxical finding has not yet been explained, but multiple laboratory-based studies have confirmed that individuals who self-injure have a lower sensitivity to pain than people who do not, indicating that it takes them longer to perceive stimuli as painful, and can endure pain longer than individuals who do not.

I.VI. RISK-TAKING

Risky behavior or risk-taking behavior is defined according to Trimpop (1994) as “any consciously, or non-consciously controlled behavior with a perceived uncertainty about its outcome, and/or about its possible benefits, or costs for the physical, economic or psycho-social well-being of oneself or others.” A behavior that may have long-term negative impacts on the individual's mental and physical well-being is described as risk-taking behavior.

Adolescents are frequently involved in these behaviors, which can have several causes. These include peer acceptance, the need for autonomy and identity, coping mechanisms for the stress of environmental and developmental barriers, or even the occurrence of psychological issues. Risk-taking behavior refers to a tendency to engage in behaviors such as bodily harm, social rejection, emotional disengagement, and suicidal ideation and attempts.

Following NCERT (2006), adolescence has been described as "the stage of life that begins at the onset of puberty, when sexual maturity or the ability to produce is attained." Adolescence is the most notable phase of transition in the life of an individual. During this period, there are significant changes in personality, physiology, psychology, and the community. On top of that, it is a stage of life that is frequently marked by reckless and impulsive behavior. This phase prepares the person for the transition into the adult world, which is fraught with many risks and spans from childhood to adulthood. Risk-taking in late adolescence may develop into an adaptive pattern in the mind and body that lasts into adulthood, such as addiction and criminality. Adolescents who have less parental supervision and peers who also actively participate in risk-taking behavior are more likely to engage in risk-taking behavior.

I.VII. "WALSH'S RT: CATEGORIZING RISKY ACTIONS"

Walsh (2012) provides a summary of RT behaviors, which are classified into three categories: situational, physical, or sexual. Situational response theory (RT) describes six behaviors that, while not inherently dangerous, may become so in specific situations (e.g., going for a walk at night in a dangerous area). Engaging in risky physical behaviors, such as walking in rush hour traffic, is referred to as physical RT (Walsh, 2012). Promiscuity and engaging in sexual activity while intoxicated are two examples of the many sexual behaviors that make up sexual RT.

I.VIII. RISK-TAKING IN ADOLESCENTS

Based on a survey carried out by the Centers for Disease Control and Prevention (CDC), late adolescents—especially high school students—engage in several risk-taking behaviors. Adolescents are drawn to and critically indulged in the online world, particularly when it comes to gaming. Recently, risk-taking behavior (suicidal ideation and attempts) by young adults and adolescents who played various online games like Blue Whale across the globe, including India, has come to light. Adolescents often engage in high-risk activities; increased reward sensitivity, conformity, and motivation to receive peer rewards have all been linked to an increase in adolescent risk-taking.

The Dual Systems Model of Adolescent Risk Taking (DSMART), put forth by Steinberg (2010), explains why adolescents engage in more RT behaviors. According to this model, the incentive processing and cognitive control systems are primarily triggered by distinct patterns of brain development. It used to be believed that teenagers lacked the maturity to use reason to make logical decisions, just like adults. On the other hand, empirical research demonstrates that adolescents and adults can reason logically on the same level (Steinberg, 2010). Adolescents thus seem to be aware of the risks associated with certain behaviors, but they nevertheless decide to partake in risky ones. Compared to adolescents, adults are less likely to participate in

high-risk behaviors even though they are aware of the risks. Therefore, the high level of RT engagement during adolescence cannot be explained by a lack of sound, logical reasoning.

I.IX. RISK-TAKING AND SELF-HARM

Risk-taking and self-harm behaviors (RSB) are categorized as behaviors that may pose a threat to an individual's physical or psychological growth. These involve sexually risky behavior, truancy, excessive media consumption, smoking, illicit drug and alcohol use, nonsuicidal self-injury (NSSI), and suicide attempts. Adolescents frequently experience RSB, which can happen for several reasons. These include peer acceptance, the need for autonomy and identity, a coping mechanism for the stress of developmental and environmental challenges, or even the emergence of psychological issues.

Based on several research studies (Gratz & Chapman, 2009; Lofthouse, Muehlenkamp, & Adler 2009; Walsh, 2012), SH encompasses actions that cause varied degrees of bodily harm to the individual, whereas RT is typically defined as actions that could have unacceptable consequences. While RT typically decreases after adolescence, SH may continue into adulthood (Nock et al., 2007). According to Glenn and Klonsky (2010), SH tends to be correlated with depression and the reduction of undesirable or unpleasant affect states, whereas RT is linked to a range of moods, including euphoria (Steinberg, 2004). Peers frequently cause RT to rise (Steinberg, 2008). Specifically, "risk-taking and self-harm behaviors" (RSB) refers to actions that could endanger a person's physical or mental health.

These comprise non-suicidal self-injury (NSSI), tobacco use, excessive exposure to media, illicit drug and alcohol use, truancy, and attempted suicide. Adolescents often engage in risk-taking behavior, which can occur for several reasons. These can include the need for identity and autonomy, the need for peer acceptance, a coping strategy for the stress of developmental and environmental obstacles, or the rise of psychological problems.

I.X. OBJECTIVES OF THE STUDY

- To determine the level of risk propensity in a college student sample.
- To identify the presence of NSSI (Non-Suicidal Self Injury) behaviors.
- To establish a correlation between risk-taking behavior and the occurrence of NSSI behaviors.

I.XI. HYPOTHESIS

There is no statistically significant correlation between self-harm tendencies and risk-taking behaviors among college students.

II. AIM

The study aims to examine the correlation between self-harm tendencies and risk-taking behavior among college students.

II.I. RESEARCH DESIGN

The correlational research design was used due to its ability to analyze the relationship between self-harm tendencies and risk-taking behaviors without manipulating any variables.

II.II. SAMPLE

II.II.I. POPULATION

College students have been chosen as the study's universe. The samples are representative of a homogeneous population that falls within the 18–25 age group. The samples consist of both genders. Adolescents were chosen as the population to study because risk-taking (RT) and self-harm (SH) are phenomena that can affect people at any stage of life.

II.II.II. SAMPLE SIZE

The sample size of the study is 445. Samples have been collected from 251 male and 194 female college students.

II.II.III. INCLUSION CRITERIA

In this study, adolescents between the ages of 18 and 25 were included.

II.II.IV. EXCLUSION CRITERIA

Adolescents below or above the age category of 18 - 25 were not included in the study.

II.II.V. SAMPLING METHOD

A simple random sampling method is used in this study because it ensures that every member of the population has an equal chance of being chosen for the sample. With this approach, bias is minimized and the results can be extrapolated to a broader population because the sample is guaranteed to be representative of the population from which it was taken.

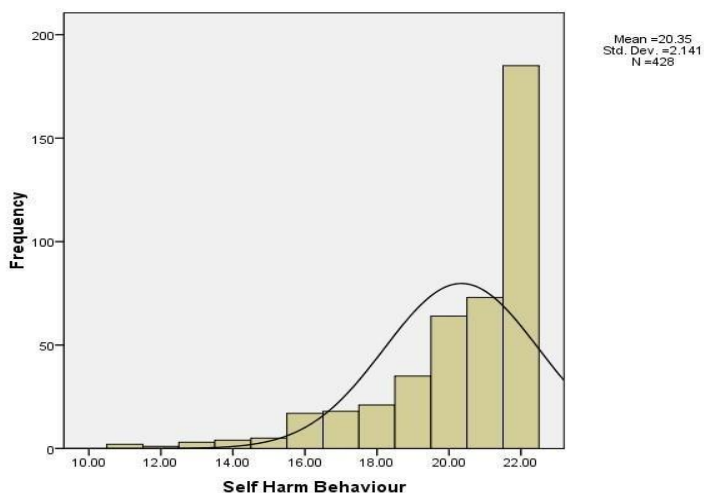
III. RESULTS

Table 3.1 represents the demographics and characteristics of the participants involved in the study.

Variable	Category	Frequency	%
Age (in years)	18	125	29%
	19	105	24.4%
	20	111	25.8%
	21	52	12.1%
	22	27	6.3%
	23-25	8	1.8%
Gender	Male	246	57.5%
	Female	182	42.5%
Educational Level	Undergraduate	355	82.9%

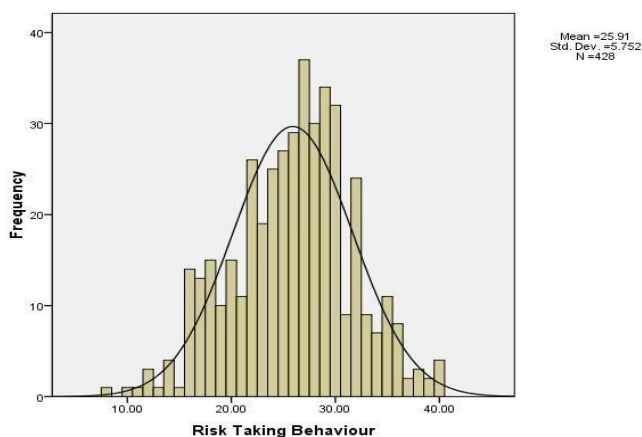
	Postgraduate	73	17.1%
Recent loss	Yes	196	45.8%
	No	232	54.2%

Figure 3.1 represents historic representation of Self-harm behaviour.



The histogram illustrates the distribution of self-harm tendencies among 428 individuals, with a mean of 20.35 and a standard deviation of 2.141. The majority of individuals cluster around the mean value, suggesting that most exhibit self-harm tendencies close to the average level.

Figure 3.2 represents a pictorial representation of risk-taking behaviour.



The histogram representation of risk-taking behavior provides a visual depiction of the distribution of scores within the sample of 428 individuals. With a mean of 25.91 and a standard deviation of 5.752, the data follows a bell-shaped curve, indicating a normal distribution of risk-taking tendencies.

Table 3.2 represents the correlation between Risk-taking behaviour and Self-harm tendencies among college students.

		Risk Taking Behaviour	Self-Harm Behaviour
Spearman's rho	Risk Taking Behaviour	Correlation Coefficient	1.000
		Sig. (2-tailed)	.109*
		N	428
Self-harm behavior	Correlation Coefficient	-.109*	.
		Sig. (2-tailed)	.024
		N	428

*. Correlation is significant at the 0.05 level (2-tailed).

The Spearman's rho correlation coefficients between risk-taking behavior and self-harm behavior, along with their corresponding significance levels (2-tailed) and sample sizes, are presented above. The negative correlation coefficient of -0.109 indicates a weak inverse relationship between risk-taking behavior and self-harm behavior among the sample population.

Table 3.3 shows the comparison of Risk-taking to Gender.

Variable	Group	N	Mean rank	Sum of rank	U	P
Gender	Female	182	177.54	32313.00	1.566	.000
	Male	246	241.84	59493.00		

From the above table, the significance level of .000 indicates that there is a significant difference between males and females in Risk-taking behaviour.

Table 3.4 shows the comparison of Self-harm tendency to gender.

Variable	Group	N	Mean rank	Sum of rank	U	P
Gender	Female	182	219.98	40036.00	2.139	.409
	Male	246	210.45	51770.00		

The significance level (P) is reported as .409, indicating that there is no statistically significant difference between the genders with Self-harm.

IV. DISCUSSION

Self-harm among adolescents has become a significant concern, driven by underlying psychological distress. Previously a taboo topic, increased awareness and research have revealed its prevalence and serious implications. Factors such as peer pressure, mental health disorders like anxiety and depression, school stress, interpersonal conflicts, trauma, and the impact of social media contribute to self-harm. This study explores the correlation between self-harm and risk-taking behaviors among college students using quantitative methods. Data from 428 college students, mostly young undergraduates, show a predominant age group of 18-20 years and a gender distribution slightly favouring males. About half of the participants had recently experienced a loss, adding an important dimension related to grief and coping mechanisms.

The study found a normal distribution of risk-taking behaviors with an average level of risk-taking (mean score of 25.91) and moderate self-harm tendencies (mean score of 20.35). Spearman's rho analysis revealed a slightly negative correlation (0.109) between risk-taking and self-harm, suggesting that those who engage more in risk-taking behaviors may exhibit lower levels of self-harm tendencies. This counterintuitive finding might be explained by the coping mechanisms associated with risk-taking, which can provide temporary relief from emotional distress, thereby reducing the need for self-harm. Studies by Glenn and Klonsky (2010) and Steinberg (2004) support these insights, indicating that self-harm is often linked to managing negative emotions, while risk-taking can induce positive emotions like euphoria.

Gender differences were significant in risk-taking behaviors, with males exhibiting higher levels than females. This aligns with existing research linking hormonal differences, particularly testosterone, to higher risk-taking propensity in males. Psychological and sociocultural factors also contribute, with males often socialized to be bolder and more independent, while females are encouraged to be cautious. However, no significant gender differences were found in self-harm tendencies, highlighting that self-harm is a gender-neutral issue, contrary to the common misconception that it primarily affects females. Age differences were significant, with younger individuals (18-19 years) showing higher self-harm tendencies, which decline with age. This trend may be due to the higher stress and identity exploration typical of younger age groups, making them more vulnerable to self-harm as a coping mechanism.

Therefore, Understanding these dynamics is crucial for developing effective interventions and support systems for college students, addressing both risk-taking and self-harm behaviors comprehensively.

V. CONCLUSION

Self-harm among adolescents is a growing concern linked to various psychological and social factors. This study found a slightly negative correlation between risk-taking behaviors and self-harm among college students, suggesting that those engaging in risk-taking might exhibit lower self-harm tendencies. Gender differences were significant in risk-taking but not in self-harm, which affects both genders equally. Younger students showed higher self-harm tendencies, highlighting the need for targeted interventions and support systems to address these behaviors in the college setting.

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