



Research Paper: Self-harm Behavior among University Students



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Citation: Sabet Dizkuhi, K., Kafie Masooleh, M. (2021). Self-harm Behavior among University Students. *Journal of Modern Psychology*, 1(3), 9-24. <https://doi.org/10.22034/jmp.2021.285993.1016>

 <https://doi.org/10.22034/JMP.2021.285993.1016>



Article info:

Received date:

16 June 2021

Accepted date:

20 Dec 2021

Keywords:

Direct self-harm, Indirect self-harm, Self-harm.

Abstract

The aim of this study was to investigate the frequency of self-harm behaviors in University Students. The statistical population of this descriptive study includes the entire undergraduate students of the University of Guilan who have been studying at this university un the academic year 2019-20. Participants in the research were 508 students (368 females and 140 males) who were randomly selected among the students. For data collection, the self-harm questionnaire of Sanson et al. (1998) and to analyze them, descriptive statistics methods and chi-square test were used. According to the findings, 17.8% of the students have self-harm behaviors. The results of Chi-square test showed that there is no difference between male and female students in terms of the frequency of direct, indirect and general self-harm behaviors. ($P > 0.01$). But burning the body, Recklessness in driving, alcohol abuse and Deliberate loss of job in male students, and involved in relationships that expose one to sexual abuse and Deliberate self-starvation were more common in female students. ($p < 0.01$). Also, local and non-indigenous university students and different age groups of students were significant different in terms of acts of self-harm and indirect self-harm. ($P < 0.01$). Based on the findings, it can be stated that self-harm is a relatively common behavior in university students. As a result, these people need to be identified and treated in a timely manner to reduce the negative consequences of these behaviors.

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1. Introduction

Self-harm behavior including inflicting any sort of intentional or deliberate injury on oneself, such as cutting different parts of the body with sharp-edged tools or burning them (National Alliance on Mental Illness, 2020), has captured the attention of numerous researchers in the recent years as one of the major health crises involving adolescents and young people (Auerbach et al., 2020). One of the most significant categorizations of the self-harm behavior is the one done by Favazza and Simon (1996) who have categorized self-harm into four groups. One of the rarest sorts of these behavior is major self-harm including mutilation and removal of eyes. Stereotypical self-harm includes a pattern of unchanging, rhythmic and inadvertent actions such as smashing one's head against the wall and biting nails, which mostly exists in individuals with chronic mental disorders and children with autism. Obsessive self-harm consists of any behavior such as scratching the skin and pulling nails. Impulsive self-harm is the most frequent and varied type of self-harm, which includes cutting, scratching, burning the skin, pulling the wounds, injecting liquids, punching and clawing oneself, which is the most prevalent type of self-harm in youths (Favazza & Simmon, 1996, as cited in Favazza, 2006).

Students are sensitive in terms of mental health, and some of them experience at least one of these challenges, leading to their poor academic performance (Bruffaerts et al., 2018). Self-harm is one of the problems damaging the mental health, which affects university students (Vidourek, 2018). Results from studies investigating the frequency of self-harm behavior among

university students exhibit prevalence rates varying from 2.5 % to 42.5 % (Labouliere, 2009; Taliaferro & Muehlenkamp, 2015). According to these results, it can be inferred that self-harm is common and on the rise habit among university students (Taliaferro & Muehlenkamp, 2015; Griffin et al., 2021). At least, one out of every 20 students engage in self-harm and 6 % of these students are inflicted with serious and chronic self-harm behavior including cutting or scratching their body and the rest have a background of self-harm behavior (Vidourek, 2018; Whitlock, 2012). In Iran, the highest prevalence rate of self-harm behavior is found to be 40.5 % in a study conducted on the students of Islamic Azad University, Babol Branch (Nobakht & Yngvar, 2017).

Self-harm, more common among the freshman and undergraduates, might decline in higher levels of education, but if it does not, it becomes more chronic as the individuals age, bringing with it greater maladies (Taliaferro & Muehlenkamp, 2015; Lang & Sharma-Patel, 2011). Overall, students face a variety of challenges in the early years of academic education due to exposure to a new environment; providing they had already had backgrounds of depression and anxiety, it is probable that they would not be able to confront these challenges and to adapt to the new setting and people, setting the stage for the emergence of self-harm behavior (Taliaferro & Muehlenkamp, 2015; Hilton, 2017). Incapability to confront anxieties resulting from running into new and complex challenges prompts the individual to look for alternative methods to get consolation and mitigate stress, and in case of engaging in self-harm, they will be

temporarily pacified. As a result, they continually use this practice as a mechanism for confronting difficult situations, and this repeated use aggravates self-harm (The National Alliance on Mental Illness, 2020). Among the other reasons students inflict self-harm on themselves is confronting negative, excessive emotions and sentiments which they fail to regulate and try to gain control over the emotions (Hilton, 2017). According to Klonsky (2007), when facing excessive negative emotions, the individual doing self-harm fails to regulate their emotions and as a result they recourse to self-harm as a method to express and control negative emotions and to get out of extreme negative emotional states (Suyemoto, 1994). When an individual comes to use self-harm as a method of confronting and regulating maladaptive emotions and finds it to be effective, the utilization of other methods would be minimized and with time, self-harm appears to be the only effective method; since such behavior is addictive, it becomes more chronic on a daily basis (Labouliere, 2009; Mental Health America, 2020).

Problems in interpersonal relationships, and failure to address them, represent one of the other reasons these individuals engage in self-harm (Burke et al., 2008). Based on the social model of self-harm, when an individual lacks the capability to initiate healthy relationships with people and cannot communicate with them successfully, they resort to self-harm as a means of doing so. Through this behavior, people inflict self-harm on themselves to capture the attention of the others and attempt to walk away from the state of isolation while demonstrating their

capability and power to them (Klonsky, 2007; Nock, 2008).

Self-harm behavior entails significant problems and ailment for the body and soul of an individual and affect their family, friends and the society, underscoring the importance of investigating such behavior (Nock, 2010; Xavier et al., 2016). Self-harm is a latent behavior simmering beneath the skin of the society, which is progressively aggravated due to not receiving timely assistance and treatment. The treatment of self-harm behavior becomes more complicated and difficult as the person ages. Moreover, it is possible that youths encourage each other to exhibit such behavior, and for the same reason, it is important that the extent and intensity of the occurrence of such behavior in the society are investigated so as to presage the preparation of effective preventive plans (The National Alliance on Mental Illness, 2020; Lang & sharma-patel, 2011; Izakian et al., 2017). On the other hand, the use of self-harm behavior as a negative coping strategy result in the decline of the academic performance of the students and it might even lead to them failing their courses in higher levels of education (Mental Health America, 2020; Hjorth et al., 2016). Studies reveal a high degree of self-criticism and self-loathing among the students (Smith et al., 2020). Poor academic performance and failure in educational development contribute to the building up of self-assessment and self-criticism of these individuals, and as a result the resurgence of self-harm (Wiseman, 2017). Self-harm behavior leads to the squandering of suitable opportunities for the growth of the individual which has a negative impact on their occupational

prospects and their efficiency within the workplace (The National Alliance on Mental Illness, 2020). Since students play a key role in the progress of a society in economic, social and cultural terms, any sort of harm on their body or soul hinders the progress of the society, incurring considerable costs for the economy and health sector of a country (Aliverdinia et al., 2012; Bruffaerts, et al., 2019)

There are limited studies on self-harm behavior in Iran and other Asian nations (Gholamrezaei et al., 2017; Wu et al., 2011) and this specific area has been neglected. Therefore, it can be stated that there is an information gap when it comes to the prevalence and grounds of emergence of self-harm behavior in general, and among the students in particular, and conducting any research in this regard in Iran would be significant. The present study is conducted with the aim of investigating the frequency of occurrence of self-harm behavior among the university students in Iran.

2. Method

The present study has a descriptive design. The population of the study includes the entire undergraduate students of the University of Guilan who were studying at this university in the academic year 2019-20. The participants of the present research are comprised of 508 students of the University of Guilan (368 females and 140 males) who were selected from the students of the Faculty of Literature and Humanities, Faculty of Engineering, and Faculty of Arts and Architecture using convenience sampling. Criteria for being included in the present study were age (18-25), level of study (undergraduate) and voluntary consent. Criteria for exclusion from the research was unwillingness to fill out the

questionnaire. The following questionnaire was employed for data collection:

The revised version of the Self-harm Inventory Questionnaire: This questionnaire, designed by Sanson et al. (1998), has 22 items for measuring direct (cutting, hitting, and burning) and indirect self-harming behavior (using illicit drugs, alcohol, and taking drugs). It was constructed to be used on psychiatric and non-psychiatric populations (Sansone et al., 1998). Psychometric properties of this questionnaire with a cut-off score of 5 were evaluated and reported as desirable outside of Iran. The internal consistency reliability coefficient of this scale was 0.74 in Cronbach's alpha test (Sansone et al., 2018). Furthermore, the convergent validity of this questionnaire with the self-destruct variable was evaluated and its correlation coefficient was 0.66, which was significant at the level of 0.01 (Wilkinson et al., 2018). Khanipour et al. (2018) reported the reliability coefficient of this questionnaire by Cronbach's alpha method ($\alpha=0.81$).

The first step in data collection procedure was to obtain necessary permits from the University of Guilan. After collecting the demographic details, the Faculty of Literature and Humanities, Faculty of Engineering, and Faculty of Arts and Architecture were selected in which to conduct the research. Afterward, several classes were picked from each faculty. Before distributing the questionnaires, the researchers gave students the explanations about the confidentiality of the results of the study and the need for truthful answering of the questions. Then, the relevant questionnaire was handed out to the participants. The data collection took approximately three months. Out of the 518

filled out questionnaires, 10 questionnaires were incomplete, which were eliminated from the research.

Eventually, the collected data were analyzed using descriptive statistic methods (frequency and percentage) and Chi-square test.

3. Results

The average and standard deviation of the age of participants in the research was calculated to be 20.74 ± 1.93 . By the order of birth, 36.4 % of the subjects were the first children, 37.6 % were the second children, 11.2 % were the third children and 14.8 %

were the fourth children or more. Additionally, 63.2 % of the respondents were local and 36.8 % were non-local students. Moreover, 7.9 % of the respondents had the history of being on academic probation while 92.1 % didn't have the history of academic probation. Meanwhile, 72.4 % of the participants in the research were female and 27.6 % were male.

In **Table 1**, the distribution of the frequency of occurrence and percentage of the prevalence of self-harm among the students are given on the basis of gender.

Table 1

Distribution of the frequency of occurrence and percentage of the prevalence of self-harm among the university students based on gender

Self-harm	Gender	Frequency	Percentage	Chi-square test	P	Contingency coefficient
Indirect	Female	72	19.6	2.291	0.13	0.067
	Male	36	25.7			
	Total	108	21.3			
Direct	Female	30	8.2	0.15	0.7	0.017
	Male	10	7.1			
	Total	40	7.9			
Total	Female	65	17.7	0.96	0.96	0.002
	Male	25	17.9			
	Total	90	17.8			

According to **Table 1**, 17.7 % of the female students, 17.9 % of the male students and 17.8 % of all students inflicted self-harm on themselves. Moreover, 19.6 % of the female students, 25.7 % of the male students and 21.3 % of all students were engaged in indirect self-harm while 8.2 % of female students, 7.1 % of male students and 7.9 % of all students engage in direct self-harm. The results of the Chi-square test reveal that

there was no significant difference between female and male university students in terms of the frequency of occurrence of self-harming behavior ($P < 0.05$).

In the **Table 2**, the frequency of occurrence of a variety of self-harm behavior among male and female students and all students are tabulated.

Table 2

The frequency of occurrence of various self-harming behavior based on gender

Questions	Female		Male		Total		Chi-square	P
	Frequency	Percent	Frequency	Percent	Frequency	Percent		
Drug overdose	19	5.2	7	5	26	5.1	0.006	0.94
Cutting/wounding	40	10.9	9	6.4	49	9.6	2.29	0.13
Burning the body	6	1.6	9	6.4	15	3	8.14	0.04
Self-hitting	57	15.5	19	13.6	76	15	0.293	0.58
Banging the head	35	9.5	21	15	56	11	3.08	0.07
Alcohol abuse	16	4.3	25	17.9	41	8.1	24.94	0.00
Recklessness in driving	17	4.6	26	18.6	43	8.5	25.47	0.01
Scratching/clawing	37	10.1	10	7.1	47	9.3	1.02	0.31
Preventing the healing of wounds	27	7.3	12	8.6	39	7.7	0.218	0.64
Worsening physical conditions	34	9.2	6	4.3	40	7.9	3.43	0.06
Promiscuousness	11	3	6	4.3	17	3.3	0.52	0.46
Being in a relationship to get rejected	57	15.5	29	20.7	86	16.9	1.96	0.16
Abusing prescribed medicine	22	6	13	9.3	35	6.9	1.72	0.18
Deliberate distancing from God	46	12.5	23	16.4	69	13.6	1.33	0.24
Emotionally abusive relationships	73	19.8	32	22.9	105	20.7	0.56	0.45
Sexually abusive relationships	29	7.9	4	2.9	33	6.5	4.21	0.04
Deliberate loss of job	33	9	23	16.4	56	11	5.75	0.01
Suicide attempt	20	5.4	4	2.9	24	4.7	1.49	0.22
Exercising an injury	23	6.3	11	7.9	34	6.7	0.41	0.51
Self-defeating thoughts	178	48.4	59	42.1	237	46.7	1.58	0.20
Deliberate starvation	66	17.9	11	7.9	77	15.2	8.009	0.01
Laxative abuse	6	1.6	3	2.1	9	1.8	0.153	0.69

Table 2 highlighted that there was a significant difference between the female and male students in terms of burning their body, excess in alcohol abuse, deliberate recklessness in driving, sexually abusive relationships, deliberate loss of job and deliberate starvation ($P < 0.05$). Male students burned their bodies more than female students (6.4 % against 1.6 percent), overindulged more in drinking alcohol

(17.9 % against 4.3 percent) and drove more recklessly (18.6 % against 4.6 percent). In addition, they deliberately lost their jobs more (16.4 % against 9 percent). However, female students were more inclined to get involved in relationships that expose them to sexual abuse (7.9 % against 2.9 percent), like molestation, starve themselves more (17.9 % against 7.9 percent).

Table 3

Distribution of the frequency and percentage of the prevalence of self-harm among students based on their local/non-local status

Self-harm	Gender	Frequency	Percentage	Chi-square test	P	Contingency coefficient
Indirect	Local	57	17.8	2.291	0.13	0.067
	Non-local	51	27.3			
	Total	108	21.3			
Direct	Local	26	8.1	0.15	0.7	0.017
	Non-local	14	7.5			
	Total	40	7.9			
Total	Local	47	14.6	0.02	0.96	0.002
	Non-local	43	23			
	Total	90	17.8			

We observe from **Table 3** that 14.6 % of the local students and 23 % of the non-local students engaged in self-harm. Additionally, 17.8 % of the local students and 27.3 % of the non-local students engage in indirect self-harm while 8.1 % of the

local students and 7.5 % of the non-local students inflicted direct self-harm.

The frequency of distribution and percentage of the prevalence of self-harm among students based on age are tabulated in **Table 4**.

Table 4

Distribution of the frequency and percentage of the prevalence of self-harm among students based on age

Self-harm	Gender	Frequency	Percentage	Chi-square test	P	Contingency coefficient
Indirect	18-20	42	16.5	2.291	0.13	0.067
	21 and above	66	26			
	Total	108	21.3			
Direct	18-20	19	7.5	0.15	0.7	0.017
	21 and above	21	8.3			
	Total	40	7.9			
Total	18-20	34	13.4	0.02	0.96	0.002
	21 and above	56	22			
	Total	90	17.75			

The results of the Chi-square test in [Table 4](#) indicated that there was a significant difference between local and non-local students in terms of direct and indirect self-harm ($P < 0.01$).

Based on [Table 4](#), 13.4 % of the students aged 18-20 and 22 % of the students aged 22-25 inflicted self-harm. Moreover, 16.5 % of students aged 18-20 and 26 % of students aged 21-25 inflicted indirect self-harm while 7.5 % of students aged 18-20 and 8.3 % of students aged 21-25 inflicted direct self-harm.

The results of the Chi-square test revealed that there was a significant difference between the age groups of students in terms of infliction of self-harm and indirect self-harm ($P < 0.01$). Besides, the results of the Chi-square test showed that there was no significant difference between the individuals in terms of the order of birth and a history of academic probation with or without a record of inflicting self-harm.

4. Discussion

The aim of the present research was to investigate the frequency of the occurrence of self-harm behavior among university students. The findings of the research highlighted that the prevalence of such behavior stood at 17.7 % among the female students, 17.9 % among the male students and 17.8 % overall. The findings of this research corroborate with the previous studies estimated the percentage of the frequency of the occurrence of self-harm among university students varying between 15 and 20 % ([Hamza & Willoughby, 2019](#); [Kharsati & Bhola, 2019](#); [Mullins-Sweatt et al., 2013](#); [Sivertsen et al., 2019](#); [Whitlock et al., 2013](#); [Whitlock et al., 2011](#)) Furthermore, several studies reported the percentage of the occurrence of self-harm to be more than 20 % and close to 50 % ([Griffin et al., 2021](#); [Nobakht & Dale, 2017](#); [Taylor et al., 2012](#), [Labouliere, 2009](#); [Gratz, 2001](#),). This variance in the prevalence of self-harm behavior in different societies was indicative of the role

of cultural and social factors in the emergence of such behavior. Similarly, such variances exist across the society and the different cities of a country. For instance, in a study on the students of the Islamic Azad University, Babol Branch, the prevalence of self-harm behavior was 40.5 % overall (Nobakht, 2017), which was approximately three times higher than the result of the present study. Nevertheless, in a study conducted at the University of Tehran, the prevalence of such behavior was reported to be 12.3 % which was approximately close to what the present study found (Gholamrezaei, et al., 2017). Factors such as the type of assessed self-harm behavior and the questionnaires used can also have an impact on this variance.

The other finding of the present research was the absence of gender-based differences. This lends support to the previous findings of some studies signaling the lack of significant difference between men and women in terms of self-harm behavior (Taliaferro & Muehlenkamp, 2015; Gholamrezaei, et al., 2017; Whitlock et al., 2013; Garish & Wilson, 2015; Heath et al., 2008). Moreover, the current study does not support previous research in this area highlighting increased self-harm behavior among men and women (Nobakht & Dale, 2017; Whitlock et al., 2011; Bresin & Schoenleber, 2015; Lockwood et al., 2020; Moran, et al., 2012; Rotolone & Martin, 2012; Van der Wal & George, 2018)

Investigating the frequency of a variety of self-harm behavior signifies the existence of significant difference in some of this kind of behavior. The findings showed that male students inflicted direct self-harm on themselves such as burning

their body parts; also, as indirect such behavior they exhibited alcohol abuse, intentional recklessness in driving and deliberately losing their jobs significantly more than female students. Female students got involved in relationships that exposed them to sexual abuse more than male students as well as intentionally starved themselves more. A large number of researchers believed that men, due to their high degrees of impulsivity and perceived stress, would harm themselves more than women, while the results of some studies corroborated the strong relationship between self-harm and impulsivity (Hamza & Willoughby, 2019; Mo et al., 2019). On the whole, impulsivity was higher in men than women; it is worth mentioning that impulse control disorder was one of the main reasons behind the self-harm acts of youths, and in particular men (Kharsati & Bhola, 2016; Whitlock, et al., 2011). In other words, impulsive self-harm happened in men more frequently than women (White et al., 2002). In the present study, it was witnessed that male students did impulsive self-harm behavior such as burning their body more than female students. Cultural factors and gender-based stereotypes also had influence on the emergence of such behavior. In different societies, there would be plenty of gender-based clichés that precluded the display of certain behavior in men and women. For example, in Middle Easterner countries such as Iran, the society accepts the exhibiting of such behavior as drinking alcohol, high-risk driving and impulsive behavior as the indication of masculinity, while women were warned against exhibiting such behavior (Mo et al., 2019). In other words, women exhibited such behavior less frequently or refrained from exhibiting it. Women would harm

themselves mostly due to internal reasons such as self-punishment or feelings of shame and guilt (Laye-Gindhu & Schonert-Reichl, 2005). Moreover, self-compassion in women was less common than men, suggesting the existence of feelings such as self-criticism, shame and guilt in women (Xavier et al., 2019). On this basis, it can be argued that it is more likely for women to refuse to leave an abusive relationship due to low self-compassion and self-worth, and even they blame themselves as they're being abused. Correspondingly, it is more likely for them to resort to self-harm behavior such as starvation than men due to the negative feelings of shame and guilt resulting from low self-compassion and high self-criticism. Based on the results of this study, and studies concurred with it, it could be concluded that men and women differed mostly in the type of self-harming behavior than they did in the number of occurrences of such behavior (Whitlock, et al., 2011).

The other finding of the present research revealed that the frequency of self-harm behavior in general and indirect self-harm behavior among the non-local students was more than the local students. Being away from the family and losing their family's support in confronting the challenges of entering a new setting could lay the groundwork for self-harm behavior in students. When these individuals meet new challenges and problems and lack sufficient support, it is probable that they fail to solve these problems and adapt to the situation on their own (Hilton, 2017). In addition, it is likely that because of entering a new setting, they may be beset by isolation and experience lower self-compassion. As a result, they may resort to self-harm as a

means of solving their problems or gaining control over the situation (Cleare et al., 2019). Furthermore, supervision and control over the behavior of students not living with their parents and staying outside students' dormitory is less feasible. Therefore, these individuals are more than others prone to self-harm and high-risk behavior, considered to be indirect self-harm (Sivertsen, et al., 2019; Atadokht et al., 2013).

In the present research, the difference between university students aged 18-20 and those aged 21 and more in terms of self-harming behavior was observed. In a study conducted by Hamza and Willoughby (2019), it was found that self-harm among the junior and older students was more frequent than the freshmen. The results of the present study are consistent with the previous findings (Hamza & Willoughby, 2019). The current study does not support the previous research in this area. In fact, the results of this research are incompatible with studies expressing the lack of significant influence of age on self-harm behavior (Vidourek, 2018; Bresin & Schoenleber, 2015). Some scholars believed that perceived stress was higher in the early years of admission to university and self-harm was also more frequent in these years (Taliaferro & Muehlenkamp, 2015). Since it is likely that self-harm may surge with the uptick in challenges and academic problems in the subsequent years, provided that they are not dealt with in a timely fashion, it will become more complicated overtime. The results of another study suggested that chronic self-harm became aggravated as one grew older (Lang & Sharma-Patel, 2011). In other words, it can be stated that the number of

cases of chronic self-harm in individuals increases as people age, while it is probable that at lower ages, the number of people who has done self-harm multiple times may be greater.

5. Conclusion

In general, the findings of the present research illustrated that the prevalence of self-harm was 17.8 % and that female students and male students didn't show a significant difference in terms of the prevalence of self-harming behavior. However, these individuals revealed differences when considering the variety of self-harming behavior. Male students did impulsive self-harm and high-risk behavior more frequently, while female students displayed self-harming behavior originating from self-punishment and low self-compassion. What was notable was that the existing differences between female and male students mostly pertained to indirect self-harming behavior. Moreover, due to factors such as being away from their families and not receiving sufficient support and control, non-local students harmed themselves more than the local students. At ages above 20, university students did self-harm and particularly indirect self-harm more, which could underline the significance of investigating this issue and addressing it at lower ages. Besides, the students didn't exhibit a significant difference in terms of the variables of the order of birth and the history of academic probation. That said, researchers believed that self-harming individuals receive lower marks more than other students, and it is likely that they may fail their courses, facing academic failure (Mental health America, 2020; Hjorth, et al., 2016). As a result, the lack of

significance of this variable might be connected to individual differences among the participants and the existing differences in the chosen society.

The findings of the present study can be utilized in the counseling centers of universities and the Ministry of Science for the identification of appropriate plans for the prevention of self-harming behavior among students. It is recommended that this study is replicated across different universities and at other levels of study and among different age groups. The findings of the present study merely hold true for the students of the undergraduate programs and are not applicable to other levels of education.

Acknowledgement

The authors are thankful to all the people who participated in this study and helped facilitate the research process.

Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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