The relationship between depression and self-compassion with non-suicidal self-injury among university students

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ABSTRACT
The non-suicidal self-injury (NSSI) has been reported among university students which must be taken into consideration because it can have a negative impact on students’ well-being and lives. Therefore, this study was conducted to investigate the relationship between depression and self-compassion with NSSI among university students. This study was to identify the levels of depression, self-compassion, and NSSI. Purposive sampling was used in this correlational study and quantitative research design. This study included 73 NSSI reported year 1 and 2 undergraduate students from one of the programs at a Malaysian university. The instruments used in this study were the depression anxiety stress scale-21 (DASS-21) depression subscales, self-compassion scale (SCS), and inventory of statements about self-injury (ISAS). Findings show that respondents had a moderate level of depression and self-compassion, as well as a low level of NSSI. Findings also demonstrate that there was a significant positive relationship between depression and NSSI. Self-compassion and NSSI had a significant negative relationship. There were also different findings for the relationship between the dimensions of self-compassion and NSSI. In conclusion, NSSI is a risky behavior that has negative consequences among university students.

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1. INTRODUCTION
Self-injury behavior without the intention of killing is a negative behavior that is increasingly worrying. This behavior or better known as non-suicidal self-injury (NSSI) is a behavior of injuring body parts without having any intention of suicide [1]. This behavior includes the act of hitting, burning, cutting off and stomping any part of the body causing injury and pain to oneself. However, some acts done on body parts such as piercing, tattooing, and any act related to religious ceremonies are not included in this category [1]. Initially, NSSI was only presented as a symptom of borderline personality disorder, however, after field testing, NSSI was placed in section 3: conditions for further study in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) [2]. This shows that the issue of NSSI is a serious and worrying issue.

Past studies show that depression is a factor that helps in increasing the rate of NSSI among students [3]–[5]. The stress faced by students causes them to use NSSI as a medium to release the pain they feel. Park [6] in his study showed that NSSI among a group of students suffering from depression was high compared to those who did not suffer from depression. This happens because those who suffer from depression are often associated with having low interpersonal relationships. Kaniuka et al. [4] explained in his study that depression is one of the reasons for a person’s involvement in NSSI. Students with depressive symptoms are likely to use NSSI as a way to cope with negative emotions. This NSSI is likely to provide temporary relief and then add to the sadness and feelings of guilt. In other words, NSSI is a process of transferring the psychological symptoms to something more soothing [7]. If NSSI is done repeatedly, it will not be able to reduce symptoms of
depression, but rather increase negative emotions for a long period of time and further increase the risk of suicide.

Apart from depression, it is found that a person’s level of self-compassion also affects a person’s involvement with NSSI, especially those who study at the university level [3]. A study shows that individuals who have a history of NSSI often have high self-criticism compared to those who have never been involved in NSSI [8]. Those who have high self-criticism usually have negative beliefs about self-compassion which will avoid them from pitying themselves [9]. According to Neff [10], self-compassion plays a role in considering the cognitive and emotional outlook of an individual by seeing the pain felt as part of the human experience rather than a personal disability. Several studies posit self-compassion as an adaptive coping mechanism that can reduce a person’s emotional distress including NSSI [11], [12]. As explained earlier, NSSI behavior is a coping mechanism for negative situations or feelings, and with self-compassion, it allows a person to be more accepting of negative feelings and situations instead of self-injury. Additionally, several recent studies have shown that self-compassion has a negative relationship with NSSI among university students [11]–[13]. Those involved with NSSI often have high negative emotions. Because of that, self-compassion will be an effective emotional control strategy for them, especially by making themselves the target to express these emotions such as criticizing themselves, being angry with themselves, hurting themselves, beating themselves [14].

In Malaysia, the increasing level of NSSI has become one of the biggest concerns. According to Masiran [15], 17 out of 100,000 people in Malaysia are involved in self-harming behavior. Based on what has been explained, the trend of NSSI occurring among university students has reached such a serious level and if this issue is not curbed, people who initially only self-harm without suicidal intention will start to self-harm with suicidal intention [16]. Based on previous studies, researchers found that not many studies related to NSSI have been conducted on university students, not only in Malaysia, but in other countries as well. This is because teenagers or high school students are the group with the highest involvement with NSSI and it is a concerning issue [17], [18]. However, university students should also be given attention because according to Boyne and Hamza [3], 25% of university students have experience and are involved with NSSI, especially first-year students.

Although NSSI is often associated with several mental illness problems, it can also be found in clinical and non-clinical populations [19]. According to a systematic study conducted by Muehlenkamp et al. [19] on the prevalence of NSSI, it shows that NSSI is a global phenomenon that has a high prevalence. However, not many studies have been conducted on NSSI in Malaysia [19]. This makes it difficult to find the percentage of NSSI among the Malaysian population. Not just that, it is also difficult to know the factors associated with NSSI in the Malaysian population. Thus, this justification is what led the researcher to conduct a study related to NSSI and the factors associated with it among university students in Malaysia.

Previous studies examining the relationship between depression, self-compassion and NSSI showed mixed findings. Some studies exhibited that there is no relationship between depression, self-compassion and NSSI. For example, a study conducted by Boyne and Hamza [3] found that high levels of depression and low levels of self-compassion did not predict NSSI involvement. Instead, they mentioned that there were other factors that influenced their involvement in NSSI. Findings from this study show inconsistent findings as to whether depression and self-compassion are related to NSSI or vice versa. These inconsistent findings have prompted researchers to conduct this study. Furthermore, until now they have not yet found any studies on this variable conducted on local university students. Therefore, we are interested in investigating the level of depression, self-compassion, and NSSI and their relationship among university students, especially in Malaysia.

2. RESEARCH METHOD

2.1. Population and sampling

To achieve the objective of the study, which is to examine the relationship between depression and self-compassion with NSSI among university students, the target population of this study is year 1 and year 2 undergraduate students from one program at one of the Malaysian universities. The sample was selected using the purposive sampling method. A total of 170 year 1 and 2 students answered the questionnaires that were distributed via email. Out of 170 respondents, 73 reported engaging in Non-Suicidal Self-Injury (NSSI), while the remaining 97 respondents did not engage in NSSI. Given that the inclusion criterion required at least one experience with NSSI, only the responses from the 73 respondents were analyzed. Roscoe [20] stated that a sample size larger than 30 and smaller than 500 is appropriate for most research. The minimum acceptable sample size for a correlational study is 30 [21]. Therefore, the total sample size of 73 in this study is considered adequate.

2.2. Procedure of data collection

To achieve the study’s objectives, a correlational study was used. A survey is used to collect data in this quantitative research design. Survey methods refer to procedures that require researchers to distribute questionnaires to a group of samples to identify trends, attitudes, behaviors, or characteristics of the population.
This method is seen as suitable for identifying the level and also the relationship between the variables of depression and self-compassion, with NSSI. In this study, the independent variables are depression and self-compassion which are used to see their relationship with the dependent variable which is NSSI. Since this study was not experimental, no manipulation of variable was performed. This study is also a cross-sectional study where data was collected only once.

2.3. Questionnaire and its analysis

This study uses the depression subscale from the depression anxiety stress scale-21 (DASS-21) instrument. The DASS-21 instrument was developed by Lovibond and Lovibond [23]. This instrument uses a 4-point Likert scale, which is (0) never to (3) often. Meanwhile, to measure self-compassion, the self-compassion scale (SCS) developed by Neff [10] was used. There are 5 Likert scales used in this instrument which are (1) almost never to (5) often. The opposite values were used for negative items. To measure NSSI among university students, the self-injury statement inventory developed by Klonsky [24] was utilized. A 4-point Likert scale was used which indicates (0) never to (3) often. Before the actual data collection was carried out, a pilot study was carried out on 30 respondents who had similar characteristics to the population of this study. The findings of the pilot study show that the Cronbach Alpha values for depression and NSSI were 0.896 and 0.809. The values for the dimensions of self-compassion, which are self-kindness, common humanity, and mindfulness, were 0.787, 0.616, and 0.756. The reliability value for the whole self-compassion was 0.881. The findings of the pilot study also reveal that the Cronbach alpha values show good reliability values where all values exceed 0.60.

This study uses descriptive statistics and inferential statistics to analyze the data. Descriptive statistics were utilized to find the value of mode, frequency, average and standard deviation in order to identify the level of depression, self-compassion and also NSSI. The correlational analysis method was used to identify the relationship between depression, self-compassion, and its dimensions (self-kindness, common humanity, and mindfulness) with NSSI. 

3. RESULTS AND DISCUSSION

The findings of this study are reported in the following sections: subsection 3.1. describes the demographic information of the respondents. Subsection 3.2. describes the levels of depression, self-compassion, and NSSI. Subsection 3.3. describes the relationship between depression and self-compassion with NSSI. Subsection 3.4. describes the relationship between self-compassion dimensions (self-kindness, common humanity, and mindfulness) with NSSI.

3.1. The demographic information of the respondents

Out of 170 respondents, 73 respondents (42.9%) reported being involved with NSSI. While a total of 97 (57.1%) respondents reported never being involved with NSSI. Since this study prioritizes respondents who were involved with NSSI, only responses from 73 of the respondents were considered.

The demographic information of the respondents involved in this study can be seen in Table 1. A total of 36 (50.7%) respondents consisted of students aged 22 to 24 years while 36 (49.3%) respondents were students aged 19 to 21 years. Most respondents in this study were women, i.e., 55 (75.3%) people and the rest were men, i.e., 18 (24.7%) people. Most of the respondents who participated in this study consisted of 41 (56.2%) first year students and 32 (43.8%) second year students. Most of the students involved in this study were students of the human resource development program, which were 49 (67.1%) students compared to the psychology program, which were 24 (32.9%) students.

<table>
<thead>
<tr>
<th>Demographic Information</th>
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<th>%</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 to 21 years old</td>
<td>36</td>
<td>49.3</td>
</tr>
<tr>
<td>22 to 24 years old</td>
<td>37</td>
<td>50.7</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>24.7</td>
</tr>
<tr>
<td>Female</td>
<td>55</td>
<td>75.3</td>
</tr>
<tr>
<td>Years of study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>41</td>
<td>56.2</td>
</tr>
<tr>
<td>Year 2</td>
<td>32</td>
<td>43.8</td>
</tr>
<tr>
<td>Program of study</td>
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<td></td>
</tr>
<tr>
<td>Psychology</td>
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<td>32.9</td>
</tr>
<tr>
<td>Human resources develop</td>
<td>49</td>
<td>67.1</td>
</tr>
</tbody>
</table>

3.2. The level of depression, self-compassion, and NSSI

A descriptive analysis was conducted to identify the levels of depression, self-compassion and NSSI of university students. The level of each variable can be seen in Table 2. The findings show that the respondents had moderate levels of depression and self-compassion (M=1.19, SD=0.61) and (M=3.25, SD=0.35). The NSSI of the respondents was at a low level (M=0.47, SD=0.25).

Table 2. The levels of depression, self-compassion, and NSSI

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>1.19</td>
<td>0.61</td>
<td>Moderate</td>
</tr>
<tr>
<td>Self-compassion</td>
<td>3.25</td>
<td>0.35</td>
<td>Moderate</td>
</tr>
<tr>
<td>NSSI</td>
<td>0.47</td>
<td>0.25</td>
<td>Low</td>
</tr>
</tbody>
</table>

The findings of this study show that the respondents, who are university students, had a moderate level of depression. According to Cheung et al. [25], the challenges of social change such as coronavirus disease (COVID-19) can increase students’ depression levels. However, this did not happen to the respondents of this study because the depression experienced was only at a moderate level. This may be due to students re-entering university and it had helped them to receive social support from peers and faculty. Social support can reduce the level of depression that interferes with human functions such as decreased motivation, concentration, and a positive view of their self-esteem [26]. The respondents felt that they experienced moderate depression because of the good acceptance of environmental changes, especially among the first-year students. Besides that, the findings of the study show that the level of self-compassion of the respondents was also at a moderate level. This is because university students have a positive psychological function that protects their mental well-being not to criticize themselves, not to run away from problems [27]. The respondents were found to underestimate themselves and were able to connect difficulties or problems experienced with other people [28]. It can therefore be said that the respondents had good emotional control because they were seen to be able to accept the pain they feel and were positive towards the issues experienced [13].

It is found that the level of NSSI among respondents was at a low level. This is in line with several past studies that stated that not many university students are involved in NSSI behavior, but instead, teenagers or school students are the ones who are mostly involved in NSSI behavior [17], [18]. According to Plener et al. [29], school students who are involved in NSSI will stop or reduce their involvement in NSSI behavior after reaching adulthood. This happens because adulthood is a stage where an individual will experience social, psychological and physiological changes. During this phase as well, students or adults usually have more stable emotional support.

3.3. Relationship between depression and self-compassion with NSSI

The findings of the correlational analysis can be seen in Table 3. There was a significant relationship between depression and NSSI among university students. This is because the p-value of this study was 0.00, which was less than the significant level (<0.05). The r value for this relationship was 0.28. This suggests that there was a weak positive relationship between depression and NSSI among university students. Hence, the null hypothesis of this study was rejected. Similar findings were obtained for the self-compassion variable where there was a significant relationship between self-compassion and NSSI among university students. The p value of this study was 0.02 which was less than the significant level (<0.05). The r value for this relationship was -0.18. This exhibits that there was a weak negative relationship between self-compassion and NSSI among university students. Thus, the null hypotheses for these two objectives were rejected.

Table 3. The relationship between depression and self-compassion with NSSI

<table>
<thead>
<tr>
<th>NSSI</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>0.28</td>
<td>0.00</td>
</tr>
<tr>
<td>Self-compassion</td>
<td>-0.18</td>
<td>0.02</td>
</tr>
</tbody>
</table>

The findings regarding the relationship between depression and NSSI show a positive significant relationship. This finding is in line with studies conducted by [4], [30], [31]. According to Bentley [32], depression is one of the pathways that can cause a person to engage in NSSI. This is because NSSI is one of the ways to divert a person’s attention to negative emotions or to reflect (rumination) on the problems faced [4]. NSSI also acts as one of the steps to overcome the negative emotions felt while experiencing symptoms of depression, especially if the negative emotions felt are too much for them [31].

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The findings of the study also reveal that there is a negative significant relationship between self-compassion and NSSI among respondents. Self-compassion acts as a mechanism that helps in reducing emotional stress experienced by individuals and those involved with NSSI are considered to have high negative emotions [11]. NSSI acts as a coping mechanism that helps a person to accept and process negative emotions [4]. On the other hand, according to Nagy [33], self-criticism which is a negative item for self-compassion will cause a person to engage in NSSI behavior to punish themselves. Those who like to criticize themselves often reject emotions, thoughts or behaviors that can increase their self-worth [34].

3.4. Relationship between self-compassion dimensions (self-kindness, common humanity, and mindfulness) with NSSI

The findings of the correlation analysis for the dimensions of self-compassion, namely self-kindness, common humanity, and mindfulness can be viewed in Table 4. The findings of the study show that there was no significant relationship between self-kindness and NSSI among university students. The p value of the analysis was 0.30, which was above the significant value (>0.05). Therefore, the null hypothesis for this objective was rejected. Table 4 also demonstrates that there was a significant relationship between common humanity and NSSI among university students. This is because the p value for this analysis was 0.00 which was less than the significant value (<0.05) and the r value was -0.41. This indicates that there was a weak negative relationship between common humanity and NSSI among university students. With this result, the null hypothesis for this objective was rejected. Next, the analysis depicts that there was a significant relationship between mindfulness and NSSI among university students. The analysis shows that the p-value was 0.03, which was less than the significant value (<0.05) with the r value being -0.17. These findings suggest that there was a weak negative relationship between mindfulness and NSSI among university students. This has resulted in the null hypothesis being rejected.

Table 4. The relationship between self-compassion dimensions (self-kindness, common humanity, and mindfulness) with NSSI

<table>
<thead>
<tr>
<th></th>
<th>NSSI</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-kindness</td>
<td>0.28</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>Common humanity</td>
<td>-0.18</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Mindfulness</td>
<td>-0.17</td>
<td>0.03</td>
<td></td>
</tr>
</tbody>
</table>

Next, for the dimensions of self-compassion, which are self-kindness, common humanity, and mindfulness, there is one dimension that did not show a significant relationship with NSSI, which is the dimension of self-kindness. Self-kindness showed a non-significant relationship with NSSI. This result is contrary to the study of Kaniuka [4] who stated that being kind to yourself can reduce self-doubt and subsequently reduce thoughts of self-harm. A possible explanation for this is that being nice does not necessarily give a person peace of mind, especially for those with clinical problems such as depression or NSSI.

According to Jiang et al. [35], those who do not perform NSSI behavior have a greater advantage to take care of themselves and understand that the problems that occur as part of human experience. This is in line with the study’s hypothesis that there is a significant negative relationship between the dimension of self-compassion which is common humanity and NSSI among university students. Common humanity can create a social identity that can help someone express their problems to someone as a way to overcome the problems instead of using self-harm [34].

The dimension of self-compassion, which is mindfulness, is a way to know and experience life that requires a person to associate all positive, negative, and neutral feelings experienced with an open attitude [36]. Based on the findings of this study, the mindfulness dimension showed a significant negative relationship with NSSI. This happens because to have mindfulness, one needs to accept, and also stays away from negative thoughts and also excessive identification of negative emotions [36]. In other words, if a person begins to control their thoughts, they will be able to distance themselves from NSSI behaviors.

Overall, this study is in line with the findings of many other previous studies that show that there is a relationship between depression and self-compassion with NSSI among university students. However, the self-kindness dimension has shown different findings. Although the findings have supported the research hypothesis, there are some limitations in this study that can be improved by future researchers, one of which is the small sample size. A larger number of samples is felt to be able to provide better results. Not only that the use of self-report as a measure is likely to reduce the measurement accuracy of this study. Even with the pilot study that has been conducted showing good validity and reliability, the use of more objective measurement tests such as health records specifically involving NSSI variables can help improve the validity and reliability of the study. Future researchers could use more reliable reports such as student clinical history reports or self-injury reports from university counseling units.
4. CONCLUSION

In conclusion, non-suicidal self-injury (NSSI) is a dangerous behavior as it comes with negative consequences such as suicidal thoughts or suicide attempts. The findings indicate a positive significant relationship between depression and NSSI, as well as a negative significant relationship between self-compassion and NSSI. There is no significant relationship between self-kindness and NSSI for the dimensions of self-compassion. While the results show a negative significant relationship between common humanity and mindfulness and NSSI. Since NSSI is one of the methods used to overcome the symptoms of depression felt by a person. With self-compassion, it can help students who have negative emotions when engaging in NSSI behavior to be kind to themselves and consider the problems faced as normal things that others also experience. Therefore, this study can help in terms of understanding the relationship between each study variable. Self-compassion can be used as an intervention that can help those who engage in NSSI behaviors to better love and care for themselves.

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