

The Relationship between Resilience, Loneliness, and Non-Suicidal Self-Injurious Behavior among Adolescents in Johor Bahru

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Abstract

Non-Suicidal Self-Injurious Behavior (NSSI) among adolescents has been reported as an increasingly concerning global health issue. This study was conducted to examine the relationship between resilience and loneliness with NSSI behavior among adolescents in Johor. Additionally, the study aimed to identify the levels of resilience, loneliness, and NSSI behavior among adolescents in Johor Bahru. A convenience sampling method was used to gather data, and a total of 109 adolescents from a secondary school in the Johor Bahru district, Johor, participated in this study. The results of the study revealed that types of NSSI behaviors, such as scratching the body to the point of injury, forcefully pinching body parts, and forcefully pulling hair, were frequently performed by the respondents. The study also showed that the respondents had moderate levels of resilience, while loneliness and NSSI behavior were at low levels. Furthermore, the study results indicated a significant positive relationship between loneliness and NSSI behavior, while there was a significant negative relationship between resilience and NSSI behavior. Several suggestions and limitations of the study have been proposed for future researchers based on the findings of this study.

Keywords: Resilience, Social Support, Non-Suicidal Self-Injurious Behavior (NSSI), Adolescents

Introduction

Mental health is considered the most important element in human life (Johari et al., 2022). According to the World Health Organization (2019), mental health refers to a state of well-being in which each individual realizes their potential, can cope with life's pressures, work productively, and contribute to society. According to Johari et al (2022), among the mental health issues that have received attention and been studied in previous research is Non-

Suicidal Self-Injury (NSSI). NSSI is deliberate self-inflicted harm to one's own body, but without a conscious intent to commit suicide, for socially or culturally unacceptable purposes (International Society for the Study of Self-Injury, 2018).

The 2017 National Health and Morbidity Survey (NHMS) statistical report revealed that the state of mental health among adolescents is increasingly concerning, with an average of adolescents aged 13 to 17 experiencing mental health issues, one in every five adolescent experiences symptoms of depression (18.3%), two out of every five experience anxiety symptoms (39.7%), and one in every ten adolescent experiences stress (9.6%). Furthermore, the 2019 NHMS report disclosed that approximately 424,000 adolescents face mental health issues in Malaysia (Ministry of Health Malaysia, 2020). About 4.2 million Malaysian adolescents aged 16 to 19 are reported to experience mental illnesses (Kamarulzaman & Jodi, 2018). Among the identified mental health issues occurring in schools is self-harming behavior among students (Johari et al., 2022).

According to the Ministry of Health Malaysia (MOH) (2012), self-harming behavior is defined as an action that causes harm to one's own body. There are two different interpretations of self-harming behavior, for instance, in the United States, the term self-harm is considered synonymous with self-injury (Klonsky et al., 2014), while in the United Kingdom, self-harm includes self-injury and self-poisoning without regard to intent (Hawton et al., 2007). The most commonly performed NSSI behaviors among adolescents include overdosing on medications, intentionally banging the head against the wall, excessive alcohol consumption, scratching the body, and the misuse of illicit drugs (Tarigan & Apsari, 2021). NSSI behavior has a high global prevalence, especially among adolescents. For example, the prevalence rate of NSSI behavior among adolescents in the United States ranges from 13.0% to 46.5%, while the prevalence rate among Canadian adolescents is 17.0%, 6.2% in Australia (Castellví et al., 2017), and 27.4% in China (Azhu et al., 2017).

In Malaysia, several studies have also confirmed the presence of NSSI behavior in the local context, particularly among non-clinical samples (Johari et al., 2022; Masiran et al., 2017). Furthermore, the rate of NSSI behavior among adults is 19 per 100,000, and the rate of NSSI behavior among children and adolescents is 12 per 100,000 in Malaysia (Masiran et al., 2017). According to Ganaprakasam et al (2021); Guan and Aman (2015), approximately 56.81% of adolescents out of 342 secondary school students in the state of Penang, Malaysia were reported to be involved in NSSI behavior.

NSSI behavior also involves various ethnicities, such as 16.2% of Indian respondents, 15% of Malay respondents, 11.6% of Chinese respondents, and 28.9% of respondents from other ethnic groups (Mohamad et al., 2021). Guan and Aman's (2015) study on adolescents aged 13 to 16 years indicated that Malaysian Chinese had a high prevalence of NSSI behavior, ranging from 56.8% to 68.0%. Additionally, female adolescents were reported to have a higher prevalence of NSSI behavior compared to adolescent males, with the most commonly reported NSSI behaviors being hair pulling and deliberate self-cutting with a knife (Guan & Aman, 2015). Ganaprakasam et al.'s (2021) study further revealed that 20.6% of Malaysian adolescents aged 14 to 17 were involved in NSSI behavior and emphasized psychological factors as predictors of NSSI behavior among adolescents.

Past studies have shown that there are respondents who engage in self-harming behavior to relieve their emotions and feelings, leading to addiction (Brown & Kimball, 2013; Johari et al., 2022). The addiction to self-harm cannot be stopped when they need it and they feel guilty when they finish doing it, making this addiction an integral part of their life (Brown & Kimball, 2013; Johari et al., 2022). What is concerning is that NSSI behavior increases the risk of suicidal behavior by sevenfold Dickstein et al (2015) and serves as a significant predictor of suicidal behavior in adolescents Castellví et al (2017), which has become a global concern as well as a local public health concern (Wan et al., 2016). However, the actual data related to self-harming behavior is challenging to ascertain because the research data obtained and conducted do not truly reveal the actual reality that occurs (Tarigan & Apsari, 2021). This phenomenon is seen as the tip of the iceberg, where the number of unreported cases is much larger than the reported cases (Hawton et al., 2012; Tarigan & Apsari, 2021).

The problem of NSSI behavior is inherently personal, and many cases often go undetected by healthcare professionals, except when adolescents involved seek treatment or prevention from psychiatrists (Sivasankari et al., 2016; Tarigan & Apsari, 2021). It clearly indicates that the mental health of adolescents today is a major concern for all parties, including guidance and counseling teachers, parents, and the society. Given the increasing prevalence of NSSI behavior among adolescents and its negative influence on them, it is essential to conduct in-depth research on NSSI behavior (Yuan et al., 2023).

There are internal factors within adolescents that indirectly influence NSSI behavior (Sun et al., 2013; Zhang et al., 2023). With the development of positive psychology, resilience has garnered significant attention from researchers as one of the essential psychological qualities that adolescents should possess. Resilience has also captured the interest of many researchers as an internal factor influencing individual behavior (Zhang et al., 2023). Resilience refers to an individual's capacity to recover and maintain a well-functioning adaptive system after experiencing a stressful event (Masten, 2014). Empirical studies have shown that the primary purpose of NSSI behavior is to release negative emotions (Hasking et al., 2017). Resilience is considered a dynamic life process that self-regulates and improves as adolescents mature (Zhang et al., 2023). Adolescents with high resilience understand the necessary coping strategies when facing challenging life situations (Yang et al., 2021). Therefore, resilience can serve as a protective resource when adolescents confront stressful and concerning situations, helping them achieve effective self-adjustment and avoid engaging in NSSI behavior (Cha & Lee, 2018).

According to Geulayov et al (2022), concerns are also rising regarding the prevalence of loneliness among adolescents and its impact on their health and well-being, even before the Covid-19 pandemic began. In a pre-pandemic survey, 10% of adolescents aged 16-24 were reported to frequently experience loneliness more than adults (Geulayov et al., 2022). Loneliness is an uncomfortable feeling that arises when an individual's relationships with others lack in quantity or quality (Peplau & Perlman, 1982). Lonely individuals consistently feel negative and unpleasant, experience social disconnection, and lack the ability to find meaning in their lives (Tiwari, 2013).

Chronic loneliness can impact the mental health and future psychological functioning of adolescents (Qualter et al., 2009; Zhang et al., 2023). Various studies related to loneliness

have been conducted, and findings from past research have demonstrated that loneliness is associated with various risk or protective factors closely related to NSSI behavior (Stickley et al., 2015; Zhang et al., 2023). Based on previous studies, loneliness, resilience, and mental health all have effects on an individual's physical and mental well-being (Esposito et al., 2022). Furthermore, higher levels of loneliness are associated with lower levels of mental health and weaker resilience (Esposito et al., 2022).

Based on the abovementioned description, there is a need for further exploration of the relationship between resilience, loneliness, and NSSI behavior, particularly among adolescents in the Johor Bahru district, Johor. Besides, most previous studies that have explored the link between resilience and NSSI behavior have primarily focused on adolescents in China (Ran et al., 2022; Tian et al., 2021; Zhang et al., 2023). To date, there are limited studies involving resilience and NSSI behavior in a local context, such as Malaysia. Moreover, research related to loneliness and NSSI has also predominantly been conducted with clinical samples (Zhang et al., 2023; Zhou et al., 2018). Until recently, there is a lack of studies involving non-clinical samples that examine loneliness and NSSI behavior in Malaysia. Thus, it is crucial for such studies to be conducted in a local context, particularly among adolescents in Johor Bahru. Hence, the objectives of this study are:

1. Identify the levels of resilience, loneliness, and NSSI behavior among adolescents.
2. Identify the relationship between resilience and NSSI behavior among adolescents.
3. Identify the relationship between loneliness and NSSI behavior among adolescents.

Methodology

This study uses a quantitative research design where a survey method is employed to gather data. The survey method refers to procedures that require the researcher to distribute questionnaires to a sample group to identify trends, attitudes, behaviors, or characteristics of the population (Creswell, 2012). This method is considered suitable for identifying the levels and relationships between the study variables. To achieve the research objectives, descriptive analysis was conducted to identify the levels of the variables, while a correlational research design was also carried out to ascertain the relationship between the independent and dependent variables. Resilience and loneliness are the independent variables, while NSSI behavior serves as the dependent variable. This study is also a cross-sectional study where data is collected only once.

Population

This study targets adolescents aged between 13 and 16 years in a secondary school in the Johor Bahru district, Johor. According to Masiran et al. (2017), Johor recorded the highest self-harm incidence among adults and adolescents. A study conducted among school students in Johor revealed their lack of awareness about mental illness, and there was a noted deficiency in the promotion of mental health (Mustafa et al., 2015).

Sample

The sample was selected using a convenience sampling method. A total of 109 respondents answered the distributed questionnaires.

Instrument

Resilience

The instrument used to measure resilience is the Connor-Davidson Resilience Scale Connor & Davidson (2003) which has been adapted to suit the local culture. The analysis of this instrument has a high reliability coefficient, i.e., $\alpha = 0.92$. A 5-point Likert scale is used to measure response choices (0 = "never," 1 = "very rarely," 2 = "rarely," 3 = "sometimes," 4 = "often," 5 = "always").

Loneliness

The instrument used to measure loneliness is the UCLA Loneliness Scale (Russell et al., 1978), which has been adapted to suit the local culture and has a high reliability coefficient, i.e., $\alpha = 0.91$. A 5-point Likert scale is used to measure response choices (0 = "never," 1 = "very rarely," 2 = "rarely," 3 = "sometimes," 4 = "often," 5 = "always").

Non-Suicidal Self-Injurious Behavior (NSSI)

The Inventory of Statement About Self-Injury (ISAS) Klonsky (2007) is the instrument used to measure NSSI behavior. A 5-point Likert scale is used to measure response choices (0 = "not at all related to myself," 1 = "very rarely," 2 = "rarely," 3 = "sometimes," 4 = "often," 5 = "always"). Pilot test also indicates that this instrument has a high reliability coefficient, i.e., $\alpha = 0.94$.

Data Analysis

This study utilizes descriptive statistics and inferential statistics to analyze the data. Descriptive statistics are employed to determine the frequency, mean, and standard deviation in order to address the first objective of this study, which is to identify the levels of resilience, loneliness, and various types of NSSI behavior. To analyze the objective of the relationship between the independent variables, namely resilience and loneliness, with the dependent variable, NSSI behavior, inferential statistics are used.

Results

The study results indicate that a total of 109 adolescent participants voluntarily took part as research respondents. Based on Table 1, the demographic profile of the respondents shows that the majority were 14 years old, comprising 44 individuals (40.4%), followed by 27 adolescents who were 16 years old (24.8%), and adolescents aged 13 and 15 years each accounted for 19 individuals. Table 1 also reveals that there were more female adolescent respondents than male adolescents, with 60 female adolescents (55.0%) and 49 male adolescents (45.0%). Most respondents were Malays, with a total of 95 individuals (87.2%), followed by 7 individuals each of Indian and Chinese ethnic groups (6.4%).

Table 1

Respondents' Demography

| Bil | Demography | Category | N | % |
|-----|--------------|--------------|----|------|
| 1 | Age | 13 years old | 19 | 17.4 |
| | | 14 years old | 44 | 40.4 |
| | | 15 years old | 19 | 17.4 |
| | | 16 years old | 27 | 24.8 |
| 2 | Gender | Male | 49 | 45.0 |
| | | Female | 60 | 55.0 |
| 3 | Ethnic group | Malay | 95 | 87.2 |
| | | Chinese | 7 | 6.4 |
| | | Indian | 7 | 6.4 |

Descriptive analysis was conducted to assess the levels of resilience, loneliness, and NSSI behavior among adolescents. Based on Table 2, it was found that the adolescent group exhibited a moderate level of resilience with a mean value of $M=3.17$, where 76 individuals (69.73%) were at a high level, 10 individuals (9.17%) at a moderate level, and 23 individuals (21.1%) at a low level. Loneliness was reported at a low level with a mean value of 2.19, where 58 individuals (53.21%) were at a low level, 33 individuals (30.28%) at a moderate level, and 18 individuals (16.51%) at a high level. In terms of NSSI behavior, it was also at a low level with a mean value of $M=0.74$, where 95 individuals (87.15%) exhibited low levels, 13 individuals (11.93%) had moderate levels, and 1 individual (0.92%) had high levels.

Table 2

Levels of Resilience, Loneliness, and NSSI among Adolescents.

| Variables | Standard Deviation | Mean | Level | | | Level Mean |
|----------------------|--------------------|------|------------------------|-----------------------------|-------------------------|-----------------|
| | | | Low <i>f</i> (%) | Moderate <i>f</i> (%) | High <i>f</i> (%) | |
| Resilience | 1.12 | 3.17 | 23 (21.1%) | 10 (9.17%) | 76 (69.73%) | Moderate |
| Loneliness | 1.43 | 2.19 | 58 (53.21%) | 33 (30.28%) | 18 (16.51%) | Low |
| NSSI behavior | 0.98 | 0.74 | 95 (87.15%) | 13 (11.93%) | 1 (0.92%) | Low |

Based on Table 3, it is indicated that 75 (68.8%) adolescents have been involved in NSSI behavior, while 35 (31.2%) adolescents have not been involved in NSSI behavior.

Table 3

Adolescents' Involvement in NSSI Behavior

| Involvement in NSSI | N | % |
|---------------------|----|------|
| Yes | 75 | 68.8 |
| No | 34 | 31.2 |

Based on Table 4, it is shown that scratching body parts until it causes injury is the most commonly performed type of NSSI behavior by the respondents, with a mean value of 1.50. In addition, the respondents also tend to engage in NSSI behaviors such as pinching body parts forcefully (M=1.23) and pulling hair forcefully (M=0.97) compared to other behaviors like burning body parts, cutting, or carving body parts.

Table 4

Types of NSSI Behaviors

| Types of NSSI Behaviors | N | Mean | Standard Deviation |
|--|-----|------|--------------------|
| Cutting | 109 | 0.62 | 1.30 |
| Biting body parts | 109 | 0.86 | 1.42 |
| Burning body parts | 109 | 0.17 | 0.67 |
| Carving body parts | 109 | 0.60 | 1.39 |
| Pinching body parts forcefully | 109 | 1.23 | 1.23 |
| Pulling hair forcefully | 109 | 0.97 | 0.97 |
| Scratching body parts until they bleed | 109 | 1.50 | 1.50 |
| Repeatedly hitting oneself | 109 | 0.67 | 0.67 |
| Preventing wounds from healing | 109 | 0.69 | 0.69 |
| Rubbing body parts on rough surfaces | 109 | 0.49 | 0.45 |
| Piercing body parts with sharp objects | 109 | 0.59 | 0.59 |
| Ingesting harmful substances | 109 | 0.45 | 0.45 |

The correlation analysis based on Table 5 further indicates that resilience and NSSI behavior have a significant weak negative relationship with a value of $r = -0.55$. Despite having a weak negative relationship, the findings of this study are consistent with and align with the results of previous studies. The results of this study demonstrate that the higher the resilience in adolescents, the lower their tendency to engage in NSSI behavior.

Table 5

The Relationship Between Level of Resilience and NSSI Behavior

| | | Resilience | NSSI |
|--|---------------------|------------|--------|
| Resilience | Pearson Correlation | 1 | -0.55 |
| | Sig. (2-tailed) | | .000** |
| | N | 109 | 109 |
| NSSI | Pearson Correlation | -0.55 | 1 |
| | Sig. (2-tailed) | .000** | |
| | N | 109 | 109 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

The correlation analysis based on Table 6, on the other hand, shows that loneliness and NSSI behavior have a significant weak positive relationship with a value of $r = 0.40$. Despite having a weak positive relationship, the findings of this study are consistent with the results of previous studies where higher levels of loneliness in respondents are associated with a higher tendency for adolescents to engage in NSSI behavior.

Table 6

The Relationship Between Loneliness and NSSI Behavior

| | | Loneliness | NSSI |
|--|---------------------|------------|--------|
| Loneliness | Pearson Correlation | 1 | 0.40 |
| | Sig. (2-tailed) | | .000** |
| | N | 109 | 109 |
| NSSI | Pearson Correlation | 0.40 | 1 |
| | Sig. (2-tailed) | .000** | |
| | N | 109 | 109 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

Discussion

Overall, the findings of this study are in line and consistent with previous research results. According to Ran et al (2022); Tian et al (2021); Ran et al (2020), resilience has a significant negative relationship with NSSI behavior. This relationship suggests that the higher the resilience in adolescents, the lower the tendency for adolescents to engage in NSSI behavior. Resilience can act as a protective resource when facing stressful situations, helping to restore an individual's psychological balance and achieve better adjustment, thereby preventing adolescents from engaging in NSSI behaviors (Cha & Lee, 2018). Resilience is also a protective factor that aids an individual's ability to adapt to difficulties, enabling them to remain calm, overcome challenges, and rediscover a sense of purpose, strength, and realistic goals (Liu et al., 2021).

The study's findings regarding the relationship between loneliness and NSSI behavior are also consistent with previous research indicating that loneliness has a positive relationship with NSSI behavior. These findings align with studies such as He and Xiang (2022) and Wang et al. (2020). The study's results can be summarized as follows: the higher the level of loneliness in adolescents, the greater the tendency for adolescents to engage in NSSI behavior. This is because NSSI behavior is used as a strategy to cope with the inability to control emotions,

providing immediate relief (Tang et al., 2021). Therefore, adolescents may resort to NSSI behavior as a means of self-soothing when experiencing loneliness.

Scratching body parts until visible wounds emerge, pinching body parts forcefully and pulling hair forcefully, represents a prevalent self-harming behavior among adolescents. Research by Zain and Arbi (2023) on adolescents with eating disorders supports these findings, revealing a substantial incidence of NSSI, primarily through the act of scratching until it induced wounds. According to Miller et al (2021), engaging in scratching to the extent of inducing wounds serves as an interpersonal method for expressing mental stress. This behavior makes internal pain apparent to both oneself and others, or acts as a strategy to alleviate mental distress by redirecting attention away from physical pain (Miller et al., 2021).

Although the findings of this study have supported the research objectives, there are several limitations in this study that could be improved by future researchers. The first limitation is the research design that utilized a cross-sectional approach, which cannot establish causal relationships. Future researchers are also advised to conduct longitudinal research approaches to explore the study over time by involving multiple data collection points. Qualitative research can also be combined with quantitative research to produce comprehensive findings. The second limitation is the restricted sample size of the study, meaning that the findings of this study cannot be generalized unless the participants share similar characteristics with the respondents in this study. Future researchers are encouraged to consider the sample size and involve adolescents from other areas in the Johor state or from different states in Malaysia as research respondents.

The third limitation is that data obtained from self-report responses answered by respondents tend to be biased. Despite the pilot study showing good reliability, the use of more precise measurement tools such as specialized health records involving NSSI variables can be employed to enhance the validity and reliability of the study. Future researchers can also utilize adolescent clinical history reports or self-injury reports from school counseling services to strengthen the study's findings.

Conclusion

In conclusion, non-suicidal self-injury (NSSI) is a dangerous behavior that is not socially accepted because it has negative consequences for adolescents, such as suicidal thoughts or suicide attempts (Castellví et al., 2017; Dickstein et al., 2015). NSSI behavior is one of the methods used to cope with the symptoms of loneliness experienced by adolescents.

Therefore, resilience plays a crucial role in assisting adolescents in managing their negative emotions, which tend to lead to such behaviors. Thus, this study is expected to contribute to the understanding of the relationship between each study variable, particularly the extent of the relationship between resilience and loneliness with self-injurious behavior among adolescents, especially in one of the schools in the Johor Bahru district. Resilience can be utilized as an intervention to aid adolescents involved in NSSI behavior in effectively self-adapting, with the goal of reducing or ceasing NSSI behavior.

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