

## RESEARCH ARTICLE

## Relationship between Emotional and Spiritual Intelligence Levels with Non-Suicidal Self-Injury (NSSI) Behaviour in Adolescents during COVID-19 Pandemic

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### Abstract

The problem of growth and development in adolescence and the emergence of the COVID-19 pandemic is psychosocial stress that could trigger anxiety, depression, and non-suicidal self-injury (NSSI). This research aims to describe the relationship between the level of emotional intelligence and spiritual intelligence with NSSI behavior in adolescents. We conducted quantitative correlational research with a cross-sectional approach. Subjects in the study consist of high school students in Bandung from June 2021 to July 2021. The examination was carried out through a questionnaire of Self-Harm Inventory (SHI) instrument, the emotional intelligence scale, and the spiritual intelligence scale. Sixty respondents with NSSI behavior were found (30.15%) out of 199 respondents, mostly aged 15–17 and female. Among them, 54 meet the mild NSSI behavior, and six people tend severe psychopathology. All adolescents with NSSI behavior were found to exhibit a level of emotional and spiritual intelligence in the moderate category. Statistically, there is a significant and simultaneous relationship between the level of emotional and spiritual intelligence and NSSI behavior in adolescents. Therefore, psychosocial intervention effort is essential for adolescents with NSSI to increase their spiritual and emotional intelligence. Adolescents with severe psychopathology need to be referred to a psychiatrist for further examination.

**Keywords:** Adolescent, COVID-19 pandemic, emotional intelligence, NSSI, spiritual intelligence

### Introduction

Several studies have reported that the COVID-19 pandemic is psychosocial stress for children and adolescents because it interferes with the mental development of children and adolescents due to restrictions on children's social activities, school closures, and others. This condition can trigger the emergence of mental-emotional problems in children and adolescents in the form of depression, anxiety, and stress.<sup>1-4</sup> Even some studies reported an increase in self-harming behavior among adolescents during the COVID-19 pandemic.<sup>2,3,5</sup>

Adolescents under stress could perform self-harming behavior<sup>2,4,6</sup> even though they do not intend to commit suicide, known as non-suicidal self-injury (NSSI).<sup>4,7,8</sup> Adolescents did NSSI to channel negative emotions and emotionally overcome pain by hurting themselves.<sup>6-9</sup>

The usual treatment for adolescents with NSSI is the provision of psycho-pharmacotherapy and psychosocial interventions. Currently, the administration of psycho-pharmacotherapy, such as antidepressants or combinations with

antipsychotics, mood stabilizers, and others, has given satisfactory results.<sup>7,8</sup>

Treatment by medication alone is not enough, as pursuing cognitive and emotional, behavioral, and attitude changes also require psychosocial intervention. Several attempts at psychosocial intervention have been carried out, such as cognitive behavior therapy (CBT) and various other psychotherapies. However, the results are still not optimal for the overall success of therapy.<sup>7,8</sup>

Several researchers have reported a significant relationship between the level of emotional intelligence and spiritual intelligence with stress, anxiety, aggression, conduct disorders, and depression.<sup>10-13</sup>

One of the assessments of the emotional and spiritual intelligence level is through the calculation and analysis of the emotional intelligence questionnaire and the spiritual intelligence questionnaire filled out by adolescents. The higher the value of the level of emotional intelligence, the more children and adolescents can understand and integrate

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emotions and thoughts in controlling their behavior.<sup>11,14</sup> However, if a low level of emotional and spiritual intelligence is found, it will certainly affect mental and emotional problems and daily life.<sup>11,13</sup>

If there is an increase in the assessment of the level of emotional intelligence and the level of spiritual intelligence through training, adolescents with NSSI are expected to be able to control their thoughts and behavior so they do not hurt themselves.

This study aims to determine the relationship between emotional and spiritual intelligence with NSSI behavior in adolescents.

## Methods

This study uses a quantitative approach for correlational research with a cross-sectional approach. This study uses primary data from a questionnaire, statistical calculations, and correlational analytics with a quota sampling technique.

The research subjects were students of class X, class XI, and class XII of vocational high school in Bandung from June 2021 to July 2021 who met the inclusion criteria. Respondent determination is done by the Slovin sampling method on a total population of 254 people with a confidence interval of 95% and an error margin of 5%, thus producing 199 respondents. The examination was conducted using the Self-Harm Inventory (SHI) instrument, the emotional intelligence scale 40, and the spiritual intelligence scale, tested for validity and reliability. Students are advised to fill out this questionnaire correctly and honestly because the researcher would keep the confidentiality of the data. Subject names are written with initials to maintain confidentiality, and filling out the questionnaire at school accompanied by the teacher and at home accompanied by parents.

The data collection method is by using Google Forms to fill out the SHI Early Detection Questionnaire, emotional intelligence scale, and spiritual intelligence scale. The respondent's parents filled out the informed consent stating their willingness to participate as the subject of this study.

In this study, to assess SHI or NSSI, the Indonesian version of the SHI instrument was used.<sup>15</sup> SHI consists of 22-item statements based on experiences of self-harm. Statements are filled

in alone with the answers "yes" (score 1) and "no" (score 0). Assessment of the SHI questionnaire on the respondents of this study showed that most of the respondents carried out mild self-harm behavior (cut-off >5). The results of the SHI questionnaire assessment with a cut-off of >11 on adolescent respondents with NSSI behavior mean that there was a tendency to have severe psychopathology in these adolescents.

Emotional intelligence is measured using the emotional intelligence scale 40, validated and tested for reliability. This scale consists of forty statements about emotional states when dealing with various situations. This scale has been validated and tested for reliability. After adding it up, we get a low emotional intelligence score of 40–93, a medium of 94–146, and a high of 147–200.

Measurement of spiritual intelligence in this study used the Spiritual Intelligence Self-Report Inventory (SISRI) questionnaire. This questionnaire has been translated into Indonesian, validated, and tested for reliability. This questionnaire consists of 24 statements, but three items cannot be used after analyzing the items, so only 21 items are used to discuss the research data. The questionnaire is divided into four dimensions: the ability to think critically, the ability to find and create meaning, the ability to explore spiritual aspects, and the ability to develop spiritual aspects. After the calculation, the total value of spiritual intelligence scores is 0–21 low, 22–62 moderate, and 63–84 high.

The research data obtained was then tested by testing the hypothesis with a correlation test using the SPSS 24.00 for Windows to identify the relationship between emotional intelligence and spiritual intelligence variables with NSSI or self-harm injury behavior variables, correlation strength, and direction of correlation.

## Results

Table 1 shows that from a total sample of 199 people, 60 have NSSI, including 45 (22.61%) female adolescents and 15 (7.54%) male adolescents. Table 2 shows a description of the assessment of the SHI questionnaire on respondents with NSSI. The SHI questionnaire assessment with a cut-off >5 showed mild self-harm (never had mild self-harm), found in 53 people (88%) aged 15–17 years and one person (2%) at the age of 18 years, more in females by 39

**Table 1 Characteristics of Respondents Who Show NSSI Behavior**

Characteristics	Gender				Total	
	Male		Female		n=199	%
	n=62	%	n=137	%		
Non-NSSI	47	23.62	92	46.23	139	69.85
NSSI	15	7.54	45	22.61	60	30.15

**Table 2 Description of the SHI Assessment of Respondents with NSSI**

Variables	SHI Score			
	Cut-off >5		Cut-off >11	
	n=54	%	n=6	%
Age (years)				
12–14	0	0	0	0
15–17	53	88	6	10
18	1	2	0	0
Gender				
Male	15	25	0	0
Female	39	65	6	10
Grade				
Class X	23	39	3	5
Class XI	20	33	2	3
Class XII	11	18	1	2

people (65%) and the most in class X as many as 23 people (39%). The SHI assessment with a cut-off score of >11 means that the respondent has psychopathology, found in 6 (10%) females aged 15–17. Respondents with severe psychopathology are recommended to be referred to a psychiatrist

for further examination.

Table 3 shows the level of emotional intelligence in adolescents who perform NSSI in the moderate category, as many as 42 people (70%) at the age of 15–17 years. While the level of emotional intelligence in the low category was found at the age of 15–17 years in as many as seven people (11.7%), and the level of emotional intelligence in the high category was found in respondents aged 15–17 years as many as ten people (16.7%).

Table 4 shows the level of spiritual intelligence in respondents with NSSI behavior in the moderate category, namely 53 people (88.3%) aged 15–17 years. The level of spiritual intelligence in the moderate category was found more in women, namely 39 people (65.0%). There are no respondents who have a high category of spiritual intelligence.

Table 5 shows Pearson's bivariate correlation test between spiritual intelligence and NSSI behavior, which obtained a correlation number of 0.000 (<0.05), meaning there is a significant correlation between the spiritual intelligence variable and the SHI variable. Based on the

**Table 3 Levels of Emotional Intelligence in Adolescents Who Do NSSI**

Variables	Emotional Intelligence (EQ)					
	Low		Moderate		High	
	n=7	%	n=43	%	n=10	%
Age (years)						
12–14	0	0.0	0	0.0	0	0.0
15–17	7	11.7	42	70.0	10	16.7
18	0	0.0	1	1.7	0	0.0
Gender						
Male	1	1.7	12	20.0	2	3.3
Female	6	10.0	31	51.7	8	13.3
Grade						
Class X	3	5.0	14	23.3	9	15.0
Class XI	3	5.0	18	30.0	1	1.7
Class XII	1	1.7	11	18.3	0	0.0

**Table 4 Levels of Spiritual Intelligence in Adolescents Who Do NSSI**

Variables	Spiritual Intelligence (SQ)					
	Low		Moderate		High	
	n=6	%	n=54	%	n=0	%
Age (years)						
12–14	0	0.0	0	0.0	0	0.0
15–17	6	10.0	53	88.3	0	0.0
18	0	0.0	1	1.7	0	0.0
Gender						
Male	0	0.0	15	25.0	0	0.0
Female	6	10.0	39	65.0	0	0.0
Grade						
Class X	3	5.0	23	38.3	0	0.0
Class XI	2	3.3	20	33.3	0	0.0
Class XII	1	1.7	11	18.3	0	0.0

**Table 5 Relationship between Spiritual Intelligence Level and NSSI Behavior**

		SQ (X2)	SHI (Y)
SQ (X2)	Pearson's correlation	1	-0.705*
	Sig. (2-tailed)		0.000
	n	60	60
SHI (Y)	Pearson's correlation	-0.705*	1
	Sig. (2-tailed)	0.000	
	n	60	60

Note: \*correlation is significant at the 0.01 level (2-tailed)

r-calculated value in Pearson's correlation table obtained 0.705 (>r-table 0.254), it can be concluded that there is a relationship between the spiritual intelligence variable and the SHI variable. The value of the r-count is negative; this indicates that the relationship between spiritual intelligence variables is negative, meaning that the higher the spiritual intelligence, the lower the NSSI behavior.

Table 6 shows the simultaneous relationship between the emotional intelligence variable (X1) and the spiritual intelligence variable (X2)

on the SHI variable (Y). The researcher used multiple linear regression analysis techniques with the output of Sig. of 0.000 (<0.05), and the value of the F-count is 31.113 (>F-). These show that emotional and spiritual intelligence simultaneously affect the behavior of NSSI.

**Discussion**

From the results of this study, it was found that 60 respondents (30.15%) and mid-teenagers in the 15–17 year age group had 59 respondents (98%).

**Table 6 Relationship between Emotional Intelligence Level and Spiritual Intelligence Level with NSSI Behavior**

ANOVA					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	158.975	2	79.488	31.113 <sup>a</sup>	0.000 <sup>b</sup>
Residual	145.625	57	2.555		
Total	304.600	59			

Note: <sup>a</sup>dependent variable: SHI (Y), <sup>b</sup>predictors: (constant), SQ (X2), EQ (X1)

Many teenagers have contemplated suicidal ideation, attempted suicide, or self-harm in their lifetime. According to Hawton et al.,<sup>10</sup> the average lifetime prevalence of adolescent self-harm is around 13%, previously preceded by about 6% in the last 12 months. These show that adolescents are an age group that is a risk factor for behavior NSSI because NSSI behavior is carried out higher in adolescents compared to other age groups.

NSSI behavior in this study was more in female adolescents, as many as 45 people (22.61%), than in male adolescents. These findings are the same as the results of previous studies, namely, the average suicidal thoughts or self-harm behavior in women are higher than in men.<sup>16–19</sup>

Assessment with the SHI questionnaire on the respondents of this study showed that most of the respondents carried out mild self-harm behavior (cut-off >5), as many as 53 people (88%) at the age of 15–17 years and one person (2%) at the age 18. The results of the SHI questionnaire assessment with a cut-off of >11 on adolescent respondents with NSSI behavior in this study found six people (10%), meaning there was a tendency to have severe psychopathology in these adolescents. Every teenager with severe psychopathology needs to be observed, have an examination, and get treatment by a psychiatrist.<sup>20</sup>

Not all people who engage in self-harm behavior (NSSI) intend to commit suicide. Still, according to some experts, people who engage in self-harm behavior have a 1.68-fold risk of committing suicide.<sup>12</sup> In DSM-TR-5, self-harm behavior is listed as a separate diagnostic category named non-suicidal self-injury.<sup>6</sup> Self-harm is a person's failure to cope with stress. Self-harm is an essential mental health symptom that can occur in the average population or patients with a mental disorder diagnosis.

Based on Pearson's bivariate correlation test, the Sig. (2-tailed) between emotional intelligence and NSSI behavior is 0.000 (<0.05), which means there is a significant correlation between emotional intelligence variables and NSSI behavior variables.

The value of r-count is negative, which means that the relationship between emotional intelligence variables is negative; in other words, the higher the level of emotional intelligence, the lower the self-harm behavior (NSSI), and conversely, the lower the emotional intelligence level, the higher the NSSI behavior. The results of this study follow the results of the previous study

regarding the relationship between emotional intelligence and depression levels in adolescents, which states that there is a negative correlation between emotional intelligence and depression levels in adolescents, namely the higher emotional intelligence possessed by adolescents, the lower the level of depression.<sup>21,22</sup>

This study had a significant relationship between spiritual intelligence and negative NSSI behavior. The level of spiritual intelligence in the low category was found in 10% of respondents with NSSI behavior. However, this study did not find a high level of spiritual intelligence in adolescent respondents with NSSI behavior. The level of spiritual intelligence in the high category is likely to prevent NSSI behavior in adolescents. So, efforts to increase spiritual intelligence through emotional spiritual quotient (ESQ) training are very important for adolescents with NSSI behavior.

## Conclusions

There is a relationship between emotional and spiritual intelligence with NSSI behavior. The relationship between emotional intelligence variables is negative, meaning that the higher the emotional intelligence, the lower the self-harm or NSSI behavior.

## Conflict of Interest

None declared.

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## References

1. Ghosh R, Dubey MJ, Chatterjee S, Dubey S. Impact of COVID-19 on children: special focus on the psychosocial aspects. *Minerva Pediatr.* 2020;72(3):226–35.
2. Singh S, Roy D, Sinha K, Parveen S, Sharma G, Johsi G. Impact of COVID-19 and lockdown on mental health of children and adolescents: an narrative review with recommendation. *Psychiatr Res.* 2029;293:113429.
3. Son C, Hedge S, Smith A, Wang X, Sasangohar F. Effects of COVID-19 on college

- students' mental health in the United States: interview survey study. *J Med Internet Res*. 2020;22(9):e21279.
4. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5-TR). 5<sup>th</sup> Edition. Arlington: American Psychiatric Association; 2013.
  5. Shrestha R, Siwakoti S, Singh S, Shrestha AP. Impact of the COVID-19 pandemi on suicide and self-harm among patients presenting to the emergency department of a teaching hospital in Nepal. *PLoS One*. 2021;16(4):e0250706.
  6. World Health Organization. Assessment for self harm/suicide in persons with priority mental, neurological and substance use disorders [Internet]. Geneva: World Health Organization; 2015 [cited 2021 May 25]. Available from: <https://www.who.int/teams/mental-health-and-substance-use/treatment-care/mental-health-gap-action-programme/evidence-centre/self-harm-and-suicide/assessment-for-self-harm-suicide-in-persons-with-priority-mental-neurological-and-substance-use-disorders>.
  7. Kurniawan SL. Hubungan antara kecerdasan emosional dan gangguan jiwa [Internet]. Denpasar: Universitas Udayana; 2016 [cited 2021 June 10]. Available from: <http://erepo.unud.ac.id/id/eprint/6092/1/9089edb71257b8576ofdd862b951c8dd.pdf>.
  8. Goleman D. Emotional intelligence. Kecerdasan emosional: mengapa EI lebih penting daripada IQ. Jakarta: PT Gramedia Pustaka Utama; 2006.
  9. Groschwitz RC, Plenner PI. The neurobiology of non-suicidal self-injury (NSSI): a review. *SOL*. 2012;3(1):24–32.
  10. Hawton K, O'Connor RC, Saunders KEA. Suicidal behaviour and self-harm. In: Thapar A, Pine DS, Leckman JF, Scott S, Snowling MJ, Taylor E, editors. *Rutter's child and adolescent psychiatry*. 6<sup>th</sup> Edition. Chichester: John Willey and Sons; 2015. p. 893–910.
  11. Zohar D, Marshall I. *Spiritual intelligence: the ultimate intelligence*. London: Bloomsbury Publishing; 2000.
  12. Yunalia EM, Etika AN. Analisa kecerdasan emosional remaja tahap akhir berdasarkan jenis kelamin. *JKJ*. 2020;8(4):477–84.
  13. Hamid A. ESQ dan kebutuhan spiritualitas civitas akademik. *Al Munir*. 2014;5(2):132–51.
  14. Khaliq R, Fatimah S, Melati. Tingkat kecerdasan spiritual mahasiswa ditinjau dari keaktifan dalam ekstrakurikuler keagamaan. *J Studia Insania*. 2019;7(1):35–51.
  15. Dewi HK, Setyaningrum RH, Putranto RPA. Perbedaan kecerdasan spiritual pada mahasiswa kedokteran Universitas Sebelas Maret berdasarkan waktu pelatihan emotional spiritual quotient. *Smart Med J*. 2020;3(1):1–6.
  16. Victor SE, Muehlenkamp JJ, Hayes NA, Lengel GJ, Styer DM, Washburn JJ. Characterizing gender differences in nonsuicidal self-injury: evidence from a large clinical sample of adolescents and adults. *Compr Psychiatry*. 2018;82:53–60.
  17. Zhang YY, Lei YT, Song Y, Lu RR, Duan JL, Prochaska JJ. Gender differences in suicidal ideation and health-risk behaviors among high school students in Beijing, China. *J Glob Health*. 2019;9(1):010604.
  18. Miranda-Mendizabal A, Castellví P, Parés-Badell O, Alayo I, Almenara J, Alonso I, et al. Gender differences in suicidal behavior in adolescents and young adults: systematic review and meta-analysis of longitudinal studies. *Int J Public Health*. 2019;64(2):265–83.
  19. Evans R, Parker R, Russell AE, Mathews F, Ford T, Hewitt G, et al. Adolescent self-harm prevention and intervention in secondary schools: a survey of staff in England and Wales. *Child Adolesc Ment Health*. 2019;24(3):230–8.
  20. Vine V, Byrd AL, Mohr H, Scott LN, Beeney JE, Stepp SD. The structure of psychopathology in a sample of clinically referred, emotionally dysregulated early adolescents. *J Abnorm Child Psychol*. 2020;48(11):1379–93.
  21. MAA Zoromba, SA Abdellatif, ES Hussien, WE Hamed. Relationship between emotional intelligence and levels of depression among patients with depressive disorders. *MNJ*. 2015;2(1):45–54.
  22. Foster B, Lomas J, Downey L, Stough C. *Front Psychol*. Does emotional intelligence mediate the relation between mindfulness and anxiety and depression in adolescents? 2018;9:2463.