Konselor
Volume 11 Number 1 2022, pp 20-24
ISSN: Print 1412-9760 – Online 2541-5948
DOI: https://doi.org/10.24036/02021103113653-0-00
Received August 13, 2021; Revised September 28, 2021; Accepted October 26, 2021

KONSELOR
http://ejournal.unp.ac.id/index.php/konselor

Emotion dysregulation and deliberate self-harm in adolescents

Andi Tenri Faradiba*), Anindya Dewi Paramita, Rita Puspa Dewi
Faculty of Psychology, University of Pancasila, Indonesia
*Corresponding author, e-mail: atenri.frd@gmail.com

Abstract
Adolescents belong to the high-risk group for deliberate self-harm. Data shows that about 20 percent of teenagers in the world engage in self-injurious behavior in forms of scratching, razor blading, hitting, biting, hair-grabbing, and head-banging against walls just to relieve pain. This study aims to determine the correlation between emotion dysregulation and deliberate self-harm in adolescents. This study applied two instruments to measure each variable: (1) Difficulties in Emotion Regulation Scale (DERS), developed by Victor and Klonsky (2016), to measure emotion dysregulation; and (2) Deliberate Self-Harm Inventory, developed by Gratz (2001), to measure deliberate self-harm. Researchers implemented a quantitative approach with a correlational design to answer the research questions. Participants were 174 adolescents recruited from the distribution of online questionnaires with purposive sampling technique. Findings from the study indicate that emotion dysregulation is positively correlated with deliberate self-harm in adolescents with a sig p value < 0.005. This research concludes that the higher the emotion dysregulation, the higher the deliberate self-harm in adolescents.

Keywords: emotional dysregulation, deliberate self-harm, adolescents

How to Cite: Andi Tentri Faradiba, Anindya Dewi Paramita, Rita Puspita Dewi. 2022. Emotion dysregulation and deliberate self-harm in adolescents. Konselor, 11 (1): pp. 20-24, DOI: 10.24036/02021103113653-0-00

Introduction

Deliberate Self-Harm (DSH) refers to a range of intentional and conscious self-injurious behaviors without any suicidal intent (Gratz, 2001). Some forms of self-injurious behavior that are classified as DSH include self-inflicted cutting or slashing the skin until it scars, head-banging against hard surfaces, such as walls, hitting or biting oneself (Sutton, 2007). Veague and Collins (2009) explain that adolescents belong to the high-risk group for DSH and are even more likely to engage in the behavior than adults. The World Health Organization (in Asiah, 2019) reveals that there are about 20 percent of teenagers in the world engage in self-injurious behaviors in forms of scratching, razor-blading, hitting, biting, hair-grabbing, and head-banging against walls just to relieve pain. Some countries specifically mention the number of adolescents who engage in DSH, such as Canada in 2003 around 13% (Hargus, Hawton, & Rodham, 2005); Hong Kong in 2007 around 11% (Wong, Stewart, Ho, & Lam, 2007); Japan in 2004 around 7% (Yamaguchi et al 2004); and Indonesia around 38% in 2012 (Tresno, Ito & Mearns, 2012). Furthermore, data shows that in Surabaya, Indonesia, in a week, a psychiatrist received about 10 teenage patients who came with self-inflicted scratch on their hands (Ginanjar, 2019).

DSH behaviors belong to a different group of behaviors and need to be differ from behaviors with suicidal intent because individuals who engage in DSH do not have the intention to suicide (Posner, Brodsky, Yershova, Buchanan, & Mann, 2014). There are differences in the ways, methods, and patterns of self-injurious behaviors in DSH and self-injurious behaviors with suicidal intent. However, DSH remains concerning because even though there is no suicidal intent involved, about 55%-85% of individuals who engage in DSH are found to have a history of committing suicide at least once in their life (Brent et al., 2002 in Posner, Brodsky, Yershova, Buchanan, & Mann, 2014).

Gratz (2001) mentions that there are seventeen common forms of deliberate self-harm behaviors. They are cutting, burning with cigarette (Veague & Collins, 2009), burning with lighter or match, carving words

into skin, carving pictures into skin, severe scratching, biting, rubbing sandpaper on skin, dripping acid on skin, using bleach or oven cleaner to scrub skin, sticking sharp objects (such as pins, needles, or staples) into skin, rubbing broken glass into skin, breaking bones, banging head (occurs in individuals who have neurological disorders such as autism), punching self, interference with wound healing, and other forms of self-harm.

Sutton (2007) explains that these self-injurious behaviors occur because there is a desire to cope with an overwhelmed psychological distress as an effort to gain emotional balance. Individuals who engage in DSH behaviors usually perceive that the invisible emotional excruciating pain can be then 'traded' for a visible pain, which is easier to manage and treat. Usually, after engaging in DSH behaviors, individuals feel calmer, more in control of themselves, safer, and are more able to function. Therefore, individuals who engage in DSH behaviors perceive self-injurious behaviors as an attempt to save themselves rather than to self-destruct.

A factor that has the potential to trigger DSH behaviors is the individual's ability to regulate emotions. In psychology, the term refers to emotion regulation that can be defined as the ability to modulate the experience and expression of one's emotional state and response (Moreira, Gouveia, & Canavarro, 2020). Gross and John (2003) describe emotion regulation as a process that individuals experience when managing the emotions they have, when to feel them, how they feel, and how they want to express them. Conversely, when individuals find it difficult to regulate their emotions, they experience emotional dysregulation. This refers to maladaptive ways of responding to emotions; as a result, it is difficult to control one's behavior when experiencing negative emotions (Gratz & Roemer, 2008). Emotion dysregulation plays an important role in determining uncontrollable behaviors, such as aggression and self-harm.

Weiss, Tull, and Sullivan (in Bryant, 2015) state that emotion dysregulation is correlated with various risky behaviors that are self-destructive and health-endangering, such as self-injurious behaviors or deliberate self-harm, aggressive behaviors, and eating disorders. Based on this, emotion dysregulation is considered relevant to the DSH behavioral model as DSH is a pattern of behavior engaged to avoid certain emotions that individuals do not want to feel or as a paradoxical way to control dysregulated emotions (Gratz & Roemer, 2008).

Looking at the limited research examining the correlation between the two concepts, particularly in Indonesia, researchers are eager to further explore the correlation between emotional dysregulation and Deliberate Self-Harm in adolescents in Indonesia. Our hypothesis is that adolescents with difficulties in managing emotions tend to engage in DSH behaviors as a solution to their negative emotions. This study uses a quantitative approach through filling out online self-report questionnaires.

Method

This study uses a quantitative approach with a correlational research design, in which researchers reveal the correlation of one variable with other research variables. Participants in this study were teenagers in the age group of 14-20 years who in the last 3 months engage in DSH behaviors. This study applied a self-report questionnaire that was administered online. Questionnaire links are distributed through social media, such as Twitter and Instagram, to obtain diverse participants in terms of age, domicile, ethnicity, and other characteristics. We collected 561 data through the link. Upon screening the data based on the characteristics of the participants in this study, we found 174 data that matched the characteristics and were processed.

There are two measuring instruments used in this study. They are Difficulties in Emotion Regulation Scale-18 (DERS-18), developed by Victor and Klonsky (2016), and Deliberate Self-Harm Inventory (DSHI), developed by Gratz (2001). Difficulties in Emotion Regulation Scale-18 (DERS-18) is the short form version of the Difficulties in Emotion Regulation Scale (DERS), developed by Gratz and Reoemer (2004). Victor and Klonsky (2016) developed DERS into 18 items. On favorable items, participants will get a score of 1 (never), a score of 2 (rarely), a score of 3 (sometimes), a score of 4 (often), and a score of 5 (always), while the scoring for unfavorable items applies the opposite. There are 6 dimensions to measure emotion dysregulation: non-acceptance of negative emotions, inability to engage in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. The reliability value of the DERS-18 measuring instrument is 0.858.

The data analysis method used is the Spearman correlation method using IBM SPSS Statistics 22. Spearman correlation is used to measure the magnitude and direction of the linear relationship between two variables of the interval or ratio type. Normality test was carried out before hypothesis testing. The results of the data normality test using Kolmogorov Smirnov showed that the data were not normally distributed. Therefore, a non-parametric correlation test was carried out.

Results and Discussion

Table 1 shows that the dominant characteristics of participants in this study were female adolescents aged 17 years old with high school education background and married parents. Meanwhile, table 2 shows the results of emotion dysregulation in adolescents with the highest category being the high category, with a total of 121 adolescents (69.5%), and the low category with a total of 99 adolescents (30.5%). This explains that adolescents with high category have high emotion dysregulation. Furthermore, the description of deliberate self-harm in adolescents with the most categories is the high category with a total of 102 adolescents (8.6%) and the low category with a total of 72 adolescents (41.4%). This illustrates that adolescents in the high category have a high engagement in deliberate self-harm. Correlation test was conducted to see whether there was a correlation between the deliberate self-harm variable and emotion dysregulation in adolescents. The result shows that there is a correlation between emotion dysregulation and DSH behaviors with p value < 0.05 and r value = 0.233. This means that there is a positive correlation between deliberate self-harm and emotion dysregulation. Therefore, we can conclude that the higher the emotion dysregulation, the higher the deliberate self-harm in adolescents..

Table 1. Demographic Data and Deliberate Self Harm Difference Test

Category	Frequency	Percentage	Mean	Sig.
Gender				
Female	162	93%	5.38	0.407
Male	12	7%	5.67	
Parental Status				
Married	149	85.6%	5.45	0.097
Divorced	25	14.4%	5.12	
Education				
Junior High School	12	6.9%	4.25	0.370
Senior High School	119	68.4%	5.40	
Associate degree	4	2.3%	4.25	
Bachelor's degree	39	22.4%	5.92	
Age				
14 years old	10	5.7%	4.50	0.161
15 years old	15	8.6%	4.20	
16 years old	24	13.8%	4.88	
17 years old	38	21.8%	5.34	
18 years old	28	16.1%	5.93	
19 years old	35	20.2%	5.54	
20 years old	24	13.8%	6.33	

Table 2. Categories of Emotion Dysregulation and Deliberate Self-Harm

Category	Frequency	Percentage
Deliberate Self Harm		
Low	72	41.4%
High	102	58.6%
Emotion Dysregulation		
Low	53	30.5%
High	121	69.5%

The result shows that there is a significant correlation between emotional dysregulation and deliberate self-harm. Consistent with this view are previous studies which state that there is a significant correlation

between emotion dysregulation and self-injurious behaviors (Wolff, Thompson, Thomas, Nesi, Bettis, Ransford and Liu, 2019). The result is also supported by the findings from the studies of Bresin, Carter and Gordon (in Bryant, 2015) which state that individuals will tend to have the urge to engage in self-injurious behaviors if the individual is feeling negative emotions. Similarly, Sim, Adrian, Zeman, Cassano, and Friedrich (2009) also state that more than 70% of participants reported that they experience anger before engaging in DSH behaviors. This is possible because self-injurious behaviors become one of the ways for an individual to alleviate negative emotions, such as anger, being upset, or sadness (Simeon & Hollander, 2001).

When adolescents are lacking skills in adaptive emotion regulation, DSH behaviors serve as a compensatory strategy to cope with perceived emotions. Specifically, DSH behaviors tend to be used to self-punish or self-soothe to distract oneself from distress and to regain a sense of control over themselves (Ford and Gomez, 2015; Lang and Sharma-Patel, 2011). From his summary of previous studies, Klonsky (2007) found that DSH behavior was carried out as a form of 'emotional or tension relief' both in clinical samples – namely individuals with Borderline Personality Disorder – as well as in non-clinical samples, which also appeared not only in sample of adults but also in adolescents. From these findings, DSH as a form of affect regulation appears to have a higher incidence than as a form of self-punishment. Kim et.al. (2020) stated that emotion dysregulation acts as a risk factor for harmful behaviors, suc as DSH. They found that DSH participants showed greater emotion dysregulation, worse reactivity to emotions and greater affective lability compared to participants whose attempting suicide.

Although the results of previous studies state that deliberate self-harm behaviors are more common in females than in males (Fox and Hawton, 2004), the data in this study shows that the average value of DSH behaviors in males is higher with an insignificant difference. This provides a riveting information that DSH behaviors in adolescents are no longer exclusive to gender and that male adolescents have a tendency to engage in DSH behaviors. Furthermore, data on parental status, education, and age do not contribute any significant differences in DSH behaviors. According to Linehan (1993), an environment that is not emotionally supportive can promote poor strategies for dealing with emotional distress. Individuals who live in an emotionally unstable environment are individuals who are less able to manage their emotions and use maladaptive affective regulation strategies. This indicates that a chance for individuals to engage in DSH behaviors, particularly for adolescents, does not consider these three factors. DSH behaviors are perceived as a way out from unmanageable negative emotions.

The data showed that most of this population has a high degree of emotional dysregulation (69.5%). This needs to be a concern because based on Bender, Reinholdt-Dunne, Esbjørn and Pons (2012), emotional dysregulation significantly predicts anxiety in adolescents. In female participants, limited access to emotion regulation strategies and lack of emotional transparency predict anxiety in female adolescents, while in male adolescents, the more predictive of anxiety is non-acceptance negative emotional responses. Thus, improving the skills of regulating emotions needs to be the attention of various parties involved in the adolescent development process, especially the home and school environment as the closest microsystem to adolescents.

Some of the findings from this study can be used as a basis for conducting further research, particularly in researching the typical behavior forms in female adolescents and male adolescents. As the number of participants in this study are dominated by females, this study becomes less representative.

Conclusion

Adolescents' inability to regulate and manage emotions contributes to their tendency to engage in DSH behaviors. The more incapable of adolescents to manage their emotions, the higher their tendency to engage in self-harm behaviors.

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