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Mindfulness Community Education for High School Students and Guidance and Counseling Teachers

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Abstract

Some events that occur in a adolescence's life can be a source of stress. Stress could cause physical and psychological disorders. Stress resilience allows a person to avoid the negative effects of stress. Objective of this community education activity was to provide initial information about mindfulness as a way of self-empowerment to improve stress resilience of high school students and identify the resilience level to determine the need for further training. The participants in this activity were high school students and guidance-and-counseling teachers. Education about mindfulness were given to high school students and guidance-and-counseling teachers through online meeting platform. Before the education session, participants were asked to voluntarily fill out a Brief Resilience Scale questionnaire to identify the participants' level of stress resilience. At the end of the education, a mindfulness practice session was given. Identification of stress resilience showed that of the 277 participants who filled out the questionnaire, 27.2% had low resilience levels, 72.2% had normal resilience levels, and 0.4% had high resilience levels. The percentage of respondents with low resilience decreased with increasing age (31.5% in adolescents, 22.2% in young adults, and 10.2% in adults). In teacher's group, 10.71%, 87.50%, and 10.71% of respondents had low, normal, and high resilience, respectively. In student's group, 68.33% and 31.67% of respondents had normal and high resilience, respectively. A higher percentage of adolescents with low resilience require follow-up. This activity revealed the importance to increase stress resilience which have an impact on improving the learning quality, especially for adolescents as the nation's next generation.

***Keywords**: stress resilience, mindfulness, cognitive, adolescent, self-empowerment*

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Introduction

Stress is a negative emotional experience accompanied by biochemical, physiological, cognitive, and behavioural changes that are directed at changing the stressor or taking advantage of the effects of stress (Taylor, 2018). Each person may perceive stressors differently depending on the resources they have. Some people are not affected at all, others perceive stressors as challenges, and others perceive them as burdens and cannot control them (McEwen, 2017).

In general, psychological stressors and physical stressors will elicit a response to stress through the Hippothalamus-Pituitary-Adrenal axis (HPA axis) and the sympathetic-adrenomedullar axis (SAM axis). Both will release mediators that will work on specific receptors in the body and brain so that physiological and behavioural changes appear that allow people to adapt. On the HPA axis, cortisol will be produced which will trigger energy mobilization, metabolic changes, activation of the immune system, suppression of digestion, and cessation of reproduction (reproduction shut down). In the SAM axis, adrenaline will be produced which will trigger the activity of the sympathetic nervous system, which makes a person able to fight or flee (fight or flight response). The prefrontal cortex, amygdala, hippocampus, and hypothalamus play a key role in a person's response to stress. The prefrontal cortex plays a role in a person's executive and cognitive functions, enabling the person to think and make decisions. The prefrontal cortex can also influence the activity of the amygdala, allowing a person to suppress his emotions and elicit a considerate response to the stressor that hits him (Godoy, Rossignoli, Delfino-Pereira, Garcia-Cairasco, & de Lima Umeoka, 2018).

A person's inability to cope with stressors has a detrimental effect on a person's behaviour and body. When the brain and body respond excessively or disproportionately to the stressors that hit them, various adverse physical and mental conditions manifest (McEwen, 2017). Stress can trigger exacerbations of various chronic diseases. In the cardiovascular system, stressors can trigger the development of atherosclerosis. Stress can lead to atopic dermatitis or psychogenic itching. Stress can also be a cause of mental illness. Stress can cause psychotic illness, affective disorders, anxiety disorders, post-traumatic stress disorder (Simpson, 2018), and alcohol abuse (Stephens & Wand, 2012). Withdrawal from peers and family can arise because a person experiences stress. Individuals who experience stress have difficulty in social interaction and have the potential to have antisocial behaviour. People with depressive symptoms also

experience a decline in social life because they have difficulty controlling their emotions, experience decreased ability to concentrate on topics of conversation, increased focus on themselves, and do not smile when interacting socially (Dising, Jørgensen, Gerds, Rod, & Lund, 2019).

High school students are around 14 – 18 years old. This age group is classified as adolescence. Adolescence is a period when young people experience confusion about roles and self-regulation. Stressors can come from many things, such as academic problems, relationships between friends, romantic relationships, finances, and determination of future careers (Bhargava & Trivedi, 2018). During adolescence, the prefrontal cortex of the brain is not fully developed and is still maturing. Adolescence are prone to amygdala hijack. Amygdala hijack shows that emotions dominate a person's behaviour, appearing as spontaneous behaviour to stimuli (Goleman, 2009). The dominance of the role of the amygdala can be controlled by the activity of the prefrontal cortex, but in adolescents this part has not developed optimally. Support from teachers plays an important role in supporting student resilience (Roli & Buyusi, 2018). The psychological condition of a good guidance-and-counseling teacher also plays a role in improving the quality of guidance and counseling to students (Mahomed, Johari, & Mahmud, 2019).

Resilience is the ability to bounce back or recover from stress (Smith, Epstein, Ortiz, Christopher, & Tooley, 2013). Resilience to stress is an active process that involves a series of neural and cellular mechanisms that allow a person not to experience the negative consequences of stress (Faye, Mcgowan, Denny, & David, 2018). Various ways can be done to increase one's resilience. Various non-pharmacological methods are used to manage stress and increase resilience. Examples of intervention programs that aim to increase resilience are the American Psychological Association (APA)'s Road to Resilience program, Meditation and Physical (MAP) training, bright light therapy (BLT), exercise therapy, weight management, and calorie restriction (Faye, Mcgowan, Denny, & David, 2018). Resilience can also be improved with mindfulness (Galante, et al., 2018).

Mindfulness can be applied to daily activities. Mindful breathing, mindful eating, mindful movement, mindful body scanning, mindful gardening, mindful cooking, and mindful writing are some examples of activities that can be done mindfully. When doing something mindfully someone will raise self-awareness (awareness and insight) by seeking attention, observation,

and acceptance of all that is happening without judgment. When doing this activities a person will pay attention to it without judgment or attachment to it (Maher, 2021).

Mindfulness has benefit for both physic and psyche. Mindfulness can increase the ability to regulate emotions effectively, reduce reactivity to events, increase cognitive flexibility, increase the ability to build interpersonal relationships, improve self-awareness, morale, and intuition (Davis & Hayes, 2011), reduce stress (Bartlett, Buscot, Bindoff, Chambers, & Hassed, 2021), and improve resilience (Antonini Philippe, Schwab, & Biasutti, 2021). Mindfulness can also help you lose weight, improve exercise performance (Mistretta & Glas, 2018), improve one's attention, memory, cognition, and academic performance (Wimmer, Bellingrath, & von Stockhausen, 2016).

High school students are in the adolescent age group who are vulnerable to experiencing the negative effects of stressors. The low level of resilience of some teenagers needs to be improved. Guidance-and-counseling teachers can help improve student resilience. Mindfulness is one of the alternative activities to reduce stress and improve resilience. These encourages training programs for students and teachers to reduce stress and increase resilience. This community education was done to provide initial information about mindfulness as a way of self-empowerment to improve stress resilience of high school students and identify the resilience level to determine the need for further training.

Methods

Activity Details

The activities were online community education to students and guidance-and-counseling teachers in several high schools in Java. The duration of the activity was approximately 2 hours. The details of the activities were as follows: Opening; Presentation of material about the background and purpose of the presentation of the material, stress and its effects, introduction to the basics of mindfulness and its benefits, various activities that can be done mindfully and how to do it; Discussion; Mindfulness practice; Sharing experiences after practice.

Mindfulness practice session was carried out for 5-10 minutes guided by speaker. Participants were asked to prepare themselves before starting the practice. Activities that were trained include mindful breathing and mindful movement.

Mindful breathing. In mindful breathing, participants were reminded to do diaphragmatic breathing. In diaphragmatic breathing, the activity of the diaphragm and abdominal muscles was more dominant in the activity of inhalation. Participants were trained to be aware of their breathing, to be aware of cold air entering and warm air coming out of their nostrils, recognizing each inhalation and exhalation. Breathing activity was always done all the time in a person's life, but people are not necessarily aware of it. In mindful breathing, people were led to realize the life energy from nature in the form of air that enters the body and strengthens it and the energy that comes out and melts back into nature. If during the practice one's mind wanders and one's focus is distracted, one will be asked to refocus on the breath.

Mindful movement. In mindful movement exercises, participants were invited to perform certain movements according to the guidelines in the video presentation. Each movement was accompanied by inhalation and exhalation. Participants were asked to be aware of each movement performed, each muscle involved in the movement. In addition, the element of "here and now" was also emphasized, in addition to the element of self-acceptance. The movements taught were simple movements that were easy to do such as stretching your arms, extending your arms up, turning your waist to the right and left, and bending. The purpose of doing these movements was to stretch the muscles which will later lead to a state of relaxation. After completing a series of movements, participants were also encouraged to be quiet for a moment and be aware of the situation around them. When practicing mindful movement, participants were also guided to be grateful for their physical condition, whatever the achievements they get.

Data Collection

The data taken in this activity are data on the level of resilience, age, and gender. This was done to collect information about level of resilience as a consideration to compile further training programme. The level of resilience was assessed by a Brief Resilience Scale consisting of 6 questions. Before starting the education session, participants were asked to fill out a questionnaire that was distributed using the google form link. Filling out the questionnaire was voluntary and anonymous. If participants want to get the results, participants were asked to include an active email address.

Data Analysis

Age data were grouped into less than 18 years (adolescent age group), 18-25 years old (young adult age group), and more than 25 years (adult age group). Resilience levels were grouped into high, normal, and low resilience levels. The data also grouped into teacher and student. The data were analyzed using Microsoft excel 365. The data was displayed in tabular form.

Results and Discussions

Results

The online community education activities were carried out in stages with a total of 381 participants. Out of 381 people, 277 people filled out the questionnaire link that was shared. The distribution of respondents is shown in Table I. The distribution of stress resilience by age group and gender is shown in Table II. The distribution of age and stress resilience according to role in school is shown in Table III. The community education participants were aged 15 – 59 years. Most of the high school students are in class X and some are in class XII. The community education participants were dominated by young women. The highest percentage of respondents in the category of low resilience was found in the adolescent age group, followed by the young adult age group, and the lowest percentage in the adult age group. There were respondents with low resilience level in teacher and student group. The percentage of respondent with low resilience level in student group was higher than in teacher group.

Table I. Respondent Distribution

Categories	Amount	Percentage
Gender		
Male	14	5%
Female	263	95%
Age		
< 18 years old	219	79.1%
18 – 25 years old	9	32%
>25 years old	49	17.7%
Resilience		
High	1	0.4%
Normal	200	72.2%
Low	76	27.4%

Discussions

Extension activities are carried out after teaching and learning activities in the 2020/2021 end. This activity was useful for class X students to prepare them for high school in class XI and XII. For class XII students who after graduating will continue to the next level of education or

enter the world of work, this activity will provide them with a choice of activities to reduce tension/stress (Galante, et al., 2018).

Table II. Stress Resilience Distribution

Categories	Amount	Percentage
<18 years old		
High	0	0%
Normal	150	68.5%
Low	69	31.5%
18 – 25 years old		
High	0	0%
Normal	7	77.8%
Low	2	22.2%
>25 years old		
High	1	2%
Normal	43	87.8%
Low	5	10.2%

Table III. Stress Resilience Distribution According to Role in School

Categories	Amount	Percentage
Teacher		
High	1	1.79%
Normal	49	87.5%
Low	6	10.71%
Student		
High	0	0%
Normal	151	68.33%
Low	70	31.67%

The community education activities went smoothly. The enthusiasm of the participants was shown by the questions asked during the discussion session. Some participants were not familiar with the term mindfullness (with one letter “l”) and some equated it with the term mindfullness (with two letters “l”). Mindful and mindfull are 2 different terms. Doing something with mindful refers to doing an activity that is mindful, focusing on when and where the activity is done, and fully accepting all conditions without giving any judgment to what happened. Doing something with mind-full refers to doing an activity while the mind is filled with various things so that it often makes one's mind not in that place or time even though the body seems to be there (Bottero, 2012).

In addition to asking questions about the material, participants also provided important suggestion for the implementation of further community education. Input from participants included the use of terms that were easier to understand by lay people when explaining the material and using Bahasa terms in presentations. This provides input for resource persons to make the material easier to understand and more interesting.

Participants convey the impression they feel after the mindful practice. They said that the practice, both mindful breathing and mindful movement, made them more relaxed. Their comment was inline with statement in Davis & Hayes article (Davis & Hayes, 2011). Some participants stated that they needed more practice to do it more easily. Several participants said that diaphragmatic breathing was relatively more difficult to do because they were more accustomed to doing chest breathing. When practicing diaphragmatic breathing, the breath seems shorter and more tiring. This can be overcome by constant practice and getting used to it.

The obstacle felt in online community education was that some participants in teacher community education session felt less than optimal in participating in the education session because they had to do other activities at the same time. A common problem during online meetings is that one person is doing more than one activity at the same time. The existence of information technology and several electronic devices allows someone to attend several online meetings at the same time. Online meetings allow people to be in two or more virtual meeting rooms at the same time. This is actually not in line with the principle of mindfulness because being in several spaces with different activities makes people unable to focus on one thing. People's attention will be divided. When doing something with mindful, one should focus on one particular thing that is being done at a time by being present and fully participating in the activity. Awareness and here and now are elements of mindfulness.

Some participants also felt the internet connection problem, so that the presentation could not be heard properly. Connection problems can be overcome by recording previous material or recording training activities so that they can be accessed by participants at another time.

The enthusiasm of the participants to fill out the questionnaire can be categorized as sufficient. A total of 72.7% of the education participants filled out the questionnaire. Participants who filled out the questionnaire and included an email address received their resilience level results via email. Problems with distribution of results via email occurred when participants entered their email addresses incorrectly. In the next activity, improvement efforts that can be done are asking participants to write the email address twice on a separate line and take advantage of the automatic email address recognition feature in the google form and add information to write down the email address correctly for sending the results of the resilience level measurement.

Respondents who have a high and normal level of resilience are 72.6% while the level of low resilience is 27.4%. Of the respondents who have a low level of resilience, the highest percentage is in the adolescent age group, followed by young adults, and the lowest percentage is in the adult age group. In student and teacher group there were low resilience respondents. Although less than 30% of respondents have low resilience, this information cannot be ignored. Low resilience indicates that respondents are at risk of experiencing negative impacts when exposed to stress. Resilience can be improved with various efforts. The results of the survey on this activity provide information that for further training activities to increase resilience can be focused on the adolescent age group. The other training also could be arranged for teacher's group.

The follow-up to this activity is to prepare a mindfulness training module. The first training module is training for those who are interested in learning to do activities with mindful. The second training module is training for those who are interested in coaching or assisting others in mindful activities. In addition to preparing training modules, peer-sharing groups and discussions based on device applications such as WhatsApp or Telegram can also be initiated.

Conclusion

The participant got the initial information about mindfulness. A higher percentage of adolescents with low resilience require follow-up. It is important to carry out follow-up activities to increase resilience, especially for adolescents as the nation's next generation. For further activities, structured training can be carried out in collaboration with the school to maximize training. In addition to training, assistance is also needed to ensure the program runs well.

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