Distress-reducing strategies for enhancing students' ability to cope with psychological challenges associated with online learning

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Abstract

Purpose: This workshop aims to enhance students' comprehension of online learning and psychological stress. Additionally, it seeks to expand students' awareness of anxiety and depression symptoms and enable them to overcome these conditions by routinely practicing stress-reducing strategies. **Methods:** Distress-reducing strategies training was conducted at the Health Institute of Sehat Medan from June to September 2021. The training included a focus group discussion and a preliminary survey distributed among female students through Google Forms. The survey collected demographic data, and online learning feedback, and used the Kessler Psychological Distress (K-10) questionnaire to assess the participants' psychological distress levels. Students also learned techniques to help reduce distress. **Results:** Of the 51 female students who are currently in semesters 2 to 5 participating in the survey, 70.59% admitted to experiencing signal disturbances, 56.9% complained that the lecturers' assignments were burdensome, and 83.4% of them had insufficient resources to buy internet packages. After one year of online learning, students still prefer the offline aspect. It was also discovered that 11.8% of the respondents experienced psychological disorders, while 88.2% of them did not experience distress. **Conclusion:** Finally, the students found the workshop helpful in reducing their distress and were satisfied with the training.

Keywords: online learning; psychological distress; workshop

INTRODUCTION

The World Health Organization declared Coronavirus Disease 2019 (COVID-19) on March 11, 2020. Indonesia first experienced this pandemic in March 2020, four months after the first case was reported in China. Since then, COVID-19 has increased rapidly, with 743,196 confirmed cases, 22,138 deaths, and 611,097 recoveries as of December. The provinces with the highest cases are the Special Capital Region of Jakarta, Central Java, and West Java [1].

COVID-19 has significantly impacted the educational system, and due to health protocols such as crowd avoidance, class-based education has

changed to an online form [2]. In Indonesia, distance learning from home has been encouraged through the Circular Letter of the Ministry of Education and Culture (Kemendikbud) Number 4 of 2020. It is worth noting that educational technology and strategies for implementing online learning were previously unstructured. Online learning started in March 2020 after the first COVID-19 case was detected in Indonesia [3]. Although various platforms are available to support this new form of education, mapping its activities remains a challenge for universities. It was discovered that online learning causes professors, lecturers, and students to face technical, financial, and social issues. The pandemic and restrictions on public gatherings are also affecting people's mental health, as many students experience stress, anxiety, and psychological problems. Furthermore, not all students have equal access to or ability to use digital technology [4].

A study by Romeo in Italy showed that university students had higher rates of anxiety and depressive symptoms than general workers during the COVID-19 period. According to Romeo, sociodemographic factors, including being female and having a lower level of education, were associated with more symptoms [5]. The study also showed that health-related factors, such as concerns about being infected with COVID-19, contributed to increased psychological distress among students. Meanwhile, Brownin emphasized that women at a younger age who had poor health spent a lot of time in front of monitor screens and knew someone infected with the virus had high psychological distress in the United States [6].

This shows COVID-19 and the change from classroom-based education to online education have led to increased psychological distress. Therefore, it is necessary to take steps to enhance students' ability to cope with this issue. One effective approach is to provide online learning on topics such as education and psychological distress, identifying thoughts that lead to anxiety and depression, deep breathing exercises to reduce stress, and muscle stretching techniques to alleviate neck and shoulder tension.

METHODS

Implementation of Activities

This community service began with the implementation of focus group discussions with *STIKES SEHAT* students to obtain information about the needs required during online learning. The group discussion was carried out a year after COVID-19 and its psychological impact on students. Questionnaires regarding the problems related to online learning and psychological distress were distributed using the Kessler Psychological Distress Scale (K10). Afterward, necessary training is carried out to improve the ability to deal with psychological pressure. The following are strategies to improve the ability to deal with psychological stress associated with online learning.

1. Online learning

Online learning is a means of interactive learning that uses various tools, such as tablets and computers, that are connected to the internet. Students can gain knowledge about online learning, the barriers, and the challenges associated with it [7].

2. Psychological Distress Education

Psychological distress, characterized by symptoms of depression and anxiety that often coexist with somatic complaints and various chronic conditions, as well as medically unexplained syndromes, is regarded as a global mental health problem [8]. A previous study showed that a total of 450 million people suffer from stress, depression, and anxiety disorders [9]. Students learn about psychological distress and its risk factors, and their experiences are assessed using the Kessler Psychological Distress Scale (K10). This instrument can be used to assess how often people have experienced psychological distress during the last 30 days. The K10 is a validated instrument in Indonesia, with a sensitivity of 85.7% and a specificity of 74.7%. It takes only 2-3 minutes to complete, and scores can be used to indicate the severity of psychological distress: normal, mild, moderate, and severe, which are <20, 20-24, 25-29, and ≥30, respectively [10].

3. Identify thoughts that create anxiety and depression

Female students are learning to recognize the thoughts that cause psychological reactions as part of cognitive-behavioral therapy. They are also taught to identify situations and events that generate automatic thinking, causing psychological and emotional distress. Examples of automatic thinking include predicting the future, reading people's minds, and using the word "should." [11].

4. Deep Breathing Training

Perciavalle showed that deep breathing techniques can improve mood, reduce stress, and positively impact objective parameters such as heart rate variability and cortisol levels in saliva. Although its mechanism is unknown, this technique mediates the autonomic nervous system, which breathing controls [12]. Breathing techniques can change the dominant sympathetic to a parasympathetic state. This technique

has become a first choice and additional treatment for stress, anxiety, depression, and some emotional disorders [13]. Belly breathing is one of the approaches that students use to slow their breathing and reduce general anxiety levels. Practically, this will help people overcome the anxiety they feel in a particular situation.

5. Stretch exercises on the neck and shoulder muscles

By increasing flexibility and stretching their legs with back muscles, female students can perform stretching exercises after sitting for extended periods at the computer [14]. These stretches are beneficial after completing 1-2 hours of online learning. The training also assesses the ability to receive the material with pre- and post test assessments, as well as the level of response to the relevance of the training material and the level of satisfaction with the training.

Partner participation contribution
The partner is *STIKES SEHAT* Midwifery Study Program
1. Partners are willing to participate in a survey in the form of a Google form to provide feedback on the recent situation where female students were sent home from the STIKES dormitory due to pandemic-related restrictions.
2. Partners are also willing to provide facilities and infrastructure at STIKES for the implementation of deep breathing and neck and shoulder muscle stretching training in small groups of female students. Additionally, they are willing to produce instructional videos that students can use on their own. Those involved are STIKES students who live around STIKES.
3. Partners are willing to participate in all forms of training that aim to improve strategies for dealing with psychological pressure related to online learning.

RESULTS

Table 1 presents a psychological distress evaluation. Out of fifty-one female students of semesters 2-5 have a median age ranging from 18-21 years, are single, do not have any personal income, live with their parents, have never been confirmed with COVID-19, do not have any comorbidities, and 88.2% of them did not experience stress while 11.8% experienced psychological pressure..

Table 1. Evaluation of psychological distress with K-10 (N=51)

Interpretation K-10	n (%)
Normal	45 (88.2)
Distress	6 (11.8)

Table 2 shows that the majority of them still preferred to study offline, even after one year of online

learning. The results showed only 98% out of 37 students that studied online for 1-2 hours per day fully participated. Additionally, 56.9% of the female students stated that lecturers gave them many assignments. A total of 66.67% reported that they feel neutral after one year of online learning. Similarly, 56.9% of students stated being neutral about their understanding of the material. A total of 70.59% of them faced obstacles during online learning, primarily related to network problems. Meanwhile, 84.3% of students had financial constraints when buying internet data.

Figure 1 shows there was an improvement in pre-test scores compared to the post-test in all three training sessions, which helped to provide basic skills to cope with psychological pressure related to online learning. However, it is necessary to continuously monitor the implementation independently to ensure the effectiveness of the training. The feedback received can serve as a basis for improving skills in delivering material online.
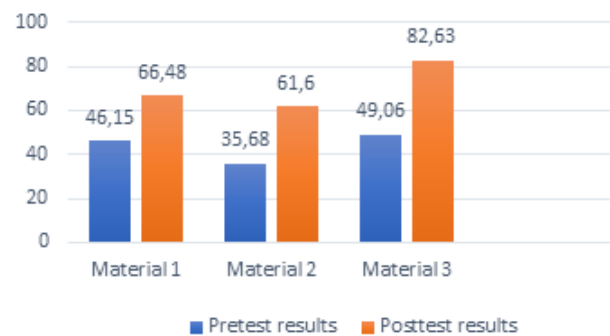
Figure 1. Evaluation of training activities provided Assessment of feedback from the implementation of the training

Evaluation of Material Giving
Online training was provided three times interactively in connection with the Implementation of Restricting Community Activities (PPKM; *Pemberlakuan Pembatasan Kegiatan Masyarakat)* starting on July 12, 2021, and partner policies repatriating all female students from the dormitories. The training materials include (1) online learning education and psychological pressure; (2) identification of thoughts that cause psychological distress, and (3) deep breathing exercises and neck and shoulder muscle stretching. Before the training was carried out, students were expected to fill out the attendance form and complete the pre-test, while they were asked to fill out the post-test after the training. The implementation obstacle shows only 36 female students participated in the training. This is consistent with **Figure 1**, and the test results on materials 1, 2, and 3 showed an improvement in the

pre-test score from 46.15 to 66.48, 35.68 to 61.6, and 49.06 to 82.63, respectively.

**Table 2. Responses to online learning question (N=51)**

Questions	n (%)
How many hours are used for online learning in a day:	
1 – 2 hours	37 (75.55)
3 – 4 hours	13 (25.45)
5 – 6 hours	1 (1.96)
Vote for your opinion about how online learning helps you gain an understanding of teaching materials	
Totally agree	0 (0)
Agreed	6 (11.8)
Neutral	29 (56.9)
Do not agree	16 (31.4)
Disagree	0 (0)
If you are asked to choose a learning method, what do you like?	
Online	2 (3.9)
Offline (classroom)	49 (96.1)
Do you have financial problems with online learning to meet internet data quotas?	
Yes	43 (84.3)
No	8 (15.7)
Problems encountered when learning online	
Pure network	36 (70.59)
Network and quota	11 (21.57)
Pure quota	1 (1.96)
It is difficult to understand the lesson	1 (1.96)
No problems	2 (3.92)
When the lecturer delivers teaching materials, do you follow them from start to finish?	
Yes	50 (98.0)
No	1 (2.0)
During online learning, does the teaching staff give a lot of assignments?	
Yes	29 (56.9)
No	22 (43.1)
After 1 year of online learning, choose your opinion about online learning you are following	
Very satisfied	2 (3.92)
Satisfied	6 (11.76)
Neutral	34 (66.67)
Dissatisfied	7 (13.73)
Very dissatisfied	2 (3.92)

After the completion of the training, a feedback assessment was carried out using the Google form to evaluate its implementation. The assessment aimed to measure the relevance of the training using a Likert scale ranging from strongly disagree to strongly agree (**Figure 2**). About 47.22% and 52.77% of the respondents agreed it was and stated that they were very satisfied with the activity using a Likert scale of 1-5 ranging from very dissatisfied to very satisfied (**Figure 3**).
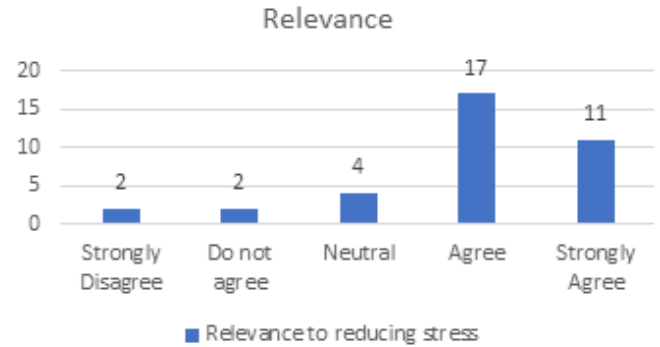
Figure 2. Feedback on the relevance of the training
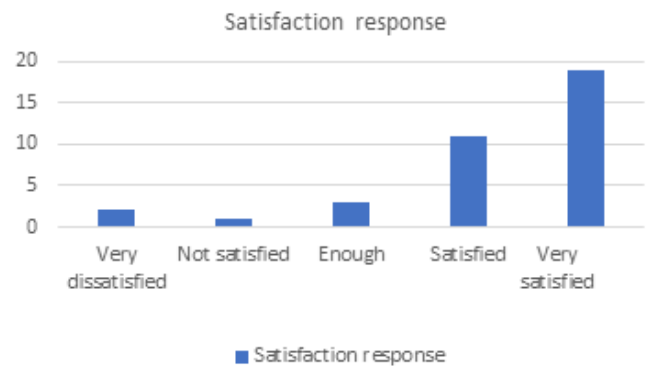
Figure 3. Feedback on training activity satisfaction

DISCUSSION

This community service activity showed that the level of psychological pressure experienced by female students during online learning is low, at only 11.8%. However, this issue still needs to be addressed, followed up by increasing students' ability to cope with pressure. This shows that online learning needs to be continued and evaluated regularly to prevent the occurrence of severe mental disorders. It is noteworthy that most students did not face any difficulties and were able to adapt well to online learning.

However, some challenges need to be considered in the health sector, such as problems with the online learning process and the perception of students that this method is inadequate in terms of gaining a deep understanding of the material. Health education often involves training in laboratory skills and field practice, which are difficult to replicate in an online setting. Studies show students prefer offline over online learning when it comes to developing their understand-

ing and skills [7,15,16]. To improve understanding and skills, a virtual laboratory is needed to stimulate experiments related to online training [4,17,18].

Although online learning has been implemented for a year, many female students still prefer offline learning, which can be a source of stress and cause psychological distress. Chakraborty emphasized that students perceive online learning as stressful and negatively affecting their health and social lives [4]. Similarly, Sundarasen identified financial problems, online learning, uncertainty related to academic performance, and future career expectations as the main stressors that have a psychological impact on students in Malaysia [16].

CONCLUSION

This community service activity can serve as a basis for partners to consider policies that provide ongoing counseling and monitoring services for female students who experience psychological distress. It is necessary to evaluate the implementation of online learning and choose a method that is fully appropriate for face-to-face hybrid learning while adhering to health protocols. This is to enable students to improve their ability to understand the educational materials provided. Furthermore, partners need to increase the availability of stable internet networks and seek joint solutions to students financial problems, to improve the online learning process.

ACKNOWLEDGEMENTS

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