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Increasing the Knowledge of Mental Health of Young Adults through Video-Assisted Education: A Pilot Study in Surabaya

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Abstract Background: Young adults (<25 years old), a 49% proportion of the Indonesian population, is one crucial component that might determine the future of the nation and achieve Indonesia Emas or Golden Indonesia in 2045. Anxiety is one of the effects of the COVID-19 pandemic, as one out of five Indonesian people could have suffered from anxiety, especially young adult women. This activity would like to measure the effectiveness of video-assisted learning regarding mental health education during the pandemic among young adults. Methods: Video regarding mental health during the COVID-19 pandemic was given to 35 young adults (18-25 years old) in Surabaya City using the zoom application. The pre-test and post-test consist of 10 questions and given before and after the video. The data was further analyzed descriptively and analytically using GARPH PRISM 5.00. Result: Increasing knowledge after video-assisted learning was observed, as there was an increasing number of respondents who had good knowledge regarding mental health during the COVID-19 pandemic, from 22.9% to 45.7%. The data were further analyzed using a paired t-test to find the mean difference between the pre-test and post-test knowledge scores, both mean±SD (64.28±14.80 and 73.42±19.70, $p<0.001$, respectively). The effect of respondents' backgrounds on the score was analyzed using a two-way ANOVA test. There was a significant difference between knowledge and their field of study ($p<0.05$), but not for the age, sex, and visiting online supporting group website. Conclusion: The video-assisted education effectively increased knowledge regarding mental health during the COVID-19 pandemic among young adults in Surabaya. However, broader respondents are necessary before large implementation in the community.

1. INTRODUCTION

COVID-19 was declared a Public Health Emergency of International Concern by the World Health Organization (WHO) in late January 2020. It was then declared a pandemic on March 11th 2020 (Dawood et al., 2020). This decision was a sentiment with the rapid increase of cases throughout the year, and as we know, this virus is easily transmitted through droplets and can survive for a certain amount of time on surfaces. Since there is no definitive therapy for this infectious disease, prevention attempts include retaining physical distance, mandatory mask-wearing, and maintaining individual hygiene. Many countries even implemented drastic measures, one of those restrictions was lockdowns that prevented people from entering and leaving countries and limiting residents' activities, reducing the incidence of COVID-19 (Dawood et al., 2020; Depellegrin et al., 2020). After the vaccination program, the case of COVID-19 was reduced, and the activity restriction was lenient. Unfortunately, due to the

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slow vaccination rate and rapid spreading of delta variants, the restriction measurement was tightened in most of the world, including Indonesia (Baraputri, 2021; AHK Indonesien, 2020)

Physical distancing in Indonesia began in the middle of March 2020 when the first cases of COVID-19 emerged in the capital. Following the large scale of social restriction laws to reduce its rapid transmission, this includes closing schools and work environments, limiting religious activities, and prohibiting any ventures in public spaces (Djalante et al., 2020). This was especially seen in the recent increase of Delta Variant cases in Indonesia, where it became Asia's new pandemic epicenter, with a whopping number of 56.767 new cases as of July 15th, 2021 (Dyer, 2021). The mutation of the COVID-19 virus, namely the Delta variant, was found to be 64% more contagious than the Alpha variant. Those who are very susceptible to this variant are those who are not vaccinated and with a high level of mobility. CDC reported on 6 December 2020 that COVID-19 incidence across all age groups was 99.9 per 100,000 (0–4 years), 131.4 (5–10 years), 180.6 (11–13 years), 255.6 (14–17 years), and 379.3 (18-24 years). Incidence trends among young adults aged 18-24 years have a distinct and more pronounced peak (Leidman et al., 2021). These circumstances may well be stressful to many individuals; the anxiety and fear over the mysterious disease can be devastating, including among adolescents and young adults (Pandey et al., 2020; Singh et al., 2020). Young adults below the age of 25 years old are a critical component of the Indonesian population, with 49% proportion in the population (Badan Pusat Statistik, 2018). Due to less interaction with the peer group, fewer hobbies and entertaining activity, changing in the learning process, and fear of delta variants, the mental health problem might affect those still in the early years of adulthood (Pfefferbaum & North, 2020).

In some communities in Indonesia, mental health is still a taboo topic to discuss. However, multiple pieces of evidence suggest its irrefutable high urgency in Indonesia. It was reported in 2013 that 14 million Indonesian citizens, or about 6% of the total population, have at least one mental health disorder, particularly anxiety and/or depression. Unfortunately, only 10% of those with mental health disorders can afford and access the proceeding healthcare (Arjadi et al., 2016). Moreover, the risk of developing high anxiety during the COVID-19 pandemic was exceedingly correlated with younger age groups rather than those who are older. This was suggested due to the inexperience of encountering various situations during the pandemic (Megatsari et al., 2020). A study on 610 Indonesian mothers found that 25% of the respondents have mental health problems during the pandemic, including depression, anxiety, and stress (d'Arqom et al., 2021). A recent study reveals that during the pandemic, a person out of five might have suffered from anxiety, more so one young adult woman. Another study suggests that young adults among Indonesian citizens are more familiar with showing depression symptoms than any other age group (Anindyajati et al., 2021; Purborini et al., 2021).

With the imminent lockdown regulations for the COVID-19 pandemic, it was evident that it has severely disrupted global educational systems. It is even more overwhelming when hoaxes are prone to spread around easily throughout the community. The usual "face-to-face" learning method is strictly prohibited as most teachers and lecturers shifted to web-conferencing platforms. Other learning tools have also been considered: video-assisted learning (Yaqinuddin et al., 2020). Not only such method can be supportive to various learning styles of the students, it is easily accessible through many mobile multimedia devices (Depellegrin et al., 2020; Dhawan, 2020; Yaqinuddin et al., 2020). Some argue for its integrity as a learning method, effectiveness, and flexibility. However, the current pace of situations may positively affect students' knowledge, skill, and performance.

Considering all the information above, with a higher risk of young adults experiencing mental health disorders during the COVID-19 pandemic other than those who are older, and with the rising convenience of video-assisted learning in the community. Therefore, this study aims to measure the effectiveness of video-assisted learning regarding mental health education during the pandemic among young adults.

2. METHODS

The activity about mental health during COVID-19 started on September 2020 by launching of an online supporting group and mental health calculator, followed by a public webinar about mental health during COVID-19 pandemic on November 2020 conveyed by a psychiatrist. The ethics committee Faculty of Medicine, Universitas Airlangga approved this cross-sectional study (Ethic No 86/EC/KEPK/FKUA/2021). References about mental health during COVID-19 mostly from the Centers for Disease Control and Prevention (CDC) and The Inter-Agency Standing Committee Guidelines on Mental Health and Psychosocial Support (IASC MHPSS) (CDC, 2020; IASC, 2020). Due to the prolonged pandemic, on July 2021, a webinar for young adults was held to assess the effectiveness of 20 minutes video to increase the knowledge of mental health by playing a recording of the previous public webinar video. This video discussed the introduction of the concept of stress, the classification of stress, the types of mental disorders, the classification of attitudes towards the COVID-19 pandemic, and how to deal with stressors. An explanation of the online supporting group and mental health calculator (www.laluibersama.com), which provide an initial screening of mental health problems based on the Depression, Anxiety, Stress Scale 21 (DASS-21) was also presented (d'Arqom et al., 2020). The respondents were university students from several universities in Surabaya, recruited using convenience sampling, who agreed to join the July webinar and completed the pre and post-test.

A set of online questionnaires was distributed before and after the video screening and the website explanation. Respondents were given an explanation of the research

objectives, treatment of the subject, risks to research respondents, a guarantee of confidentiality of research data, and the nature of respondent's participation which was voluntary and had the right to refuse. Respondents were asked to click the "Yes, I agree" button as a sign of agreement before they proceeded to start the survey. Respondents of this study were students aged 18-22 years.

The self-structured questionnaire with closed-ended questions was used to assess the knowledge regarding mental health during the COVID-19 pandemic before and after watching the video. There were ten multiple choice questions with the subject content covering the basic knowledge of mental health, with a score of correct=1 and incorrect=0. The highest total score was 10, and the least score was 0. The scores were interpreted as follows: 0–3: inadequate knowledge, 4–7: Moderately adequate knowledge, and 8–10: Adequate knowledge. The content validity of the questionnaire was assessed by a medical doctor and a psychiatrist and tested in 10 persons to measure their understanding of the context. The data were further analyzed using a paired t-test to find the mean difference between the pre-test and post-test knowledge scores and the two-way ANOVA test to assess the mean differences between each respondent's background. The data were analyzed using Graph PRISM version 5.00 (La Jolla, California, USA).

3. RESULTS AND DISCUSSION

3.1 Material for Video-Assisted Learning

The video was recorded during a public webinar on the first year of the COVID-19 pandemic (November 2020). The material includes varieties of mental disorders and their explanation; concept and classification of stress; classification of attitudes towards the COVID-19 pandemic; and how to deal with stress during a pandemic (Figure 1). A psychiatrist presented the video with a duration of twenty minutes. This video was further used in the community service activity focusing on mental health in young adults. After respondents watched the video, a fifteen-minute discussion session was held to evaluate the video and share about the mental health condition during the COVID-19 pandemic.

Figure 1 . Material for video-assisted learning: (a) Title of the material, (b) Varieties of mental disorders, (c) Classification of stress, (d) Stress management during the COVID-19 pandemic.

3.2 Characteristics of respondents

A total of 37 responses were received, and 35 questionnaires were valid and used in the final analysis, corresponding to an effectivity rate of 94.6%. Majority of respondents were female (62.9%, n=22) and 37.1% (n=13) were male. Respondents aged 18 to 22 years old, with an average of 20.51 + 0.92 years old and a median of 21 years old. More than half of the respondents ever visited the online supporting group website (www.laluibersama.com) (54.3%, n=19). The majority of the respondents studied in health-related fields (82.9%, n=29), and 17.1% (n=6) studied in non-health-related fields. Table 1 summarized the characteristics of respondents.

3.3 Knowledge about mental health during the COVID-19 pandemic

Ten questions were measured before and after an online video-assisted education was given to the respondents. The

result showed that in the pre-test, most respondents (74.3%) had moderately adequate knowledge, 22.9% had adequate,

Table 1 . Characteristics of Respondents

Characteristic	N=35%	%
Sex		
Male	13	37.1
Female	22	62.9
Age		
18 years old	2	5.7
19 years old	1	2.9
20 years old	12	34.3
21 years old	17	48.6
22 years old	3	8.6
Field of Study		
Non-Health	6	17.1
Health	29	82.9
Visiting the website (www.laluibersama.com)		
Never	16	45.7
Ever	19	54.3

and 2.9% had inadequate knowledge regarding mental health during the COVID-19 pandemic. While the post-test results were that 51.4% of the respondents had moderately adequate knowledge, 45.7% had adequate knowledge and only 2.9% had inadequate knowledge (Figure 2 (a)). Therefore, an increase in respondents' knowledge about mental health was observed after online video-assisted education (Table 2). The mean of the score between the pre-test and post-test was significantly different ($p < 0.001$) (Figure 2 (b)). Unfortunately, the respondents are still unaware of the signs of mental health problems and a responsive mental attitude, such as excessive hand washing as a sign of psychosomatic disorder (Q5) and seeking help as a responsive mental attitude (Q8). This could be observed from the insignificant increasing score of these two questions. The unawareness of being afraid of contamination and repeated hand washing as a sign of mental illness might be caused by the inability to differentiate between washing hands as prevention, as suggested by WHO, or as an excessive activity (Kumar & Somani, 2020).

Moreover, positive mental health, such as seeking help, is still rarely promoted in Indonesia due to negative stigma in the community (Hartini et al., 2018). To investigate factors that affect the increasing of knowledge, an inferential statistic was performed. The results showed that only the field of study significantly affects the increasing knowledge of the respondents, but not the age, sex, and experience in visiting online supporting group websites (Figure 3).

The COVID-19 pandemic has had a tremendous impact on people's lives worldwide. All people from various groups are affected by this difficult situation. Waves of false information spread among the public regarding this situation. This problematic situation might affect the mental health of vulnerable individuals, such as stress, anxiety, or depression. Based on our study involving 35 respondents, 27 people (77.1%) of respondents admitted that they had experienced stress throughout their life based on their self-assessment. Since mass gathering is prohibited during the second wave of the COVID-19 pandemic, this study emphasized video-assisted mental health learning in the young adult population.

Our findings showed that the video-assisted learning increased the average respondents' score on mental health (62.94% vs 73.42%, $p<0.001$). However, a response shift bias might be one of the limitations of this study (Kaushal, 2016). Our finding was similar to a study conducted in 2019 to assess the effectiveness of a video-assisted learning activity on knowledge and attitudes about mental illness screening among women self-help group leaders. It was found that video-assisted learning effectively increased participants' knowledge about mental illness screening (Peter & Sadan, 2018).

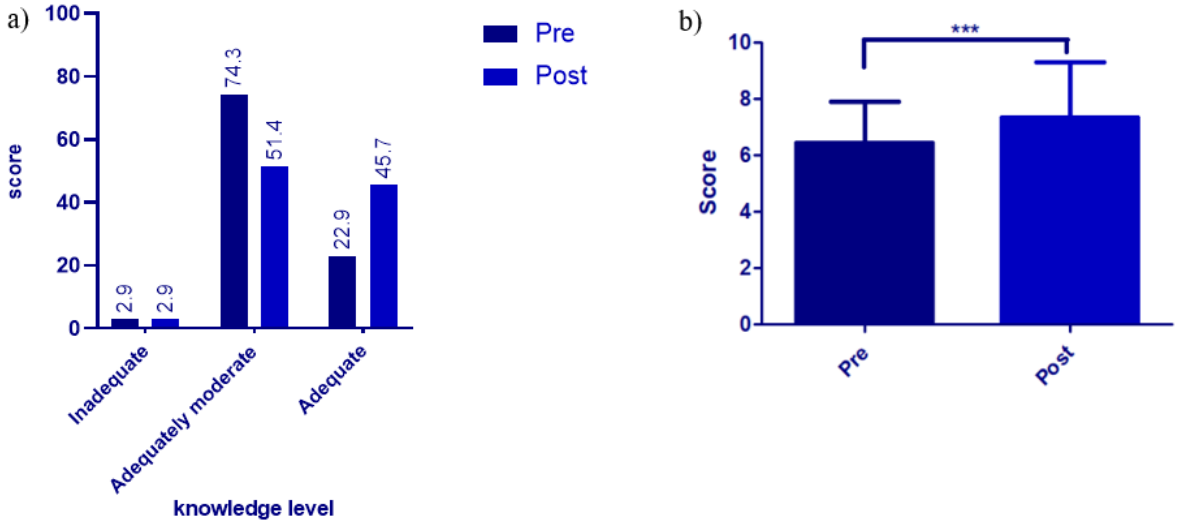

Figure 2 . Respondents' knowledge regarding mental health during COVID-19 pandemic: (a) Comparison between knowledge level in the pre-test and post-test (b) Comparison between total score in the pre-test and post-test. *** P Value <0.001

Table 2 . Characteristics of Respondents

Questions	Total Scores (%) Pre-test	Post-test
Q1 Stress, if not handled properly, will only affect mental health and not affect a person's physical condition	74.3	71.4
Q2 anxiety is always a mental disorder that happens to someone	60.0	60.0
Q3 Eustress can trigger someone to change for the better	77.1	97.1
Q4 One of the symptoms of insomnia is feeling anxious when going to sleep	88.6	94.3
Q5 Washing hands continuously and excessively facing the COVID-19 pandemic is one of the psychosomatic disorders	22.9	42.9
Q6 Psychosomatic disorders are physical symptoms caused by the influence of thoughts and emotions	94.3	97.1
Q7 Reactive behavior is characterized by a calm, measured attitude, finding out what to do and giving appropriate and reasonable responses	45.7	60.0
Q8 Seeking for help is an attitude that can be done to achieve a responsive mental attitude	8.6	22.9
Q9 Limiting information is one of the tips for dealing with stress due to the COVID-19 pandemic	82.9	91.4
Q10 One way to deal with stress is to adjust the breathing pattern, namely 4 seconds of taking a breath, 2 seconds of holding a breath, and 6 seconds of exhaling.	91.4	97.1

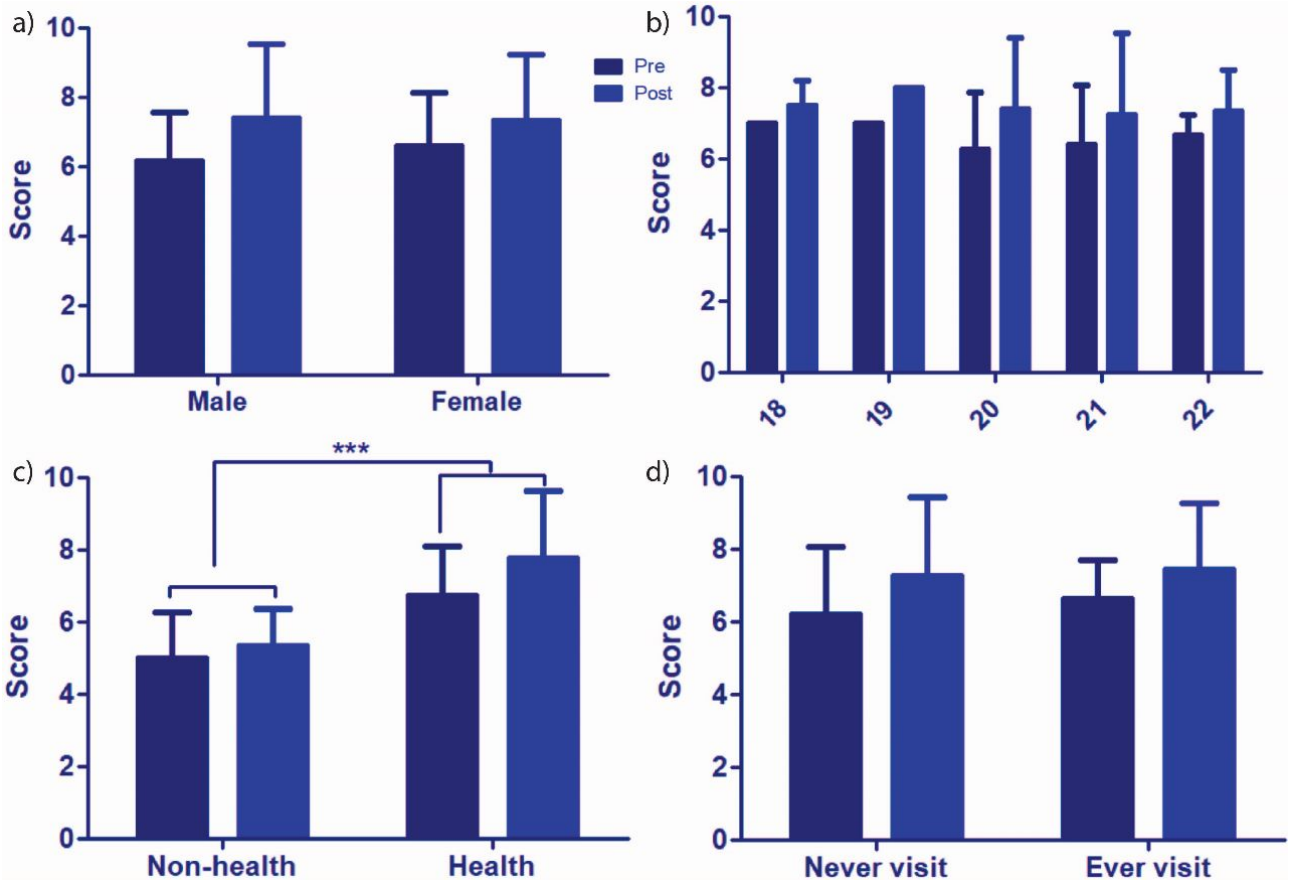

Figure 3 . Relationship between (a) sex, (b) age, (c) field of study, and (d) experience in visiting the website with knowledge regarding mental health during the COVID-19 pandemic. ***P Value <0.001

Furthermore, we divided the respondents based on sex, age, and experience of visiting the online supporting group and mental health calculator website (www.laluibersama.com) and the educational background of the respondents. After grouping the respondent by sex, it was found that the male group got a higher score increase than the female group after this video-assisted intervention. However, the statistical test did not show any effect of sex on the increasing pre-test to post-test scores. A similar finding was also found in a study conducted in China involving 1152 students (Yu, 2021). These differences might be due to females' persistent and

more committed behavior (Richardson & Woodley, 2003). Then, this study found no significant relationship between age and an increase in the respondents' pre-test and post-test scores. Even though the previous study concluded that older students preferred to watch the lecture video, the younger students preferred the interactive classes (Simonds & Brock, 2014). Moreover, the respondents' experience of visiting online support group and mental health calculator that aims to the prevention of mental health problem during the pandemic also did not affect their knowledge of mental health.

As expected, our findings showed that increasing knowledge was higher in respondents studying in health-related fields. The statistical test found a relationship between students in the health and non-health sectors with a significance value of $p< 0.001$. This finding was more likely because they have a more remarkable ability to understand more about mental health and are more familiar with the topic than respondents who studied in the non-health sector.

Since mental health problems might affect the prevention, treatment, and acceptance of vaccination (Kontoangelos et al., 2020), measurement actions are necessary to avoid escalating this problem. Through the use of video-assisted learning, mental health education could reach broader and larger community elements. The effectiveness of video-assisted education has been reported in several studies with various learning subjects, including physic, mathematics, medical clerkship, psychiatry, and dentistry (Chuzaifah et al., 2021; Jafar et al., 2020; Maduretno et al., 2017; McNab & Skapetis, 2019; Nongmeikapam et al., 2019; Yaqinuddin et al., 2020). We acknowledge that our limited respondents might affect the study results. Therefore, studies involving broader respondents are necessary before large implementation in the community. Moreover, combining more than one educational method, such as leaflets, posters, or online peer-group discussion, might bring benefits in addressing the problem (Barik et al., 2019; Hasanica et al., 2020).

4. CONCLUSION

This study showed that video-assisted education effectively increased mental health knowledge during the COVID-19 pandemic. However, the basic knowledge of young adults in Surabaya was generally moderate. Therefore, even though video-assisted learning effectively increases knowledge, combining it with other online educational methods might improve the knowledge in young adults, and broader respondents are necessary before large implementation in the community.

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CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest in this work.

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