



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



## Letter to the Editor

## Psychological first aid training as a tool to address mental health problems during COVID-19



## ARTICLE INFO

## Keywords

Psychological first aid  
Mental health problems  
COVID-19

## 1. Introduction

COVID-19 manifests the weakness of society and the structure of the health system in responding to a very powerful global pandemic. All parties require to share global responsibility for addressing common vulnerabilities around the world (Tandon, 2021a). Thus, the distribution of accurate real-time information is critical to enabling health care and policy decision-making in urgent situations with substantial uncertainty (Tandon, 2021b). Several challenges of psychological intervention during COVID-19 emerged, such as lack of resources, access to mental health care, public-private partnerships, and lack of accurate information that must be resolved immediately (De Sousa et al., 2020).

Indonesia and Malaysia can be considered as disaster-prone countries, especially during the COVID-19 pandemic the challenges they face are increasingly difficult. The level of mental health problems is elevating, especially in education, but unfortunately it has not been accompanied by the readiness of teachers to provide psychological first aid (PFA) services to students. Teachers need PFA training as the number of PFA professionals is not proportional to the number of students who need it. The spirit of preserving humanity, maintaining sanity, and promoting health must emerge as a shared commitment in dealing with COVID-19, especially in the mental health sector (Tandon, 2020). This is done because to respond to mental health problems, protection, and psychosocial care for children in the COVID-19 crisis, a fast and appropriate strategy is needed (Ashok et al., 2021; Nuryana, 2021). In the school context, for example, there is a need for school mental health programs (Suchandra et al., 2021), curriculum changes (Nuryana, 2022), and parental involvement in promoting mental health (Nuryana et al., 2022).

According to the study by Grubic et al. (2020) the change from offline to online learning methods with various challenges resulted in increased stress on students. Furthermore, other studies have also shown that problematic changes during a pandemic can increase the potential for symptoms of depression, anxiety, discomfort, trauma and fear (Cao et al., 2020). Therefore, the psychological supports for students should be integrated with the educational system (Kousky, 2016). Guidance and counseling teachers at schools have a strategic role in psychologically supporting their students to deal with various potential threats during disaster.

Thus, the study aimed to test the effectiveness of PFA training for various education practitioners using the one group pre-test and post-test models which were conducted online using Zoom media. The training was designed in three stages that were providing theoretical framework of PFA, simulation and peer practice. PFA can be delivered effectively by friends, teachers and parents, if the providers follows the guideline procedure (Everly and Lating, 2017). Therefore, the study was conducted with experiment method using training which purposed to increase participants' understanding of the application of PFA or how to practice it. Ultimately, the trainees can later support the people around them during the pandemic. As a long-term projection, participants are expected to be able to apply the PFA in any emergency situations. The training was designed to be carried out for two days consisting of theoretical and practical sessions. The material presentations were an overview of mental health, crisis situations, PFA theories, procedures, and practice.

## 2. Methods

This study utilized a one group pre-post-test study, which means that only one experimental group was measured by pre-test and post-test. This design was in accordance with the purpose of this study which was to measure the efficacy of PFA training to the participants. This training was structured with a duration of 10-hour length using an online platform due to the pandemic (Francis et al., 2020). The basic material used in this training was based on a guidebook from World Health Organization (WHO) entitled "Psychological first aid: Guide for field workers in the Indonesian" version (WHO, 2020).

A total of 106 participants attended the training, of which 99 participants came from Indonesia and 7 participants were from Malaysia. Participants were teachers at the level of kindergarten, elementary school, junior high school, high school, vocational high school, university and other educational institutions. Participants were dominated by high school teachers as much as 27 % (N = 29), junior high school teachers 25 % (N = 27) and university students and lecturers 21 % (N = 23). While participants from other education levels were not more than 15 participants. Before participating in the training, all participants had filled out informed consent and agreed to participate in the activity until finished.

<https://doi.org/10.1016/j.ajp.2022.103226>

Received 8 April 2022; Received in revised form 16 July 2022; Accepted 19 July 2022

Available online 21 July 2022

1876-2018/© 2022 Elsevier B.V. All rights reserved.

The data obtained from this study were pre-test and post-test scores which were then analyzed for variance using paired samples t-test and normalized Gain score (N-gain) test which was conducted by dividing the difference between the post-test and pre-test scores by the difference between the maximum evaluation scores and the pre-test scores. Meanwhile, the size of the training effect was measured by the Cohen's d formula that was by dividing the mean difference between pre-test and post-test by the pooled standard deviation.

### 3. Results

The results of 106 data showed that the average pre-test ( $\bar{x}_1 = 11.9$ ) was lower than the post-test ( $\bar{x}_2 = 15.7$ ). This means that there is an increase in the average score after PFA training which can be seen in Table 1. The same table also indicates that the highest and lowest scores on each test are different and tend to show an increase after the treatment is given. The results were then further analyzed with the normality test before the paired sample t-test was carried out. The results of this test showed that the pre-test ( $p_1 = 0.071$ ) and post-test ( $p_2 = 0.089$ ) data were normally distributed.

The further test carried out was the paired sample t-test, the results of which can be seen in Table 2. The results indicate that there is a significant difference between the pre-test and post-test ( $p < 0.05$ ,  $t = -12,696$ ). Furthermore, the correlation test between the pre-test and post-test data also showed that there was a significant relationship between the two data ( $p < 0.05$ ,  $r = 0.674$ ). With these results, the Gain score test can be conducted to see the percentage increase after PFA training.

The Gain score obtained by subtracting the post-test with the pre-test then dividing the result with the maximum value minus the pre-test value then multiplied by 100 %. The average Gain score shows 32, which means the average increase after training is about 32 %. This percentage is considered in the medium category. Meanwhile, to determine the size effect, the Cohen-d formula, is used ( $d = 1.2$ ) and the score shows that the treatment given have a fairly high effect.

### 4. Discussions

An interesting finding in this study is that there is a difference in the level of increase in the baseline knowledge of participants when they grouped according to their institutions. Vocational high schools with 13 participants had the highest score increase of 37 % while high schools, junior high schools and universities had almost the same increase of 33 %. The smallest increase was in the kindergarten group of 13 %. This difference is possible because each participant from each group has a different baseline of knowledge about PFA. In addition, various technical problems during online training are also possible influencing the test scores.

Implementing PFA training in face-to-face basis is predicted to give different results in terms of increasing the knowledge compared to the online schema. It argues that participants who attend in person are more able to practice with small technical problems than those who join an online training. There is still limited study that examine the different between both schemas. However, during the pandemic, the online method is the most suitable to be applied than the face-to-face. Further research is suggested to compare between the face-to-face and the online mode, so that in the future, PFA training can be delivery in the most effective method.

The results of this study are in accordance with previous research as summarized in a meta-analysis study conducted by Wang et al. (2021). Their research on 23 studies on PFA training concluded that in general PFA training was able to significantly increase participants' knowledge of psychosocial competencies and PFA skills (Akoury-Dirani et al., 2015; Horn et al., 2019; Sijbrandij et al., 2020). However, in general, this study has limitations in terms of measuring the success of the training as the study uses only one instrument to measure the pre-test and post-test. Unlike the research conducted by Akoury-Dirani et al. (2015) which

**Table 1**  
Descriptive data.

	Pre-test	Post-test
N	106	106
Mean	11.9	15.7
Median	12	16
Std. Deviation	2.8	4.1
Minimum	4	6
Maximum	18	24

**Table 2**  
Paired samples t-test result.

Paired differences		Paired samples test			Paired correlation	
Mean	Std. Deviation	t	df	Sig. (2-tailed)	Correlation	Sig.
-3.69811	2.99895	-12.696	105	0.000	0.674	0.000

used two instruments to measure the training. With the two instruments used, the results obtained after the training can be measured more comprehensively and have a comparison of one result with another. Future research should use more than one evaluation measuring instrument and at the same time checking the effectiveness of the treatment after a few months is needed to understand the participant's knowledge post training.

### Financial

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Conflict of Interest

The authors declare no conflict of interest.

### Acknowledgment

The authors would like to thank the Department of Guidance and Counseling and Department of Psychology, Universitas Mercu Buana Yogyakarta, Indonesia, Universitas Negeri Yogyakarta, Universitas Ahmad Dahlan, and Department of Human Development, Universiti Pendidikan Sultan Idris, Malaysia, for the granted supports.

### References

- Akoury-Dirani, L., Sahakian, T.S., Hassan, F.Y., Hajjar, R.V., Asmar, K.El, 2015. Psychological first aid training for Lebanese field workers in the emergency context of the Syrian refugees in Lebanon. *Psychol. Trauma: Theory Res. Pract. Policy* 7 (6), 533–538. <https://doi.org/10.1037/tra0000028>.
- Ashok, S.S., Ramaswamy, S., Kulkarni, A., Singh, D., Quadros, D., Dzuvichu, K.J., Tikku, K., Rizvi, M., Kandula, P., Tank, P., Seshadri, S., 2021. Responding to children's mental health, protection and psychosocial care concerns in the COVID crisis. *Asian J. Psychiatry* 65, 102831. <https://doi.org/10.1016/j.ajp.2021.102831>.
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., Zheng, J., 2020. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res.* <https://doi.org/10.1016/j.psychres.2020.112934>.
- De Sousa, A., Mohandas, E., Javed, A., 2020. Psychological interventions during COVID-19: challenges for low and middle income countries. *Asian J. Psychiatry* 51, 102128. <https://doi.org/10.1016/j.ajp.2020.102128>.
- Everly, G.S., Lating, J.M., 2017. *Johns Hopkins Guide to Psychological First Aid*. Johns Hopkins Press.
- Francis, B., Juarez Rizal, A., Ahmad Sabki, Z., Sulaiman, A.H., 2020. Remote Psychological First Aid (rPFA) in the time of Covid-19: a preliminary report of the Malaysian experience. *Asian J. Psychiatry* 54, 102240. <https://doi.org/10.1016/j.ajp.2020.102240>.
- Grubic, N., Badovinac, S., Johri, A.M., 2020. Student mental health in the midst of the COVID-19 pandemic: a call for further research and immediate solutions. *Int. J. Soc. Psychiatry* 66 (5), 517–518. <https://doi.org/10.1177/0020764020925108>.
- Horn, R., O'May, F., Esliker, R., Gwaikolo, W., Woensdregt, L., Ruttensberg, L., Ager, A., 2019. The myth of the 1-day training: the effectiveness of psychosocial support

- capacity-building during the Ebola outbreak in West Africa. *Glob. Ment. Health* 6, e5. <https://doi.org/10.1017/gmh.2019.2>.
- Kousky, C., 2016. Impacts of natural disasters on children. *Future Child.* 26 (1), 73–92. <https://doi.org/10.1353/foc.2016.0004>.
- Nuryana, Zalik, et al., 2021. Publication trends related to schizophrenia, mental health, and depression during COVID-19. *Asian Journal of Psychiatry* 66, 102878. <https://doi.org/10.1016/j.ajp.2021.102878>.
- Nuryana, Z., 2022. Promoting mental health related to self-esteem during COVID-19: insights from an Indonesian teacher. *Asia Pac. J. Public Health*, 101053952211071. <https://doi.org/10.1177/10105395221107132>.
- Nuryana, Z., Xu, W., Lu, S., 2022. Students mental health during COVID-19: comprehensive government and parental involvement in Indonesia. *Asian J. Psychiatry* 74, 103197. <https://doi.org/10.1016/j.ajp.2022.103197>.
- Sijbrandij, M., Horn, R., Esliker, R., O'May, F., Reiffers, R., Ruttenberg, L., Stam, K., de Jong, J., Ager, A., 2020. The effect of psychological first aid training on knowledge and understanding about psychosocial support principles: a cluster-randomized controlled trial. *Int. J. Environ. Res. Public Health* 17 (2), 484. <https://doi.org/10.3390/ijerph17020484>.
- Suchandra, H.H., Bhaskaran, A.S., Manjunatha, N., Kumar, C.N., Bada Math, S., Reddi, V. S.K., 2021. Suicide prevention in the context of COVID-19: an Indian perspective. *Asian J. Psychiatry* 66, 102858. <https://doi.org/10.1016/j.ajp.2021.102858>.
- Tandon, R., 2020. COVID-19 and mental health: preserving humanity, maintaining sanity, and promoting health. *Asian J. Psychiatry* 51, 102256. <https://doi.org/10.1016/j.ajp.2020.102256>.
- Tandon, R., 2021a. The bitter lessons of COVID-19: acknowledging and working through many points of tension. *Asian J. Psychiatry* 55, 102545. <https://doi.org/10.1016/j.ajp.2021.102545>.
- Tandon, R., 2021b. COVID-19 and suicide: just the facts. Key learnings and guidance for action. *Asian J. Psychiatry* 60, 102695. <https://doi.org/10.1016/j.ajp.2021.102695>.
- Wang, L., Norman, I., Xiao, T., Li, Y., Leamy, M., 2021. Psychological first aid training: a scoping review of its application, outcomes and implementation. *Int. J. Environ. Res. Public Health* 18 (9), 4594. <https://doi.org/10.3390/ijerph18094594>.
- WHO, 2020. In: Margaretha, Sari, D.K. (Eds.), *Pertolongan Psikologis Pertama: Panduan bagi Relawan Bencana*. Airlangga University Press.
- Luky Kurniawan<sup>a</sup>, Natri Sutanti<sup>d</sup>, Ruly Ningsih<sup>a</sup>, Nanda Yunika Wulandari<sup>b</sup>, Aslina binti Ahmad<sup>c</sup>, Pau Kee<sup>c</sup>, Zalik Nuryana<sup>e,\*</sup>
- <sup>a</sup> Department of Guidance and Counseling, Universitas Mercu Buana Yogyakarta, Indonesia
- <sup>b</sup> Department of Psychology, Universitas Mercu Buana Yogyakarta, Indonesia
- <sup>c</sup> Department of Human Development, Universiti Pendidikan Sultan Idris, Malaysia
- <sup>d</sup> Department of Guidance and Counseling, Universitas Negeri Yogyakarta, Indonesia
- <sup>e</sup> Department of Islamic Education, Universitas Ahmad Dahlan, Indonesia

\* Corresponding author.

E-mail address: [zalik.nuryana@pai.uad.ac.id](mailto:zalik.nuryana@pai.uad.ac.id) (Z. Nuryana).