ORIGINAL ARTICLE

The Effects of Psychological First Aid Training on Knowledge, Perceived Ability Using the Skill, and Quality of Life among Medical Students

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ABSTRACT

INTRODUCTION: The response to the crisis in Malaysia in recent years has led to a growing need for mental health services and a general dependence on mental health professionals to address the issue. It is widely acknowledged that providing psychological first aid (PFA) to survivors in the immediate aftermath of a crisis or disaster is an effective first step toward meeting their psychosocial needs. This study aims to determine the impact of PFA training on medical students' knowledge, perceived ability to apply skills, and quality of life. **MATERIALS AND METHODS:** 136 medical students were recruited for this non-randomized single group pre-post study, and trained using the World Health Organization (WHO) PFA guidebook. Measures include PFA knowledge, perceived ability to use PFA skills, WHO Quality of Life brief version (WHOQOL-BREF), and Helping Attitude Scale. Participants were required to fill in the questionnaire before and one month after the training. **RESULTS:** There were significant improvements in PFA knowledge (p<.001, Cohen's d = 0.60), perceived ability to use PFA skills (p<.001, Cohen's d = 0.80), psychological health (p<.001, Cohen's d = 1.52), and quality of life (p<.001, Cohen's d = 0.44). Brief training with various interactive teaching methods helps participants master the skills while paying attention to their emotional needs. **CONCLUSION:** Brief PFA training is as effective as a whole-day PFA workshop. However, regular training should be provided to increase the level of confidence of responders in dealing with crises.

Keywords
Psychological first-aid training, Medical students, Perceived ability, Quality of life

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INTRODUCTION

A disaster can be defined as a significant interference with the normal functioning of a community or society as a result of hazardous events that interact with the conditions of exposure, susceptibility, and capacity.[1] This could lead to one or more of the following impacts: human, material, economic, and environmental losses. These impacts can be immediate and limited. However, the impacts are sometimes extensive and may persist longer than expected. The affected population may be unable to cope with their resources and, therefore, may need help from other external sources.[1] Although Malaysia is located in a geographically stable area and free of many natural disasters, it is vulnerable to several small-scale disasters such as haze, flooding, and landslides[2] and it is not uncommon for the most recent outbreak diseases such as the COVID-19 pandemic.

In Malaysia, disaster management has always been almost exclusively based on a centralised top-down government strategy and has adopted the 'loss reduction' model to mitigate natural disasters.[3] Typically, mental health professionals were referred to handle any psychological crisis. The fact is that mental health service providers are still lacking in Malaysia, with a population-to-psychologist ratio of 1.27 per 100,000 and approximately 400 clinical psychologists serving 33 million people.[4,5] More stakeholder participation is required to effectively mitigate the effects of a disaster. Enhancing their skills

and knowledge would enable prompt responses to disasters.[2] Given that the community is always the first responder to a disaster, empowering the communities through disaster risk reduction initiatives and promoting community resilience is essential.[3] Therefore, the public needs to be proactive in maintaining their mental health while equipping them with psychological first aid skills (PFA). This could help prevent overreliance on mental health professionals.[6]

American Psychiatric Association Committee on Civil Defense first adopted the term PFA during World War II in response to acute traumatised experiences in the year 1954.[7] The initial goal was to rapidly regain good function or, at the very least, stay comfortable until assistance could be provided. This concludes the PFA definition given by the National Child Traumatic Stress Network and National Center for PTSD as "*an evidence-informed modular approach for assisting people in the immediate aftermath of disaster and terrorism: to reduce initial distress and to foster short- and long-term adaptive functioning*".[8]

Over the years, despite many PFA models having been developed, the main principles generally emphasise the sense of safety, self and community efficacy, calmness, connectedness, and hope.[9] Among all, the World Health Organization outlined simple core actions of PFA: (1) Look – to observe those in urgent basic needs and emotional distress; (2) Listen–to focus on active listening, comforting and reassuring individuals, helping them express their feelings and concerns without the need to discuss the crisis event; (3) Link – to address the basic needs of individuals by identifying coping strategies, providing them with information and connecting them to relevant local social or professional services. (4) Know the limitations of PFA and recognise the need for professional care. It is important to understand that PFA is not a replacement for professional care and that those providing PFA need self-care too.[10,11]

Although PFA is widely recognized as a preferred post-disaster approach, there is limited evidence of its effectiveness.[12] Ethical concerns arise in studies involving vulnerable people who have just experienced a crisis.[13,14] Methodological limitations, long-term follow-up challenges, generalisability issues, and complex measurement of PFA, especially in mental health outcomes due to confounding factors and subjective assessments, limit the applicability of research results. Therefore, most studies that examined the effects of PFA training involved didactics, simulation, and role-playsand demonstrated improvements in participants' confidence and readiness to apply PFA as one of the mental health interventions after a crisis.[15-18] Most PFA training involved full-day training and helped improve providers' confidence in applying PFA.[19]

However, another pilot study observed by World Vision International after the Haiti earthquake in 2010 found that even two to three hours of briefer training was similarly beneficial to providers. They described the training as 'helpful, practical, and empowering', increasing their competence in handling survivors and motivating them to receive additional training.[20] Not only receivers, many believed that PFA training could help PFA providers become aware of their distress, thus reducing the burnout rate and practicing effective coping methods.[10,13] Knowing its effectiveness, Gispen & Wu[10] recommended that all healthcare workers should be able to practice PFA at their workplace. This approach ensures the provision of essential emotional support needed during mental health crises. Therefore, integrating PFA training into the co-curriculum activities of medical schools and nursing schools is imperative. Moreover, it should be accessible to lay people and non-mental health providers, ensuring widespread availability and knowledge dissemination.

In the present study, our objective was to examine the effects of PFA training by measuring the level of knowledge, perceived ability to apply PFA and quality of life among medical students. Ultimately, we hope to advise potential stakeholders such as universities, social welfare agencies, and non-governmental organizations to consider PFA training in their teaching modules for crisis response preparedness.

MATERIALS AND METHODS

Study Design and Participants

This is a non-randomized single-group pre-post interventional study that was conducted at a Malaysian public university, and participants were recruited via convenience sampling. An invitation mail was sent to 300 medical students randomly. One hundred and seventy-two students (response rate=57.3%) were agreed to participate in this study. However, only 136 university students (*mean age* =22.47, *SD*=1.19 years) were included in the final analysis (Table I) with an attrition rate of 20.9%.

Table I: Characteristics of the participants (N=136)

Variables	Frequency	%
Age	22.47 (1.19)*	
Male	24	25.0
Female	102	75.0
Malay	60	44.1
Chinese	28	20.6
Indian	5	3.7
Sarawak natives	37	27.2
Sabah natives	6	4.4
Islam	69	50.7
Christian	46	33.8
Buddhist	15	11.0
Hindu	4	2.9
Atheist	2	1.5

**Mean (SD)*

Measures

PFA knowledge

The PFA knowledge was assessed using 15 statements with yes or no answer options. The WHO working committee designed the questions that are readily available in Psychological First Aid: Facilitator's Manual for Orienting Field Workers.[21] The higher the score, the better the knowledge.

Perceived ability of PFA skill

A 12-item statement was used to measure the ability to support people who have experienced disasters or other extremely stressful events.[21] The respondents rated the items on a 5-point Likert Scale (1=Very Low, 5=Very High). The higher the score, the better perceived the ability to perform PFA skills. The internal consistency coefficient (Cronbach's α) was .89 for the pretest and .92 for the post-test.

Quality of life

The WHOQOL-BREF is a self-administered 26-item questionnaire that measures the general quality of life and general health (2 items) and other domains, including physical health (7 items), psychological (6 items), social relationships (3 items) and environment (8 items).[22] Each item was scored on a 5-point Likert scale to reflect the intensity, capacity, frequency, and evaluation of the past two weeks. Items 3, 4, and 26 require reverse scoring. The higher the score, the better the quality of life and the specific domain. The Cronbach's α were 0.92 and 0.94 for pretest and post-test, respectively.

Helping Attitude

A 20-item Helping Attitude Scale (HAS) was used to measure the beliefs, feelings, and willingness of the respondents to adopt prosocial attitudes that benefit others.[23] The respondent was expected to respond on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A reverse score was done for items 1, 5, 8, 11, 18, and 19 before summing up the total score. A higher score reflects the higher levels of pro-social attitude. In the present study, Cronbach's alpha was .92 at pretest and .90 at post-test.

Procedures

The study was conducted between March 2021 and March 2023. The university students were invited to participate in the training via online registration. The participants were university students with no previous experience and voluntarily attended the PFA training. Participants were given a participant information sheet and were required to sign informed consent before the study. After an initial screening to review inclusion criteria, participants were asked to fill out questionnaires before training. All participants attended 4-hour PFA training provided by well-versed facilitators in WHO PFA modules. The modules were delivered as a didactic lecture by a psychiatrist, followed by role-plays in smaller groups guided by the facilitators, consisting of three counsellors and a clinical psychologist. After the role-play, the

facilitator provided constructive feedback to the participants. The participants were also asked to fill in the evaluation form at the end of the training. After a month, the participants were approached again to fill up the questionnaire (Figure 1). The participant repeated the questionnaire one month post-PFA training. Three consecutive emails were sent to remind the participants before considering the attrition rate (20.9%).

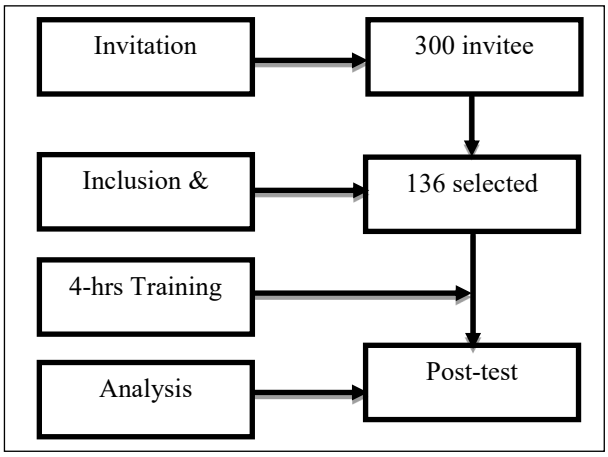

Figure 1. Study design and recruitment procedure

Data Analysis

IBM SPSS version 28 was used for data analysis.[24] A paired sample t-test was used to assess the impact of PFA training. This test compared the participants' knowledge, the perceived competency to apply the PFA skills, and the quality of life before and one month after training. Pearson's correlation method was used to determine the relationships between these variables. For a more comprehensive understanding of the results, practical significance was evaluated using Cohen's *d*, with established cut-off values to interpret the effect sizes.[25] The threshold for statistical significance was maintained at 5%.

RESULTS

Effect of the PFA training

A paired-sample *t*-test showed statistically significant improvements in knowledge, perceived ability using PFA skills, and psychological health domain of WHOQOL-BREF. The effect size was moderate for knowledge and small for overall quality of life, while it was large for perceived ability and psychological health (Table II).

Table II: Paired-sample test (Pre-Post) on each measure (N=136)

	Pretest Mean (SD)	Post-test Mean (SD)	*p-value*	*Cohen's d*
PFA knowledge	10.14 (1.69)	11.29 (2.03)	< .001**	.60
Perceived ability using PFA skill	27.26 (5.42)	32.17 (5.08)	< .001**	.80
WHOQOL- BREF				
Overall QOL	7.26 (1.56)	7.79 (1.21)	<.001**	.44
Physical Health	26.10 (4.09)	26.43 (4.10)	.263	.10
Psychological Health	17.12 (3.59)	20.97 (4.21)	<.001**	1.52
Social Health	7.42 (1.43)	7.39 (1.71)	.802	.02
Environmental Health	30.25 (4.21)	30.97 (4.50)	.022*	.20
HAS	82.38 (9.96)	82.72 (10.00)	.612	.04

Note. ** p<.05, **p<.001*
PFA=Psychological First Aid; WHOQOL-BREF= World Health Organization Quality of Life Brief Version; QOL= Quality of Life; HAS= Helping Attitude Scale, Cohen'd = Small (0.20), Moderate (0.50). Large (0.8).

The relationship between PFA knowledge, perceived ability to apply PFA skills and quality of life post PFA training

There was no significant relationship between PFA knowledge and other parameters in this study. The perceived ability to apply PFA skills has a positive correlation with all the domains of quality of life and helping attitude. All domains of quality of life were positively correlated with each other (Table III).

Table III: Correlation matrix of PFA Knowledge, Perceived Ability to Apply PFA Skills and Quality of Life

		1	2	3	4	5	6	7	8
1	**PFA Knowledge**	-							
2	**Perceived ability to apply PFA skills**	.086	-						
3	**Overall QOL**	-.120	.168	-					
4	**Physical health**	.054	.171*	.579**	-				
5	**Psychological health**	-.001	.248**	.713**	.749**	-			
6	**Social health**	.118	.241**	.463**	.609**	.689**	-		
7	**Environmental Health**	.155	.239**	.474**	.641**	.650**	.665**	-	
8	**HAS**	.104	.347**	.206*	.288**	.256**	.193*	.366**	-

Note. ** p<.05, **p<.001*
PFA=Psychological First Aid; WHOQOL-BREF= World Health Organization Quality of Life Brief Version; QOL= Quality of Life; HAS= Helping Attitude Scale

DISCUSSION

In general, the present training significantly improved the participants' PFA knowledge and the perceived ability to apply PFA skills. The results are consistent with other studies from several countries using different PFA training modules.[16,18] There was also a significant improvement in overall quality of life, especially psychological health. This is particularly useful, given that the training took place during the increased challenges of the post-COVID-19 mental health crisis. Most of the participants were able

to acquire the skills to effectively engage with those around them promptly using more appropriate strategies while simultaneously increasing self-efficacy in prioritizing self-care. Gispen and Wu[10] highlighted the tendency of healthcare workers to neglect their own emotional needs in their work lives. They believed that PFA training would facilitate self-awareness and be more sensitive to other colleagues' emotions, thus having an early intervention to reduce the rate of burnout. As such, integrating PFA training into the undergraduate curriculum could serve as a protective approach to address psychological distress, empowering them to actively support the emotional well-being of their peers effectively.

Participants' helping attitude remained consistently high following the PFA training despite no significant increase being observed. This dedication was believed to stem from their genuine desire to alleviate the suffering of others, motivating their voluntary participation in the current study. Studies indicate that PFA training has effectively enhanced PFA knowledge among non-mental health-trained personnel.[16,18] While many individuals may hesitate to offer support due to various obstacles, the participants in the present study were all medical students, inherently possessing strong pro-social tendencies. Instead of hindering them from responding to crises, awareness of the potential challenges while delivering PFA empowers them to persist in working with others' suffering. Their readiness to respond to crises was not hampered by their awareness of potential roadblocks when providing PFA; instead, it empowers them to continue working towards relieving others from suffering.

According to the previous study, the participants found it beneficial and were more likely to use PFA in responding to crises when equipped with the training. One key factor is that PFA prioritizes building genuine human connections, ensuring safety and accessibility rather than solely focusing on therapeutic outcomes in mental health. This is particularly useful for non-mental health professionals, relieving them of pressure to ensure positive psychological outcomes.[13,19] This allows them to focus on fostering meaningful connections and providing essential support in need. Furthermore, it is very time-consuming to train mental health professionals, while PFA responders can address various crises promptly and effectively on time.[6]

Most PFA training takes a full day or at least 6 hours. However, the present study applied the 4-hour training and found comparable effects in knowledge and self-efficacy in delivering PFA. Presumably, the effectiveness of current training may be affected by factors such as teaching methods, role-plays, constructive feedback, and a supportive environment. The easy-to-apply PFA concept facilitated the participants in acquiring knowledge and gaining confidence in applying it. This is consistent with previous qualitative studies that highlighted participants; preference for various teaching styles with shorter, regular training sessions over long ones.[26]

In light of the findings of the current study, we recommend increasing the accessibility of PFA training for people without mental health expertise and integrating it into the curriculum of medical and nursing schools. To provide high-quality PFA training in diverse populations, training more practitioners who can qualify as trainers is crucial. Ultimately, the researchers hope to establish a well-functioning community response structure capable of providing emergency crisis relief during disasters. Future research in this area could explore PFA training within communities or among people in remote areas.

To our understanding, the study represents the first study examining the effects of PFA training among university students in the region using WHO Psychological First Aid: Guide for Field Workers. Ethically, exploring the effects of PFA training on this demographic is essential, equipping university students with essential life skills to effectively respond to crises and fostering a campus community that is better prepared to respond to disasters and crises. Besides, the current training empowers them to support their peers emotionally and psychologically, promoting a healthier campus environment.

Limitations and Future Directions

This study has several limitations. Although the PFA concept is widely accepted, the WHO PFA model was not

rigorously researched on its module validity. Another limitation was the short follow-up period to examine the effects of training. It is recommended that participants attend revision courses regularly, especially in a setting with few disasters. Furthermore, there was no comparison of the control group in the study, which consisted of only one group intervention, which limited the depth of analysis. Conducting a comprehensive, randomized controlled trial with an extended follow-up period would provide a more in-depth understanding of the outcomes of PFA training.

CONCLUSION

Regardless of the severity of disasters, disasters can have an unpredictable impact on people's lives. Hence, it is important to prepare professionals and laypeople, enabling them to offer psychosocial support confidently without relying solely on mental health professionals. Regular brief revision training would help responders master the PFA skills, which would reduce the aftermath of a crisis. Furthermore, the use of these skills benefits the recipients and improves the psychological well-being of PFA providers, making them more aware of their own mental health. Therefore, it is worthwhile to encourage the university and other organisations to incorporate PFA into their regular training programmes.

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INSTITUTIONAL REVIEW BOARD (ETHIC COMMITTEE)

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