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RESEARCH ARTICLE

The Efficacy of Psychological First Aid Training Program on Academic Faculties' Knowledge and Competency to Deal with Students Experiencing Traumatic Events: A Quasi-Experimental Study

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Abstract:

Background:

Academicians, nowadays, are assuming multiple roles, including psychological support. The need to enhance academicians' knowledge and skills related to psychological first-aid is increasing due to the significant and timely intervention that academicians might assume when their students experience traumatic events.

Objective:

To assess the efficacy of the psychological first-aid training program on faculty members' knowledge and competencies dealing with undergraduate students experiencing traumatic events.

Methods:

One group pretest-posttest quasi-experimental design was used. Participated faculty members received a PFA training program which was preceeded and followed by an assessment of their knowledge and competencies using the PFA knowledge and competency questionnaire.

Results:

A total of 43 faculty members participated in the study. Faculty members' knowledge and competency were improved after receiving the PFA training program (knowledge means = 7.7 to 11.0, $t = -15.7$, $df = 42$, $p = 0.00$); Competency means = 17.2 to 33.0, $t = -14.6$, $df = 42$, $p = 0.00$). No variation in the changes in knowledge and competency across study phases between demographic variables.

Conclusion:

Sustainable and up-to-date training on topics related to the psychological needs of students is a cornerstone to enhance the role of faculty members in academic settings.

Keywords: Knowledge, Competency, Psychological first-aid, Student, Traumatic events, Questionnaire.

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1. INTRODUCTION

Students entering universities may have a variety of traumatic experiences such as violence, death, abuse, mass shootings, car crashes or accidents, and illness that have long-term effects on their mental well-being and might lead to severe forms of mental illnesses [1, 2]. A traumatic event is an incident that causes physical, emotional, spiritual, or psycholo-

gical harm and has a negative impact on a person's attitude, behavior, or other aspects of functioning [3, 4]. The unexpected death of a loved one, family violence, unwanted sexual attention, and sexual assault were the most common traumatic events experienced and reported by university students (85%) [5]. Students who suffer from a traumatic event may feel threatened, anxious, frightened, sad, or angry. Moreover, they may cry frequently, become irritable, have difficulty concentrating and sleeping, as well as continuously think about what happened, and become isolated from family and friends

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[4, 6]. Furthermore, no clear statistics on traumatic events experienced by Jordanian undergraduate students have been published in the last 20 years.

Psychological first-aid (PFA) is a set of helping actions used to mitigate initial traumatic distress and assist in short-and long-term adaptation in ways that respect the person's dignity, culture, and abilities [7, 8]. PFA is an evidence-based supportive approach used to support survivors after exposure to an incident of a disaster, or a traumatic event, and it aims to promote coping and adaptive functioning [9, 10]. The potential value of PFA training emphasizes educating and training leaders in the public, on how to deal effectively with people and students when they experience traumatic events. Therefore, laypeople such as academicians can reduce delays in early intervention if they are fully aware and competent in managing the effect of traumatic events [11, 12]. Academicians have been pushed to embrace new roles and accept greater obligations, including providing psychological support as front liners for students at risk or experiencing traumatic events [13]. The COVID-19 pandemic demonstrated a greater demand for faculty members to provide psychological assistance to their students and to be able to use their online courses as a source of psychosocial help [14]. However, the question of whether academics are willing to provide acceptable and necessary psychological requirements for their students is invalid and has not been thoroughly investigated. This study emphasizes the efficacy of training faculty members to provide PFA for students experiencing traumatic events.

A systematic review conducted by Forthal *et al.* [15], which included nine studies, revealed that mental health first-aid yielded a positive impact on trainees' knowledge and competencies in managing traumatic events. Further studies supported the evidence that psychological first-aid training can promote laypersons' competency, attitude, knowledge, and helping behaviors [16, 17]. According to Zhang and colleagues [18], both PFA-related knowledge and competencies were significantly improved after introducing PFA training in academic faculty. Kılıç and Sims, eks [19] had proven the effectiveness of PFA training on traumatic preparedness for undergraduate students and suggested integrating PFA as part

of the curriculum. Thus, the unintentional omitting effects of traumatic events may produce psychological stress and dysfunction among these age categories [20]. In addition, establishing support is a social responsibility that should include family members, friends, and social workers [9, 21].

This is a pioneering study conducted in the Arab world addressing the use of PFA training programs directed at academic faculty members' knowledge and competencies in dealing with undergraduate students experiencing traumatic events. This study will prove beneficial to society, considering that PFA plays a vital role in science today. The greater prevalence of symptoms of a traumatic background among university students justifies the need for a more effective demand for PFA program training for life-changing teaching approaches. Researchers assume that there are ways to minimize the potential impact that an emergency or traumatic situation may have on university students. Psychological first-aid (PFA) is one approach for reducing negative mental consequences [10].

1.1. Purpose of Study

The purpose of this study was to assess the efficacy of the Psychological First-Aid (PFA) training program on academic faculty members' knowledge and competencies when dealing with undergraduate students experiencing traumatic events.

2. MATERIALS AND METHODS

2.1. Design

A quasi-experimental; one-group pretest–posttest design was used in this study to assess the efficacy of a PFA training program.

2.2. Sample and Setting

The study program took place at the University of Jordan-Aqaba Campus. This study was conducted in the period between April-October 2022. The inclusion criteria for the faculty members included (1) a full-time faculty member with a master's or Ph.D. degree; (2) having been a university academic teacher for at least one year. Census sampling was used in an attempt to approach all academic faculty members eligible for the study.

Table 1. The Psychological First Aid (PFA) training program.

Sessions	Component of Session	Content	Teaching Methods and Extra Resource and Material	Time
Session number 1	PFA definition and framework	(A) An overview of PFA (B) What PFA is and is not (C) Who, when, and where PFA occurs (D) Discussing and sharing traumatic events.	1. Didactics teaching 2. Problem-based learning focuses on working in teams, oral and written communication, critical thinking and analysis, and explaining concepts. 3. Assignment, and distribution of a handbook and pamphlet.	Session lasts for 60 minutes followed by 30 minutes of feedback
Session number 2	Applying PFA action principles	(A) Prepare-learn about the situation (B) Action Principle of PFA: Listen, Look, Link (C) Ending Work of PFA	1. Didactics teaching 2. Video demonstration, 3. Problem-based learning focuses on Applying course content to real-world examples and problem-solving 4. Task-based learning focuses on interactive tasks and exercising	Session lasts for 60 minutes followed by 30 minutes of feedback

(Table 1) contd.....

Sessions	Component of Session	Content	Teaching Methods and Extra Resource and Material	Time
Session number 3	PFA-related scenario simulation	(A) Knowledge review (B) Simulation case provision (C) Role-playing (D) Summary and feedback	1. Situational teaching 2. Role-playing 3. Interactive exercising 4. Summary and feedback	Session lasts for 60 minutes followed by 30 minutes of feedback

Note: PAF; Psychological First Aid

2.3. Interventions

Participants involved in the study were exposed to the PFA training program developed by Zhang *et al.* [18]. The original PFA training program contents were designed according to the guidelines: “Psychological First Aid: Facilitator’s Manual” for orienting field workers (English version) and “Mental Health Handbook for the Public” [7, 22]. Permission was obtained from the primary author to make some changes to adapt to the Jordanian culture. Adaptation includes the social, cultural, spiritual, mental, and economic context of Jordanian people to carry out the intervention according to the specified administration guidelines to ensure that therapy is delivered consistently across settings, therapists, and academic faculties. For example, information related to the pattern of family and communication in families and gender-role assumption in Jordan families have been addressed. A guideline for administering the PFA training program was considered to ensure consistent delivery across all sessions. In this study, the Arabic language has been used for program material delivery depending on psychological first-aid: Guide for field workers—Arabic version [23].

The PFA training program was implemented in three sessions. Each session consisted of comprehensive content and teaching methods that lasted 60 minutes, followed by 30 minutes of feedback, with a half-hour break between sessions. All sessions occurred on the same day, and participants were included in one group. The major teaching methods were didactics, video demonstrations, situational teaching, case-based learning, assignment, distribution of a handbook and pamphlet, interactive exercises, and other teaching strategies. The researcher was a nurse with a Ph.D. degree in psychiatric nursing, certified as a Clinical Nurse Specialist-psychiatric mental health nursing, and qualified to use and apply the training program package. The PFA training program consisted of; (1) PFA definition and framework, emphasizing; (A) an overview of PFA, (B) what PFA is and is not, and (C) who, when, and where PFA occurs, as well as (D) discussing and sharing traumatic events. (2) Applying PFA action principles focused on; (A) To prepare-learn about the situation, (B) the action principle of PFA: listen, look, link, (C) ending the work of PFA, (3) PFA-related scenario simulation, with an emphasis on (A) knowledge review, (B) simulation case provision, (C) role-playing, and (D) summary and feedback (Table 1).

2.4. Data Collection Procedure

The assessment was performed before and after conducting the PFA training. The researchers performed a screening of the faculty members’ records to ensure the eligibility of faculty members for the study and met the inclusion criteria. All eligible faculty members were provided with a brief description

of the study, which included all information regarding their roles, rights, and confidentiality measures. The researcher was a nurse with a Ph.D. degree in mental health nursing, certified as a Clinical Nurse Specialist, and was eligible to use and apply to the training program. The faculty members participated in the study, completed the questionnaires in two stages, and submitted them directly to the researcher in a closed envelope.

2.5. Instruments

The assessment conducted before and after the training program used the following instruments:

1. Demographic questionnaire: The demographic questionnaire was designed to collect the following information about the participants: age, years of experience, gender, educational level, college name, place of residence, and whether they previously participated in a PFA training program.

2. The PFA knowledge and competency questionnaire were used to measure the level of PFA-related knowledge and competency of the sample. The PFA knowledge and competency questionnaire were adopted by Zhang and colleagues [18]. The questionnaire originated from the WHO PFA facilitator’s manual, including a knowledge dimension with 15 items and a self-assessment competency questionnaire with nine items, which were used to add all items directly [7]. The PFA knowledge questionnaire items were rated dichotomously using 1 for “yes” or 0 for “no.” Higher scores represent a higher level of knowledge. Examples of yes/no questions from the knowledge questionnaire include ‘most affected people developing a mental disorder’; ‘most affected people needing specialized mental health services’. The other questions are related for people who have experienced very traumatic events such as ‘asking people to recount some of the details of their traumatic experiences’ and ‘taking time to be sure it is safe to approach the scene of a traumatic event even if you must act urgently’. The self-assessment competency questionnaire was rated using a 5-point Likert scale. Each item’s score ranges as follows: 1 (very low), 2 (low), 3 (medium), 4 (high), and 5 (very high). Higher scores indicate a higher level of self-competency. Examples of the competency questions including the respondent’s self-rating to the following items: ‘the ability to support people who have experienced disasters or other extremely stressful events’; ‘the ability to prepare and approach a traumatic situation safely’. Testing competency tool reliability revealed higher internal consistency in the pre and post-tests using Cronbach’s α test as follows 0.79 and 0.83, respectively.

2.6. Data Analysis

Preparation and managing the data included transferring

questionnaire responses into the Statistical Package of Social Sciences (IBM SPSS-version 25). Missings and outliers were minimal and treated by rechecking the original hardcopy forms. Descriptive statistics were used for demographics and study variables, which included: means, percentages, standard deviation (SD), and percentiles. The paired t-test was used to analyze the differences in knowledge and competency between pre- and post-PFA. In other words, the total scores of both knowledge and competency tools were calculated to compare changes in respondents' perspectives. The independent t-test was used to examine the variation across demographic characteristics and determine the factors influencing the efficacy of PFA training outcomes. The level of significance was set at 0.05 for all statistical measures.

2.7. Ethical Consideration

Prior to data collection, the Institutional Review Board (IRB) of XYZ University granted ethical permission (1/2022/389). Consent was obtained from all participants before commencing the study. All participants were informed about all ethical measures undertaken in the study, including anonymity, rights of rejection and withdrawal, and confidentiality.

3. RESULTS

Fifty-five academic faculty members met the inclusion criteria. Twelve academic faculty members refused to participate in the study for personal reasons. Forty-three academic faculty members agreed to participate, signed the consent form to participate, and received the PFA training program. Therefore, 43 academic faculty members formed the sample of this study and were included in the analysis.

3.1. Participants' Characteristics

According to the data presented in Table 2, the average of participants' age was 46 years old. Participants' academic experience ranged from 2 to 15 years, with a mean of 8.7 years. The majority of participants (69.8%) were males holding a Ph.D. degree (74.4%). Concerning their distribution over different university schools, the highest contribution was reported from humanities schools (65.0%), while the rest were drawn from other schools. None of the participating faculties had previously participated in any PFA or similar training programs.

Table 2. Faculty members' demographic characteristics (N = 43).

Variables	Categories	n (%)
Age, Mean (SD)	46.7 (6.1) Range: 36–59	
Gender	Male	30 (69.8%)
	Female	13 (30.2%)
Schools	Humanities Schools	28 (65.0%)
	Scientific Schools	12 (28.0%)
	Health Schools	3 (7.0%)
Education Level	Master	11 (25.6%)
	Ph.D.	32 (74.4%)

3.2. Assessment of Knowledge and Competency before and after the PFA Training

The results related to the assessment of knowledge before and after the delivery of the PFA training program are presented in Table 3. Based on the table, the participants' knowledge mean was 7.7 (SD1.3) out of 15, indicating a low to moderate knowledge level of traumatic event management. However, the knowledge scores increased to an average of 11.0 (0.8), indicating a high knowledge level in traumatic event management. This shows a significant difference between the two means ($t = -15.7, p = .000$).

Regarding the competency scores, participants scored a low competency level of traumatic event management before receiving the PFA training (mean: 17.2 (3.4) out of 45). After the delivery of the PFA program, the participants demonstrated a higher level of competency, as evidenced by higher self-assessment scores of competency at 33.0 (3.3) out of 45. This difference in means yielded a significant statistical difference ($t = -14.6, p = .000$).

These results indicated that the PFA training program improved the academic faculty's knowledge and competency based on their perspectives and self-assessment.

3.3. Variations across Demographic Characteristics

The assessment of changes in knowledge and competency across different demographic variables demonstrated the following:

1. There were no significant differences between male and female participants regarding changes in knowledge ($t=0.84, df=41, p=0.41$) and competency ($t=-0.48, df=41, p=0.64$) scores before and after the study program.
2. There were no significant differences between master's degree and Ph.D. degree holders regarding changes in knowledge ($t=-1.22, df=41, p=0.23$) and competency ($t=1.65, df=41, p=0.11$) scores before and after the study program.
3. There were no significant correlations between participants' age and changes in their knowledge ($r=0.122, p=0.44$) and competency ($r =0.204, p=0.19$) scores before and after the study program.
4. There were no significant correlations between participants' length of academic experience and changes in their knowledge ($r=-0.017, p=0.91$) and competency ($r =0.095, p=0.55$) scores before and after the study program.

(Table 2) contd.....

Variables	Categories	n (%)
Years of Experience, Mean (SD)	8.7 (2.8)	
Previously Participated in the PFA Training Program	Yes	0 (0%)
	No	43 (100%)

Note: PAF: Psychological First Aid; SD: Standard Deviation

Table 3. Main variable comparison between pre-test and post-test.

Variables	Pre-test	Post-test	Paired t- test (t)	df	SE	P-value	CI
	mean (SD)	mean (SD)					
Knowledge	7.7 (1.3)	11.0 (0.8)	- 15.7	42	0.21	.000	-3.78 to -2.92
Competency	17.2 (3.4)	33.0 (3.3)	- 25.9	42	0.61	.000	-17.10 to -14.63

Note: SD: Standard Deviation; df: Degrees of Freedom; SE: Standard Error; CI: Confidence Interval

4. DISCUSSION

Innovation and advanced technology in education at various levels of academia have forced academicians to adopt new roles and assume more responsibilities toward their students. The COVID-19 pandemic showed a greater need for faculty members to psychologically support their students and be able to use their online courses as one main psychosocial support. However, whether academicians are willing to provide appropriate and needed psychosocial needs for their students is not valid and has not been investigated adequately. This study emphasizes the efficacy of training faculty members to provide PFA for students experiencing traumatic events. The results of this study showed that faculty members have a low level of PFA-related knowledge and competencies before conducting the PFA training program. However, the psychological first aid-training program has significantly improved PFA-related knowledge and competencies. Although it seems logical that those who received training will have an increment of knowledge and competencies related to PFA, the greater inference of this study sustains the notion of the need to have trained faculty members due to evidence at baseline where they reported a low level of knowledge and competency. Moreover, the study added that the assumed role for faculty members to use psychosocial support and minimal psychological PFA intervention would be a significant enhancement of their role and might contribute to saving the lives of students who are at high risk and might be mentally exhausted due to the traumatic effects. In particular, the content of the training, which aimed at reforming and strengthening the faculty members' ability to deal with undergraduate students experiencing traumatic events, might have alarmed the faculty members to assume their additional roles as significant supportive persons and role models for students who they trust and listen to. As hypothesized, faculty members' knowledge and competencies related to PFA have improved directly in the post-training program.

The study findings supported the previous literature regarding the association between knowledge and skill of the individual's ability to deal with traumatic events [18]. The PFA training program used in this study has bifocal benefits, increasing the level of knowledge about psychological first-aid and enhancing the level of competency in dealing with students facing traumatic events [24]. Such particular information has been addressed by Movahed *et al.* [25], who linked PFA

training to providers', levels of knowledge and competency in helping individuals experiencing traumatic events. This study, on the other hand, supports previous efforts that using such training has contributed to improving the knowledge and skills of professional and non-professional health personnel [26 - 28]. It is important to mention that the need for training seems to be for all those who might be in the position and are required directly or indirectly to provide psychosocial support. Mental health and psychosocial support are essential for everyone. Therefore, all those, whether in academic or non-academic settings, should be trained in PFA and psychosocial support skills.

According to Lee and colleagues [13], faculty members might act and assume the role of front liners for students at risk or suffering traumatic events. This infers that the lack of skills and knowledge of faculty members to manage such a situation might jeopardize the situation and endanger the lives of students. Being able, at least, to use the minimal level of skills, find and identify those in need of psychological care and make the appropriate advice of referral might save the lives of students. For instance, asking students to recount some of the details of their traumatic experiences, taking time to be sure if it is safe to approach the scene of a traumatic event, even if you must act urgently, telling them the story of someone else you just helped so they know they are not alone, giving any reassurance that would help them feel better, being sure to say only what you know and not to make up information that you do not know, judging the person's actions and behavior so they would not make the same mistake next time, telling an affected person how they should be feeling, practicing self-care by taking regular breaks, and talking with someone you trust about your experience, *etc.* The researchers in this study support the psychological support role of the faculty members and do not limit their role to material endorsement and teaching. They are willing to assume their roles as role models and knowledgeable persons willing to provide assistance and show understanding. This is one reason behind proposing the PFA-training program to faculty members to ensure the improvement of PFA-related knowledge and competencies in dealing with students experiencing traumatic events and being able to intervene timely and appropriately.

4.1. Limitations and Recommendations

A larger sample size would add additional strength to the study. In addition, including a cluster sample that integrates academic staff from different sectors, such as the government

and private universities, would provide more generalizable findings.

CONCLUSION

Based on this study training program, which integrated various teaching methods, faculty members have been equipped with higher knowledge and the ability to deal with students experiencing traumatic events. The study indicated that the training program was effective in promoting faculty members' knowledge and competencies in PFA to deal with students who have experienced traumatic events. The merit of our training program was particularly achieved through using a variety of teaching methods that would build the basis for giving psychological support to those students affected by traumatic events. Furthermore, this study found that the ages and length of the academic experience of academic staff may not be influential in improving knowledge and competency in dealing with PFA instances. Thus, PFA is an extremely useful resource for faculty and should be implemented across educational settings regardless of the academic staff's age or length of academic experience.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Prior to data collection, the Institutional Review Board (IRB) of XYZ University granted ethical permission (1/2022/389).

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All procedures performed in studies involving human participants were in accordance with the ethical standards of institutional and/or research committees and with the 1975 Declaration of Helsinki, as revised in 2013

CONSENT FOR PUBLICATION

Consent was obtained from all participants before commencing the study. All participants were informed about all ethical measures undertaken in the study, including anonymity, rights of rejection and withdrawal, and confidentiality.

STANDARDS OF REPORTING

COREQ guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The datasets used in the current study are confidential and available from the corresponding author [M.A.S.] on reasonable request.

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None.

CONFLICT OF INTEREST

The authors declare no conflict of interest financial or otherwise.

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