

REVIEW ARTICLE

THE EFFICACY OF SENSATION AWARENESS FOCUSED TRAINING IN ALLEVIATING POST INTENSIVE CARE SYNDROME-FAMILY (PICS-F) AMONG FAMILIES STAYED AT ICU

Regidor III Dioso, Nazia Yousef

Department of Medicine, Lincoln University College, Malaysia

ABSTRACT

Background: Post Intensive Care Syndrome-Family (PICS-F) encompasses a cluster of psychological disorders such as anxiety, depression, acute stress disorder, PTSD, and complex grief experienced by the patient's family after an ICU stay. These challenges can significantly impair the family's ability to support the patient's recovery following critical care. The current study aims to evaluate the effectiveness of Sensation Awareness Focused Training as treatment for Post Intensive Care Syndrome-Family

Materials & Methods: PICS-F is a form of psychological and emotional distress experienced by family members of individuals who have undergone intensive care and takes the form of a generalized anxiety disorder, major depressive disorder and, in the most severe cases, post-traumatic stress disorder (PTSD). SAFT intervention focuses on improving awareness of sensory experiences as an early treatment that provides families with sensory-based strategies that they can use to alleviate bodily-focused sensations.

Results: The current study supports the position that sensory awareness can promote modulation of body-focused practices and, thus, reliably reduces emotional regulation and decreases brief psychological injury. Comparison of PICS-F is by definition multidimensional.

Conclusions: The study argued that a sensory awareness-based intervention would improve bodily-focused processes and at the same time profoundly decrease the rate or degree of occurrence of PICS-F.

Key Words: PICS-F; PTSD; ICU; SAFT.

Cite as: Dios R, Yousef N. The efficacy of sensation awareness focused training in alleviating Post Intensive Care Syndrome-Family (PICS-F) among families stayed at ICU [review article]. *Gomal J Med Sci* 2024 Oct-Dec ;22(4):365-73. <https://doi.org/10.46903/gjms/22.04.1615>

1. INTRODUCTION

The term Post Intensive Care Syndrome-Family refers to the psychological distress and difficulties that the patient's family experiences following a stay in the intensive care unit (ICU). The development of a cluster of the above psychological disorders like anxiety, depression, acute stress disorder, Post-traumatic stress disorder complex grief following exposure to

critical care in a patient's family is majorly known as post-intensive care syndrome family and can indeed affect the family's capability to help the patient recover from ICU.¹

PICS-F was initially defined as significant psychiatric disorders including anxiety, depression, and Post-traumatic stress disorder and complicated grief that develop in the families of critically ill patients admitted to an ICU.² However, in addition to these psychiatric impairments, families exhibit actual physical impairments such as fatigue and sleep disturbances during the post-ICU period, as well as household financial insecurity due to their cardiovascular activities, such as patient care, work absence, and restrictions.³

Traditional therapies may be inadequate to fulfill the more advanced demands of PICS-F since the symptomatology and etiology are multifaceted. Innovative

Corresponding Author:

Dr. Nazia Yousef
Department of Medicine
Lincoln University College
Malaysia

E-mail: naziayousif19@gmail.com

Date Submitted: 02-02-2024

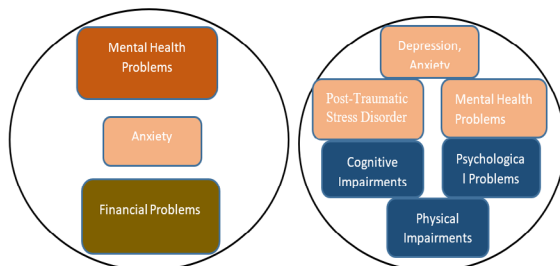
Date Revised: 28-08-2024

Date Accepted: 05-09-2024

strategies and tactics are necessary to handle the one-of-a-kind person with PICS-F ailments. These plans should assist family members in developing broader approaches to renal difficulties, history, and regulation to increase the whole underlying physiological healthcare system. Ultimately goal to minimize the appearance, r. PICS-F manifestations in both the frequency and extent.⁴

1.1. Signs and Symptoms of Post Intensive Care Syndrome-Family (PICS-F):

PICS-F is characterized by distinct feelings that have a detrimental impact on the family members of an ICU patient in the course of and post the patients’ hospital stay. Psychological symptoms of PICS-F include depression, anxiety, and post-traumatic stress disorder (PTSD), which range from one to sixty-two percent.⁵ Despite that families with PICS-F have noted a decrease in generic or hospital-specific complaints, anxiety remains distinctly high. Anxiety about the ICU, patient well-being, and care continuum may be contributing factors towards heightened anxiety.⁶



Family Members ICU Survivors
Fig 1: Symptoms of PICS-F in family members and ICU survivors

Meanwhile, severe trauma-based symptoms such as acute stress disorder and PTSD can be particularly high upon ICU discharge. A higher prevalence of depression is observed among patients with PICS-F. The negative depressive behavior could entail feeling down and losing interest in regular activities. The recovery survey first noticed this increase, indicating that the clinical scenario had worsened.⁶ Overwhelming emotions of fear and uncertainty in an ICU are to blame. It can make one even more desperate to see their dear one in this struggling for many days, and with an uncertain future.⁷ some percentage of caregivers reported disturbed sleep at some time past and future their patient’s ICU stay. Family may also report Cognitive complaints such as memory loss, slow thought, and lack of interest in physical activities. These signs and symptoms are multifaceted. Therefore, it is essential to recognize and acknowledge the demands of these family members. Adequate support to the factors contributing to Psychological, physical, and cognitive signs of PICS-F is necessary to ensure good wellbeing in patients and their families.⁷

1.2. Impact of PICS-F on ICU Families:

Post-Intensive Care Syndrome-Family consequences spiral deeply within a family that has experienced an ICU stay, leaving a profound and long-lasting effect. A breakdown of each effect gives an understanding of PICS impacts to portray a multi-dimensional and all-adjusting impact to a family.⁸

1.2.1. Psychological Impact:

The psychological trauma that a family undergoes is severe, beginning from the fear and worry of losing a loved one to the extinction of post-trauma. The immediate reaction mainly presents as acute symptoms amounting chronic fade from the trauma experience, including anxiety, depressions, and PTSD. The daily disruption of nightmares and flashbacks require long-term professional assistance for the family to recover.⁹

1.2.2. Social Impact:

Socially, the consequences of PICS-F cannot be ignored. PICS-F isolates the family through physical distancing with a larger society, but the extent of experiences of a family is incomprehensible, making the family feel lonely. The need to be with a patient confines the family during social engagements, thus leading to the destruction of support systems, leaving the family with less social interaction space. This difficult period can make the impacted family feel lonely and bored.¹⁰

1.2.3. Financial Impact:

The financial impact, at the same time, can morph into a burden as well. The mounting bills for care and the loss of income can quickly become a financial burden on the family. The illness’s effects are far from over when the acute medical emergency has healed, leaving a distinct mark of lives changed and debilitated. The strain of unpaid bills and financial instability is a constant, tangible reminder of the stress that parents are experiencing.¹¹

1.2.4. Physical Impact:

The severe stress of the experience, combined with a focus on the needs of the sick loved one, will render the family’s own health ignored. The physical symptoms of stress will begin to show, including headaches, exhaustion, and sleep disturbances. Such inattention on their own bodies can yield long-term damaging effects and call attention to the need to treat parental well-being’s physical consequences as well as the emotional and psychological impacts.¹²

1.2.5. Impact on Family Dynamics and Relationships:

ICU stay can dramatically change family dynamics. For starters, if members of the family take on more responsibilities, they may soon start to fight that can also facilitate the reformation of a family “business”. Furthermore, the emotional burden placed on family members may lead to hindrance in communication

and emotional retreat. It is not uncommon for such changes to persist for a long period of time and leave a lasting impact on the family structure.¹³

1.2.6. Cognitive and Emotional Impact on Decision-Making

PICS-F may have a cognitive and emotional significance in decision-making. Many family members note that they feel overwhelmed with decision-making responsibility due to their own emotional state. In this case, family-centered care should ensure that there is a system of decision-making support and counseling.¹⁴

1.2.7. Long-term consequences

It can affect mental health and relationship with the household, present economic and physical problems in one's family and so forth. Given its complex and multilateral nature, recovery should be long-term, and resources should not cease post-discharge.¹⁵

2. MATERIAL AND METHODS

This review was conducted in evaluating the effectiveness of SAF-T in alleviating PICS-F. This review analyzed articles published for the period from January 2019 to January 2024 in both local and foreign journals. The main question of this paper was to assess the theoretical foundation SAFT in alleviating disorders and practical implementations of SAFT in reducing PICS-F. To answer these question, different keywords, Psychological Disorder, Post Intensive Care Syndrome-Family (PICS-F), Sensation Awareness Focused Training (SAFT), ICU, Assessment of PICS-F, Implications of SAFT in alleviating PICS-F and in combination searched in different electronic databases such as Google Scholar, PubMed, Scopus, Web of Science, Sci-Hub, HEC digital library, and Medicine. The article's inclusion criteria were based on the perspective assessment of PICS-F and its timing and different theories that are important in its perspective were discussed. The language of all these articles was English.

RESULTS

The quantitative outcomes, families' perspectives and experiences, and comparative analysis are the elements that constitute the research on the effectiveness of Sensation Awareness Focused Training in reducing PICS-F among ICU families.

3.1 Quantitative results: reduction in the symptoms of PICS-F: The outcomes that are quantitatively measurable include the reduction in the symptoms of PICS-F. Before and after the session, the session administers standardized evaluations that depend on numbers to evaluate the symptoms that have decreased. Some of the symptoms that may be evaluated include anxiety, sadness, PTSD symptoms, and perceived stress. Researchers can provide evidence-based evidence of the amount to which SAFT reduces psychological distress among ICU patients' families by comparing the quantifiable reduction in symptoms using statistical analysis.¹⁵

3.2 A qualitative analysis: Families' perspectives and experience: There are two ways in which feedback of qualitative nature may be collected to understand how they experienced SAFT. These are through focus groups, in-depth interviews, or open-ended surveys. The researchers investigate the subjective effects, emotional results, and the impression that the family members get. The researchers find the key insights that are capable of bringing out the complex understandings, such as the renewed sense of agency, change in the types of cognitive coping, and increase in IQOL.

3.3 Analyzing SAFT in comparison to the conventional support techniques: A comparative study is when I compare the result of the SAFT group with the one that has the more traditional support intervention or the one that gets no intervention. Researchers can develop evidence-based recommendations for minimizing the ICU families' suffering if the relative effectiveness of SAFT to the more conventional methods is well defined.

Table 3.1: Evaluating the Effectiveness of SAF-T in Alleviating PICS-F

Qualitative Methods	<p>Administered using validated scales or questionnaires before and after the intervention to quantify changes in symptoms.</p> <p>Provides numerical data for statistical analysis of the intervention's impact on psychological distress among participants.</p> <p>Interviews or focus groups conducted to gather in-depth insights into participants' experiences with SAFT.</p> <p>Allows for exploration of participants' perceptions, experiences, and subjective outcomes of the intervention.</p> <p>Provides rich, qualitative data to complement quantitative findings and capture nuanced aspects of participants' experiences.</p>
Observational Measures of Behavioral Changes	<p>Direct observation of participants' behavioral changes during and after the intervention.</p> <p>Focuses on observable indicators such as changes in coping strategies, communication patterns, and emotional regulation.</p> <p>May involve structured observations by trained researchers or clinicians to assess changes in real-time behaviors.</p>
Self-Reported Improvements in Coping Strategies	<p>Participants' self-assessment of changes in coping strategies and adaptive responses to stressors.</p> <p>Obtained through self-reported measures or questionnaires designed to capture perceived improvements in coping skills.</p> <p>Provides insights into participants' subjective experiences of resilience-building and empowerment through SAFT.</p>

3.4 Assessment of PICS-F: Table 3.1 shows that there is no universal tool to assess PICS-F, and the tools used in studies are quite diverse. Both anxiety and depression are frequently measured using HADS (Lobato et al., 2023). Anxiety is also evaluated using PHQ 8 or PHQ 9, which excludes the questions of suicidal and hurting thoughts from PHQ 8. CES-D is indicated to screen for depression. PTSD can be measured using the Impact of Event Scale or PTSD checklist. In the IES, IES-R and IES-6 are used to assess PTSD.¹⁵ The Society of Critical Care Med-

icine proposed a cutoff value of 1.8 and 1.65, the average for the IES-R and IES-6, respectively. In the PCL, PCL-5, PCL-S, and PCL-c are used to assess PTSD. It should be noted that PCL-5 is based on DSM-V criteria.

Psychological problems of PICS-F are not the only issue; families are facing various challenging situations. Other aspects should also be assessed. The objective assessment of complicated grief following a patient’s death can be performed using Inventory of Complicated Grief. This level of hardening can

Table 3.2: Assessment of PICS-F

	Family after hospital discharge	Items	Score range	Cutoff	Features
Anxiety or depression	HADS (Hospital Anxiety and Depression Scale)	14	0–21	≥8	
Depression	PHQ-8 (Patient Health Questionnaire-8)	8	0–27	≥10	Omitting suicide and hurting thought question
	PHQ-9 (Patient Health Questionnaire-9)	9	0–24	≥10	
	CES-D (Center for Epidemiologic Studies Depression)	20	0–60	≥16 or 20	
PTSD	IES-R (Impact of Event Scale-Revised)	22	0–4 (average)	> 1.8 at average	Based on DSM-IV
	IES-6 (Impact of Event Scale-6)	6	0–4 (average)	> 1.65 at average	Short version of IES-R
	PCL-5 (PTSD Checklist-5)	20	0–80	≥28 or 37	Based on DSM-V
	PCL-S or -C (PTSD Checklist for Specific or Civilian version)	17	17–85	≥28 or 30	PCL-S asks symptoms related to a specified event
Complicated grief	ICG (Inventory of complicated grief)	19	0–76	≥25 or 30	Internal consistency, convergent and criterion validity
Sleep	PSQI (Pittsburgh Sleep Quality Index)	9	0–21	> (sleep disturbance)	Sleep quality, latency, duration, efficiency, disturbance, medication, daytime sleep dysfunction
Quality of life	SF-36 (Short Form-36)	36	0–100	NA	Usage fee required, physical, pain, general health, vitality, social, emotional, psychological
Quality of care	FS-ICU 24 (Family Satisfaction in the ICU)	24	0–100	NA	Family’s assessment of quality of patient’s care in the ICU
Caregiver burden	Zarit-12 (Zarit Burden Interview 12 items)	12	0–48	13	Social, psychological, physical burden of caregivers

Abbreviations: DSM (Diagnostic and Statistical Manual of Mental Disorders); ICU (Intensive Care Unit); NA (Not Applicable); PTSD (Post-Traumatic Stress Disorder).

lead to sleep disturbance in the families. It is also important to understand the needs and expectations of families for health care providers during the ICU stay. It can be measured using FS-ICU to assess the family’s experience in ICU. One of the crucial aspects of PICS-F is to measure the care burden of patients .

3.5 Timing to Assess PICS-F: The optimal timing for these evaluations is crucial for the appropriate understanding and intervention to the challenges faced by families of ICU patients. Furthermore, optimal evaluation timing enables proper evaluation of the family’s needs, which may be appropriately managed. The Society of Critical Care Medicine recommended screening for PICS to be within 2–4 weeks on ICU survivors after hospital discharge . On the other hand, too-late evaluations will miss the opportunity to intervene those with PICS-F. Since there are unestablished criteria for evaluation timing, the frequency and timing of PICS-F in the evaluation timing are summarized in Table 3 below. According to the summary, most frequent assessments occurred

at 3 and 6 months, although the timing of the start of the assessment differed .

3.6 Implementing SAFT in ICU Settings:

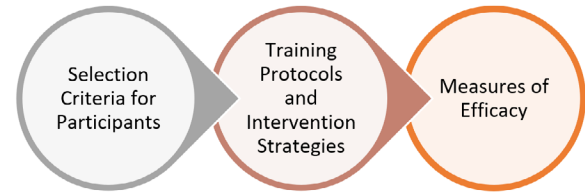


Fig 3.2: Steps in implementation of SAFT in ICU

The implementation methodology of SAFT in intensive care unit settings includes several crucial components, which guarantee that it will be conducted and evaluated in an effective manner to make sure that only individuals who have the potential to benefit from the SAFT intervention the most would take part in the program, it is vital to establish the selection criteria for the program participants. Specifically,

Table 3.3: Timing to assess PICS-F

	<1 month	1–2 months	3 months	3–6 months	6 months	12 months
Anxiety	60%	37%	45%		27%	34%
	41%	23%	63%	10%	18%	
		28%	13%		4%	
			7%		45%	
			48%			
Depression	33%	9%	25%		7%	28%
	18%	46%	59%		26%	
	55%	63%	30%		17%	
			26%		12.5%	
			28%			
PTSD		37%	34%		48%	26%
			66%		36%	
		6%	11%		17%	
			64%		47%	
			27%		21%	
			31%–35%			
Complicated Grief			6%		47%	
Fatigue	50%	44%		53%		
Sleep disorder	61%	56%		57%		
	52%	53%				

Abbreviations: ICU = intensive care unit; PTSD = post-traumatic stress disorder.

such criteria as age, relationship with the patient in the role of physician, level of experience emotional distress, and readiness to receive help.

The preparation of the training protocols and intervention strategies for SAFT is based on the specific problems and challenges experienced by family members of the intensive care unit's patients in the critical care unit environmental. The purpose of these measures is to identify the effectiveness of SAFT. As for a qualitative in-depth evaluation, it may include such methodologies as pre- post-intervention standardized assessments of anxiety, depression, post-traumatic stress disorder symptoms, and self-reported stress levels . One-on-one interviews may also be conducted to gather information about the usefulness of SAFT and promote projects. The systematic methodology including evidence-based efficacy measures, well-defined training protocols and intervention strategies, and clear criteria should be used to optimize the implementation of SAFT in intensive care unit settings in order to address the distress that the family members of the critical illness patients experience .

DISCUSSION

Several interventions have been designed to manage the high levels of psychological distress among family members of ICU patients (PICS-F) to reduce their effects and enhance well-being.

Finally, psychoeducation also plays a critical role in this aspect as it educates families about PICS-F, possible symptoms, and ways to cope with the outcome. Evidence has indicated that greater distress during the ICU stay can increase the risk of PICS-F.¹⁶ Thus, it is essential to educate families on the ICU environment and their typical emotional responses to feel more prepared and supported during distressed periods.¹⁷

Additionally, caregiver support programs offer primary caregivers practical assistance and emotional backing, lifting the burden of care and reducing caregiver exhaustion. Programs offering a peer mentoring component connect experienced caregivers to families newly impacted, providing much-needed peer support and guide.¹⁸ Finally, long-term follow-up and support programs guarantee regular monitoring and care, providing patients further resiliency and recovery over time.¹⁹ Sensation Awareness Focused Training is predicated on several core principles aimed to foster individuals' emotional resilience and well-being, family members of ICU patients in particular. Firstly, SAFT is dedicated to the notion of the mind-body connection that underscores how the physical state is inevitably interrelated with the emotional and psychological. Creating the sensitivity to bodily sensations, SAFT enables individuals to perceive their emotional responses and eventually manage them better.²⁰ Mindfulness

activities are crucial for SAFT since practicing them ensures that an individual is more likely to become mentally enveloped in the present moment and less inattentive or anxious about future events, which is a common challenge for the family of ICU patients.²¹

SAFT centers around self-regulation bringing bodily sensations to the early exposure of stressful states. This way, the individual becomes aware of the ways they behave under stress and, thus, better equipped to develop and apply effective self-regulation strategies.²² Therefore, an individual is granted a choice, given how to manage injuries and disease aspects, allows them to acquire a range of physical sensations to develop resilience and self-regulation.²³

Pearlin's Theory of Psychological Distress, part of the Stress Process Model, suggests that individuals are consistently in motion and their trajectories are exposed to the scenarios and many kinds of stress experienced. Medicine or skill to manage, handle, regulate the root cause, is a buffer to the imagination of coping with stress, instrumentalism, emotionality, and information are the source of medic and skill, and are generally coping with medicine. Third is the character, time, and timing of the stimulus in visual distress each.²⁴

Somatic Experiencing is a therapeutic approach founded by Dr. Peter Levine that emphasizes the role of the body in trauma processing and recovery. Somatic Experiencing recognizes that adversity can lead to dysregulation of the nervous system, which can create tension and unresolved trauma responses in the body.²⁵ SAFT uses Somatic Experiencing principles to address psychological suffering and foster strength. SAFT employs the somatic experiencing technique to support people in noticing and processing sensations related to their trauma in this framework, releasing and resolving the tension causing stress stored in the body.²⁶ This might mean focusing on sensations like muscular tension, variations in one's breathing rate, or feelings of constricted or extended energy in the body. Likewise, it does this little by little, allowing individuals to experience the sensations without criticizing or avoiding them. Rather, the method views physical sensation as a way to assist people in experiencing and incorporating the physiological aspects of their trauma.²⁷

Though sensation awareness-focused training emphasizes body-focused cognition, it merges with cognitive-behavior therapy (CBT) as it treats patterns of thinking and behavior exacerbating such illness. Cognitive-behavior therapy is an evidence-based treatment strategy engaging in the modification of maladaptive thoughts and behaviors that relieve emotional difficulty.²⁸ Second, as a platform for individuals to be more in touch with their bodies, SAFT helps to situate disquieting emotional experiences within the body. One important aspect

of increasing awareness at the level of sensation is the ability to recognize early sensations as signs of emotional distress that can guide interventions.²⁹ Once these connections are made, clients can also launch interventions at the level of sensation by interrupting and challenging attributions – core elements of CBT – related to what these physical sensations mean. Such interventions can lead to strategies for modulating and changing patterns of disquiet in thoughts and behavior. As a result, SAFT cultivates the capacity for emotional regulation and distress tolerance by supporting adaptive responses to stressors and triggers.³⁰

Quality of life Palliative Care Resilience Training Connor and Davidson wrote, “resilience suppresses PTSD and can be defined as the quality in individuals that makes them able to weather difficulties well, allowing them to develop from the experience”.³¹ Several scales measure resilience, but the Conner-Davidson’s Resilience Scale is a scale that has been translated and continue being developed into Japanese and used to develop the research. It is a 25 item scale to use that is self-administered by the general or clinical population and uses a 5-point scale. The study measured the relationship between PICS-F and resilience using this CD-RISC.³²

Practical implementation of SAF-T includes training sessions that cover the following cumulating and complementary utilization strategies designed to reduce distress among family members for ICU patients. Assessment of participants, both the degree of distress and need and readiness. Individualization of SAF-T is crucial to focus on a participant’s concerns and meet their needs and preferences specifically. Role of facilitator, extensive training should be given in the principles of SAF-T, its techniques and mode of delivery. In teaching the movement techniques, they should learn the skills, first of all, as a kind of active observer, communicator and counsellor, in mindfulness.³ Adaptation; After program review, FAC and ICC were modified to a permanent one. Integration with other services; integration into the hospital teams. Sustainability and continuity; SAF-T experience.²⁵

Challenges and Limitations

Implementing Sensation Awareness Focused Training (SAF-T) faces several obstacles that require a comprehensive integration strategy. Resource limitations, including time, funding, and trained providers, may hinder widespread adoption.²⁴ Overcoming these challenges involves securing additional funding, integrating SAF-T as a best practice model, and tailoring recruitment strategies to enhance participant engagement.²⁶ Cultural and linguistic considerations also need addressing through adapted SAF-T materials and protocols.³¹ Integration into existing healthcare systems requires collaboration with stakeholders

to ensure seamless adoption.³² Furthermore, advancing SAF-T research involves addressing current limitations such as small sample sizes and short-term focus, advocating for larger, longitudinal studies with diverse populations and objective outcome measures. Understanding SAF-T’s mechanism of action through comparative efficacy studies will further enhance its evidence base and clinical application.

Future Directions and Implications

Innovative strategies in intensive care aim to enhance patient and family well-being by addressing the challenges associated with ICU environments. Future research should emphasize patient-centered design and interventions that mitigate physical and mental stressors. This includes initiatives such as noise reduction, improved lighting, digital nature experiences, enhanced patient-to-family communication and involving families in care processes. Collaborative efforts involving healthcare providers, administrators, and patients will facilitate the transformation of ICU settings, ensuring solutions are locally relevant yet universally effective. These initiatives aim to improve patient outcomes and enhance family engagement in the care process.

CONCLUSION

In conclusion, Sensation Awareness Focused Training (SAFT) offers a transformative intervention for improving ICU family care by addressing the psychological distress experienced by families of ICU patients. Through mindfulness of sensory experiences, SAFT helps regulate emotions, reduce distress, and enhance resilience and well-being among family members. By equipping families with coping skills focused on sensory awareness, SAFT addresses the stressors and potential trauma associated with the ICU experience, facilitating psychological healing and resilience. This study has examined SAFT’s principles, theoretical foundations, critical approaches, and identified areas for improvement to enhance its effectiveness in clinical practice.

REFERENCES

1. Brummel NE, Girard TD, Pandharipande PP, Thompson JL, Jarrett RT, Raman R, et al. Prevalence and course of frailty in survivors of critical illness. *Crit Care Med.* 2020;48(10):1419-26. <https://doi.org/10.1097/CCM.0000000000004444>
2. Goodberlet DM. The use of patient diaries in the CVICU to prevent post-intensive care syndrome and improve family satisfaction with care. 2019;498(1):119-36.
3. Marra A, Pandharipande PP, Girard TD, Patel MB, Hughes CG, Jackson JC, et al. Co-occurrence of post-intensive care syndrome problems among 406 survivors of critical illness. *Crit Care Med.* 2018;46(9):1393-401. <https://doi.org/10.1097/CCM.0000000000003218>

4. Header W. Understanding current occupational therapy practice behaviors and knowledge relating to post-intensive care syndrome: An exploratory, cross-sectional survey. 2021;8(1):09-26.
5. Butler-Baldwin JM. Cancer and chronic pain: The effects of resilience on quality of life and personality. *Alliant Int Univ.* 2024;4(2):14-28.
6. Wright JH. Cognitive-behavior therapy for severe mental illness: An illustrated guide. 2020;1(2):56-78.
7. Payne P, Levine PA, Crane-Godreau MA. Somatic experiencing: Using interoception and proprioception as core elements of trauma therapy. *Front Psychol.* 2015;6:124489. <https://doi.org/10.3389/fpsyg.2015.00093>
8. Devereaux C. An interview with Dr. Stephen W. Porges. *Am J Dance Ther.* 2017;39:27-35. <https://doi.org/10.1007/s10465-017-9252-6>
9. Selye H. History and present status of the stress concept. *Stress and coping: An anthology.* Columbia University Press; 1991. p. 21-35. <https://doi.org/10.7312/mona92982-007>
10. Johnson RJ, Turner RJ, Link BG. Sociology of mental health: Selected topics from forty years 1970s-2010s. Springer; 2014;31:33-38. <https://doi.org/10.1007/978-3-319-07797-0>
11. Aneshensel CS, Mitchell UA. The stress process: Its origins, evolution, and future. *Sociology of mental health: Selected topics from forty years 1970s-2010s.* Springer; 2014. p. 53-74. https://doi.org/10.1007/978-3-319-07797-0_3
12. Burnette JL, Knouse LE, Vavra DT, O'Boyle E, Brooks MA. Growth mindsets and psychological distress: A meta-analysis. *Clin Psychol Rev.* 2020;77:101816. <https://doi.org/10.1016/j.cpr.2020.101816>
13. Price CJ, Hooven C. Interoceptive awareness skills for emotion regulation: Theory and approach of mindful awareness in body-oriented therapy (MABT). *Front Psychol.* 2018;9:335233. <https://doi.org/10.3389/fpsyg.2018.00798>
14. Anand H. How to meditate: Practicing mindfulness & meditation to reduce stress, anxiety & find lasting happiness. Harini Anand; 2020;9:55-75.
15. Meyers EE, McCurley J, Lester E, Jacobo M, Rosand J, Vranceanu AM. Building resiliency in dyads of patients admitted to the neuroscience intensive care unit and their family caregivers: Lessons learned from William and Laura. *Cogn Behav Pract.* 2020;27(3):321-35. <https://doi.org/10.1016/j.cbpra.2020.02.001>
16. Cairns PL. Prevention of post-intensive care syndrome-family with sensation awareness focused training intervention: A randomized controlled trial pilot study. 2018;20:114-43.
17. Bergner F. Post-intensive care syndrome. *Univ Zagreb Sch Med.* 2021;1:127-35.
18. Walsh F. Family resilience: A developmental systems framework. *Eur J Dev Psychol.* 2016;13(3):313-24. <https://doi.org/10.1080/17405629.2016.1154035>
19. Borji M, Nourmohammadi H, Otaghi M, Salimi AH, Tarjoman A. Positive effects of cognitive behavioral therapy on depression, anxiety and stress of family caregivers of patients with prostate cancer: A randomized clinical trial. *Asian Pac J Cancer Prev.* 2017;18(12):3207.
20. Andriessen K, Kryszynska K. A psycho-educational perspective on family involvement in suicide prevention and postvention. *Suicide: An unnecessary death.* 2016:333-44. <https://doi.org/10.1093/med/9780198717393.003.0032>
21. Frivold G, Slettebø Å, Dale B. Family members' lived experiences of everyday life after intensive care treatment of a loved one: A phenomenological hermeneutical study. *J Clin Nurs.* 2016;25(3-4):392-402. <https://doi.org/10.1111/jocn.13059>
22. Haines KJ, McPeake J, Hibbert E, Boehm LM, Aparanji K, Bakhrū RN, et al. Enablers and barriers to implementing ICU follow-up clinics and peer support groups following critical illness: The Thrive Collaboratives. *Crit Care Med.* 2019;47(9):1194-200. <https://doi.org/10.1097/CCM.0000000000003818>
23. Kang J. Being devastated by critical illness journey in the family: A grounded theory approach of post-intensive care syndrome-family. *Intensive Crit Care Nurs.* 2023;78:103448. <https://doi.org/10.1016/j.iccn.2023.103448>
24. Walsh TS, Salisbury LG, Merriweather JL, Boyd JA, Griffith DM, Huby G, et al. Increased hospital-based physical rehabilitation and information provision after intensive care unit discharge: The RECOVER randomized clinical trial. *JAMA Intern Med.* 2015;175(6):901-10. <https://doi.org/10.1001/jamainternmed.2015.0822>
25. Patel S. The influence of demographic factors, resilience, and other psychological factors in predicting caregiver burden in trauma ICU populations. 2020;11:70-105.
26. Peterson KC, Prout MF, Schwarz RA. Post-traumatic stress disorder: A clinician's guide. Springer Sci Bus Media; 2013;12:72-85.
27. Huggins EL, Bloom SL, Stollings JL, Camp M, Sevin CM, Jackson JC. A clinic model: Post-intensive care syndrome and post-intensive care syndrome-family. *AACN Adv Crit Care.* 2016;27(2):204-11. <https://doi.org/10.4037/aacnacc2016611>
28. Ramnarain D, Aupers E, den Oudsten B, Oldenbeuving A, de Vries J, Pouwels S. Post-intensive care syndrome (PICS): An overview of the definition, etiology, risk factors, and possible counseling and treatment strategies. *Expert Rev Neurother.* 2021;21(10):1159-77. <https://doi.org/10.1080/14737175.2021.1981289>
29. Abdul Halain A, Tang LY, Chong MC, Ibrahim NA, Abdullah KL. Psychological distress among the family members of intensive care unit (ICU) patients: A scoping review. *J Clin Nurs.* 2022;31(5-6):497-507. <https://doi.org/10.1111/jocn.15962>

30. Rawal G, Yadav S, Kumar R. Post-intensive care syndrome: An overview. J Transl Intern Med. 2017;5(2):90-2. <https://doi.org/10.1515/jtim-2016-0016>
31. Smith JM, Lee AC, Zeleznik H, Coffey Scott JP, Fatima A, Needham DM, et al. Home and community-based physical therapist management of adults with post-intensive care syndrome. Phys Ther. 2020;100(7):1062-73. <https://doi.org/10.1093/ptj/pzaa059>
32. Davidson JE, Harvey MA. Patient and family post-intensive care syndrome. AACN Adv Crit Care. 2016;27(2):184-6. <https://doi.org/10.4037/aacnacc2016132>

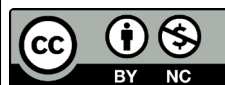
CONFLICT OF INTEREST
Authors declare no conflict of interest.
GRANT SUPPORT AND FINANCIAL DISCLOSURE
None declared.

AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: RD, NY
Acquisition, Analysis or Interpretation of Data: RD, NY
Manuscript Writing & Approval: RD, NY

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



Copyright © 2024. Naeem Ullah, et al. This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License, which permits unrestricted use, distribution & reproduction in any medium provided that original work is cited properly.