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Date: 3/2/2026

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Official Approval Letter

rincipal Investigator : Dr. Falastine Rafiq Hamdan
College : Faculty of Nursing

ar Researcher,
th reference to the Institutional Review Board (IRB) application form submitted by you for the research oposal (Protocol No **(60/5/2025/2026)** entitled:

" Effectiveness of a Stress Management Training Program in Reducing Caregiver Burden and Perceived Stress Among Families of Long-Stay ICU Patients."

e Institutional Review Board has reviewed your research proposal through an expedited review process in meeting (5/2025/2026) dated (29/1/2026).After ensuring that the ethical aspects of the proposal comply th the approved scientific and ethical standards adopted by the committee, you are hereby granted proval to conduct the study.

te that this approval is valid for **one year** from the date of this letter, in according to the following nditions:

1. The study must be conducted strictly in accordance with the approved protocol. No amendments are permitted unless prior approval is obtained from the Deanship of Scientific Research and Innovation. Substantial amendments may require submitting new application for review.
2. The research protocol number and project title mentioned above must be cited in all future correspondence with the Committee or the Deanship
3. All original data related to the project must be stored and archived for a period of no less than five years from the study's end date. The Principal Investigator bears full responsibility for this requirement.
4. The principal investigator is prohibited from direct contact with patients or study participants without prior authorization from the IRB.
5. The principal investigator is responsible for ensuring participant confidentiality and complying with all ethical guidelines.
6. Adherence to obtaining the necessary approvals and observing the relevant laws and regulations, under penalty of liability and invalidation.

With our sincere regards,

airman, Institutional Review Board (IRB)

Prof. Mohammad Faiz Hamad

Intervention protocol

The primary objective of this model was to strengthen family caregivers' capacity to effectively cope with and manage stressful situations that arise during the process of caring for critically ill patients. Specifically, the intervention protocol aimed to enhance caregivers' psychological well-being through improve their understanding of stress and its potential effects, and promote their practical coping strategies that can be utilized among caregiver of patients admitted to ICUs. The intervention protocol consisted structured educational sessions, and supportive interventions (Abuatiq, 2020). Caregivers were guided to identify all possible stressors associated with prolonged family member critical unites hospitalization, as well as to develop adaptive coping mechanisms such as relaxation techniques, cognitive restructuring, and problem-solving skills (Khouban-Shargh et al., 2024). The intervention program sought to reduce emotional distress, alleviate perceived stress, and ultimately decrease the overall burden experienced by family caregivers while supporting their ability to maintain their well-being and continue providing effective care to their hospitalized relatives (Rabiei et al., 2020).

This intervention was informed by the Transactional Model of Stress and Coping, originally proposed by Lazarus and Folkman (Lazarus and Folkman, 1984). This theoretical perspective suggests that stress does not arise solely from external circumstances; rather, it is influenced by how individuals interpret and evaluate those circumstances and their perceived ability to manage them. Within this framework, two important cognitive processes are highlighted. The first is primary appraisal, in which individuals determine whether a situation is potentially harmful, threatening, or challenging. The second is secondary appraisal, where individuals consider the resources and coping strategies available to deal with the identified stressor.

Based on these principles, the present program was designed to help family caregivers reinterpret stressful caregiving situations and strengthen their capacity to cope with them. Through structured educational sessions, emotional support, and practical skill development, caregivers were encouraged to develop more adaptive ways of responding to stress. The intervention emphasized both cognitive and behavioral coping strategies, with the goal of helping caregivers manage stress more effectively and ultimately improving their psychological well-being while caring for relatives who require prolonged intensive care.

The intervention protocol was organized into a structured sequence of four progressive stages consisted of (a) Understanding Stress and Its Consequences, (b) Identifying Maladaptive and Stress-Provoking Cognitions, (c) Cognitive Restructuring and Reappraisal, and (d) Development of Adaptive Coping and Problem-Solving Skills (Khouban-Shargh et al., 2024).

The first stage focused on increasing participants' awareness of the concept of stress and its potential psychological, emotional, and physiological effects. During this phase, caregivers were introduced to the nature of stress, common stressors associated with caring for critically ill relatives in intensive care settings, and the potential impact of prolonged caregiving responsibilities on mental health and well-being. Educational discussions and illustrative

examples were used to help participants recognize how stress manifests in daily caregiving situations and how unaddressed stress can contribute to caregiver burden, anxiety, and emotional exhaustion (Botirova, et al., 2024).

The second stage focused on helping participants to recognize dysfunctional or unhelpful thought patterns that may increase personal perception of stress. Caregivers were encouraged to reflect on their personal beliefs, assumptions, and automatic thoughts related to caregiving responsibilities, uncertainty about patient outcomes, and perceived lack of control. Participants learned to identify cognitive distortions strategies such as catastrophizing, overgeneralization, or unrealistic expectations, that could exacerbate emotional distress (Safren, Gonzalez, & Soroudi, 2007).

The third stage were focused on modifying previously identified maladaptive cognitions, through guiding the caregiver to replace irrational or negative interpretations with more balanced and realistic perspectives. This process involved evaluating the evidence supporting stress-inducing thoughts and reframing them into constructive alternatives. Furthermore, participants learned to reinterpret stressful caregiving experiences in ways that reduce emotional strain and promote psychological resilience (Clark, 2022).

The fourth stage concentrated on supporting caregivers'' practical coping abilities through the application of both emotion-focused and problem-focused coping strategies. Emotion-focused techniques included relaxation training, emotional expression, and strategies to regulate anxiety and tension. Problem-focused coping involved structured problem-solving approaches, such as identifying caregiving challenges, generating potential solutions, evaluating available resources, and implementing feasible action plans. These strategies were intended to empower caregivers to respond more effectively to caregiving demands, enhance their sense of control, and reduce perceived stress (Bondarchuk et al, 2024).

Table 1

Session-by-Session Structure of the Stress Management Training Program for Family Caregivers of Long-Stay ICU Patients

Session	Objectives	Content / Activities	Teaching Methods	Duration
Session 1: Introduction to Stress and Caregiver Burden	To introduce caregivers to the concept of stress and its effects on physical and psychological well-being.	Orientation to the program, discussion of caregiving challenges in ICU settings, definition of stress, common symptoms of stress (emotional, behavioral, and physiological), and the relationship between prolonged caregiving and caregiver burden.	Interactive lecture, group discussion, sharing caregiving experiences.	30-45 min
Session 2: Recognizing Stressors in ICU Caregiving	To help caregivers identify personal stress triggers related to caring for critically ill relatives.	Discussion of common ICU-related stressors such as uncertainty about prognosis, role overload, communication difficulties with healthcare providers, and emotional exhaustion. Participants identify personal sources of stress and discuss their reactions.	Guided reflection, small-group discussion, case examples.	30-45 min

Session	Objectives	Content / Activities	Teaching Methods	Duration
Session 3: Identifying Maladaptive Thoughts	To increase awareness of negative automatic thoughts that intensify emotional distress.	Explanation of how thoughts influence emotional responses to stressful situations. Participants identify common cognitive distortions (e.g., catastrophizing, self-blame, overgeneralization) that may occur during caregiving experiences.	Cognitive awareness exercises, facilitator-guided discussion.	30-45 min
Session 4: Cognitive Restructuring and Positive Reappraisal	To train caregivers in replacing maladaptive thoughts with balanced and realistic perspectives.	Participant's practice evaluating negative thoughts and replacing them with more constructive interpretations. Role-playing exercises and examples related to ICU caregiving situations are used to practice cognitive restructuring techniques.	Role play, guided practice, facilitator feedback.	30-45 min
Session 5: Coping Skills and Relaxation Techniques	To equip caregivers with practical strategies for managing emotional stress.	Introduction to emotion-focused coping strategies such as deep breathing, progressive muscle relaxation, mindfulness awareness, and emotional expression. Participants practice relaxation techniques during the session.	Demonstration, guided relaxation practice, group discussion.	30-45 min
Session 6: Problem-Solving and Adaptive Coping Strategies	To enhance caregivers' ability to manage caregiving challenges using structured problem-solving skills.	Training in problem-focused coping including identifying problems, generating solutions, evaluating alternatives, selecting appropriate actions, and seeking social support. Participants apply these steps to real caregiving challenges.	Problem-solving exercises, group brainstorming, facilitator feedback.	30-45 min

References

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.

Khouban-Shargh, R., Mirhosseini, S., Ghasempour, S., Basirinezhad, M. H., & Abbasi, A. (2024). Stress management training program to address caregiver burden and perceived stress among family caregivers of patients undergoing hemodialysis: a randomized controlled trial study. *BMC nephrology*, *25*(1), 350.

Rabiei, L., Eslami, A. A., Abbasi, M., Afzali, S. M., Hosseini, S. M., & Masoudi, R. (2020). Evaluating the effect of family-centered intervention program on care burden and self-efficacy of hemodialysis patient caregivers based on social cognitive theory: A randomized clinical trial study. *Korean journal of family medicine*, *41*(2), 84.

Abuatiq, A. (2020). Perceptions of stress: patient and caregiver experiences with stressors during hospitalization. *Number 1/February 2020*, *24*(1), 51-57.

Botirova, D. B., Abdullayeva, M. R., Khaydarov, I. Y., Khaydarova, R. N. A., & Sharofova, S. S. (2024). Social Psychological Features of the Process of Professional Stress in Pedagogical Activity. *Journal Power System Technology ISSN*, *10003673*.

Safren, S., Gonzalez, J., & Soroudi, N. (2007). *Coping with chronic illness: a cognitive-behavioral approach for adherence and depression client workbook*. Oxford University Press.

Clark, D. A. (2022). Cognitive reappraisal. *Cognitive and Behavioral Practice*, *29*(3), 564-566.

Bondarchuk, O., Balakhtar, V., Pinchuk, N., Pustovalov, I., & Pavlenok, K. (2024). Coping with stressfull situations using coping strategies and their impact on mental health. *Multidisciplinary Reviews*, *7*, 2024spe034.