Original Article

The Effect of The Mental Health Literacy Promotion Program on Emotion Regulation Strategies of Family Caregivers of Patients with Chronic Psychiatric Disorders in Isfahan, Iran

Zeynab Pirallahi[1], Mousa Alavi[2], Mohammad Akbari[2], Najme Aliyari[2]

[1]Student Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran, [2]Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

Abstract

Background: Emotion regulation strategies help family caregivers of chronic psychiatric patients to manage caring behaviors. However, evidence pointed out problems and therefore a need to execute respective programs to improve emotion regulation for caregivers. This study aimed to investigate the effectiveness of mental health literacy promotion programs on emotion regulation strategies of family caregivers of chronic psychiatric patients. **Materials and Methods:** This is a clinical trial study, with two-group pretest–post-test design with a follow-up period conducted in 2023. Sixty family caregivers of chronic psychiatric patients were randomly allocated to intervention control groups. Data collection was done using a demographic characteristics questionnaire and Gross and John's Emotion Regulation Scale. The mental health literacy promotion program was implemented for the intervention group in six sessions weekly. Immediately and 1 month after the last meeting, the questionnaires were completed. The data were analyzed using Chi-squared and Fisher's exact tests, Mann–Whitney test, and analysis of covariance by SPSS-22. The significance level was set to 0.05. **Results:** The results showed that the frequency distribution of demographic variables in the control and test groups had no statistically significant difference ($p > 0.05$). The intervention had significant effects on the mean score of emotion regulation strategies, and its subscales included re-evaluation and suppression of family caregivers of chronic psychiatric patients in both the post-test and follow-up periods ($p < 0.001$). **Conclusions:** According to improving the emotion regulation of family caregivers of chronic psychiatric patients through the mental health literacy promotion program, it is suggested to use this program to achieve the desired emotion regulation.

Keywords: *Caregivers, emotion regulation, mental disorders, mental health*

Introduction

Mental illness is a global public health concern. According to World Health Organization estimation, mental disorders constitute 14% of the global burden of disease.[1] According to evidence, despite the treatment and prevention methods of psychiatric disorders, most of these people do not have access to adequate care.[2] Since 1950, the movement toward community-oriented care for people with chronic psychiatric disorders began. After that, the number of people who cared for chronic psychiatric patients in the family increased significantly.[3] Since the family has the most burden of patient care, they play an essential role in care and rehabilitation by managing and controlling patients and their illness and face a great deal of physical, psychological, and social pressure. The burden of care is influenced by various factors, such as the type of mental disorder of affected persons, duration of providing care, and caregivers' physical, social, emotional, developmental, and moral development. The psychological stress caused by this responsibility is the basis for creating problems such as anxiety, depression, and burnout in family caregivers.[4] The burden of care and tensions caused by this responsibility affect family caregivers' reactions and their experienced emotions severely and can expose them to psychological injuries.[5] Previous studies have shown that there is a direct relationship between family burden and emotion regulation.[6,7] Emotions are a part of daily life of all people, including caregivers of psychiatric patients. When emotions do not match conditions, the

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Pirallahi Z, Alavi M, Akbari M, Aliyari N. The effect of the mental health literacy promotion program on emotion regulation strategies of family caregivers of patients with chronic psychiatric disorders in Isfahan, Iran. Iran J Nurs Midwifery Res 2025;30:116-22.

Submitted: 08-Nov-2023. **Revised:** 09-Sep-2024. **Accepted:** 10-Sep-2024. **Published:** 15-Jan-2025.

Address for correspondence:
Dr. Mousa Alavi, Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.
E-mail: m_alavi@nm.mui.ac.ir

Access this article online

Website: https://journals.lww.com/jnmr

DOI: 10.4103/ijnmr.ijnmr_349_23

Quick Response Code:

need to adjust them is felt. Since emotion regulation is an essential part of a person's life, disturbance in emotion regulation can lead to psychological damage. The inability to regulate emotions is defined by problems in awareness, understanding, and acceptance of emotions or the inability to control behavior when faced with intense emotional stimuli.[8] Emotional dysregulation is a trans diagnostic construct defined as the inability to regulate the intensity and quality of emotions (such as, fear, anger, sadness) in order to generate an appropriate emotional response; to handle excitability, mood instability, and emotional over reactivity; and to come down to an emotional baseline.[9] McRae and Gross[10] defined emotion regulation strategies as mental strategies used to manage receipt of emotion-inducing information. These strategies are classified into compatible strategies (including reappraisal and emotional distancing) and incompatible strategies (including rumination and social withdrawal); inconsistent strategies are related to mental health problems such as depression, anxiety, job burnout, and decreased sense of well-being.

Disturbance in regulating emotions such as anger, anxiety, and stress can cause physical, occupational, and social problems.[9] Considering the amount of care endured by caregivers, the family is affected from various aspects, especially the health status and vital balance of the family system.[11] Some evidence has shown that improving the knowledge and skills needed to manage life conditions is related to better performance in psychological reactions and subsequently more desirable behaviors, which is called health literacy in the literature of health sciences. Adequate health literacy means a person's ability to apply knowledge and skills in health-related matters.[12-14] One of the indicators of health literacy is mental health literacy, which is the knowledge related to seeking professional help and treatment options, the ability to recognize the symptoms of mental health disorders, and the capacity and willingness to support and help other people with these symptoms effectively.[15] In this regard, the results of the study by Chen *et al*.[16] in 2017 showed that despite the knowledge of the caregivers of psychiatric patients in the field of treatments and interventions for mental disorders, they need to improve their knowledge in some areas, especially in the field of cognition and the causes of mental illness, especially in the case of schizophrenia. Previous studies have demonstrated that the informed involvement of families in mental health services positively impacts disease prognosis, the patient's ability to adapt, and the overall quality of life for the patient, family, and caregivers[17,18]; however, they mainly have been conducted under the umbrella of psychological education,[19] psychosocial empowerment,[20] and group therapy[21] based on education rather than examining interventions specifically aimed at promoting mental health literacy in such populations. Therefore, the present study aimed to investigating the effectiveness of Mental Health Literacy Promotion (MHLP) programs on emotion regulation strategies of family caregivers of chronic psychiatric patients.

Materials and Methods

This is a controlled clinical trial study (IRCT20160927030002N3) conducted in May 2023–April 2024 with a pretest–post-test design with a follow-up period. Inclusion criteria for the family caregivers were having desire to participate in the study, lack of experience of severe stress such as divorce in the past 6 months, lack of history of drug or alcohol use, lack of history of psychiatric diseases of the participant that led to drug consumption or hospitalization in the psychiatric ward, and familiarity with the Persian language. The caregiver should only care for one psychiatric patient in the family and should live in the same house as the patient. Inclusion criteria for patients to select their caregivers consisted of the patient being hospitalized in a psychiatric ward during the past year up to the time of the study, suffering from a psychiatric disorder diagnosed by psychiatrics based on DSM-5 criteria, and not having a substance-induced psychiatric disorder, as well as passing at least 6 months since the beginning of illness. Exclusion criteria consisted of unwillingness to continue participation, nonparticipation in more than two sessions, failure to complete questionnaires, and suffering from severe physical or mental health issues during the study sessions that would impede their ability to participate.

Sampling was done using the convenient sampling method, and the subjects were randomly allocated to the intervention and control groups; sample size was estimated using G-power3.1.9.2 software considering the significance level (α) equal to 0.05, the power (1-ß) equal to 0.9, and the effect size (Cohen's d) equal to 1.02. The Hajsadeghian, Ghazelbash, and Mehrabi's study[22] has been used to estimate the effect size, and finally, 22 people were estimated for each group. However, in order to satisfy assumptions of parametric analysis, 30 people were considered in each group [Figure 1].

A two-part questionnaire for caregivers of chronic psychiatric patients was used to collect data. The first part of the questionnaire gathered demographic information, including age, gender, number of children in the family, income, marital status, educational background, and employment status. The second part was related to Gross and John's Emotion Regulation Scale, which was prepared in 2003 and contains ten items. This scale consists of two re-evaluation subscales with six items and repression with four items. Participants answered the questions on a 7-point Likert scale (e.g., 1–7), with higher scores reflecting greater agreement. Then, the marks of questions will be added up, and three marks will be obtained. A score related to reappraisal subscale, a score related to suppression subscale, and a total score will be considered. The total score of this questionnaire will be between 10 and 70, and the higher the score, the higher the emotion regulation.[23,24]

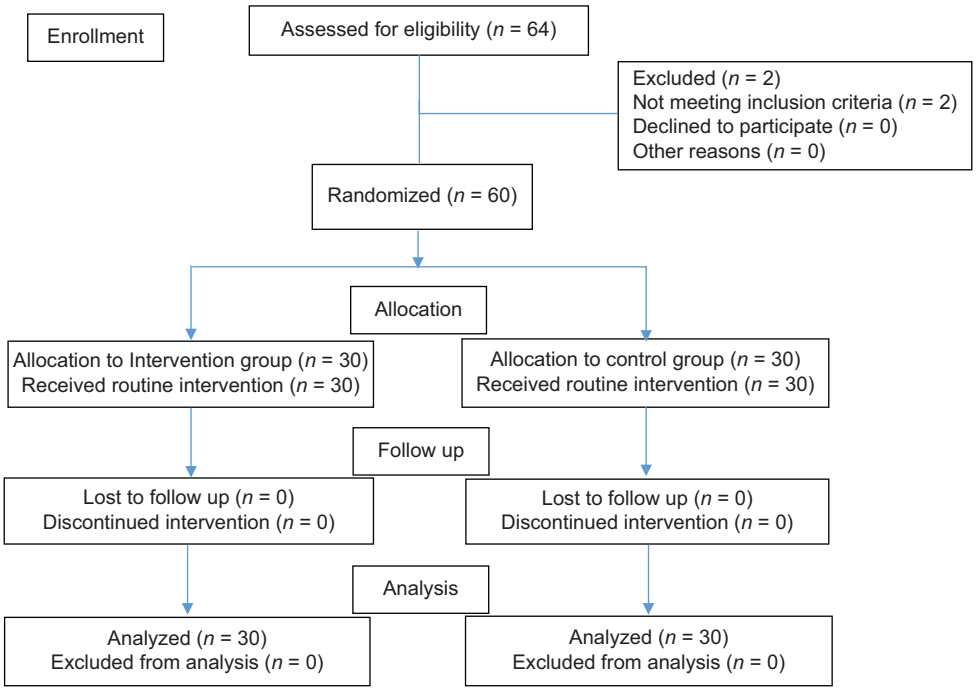

Figure 1: CONSORT flow diagram

This scale has been standardized in Iranian culture, and its validity is based on the internal consistency method with Cronbach's alpha ranging from 0.6 to 0.81.[25] The validity of this questionnaire has been examined through principal component analysis. The internal consistency (Cronbach's alpha) has also been reported as 0.76 for reappraisal and 0.872 for suppression subscales.[26]

After the presence of subjects at the designated time and in the classroom of the psychiatric department of selected hospitals (i.e., Farabi and Khurshid hospitals) affiliated with Isfahan University of Medical Sciences, Iran, the goals and stages of the intervention were fully explained to them. Then, a written consent form stating the purpose and method of research, voluntary participation, freedom to withdraw at any time, and ensuring confidentiality of personal information was provided to them. After signing the informed consent, the questionnaires were provided to them. The subjects of both groups filled out their questionnaires at the same time (i.e., before intervention, immediately after the last session, and 1 month after the last session).

The members of the intervention group were 30 people, who were divided into six groups of five people, and training sessions were held for them. The training content was developed considering the educational needs of caregivers that were mentioned in previous studies and considering the concepts related to improving mental health literacy,[16] and then the program was approved by five faculty members of Isfahan University of Medical Sciences [Table 1]. The intervention was held in lecture, questioning and answering, task presentation, and group discussion by the research team (consisted of a leading researcher and a master's student) in psychiatric nursing and a doctor of nursing in six sessions of 60–90 minutes and one session every week for 6 consecutive weeks for each intervention group. At the end of sessions and after the post-test and follow-up measurements, a printed pamphlet related to educational materials was provided to control group participants.

The data were analyzed through IBM SPSS Statistics for Windows, version 22 (IBM Corp., Armonk, N.Y., USA) software. The descriptive statistics (i.e., Chi-square and Fisher's exact for frequency distribution of categorical variables and the Mann–Whitney test for frequency distribution of quantitative variables between intervention and control groups) were used. Inferential statistics using analysis of covariance (ANCOVA) with control of the effect of pretest scores was performed to investigate the impact of the intervention on the dependent variables.

Also, to check the assumption of normal distribution of data, Kolmogorov–Smirnov test was used, and to check the assumption of equality of variances, Levin's test was used, and the results showed that the assumption of normal distribution of data in intervention and control groups and the assumption of equality of variance have been observed.

Ethical considerations

This study was approved by the Ethics Committee of MUI (code: IR.MUI.NUREMA.REC.1401.170). All participants completed and signed informed consent forms, and they were ensured to be free to participate in this study.

Table 1: Content of mental health literacy promotion sessions

Sessions	Purpose	Content
1	Improving the knowledge of family caregivers about mental health	Holding a pretest, introducing the goals and stages of the program, explaining the concept of mental health, introducing mental illnesses, symptoms, treatments, and the need to follow up treatment.
2	Improving patient and community communication skills	Definition of communication, teaching how to communicate effectively, teaching methods of calming and anger control in the conditions of communication with patients
3	Teaching strategies to reduce disease stigma and negative attitudes to family caregivers	Definition of stigma, explanation about the causes of stigma toward psychiatric patients, teaching methods to reduce stigma
4	Training of family caregivers in the field of their own needs and those of people with mental disorders	Identifying and training one's own needs as caregivers of mentally ill patients, training how to identify and deal with patients' needs, training problem solving methods and stress management
5	Training family caregivers in the field of patient rights and strategies for seeking help	Training in the field of rights of patients with psychiatric disorders, identifying the strategies of seeking help in caregivers
6	Introducing supportive interventions to improve the mental health of the patient and family	Teaching supportive interventions to improve mental health literacy, getting familiar with social support resources, holding a post-test

Results

The descriptive and inferential statistics results showed that two groups were homogeneous in terms of demographic characteristics so that the distribution of qualitative demographic variables between intervention and control groups had no statistically significant difference ($p > 0.05$). Table 2 presents the demographic information of research participants in two groups.

The between group comparisons of the subdomains of the emotion regulation strategies (i.e., dependent variables) have supported the effectiveness of the mental health literacy promotion program in both the post-test and 1-month follow-up period such that the mean scores of the subdomains of "emotion regulation strategies" and "re-evaluation" were increased and the mean score of the "suppression" subdomain decreased after the intervention ($p < 0.001$) [refer to Table 3].

Discussion

This study was conducted to investigate the impact of MHLP programs on emotion regulation strategies of family caregivers of chronic psychiatric patients. The results of the present study have supported the value of MHLP intervention to improve emotion regulation in the studied population.

Despite the little attention that has been paid to the association between mental health literacy and the state of emotional regulation, especially in family caregivers of chronic patients, the relevant literature has supported the effectiveness of MHLP interventions to improve general mental health outcomes (i.e., including emotional regulation); however, they have mainly been conducted in different populations.[27,28] In a study by Zhang, Ji, and Zhou,[29] the mediating effect of mental health literacy on psychological resilience and psychological distress of medical college students was supported. Moreover, Andrade *et al*.[30] have supported the association between mental health literacy and positive mental health of informal caregivers.

Another range of studies have paid attention to and supported the effect of psychoeducation interventions (which is the same type of MHLP program) on emotion regulation. For example, a study by Hu Yan Lam *et al*.[31] has supported the value of psychoeducational intervention in emotional regulation indices, believing that such a training program improves emotion regulation through promotion of mental health literacy. Onyedibe and Ifeagwazi's study has also supported the effect of group psychological training to improve cognitive emotion regulation in Nigerian women with breast cancer.[32] Some other studies like Ozkan *et al*.[33] and Budiono[34] concluded in their studies that psychoeducation may improve the expression of emotion in caregivers of schizophrenic patients. Moreover, Essam Ahmed *et al*.[35] concluded that the family caregivers of patients with schizophrenia had high levels of expressed emotion and there were a statistically significant correlation between total knowledge and their patterns of expressed emotion.

Despite the dispersion of the areas with which mental health literacy has been investigated, it seems that this variable predicts a better state of mental health as well as health-related behaviors in the family caregivers.[36] Changing health-related behaviors following the improvement of mental health literacy may lead to the improvement of the individual's emotional functions following the modification of attitudes, especially stigmatized attitudes, and subsequently affect health-related behaviors in the form of a cycle.[37,38] Moreover, improved mental health literacy may work as a resource for strengthening family coping and thereby better emotional function (i.e., emotional regulation) of the family caregivers of mentally ill patients.[39]

The family caregivers of patients with mental disorder express symptoms of emotional dysfunction such as feeling stressed, anxious, and low since the illness tends to be chronic and demanding. In the long run, burnout and

Table 2: Descriptive statistics of demographic characteristics of samples in the intervention and control groups

Variable	Level	Control group *n* (%)	Intervention group *n* (%)	*p*
Marital status*	Single	8 (26.66)	3 (10.00)	0.26
	Married	20 (66.66)	26 (86.66	
	Divorced	1 (3.33)	1 (3.33)	
	The widow	1 (3.33)	0 (0.00)	
Employment status*	Unemployed	2 (6.66)	0 (0.00)	0.20
	Employed	2 (6.66)	5 (16.66)	
	Retired	5 (16.66)	4 (13.33)	
	Housewife	6 (20.00)	11 (36.66)	
	Student	2 (6.66)	0 (0.00)	
	Other jobs	13 (43.33)	10 (33.33)	
Level of education*	Elementary school	10)33.33)	10 (33.33)	0.88
	Diploma	11 (36.66)	13 (43.33)	
	Associate degree	2 (6.66)	3 (10.00)	
	Bachelor's degree	5 (16.66)	3 (10.00)	
	Master's degree	2 (6.66)	1 (3.33)	
	Doctor	0 (0.00)	0 (0.00)	
The amount of family income*	Less than required	13 (43.33)	17 (56.66)	0.26
	As much as necessary	15 (30.00)	13 (43.33)	
	More than needed	2 (6.66)	0 (0.00)	
History of chronic disease*	Physical	4 (13.33)	5 (16.66)	0.72
	Mental	0 (0.00)	0 (0.00)	
	Both	0 (0.00)	0 (0.00)	
	No	26 (86.66)	25 (83.33)	
Relative to the patient*	Mother/father	11 (36.66)	8 (26.66)	0.34
	Sister/brother	5 (16.66)	11 (36.66)	
	Child	9 (30.00)	6 (20.00)	
Gender **	Man	14 (46.66)	21 (70.00)	0.11
	Woman	16 (53.33)	9 (30.00)	

**Chi-squared test, * Fisher's exact test

Table 3: Between-group comparisons of emotion regulation strategies and the subscales at three times

Variable	Time	Intervention group Mean (SD)	Control group Mean (SD)	Univariate analysis of variance test			
				F (df_1, df_2)	Mean square	*p*	η^2
Emotion regulation strategies	Pretest	50.67 (7.50)	46.80 (9.40)				
	Post-test	62.80 (5.66)	45.53 (10.03)	245.53 (1,57)	2745.19	<0.001	0.81
	Follow-up	60.27 (6.41)	46.13 (9.84)	173.36 (1,57)	16.4.71	<0.001	0.75
Re-evaluation	Pretest	32.23 (5.23)	32.43 (4.82)				
	Post-test	39.27 (3.81)	31.60 (5.59)	243.06 (1,57)	921.74	<0.001	0.81
	Follow-up	38.00 (4.38)	32.27 (5.30)	177.60 (1,57)	524.48	<0.001	0.76
Suppression	Pretest	18.43 (5.20)	14.37 (6.44)				
	Post-test	23.53 (3.28)	13.93 (6.67)	80.74 (1,57)	549.41	<0.001	0.58
	Follow-up	22.27 (3.73)	13.87 (6.45)	58.95 (1,57)	353.51	<0.001	0.51

η^2=Partial eta squared

emotional exhaustion may occur.[40] The MHLP program can improve emotion regulation through improving help-seeking skills and teaching supportive actions and resources, which can reduce the care burden of a person and subsequently improve her emotional performance.[40,41]

The present study may provide more insight into the relationship between mental health literacy and intervention based on emotion regulation strategies of family caregivers of chronic psychiatric patients, and this may pave the way for adopting relevant interventions based on promoting mental health literacy to provide emotion regulation strategies in this population.

One of the limitations of this study was that the cultural and social context of the study sample was only limited to family caregivers from Isfahan (Iran). Therefore, care and caution should be exercised in generalizing the results

of this study. Another limitation of this study was that improving mental health literacy includes many areas, while this short-term program will not include improving all dimensions, so it is necessary to set up broader programs to improve mental health literacy in future studies.

Conclusion

Based on the study's findings supporting the improvement in the emotion regulation of caregivers of chronic psychiatric patients through education and promotion of mental health literacy, it may be worthwhile to recommend implementing this program to improve emotional regulation indices and thereby preventing such common caregiving-related problems as aggression and frustration. However, it is suggested that more research be done on the effectiveness of this intervention in each of the indicators of emotional regulation (whether indicators of possession or lack of emotional regulation). Considering the breadth of the field of mental health literacy, taking into account the patient's condition and the family caregiver's needs, it is suggested that these programs be comprehensive and need-based in order to bring better results for the recipients of such programs.

Acknowledgements

Thank you also to the staff at Endocrine and metabolism research center of Isfahan for their help with clinic recruitment. Finally, we would like to thank all participants who gave their time to take part in the study.

Financial support and sponsorship

Isfahan University of Medical Sciences (IUMS)

Conflicts of interest

Nothing to declare.

References

1. Keynejad RC, Dua T, Barbui C, Thornicroft G. WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: A systematic review of evidence from low and middle-income countries. Evid-Based Ment Health 2018;21:30.
2. Wilson K, Maker Y, Gooding P, Walvisch J. The Future of Mental Health, Disability and Criminal Law: Essays in Honour of Emeritus Professor Bernadette McSherry. Australia; Routledge, 2024.
3. Mokwena KE, Ngoveni A. Challenges of providing home care for a family member with serious chronic mental illness: A qualitative enquiry. Int J Environ Res Public Health 2020;17:8440.
4. Akbari M, Alavi M, Irajpour A, Maghsoudi J. Challenges of family caregivers of patients with mental disorders in Iran: A narrative review. Iran J Nurs Midwifery Res 2018;23:329.
5. Akbari M, Alavi M, Irajpour A, Maghsoudi J, Lopez V, Cleary M. Support needs for family caregivers of clients with mental illness in Iran: A qualitative study. Issues Ment Health Nurs 2018;39:896-903.
6. Palacio C, Krikorian A, Limonero JT. The influence of psychological factors on the burden of caregivers of patients with advanced cancer: Resiliency and caregiver burden. Palliat Support Care 2018;16:269-77.
7. Schreiner N, Scherer B, Al Battashi H, Harwell C, Topalsky V, Burant C, *et al*. Examining the association between emotional dysregulation and treatment burden. Western J Nursing Res 2022;44:992-1005.
8. Benita M. Freedom to feel: A self-determination theory account of emotion regulation. Soc Personal Psychol Compass 2020;14:e12563.
9. Cole PM, Ramsook KA, Ram N. Emotion dysregulation as a dynamic process. Dev Psychopathology 2019;31:1191-201.
10. McRae K, Gross JJ. Emotion regulation. Emotion 2020;20:1-9.
11. Rahmani F, Ebrahimi H, Seyedfatemi N, Namdar Areshtanab H, Ranjbar F, Whitehead B. Trapped like a butterfly in a spider's web: Experiences of female spousal caregivers in the care of husbands with severe mental illness. J Clin Nursing 2018;27:1507-18.
12. Ren Z, Zhao C, Tian F, Yan Y, Li D, Zhao Z, *et al*. Meta-analysis of the effect of mental health literacy intervention in Chinese people. Acta Psychol Sin 2020;52:497.
13. Tonsing KN. A review of mental health literacy in Singapore. Soc Work Health 2018;57:27-47.
14. Lu S, Oldenburg B, Li W, He Y, Reavley N. Population-based surveys and interventions for mental health literacy in China during 1997–2018: A scoping review. BMC Psychiatry 2019;19:1-12.
15. Yamaguchi S, Foo JC, Nishida A, Ogawa S, Togo F, Sasaki T. Mental health literacy programs for school teachers: A systematic review and narrative synthesis. Early Interv Psychiatry 2020;14:14-25.
16. Chen S, Wu Q, Qi C, Deng H, Wang X, He H, *et al*. Mental health literacy about schizophrenia and depression: A survey among Chinese caregivers of patients with mental disorder. BMC Psychiatry 2017;17:1-8.
17. Akbari M, Alavi M, Maghsoudi J, Irajpour A, Lopez V, Cleary M. Mastering the art of collaboration: Supporting family caregivers of mental health patients by service providers in Iran. Adm Policy Ment Health 2019;15:54-61.
18. Hejazi F, Bahrami M, Keshvari M, Alavi M. The effect of a communicational program on psychological distress in the elderly suffering from cancer. Iran J Nurs Midwifery Res 2017;22:201-7.
19. Abedi Z, Alavi M, Ghazavi Z, Visentin D, Cleary M. Improving coping styles in family caregivers of psychiatric inpatients using planned behavior problem-solving training. J Nurs Res 2020;28:70.
20. Lohrasbi F, Alavi M, Akbari M, Maghsoudi J. Promoting psychosocial health of family caregivers of patients with chronic mental disorders: A review of challenges and strategies. Chonnam Med J 2023;59:31.
21. Sadeghian E, Pourmoradi F, Shamsaei F, Tapak L. Effect of group counseling on the attitude among the family caregivers of patients with mental disorders. Arch Psych Psych 2020;3:61-8.
22. Hajisadeghian R, Ghezelbash S, Mehrabi T. The effects of a psychosocial support program on perceived stress of family caregivers of patients with mental disorders. Iran J Nurs Midwifery Res 2021;26:47.
23. Gross J. Handbook of Emotion Regulation. United Kingdom: Guilford Publications; 2015.
24. Kharatzadeh H, Alavi M, Mohammadi A, Visentin D, Cleary M. Emotional regulation training for intensive and critical care nurses. Nurs Health Sci 2020;22:445-53.
25. Bayrami M, Akbari E, Qasempour A, Azimi Z. Investigating anxiety sensitivity, meta-anxiety and emotional regulation components in students with clinical and normal social anxiety symptoms. Clin Psycho Stud 2012:2:40-69.
26. Foroughi AA, Parvizifard A, Sadeghi K, Parsa Moghadam A. Psychometric properties of the Persian version of the emotion

regulation questionnaire. Trends Psychiatry Psychother 2021;21;43:101-7.
27. Gorczynski P, Sims-schouten W, Hill D, Wilson JC. Examining mental health literacy, help seeking behaviours, and mental health outcomes in UK university students. J Ment Health Train Educ Pract 2017;12:111-20.
28. Moss R, Gorczynski P, Sims-Schouten W, Heard-Laureote K, Creaton J. Mental health and wellbeing of postgraduate researchers: Exploring the relationship between mental health literacy, help-seeking behaviour, psychological distress, and wellbeing. Higher Edu Res Dev 2022;41:1168-83.
29. Zhang JY, Ji XZ, Zhou YQ. The mediating effect of mental health literacy on psychological resilience and psychological distress of medical college students. Perspect Psychiatr Care 2023;2023:3461121.
30. Andrade C, Tavares M, Soares H. Positive mental health and mental health literacy of informal caregivers: A scoping review. Int J Environ Res Public Health 2022;19:15276.
31. Lam AHY, Leung SF, Lin JJ, Chien WT. The effectiveness of a mindfulness-based psychoeducation programme for emotional regulation in individuals with schizophrenia spectrum disorders: A pilot randomised controlled trial. Neuropsychiatr Dis Treat 2020;16:729-47.
32. Onyedibe M-CC, Ifeagwazi MC. Group psychoeducation to improve cognitive emotion regulation in Nigerian women with breast cancer. Int J Group Psychotherapy 2021;71:509-38.
33. Ozkan B, Erdem E, Ozsoy SD, Zararsiz G. Effect of psychoeducation and telepsychiatric follow up given to the caregiver of the schizophrenic patient on family burden, depression and expression of emotion. Pak J Med Sci 2013;29:1122.
34. Budiono W, Kantono K, Kristianto FC, Avanti C, Herawati F. Psychoeducation improved illness perception and expressed emotion of family caregivers of patients with schizophrenia. Int Environ Res Public Health 2021;18:7522.
35. Essam Ahmed H, Hassan Abdel Aal M, Hossny Shalaby M, Mohamed Ahmed F. Effect of family caregiver expressed emotion control program on relapse among patients with schizophrenia. J Nurs Sci Benha Uni 2022;3:855-72.
36. Gamarra JM. How Powerful Is Knowledge? A Mixed-Methods Approach to Evaluating Mental Health Literacy in Caregivers. Los Angeles: University of California; 2021.
37. Zhuang XY, Wong DFK, Cheng CW, Pan SM. Mental health literacy, stigma and perception of causation of mental illness among Chinese people in Taiwan. Int J Soc Psychiatry 2017;63:498-507.
38. Poreddi V, R BI, Thimmaiah R, Math SB. Mental health literacy among caregivers of persons with mental illness: A descriptive survey. J Neurosci Rural Pract 2015;6:355-60.
39. Kazemian S, Zarei N, Esmaeily M. Effect of strengthening family coping resources on emotion regulation of family caregivers of patients with schizophrenia. Evidence Based Care Journal 2020;10:7-17.
40. Akbari M, Alavi M, Maghsoudi J, Irajpour A, Lopez V, Cleary M. Mastering the art of collaboration: Supporting family caregivers of mental health patients by service providers in Iran. Adm Policy Ment Health 2019;15;46:54-61.
41. Osman N, Michel C, Schimmelmann BG, Schilbach L, Meisenzahl E, Schultze-Lutter F. Influence of mental health literacy on help-seeking behaviour for mental health problems in the Swiss young adult community: A cohort and longitudinal case-control study. Eur Arch Psychiatry Clin Neurosci 2023;273:649-62.