Original Article

The Effects of Group Reality Therapy on General Health among Nursing and Midwifery Students

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ABSTRACT

Background: Nursing and midwifery students experience high levels of stress, particularly during their clinical education. High levels of stress negatively affect general health. Reality therapy (RT) is a method with potential effects on stress. **Objectives:** The aim of this study was to evaluate the effects of group RT on general health among nursing and midwifery students. **Methods:** This quasi-experimental study was conducted in Autumn 2015 using a pretest-posttest design. Forty-six students were randomly allocated to an intervention (n = 23) and a control (n = 23) group. Participants in the intervention group received group RT in eight weekly sessions. The General Health Questionnaire was used for general health assessment both before and 1 month after the study intervention. The paired and the independent samples t-test and the Chi-square test were used for the data analysis. **Results:** There was no significant difference between the intervention and the control groups respecting the pretest mean score of general health (33.05 ± 14.91 vs. 30.34 ± 14.32; P = 0.528). However, the posttest mean score of general health in the intervention group was statistically significantly less than the control group (19.08 ± 10.27 vs. 29.39 ± 12.38; P = 0.004). **Conclusion:** Group RT can significantly improve general health among nursing and midwifery students.

KEYWORDS: *Education, General health, Midwifery, Nursing, Reality therapy, Student*

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INTRODUCTION

Nursing and midwifery are professions with high occupational stress. Students in these professions

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experience stress due to many different stressors in college environment and clinical settings. In the clinical settings, they experience stress due to heavy responsibility, lack of adequate care-related knowledge, inability to appropriately use equipment, and care delivery to dying patients.[1] Moreover, cultural, social, and economic failures can cause stress and thereby, undermine general health and increase the prevalence of mental health disorders.[2]

A study on medical students in Iran reported that a majority of them experienced high levels of stress.[3] Another study showed that more than 50% of medical students had poor mental health.[4] Similarly, a study showed that the prevalence of psychiatric disorders among medical students was two times greater than the general population.[5] Another study in 50 universities in Spain showed that medical students suffered from high levels of stress.[6] Medical students also suffer from a wide range of sleep disorders. Together with stress, sleep disorders can negatively affect their general health, academic performance, and academic achievement.[7]

Reality therapy (RT) is one of the techniques for reducing stress. RT is counseling and psychotherapeutic technique developed by William Glasser[8] and is the most commonly used therapeutic intervention in cognitive psychology. It provides behavioral rules and determines how to achieve satisfaction, happiness, and success. It states that each person should face reality, accept responsibility, recognize his/her basic needs, make ethical judgment about the right and the wrong, focus on the present time, and develop his/her internal control. It also changes the individuals' unsuccessful identity and thereby, helps them develop a strong identity and improves their mental health.[9] RT mainly focuses on improving strengths rather than overcoming weaknesses.[10]

Previous studies reported the positive effects of RT on students. For example, a study showed that it positively affected happiness and quality of life among unsupervised adolescents.[11] Several other studies showed the significant positive effects of RT on depression and mental health among female students,[12] internal control, self-esteem, stress coping ability,[13] quality of life, and happiness among the parents of children with disability,[14] and happiness among teachers.[15] Similarly, some studies reported the effectiveness of RT in reducing academic burnout, increasing self-control,[16] alleviating social anxiety disorder,[17] and improving self-esteem among students.[18] However, some studies reported its ineffectiveness in alleviating psychological problems. For example, studies showed that RT was ineffective in improving intimacy among couples,[19] enhancing quality of life among patients with seborrheic dermatitis,[20] and reducing the symptoms of anxiety disorders.[21] Besides the contradictory results of previous studies into the effects of RT, there are limited data about the effects of RT on general health among nursing and midwifery students. The present study sought to narrow these gaps.

Objectives

The aim of this study was to evaluate the effects of group RT on general health among nursing and midwifery students.

Methods

Study design and participants

This quasi-experimental study was conducted in Autumn 2015 using a pretest-posttest design.

The statistical population of the study consisted of all nursing and midwifery students of Kerman University of Medical Sciences, Kerman, Iran, in 2015. The inclusion criteria were to be a 1st-year student and to get a score above 23 for the General Health Questionnaire (GHQ). Exclusion criterion was more than two absences from the sessions of the study intervention. Forty-six students were selected and randomly assigned to a control and an intervention group using a computer-generated randomization list. Sixty-sealed envelopes containing a paper with a number were prepared. Numbers were randomly generated using a computer program. The program assigned each number to either of the study groups. Each participant randomly selected an envelope and the number was reported to a statistician who knew the group of each number.

The minimum sample size for the study was determined to be 23 students per group using the following sample size calculation formula $n = \left(Z_{1-\alpha/2} + Z_{1-\beta}\right)^2 \left(\sigma_1^2 + \sigma_2^2\right) / \left(\mu_1 - \mu_2\right)^2$ Parameters in this formula were as follows: α = 0.05, β = 0.2, μ_1 = 32.5, σ_1 = 9.88, μ_2 = 25.29, and σ_2 = 7.16. Mean and standard deviation values were related to the general health scores in a previous study.[22]

Data collection instruments

Data were collected using a demographic questionnaire and the GHQ. The items of the demographic questionnaire were on participants' age, field of study, fathers and mothers education level and occupation, family income, and family size. The GHQ includes 28 items in four dimensions, namely somatic

symptoms (items 1–7), anxiety and sleep disorders (items 8–14), social dysfunction (items 15–21), and depression (22–28). Items are scored from zero ("No problem") to 3 ("Severe problem"). The possible total score of the questionnaire is 0–84, and according to its instruction, the lower scores indicate better general health.

Previous studies reported the acceptable validity and reliability of the questionnaire. For example, a study showed that its Cronbach's alpha was 0.89.[23] Participants were asked to complete this questionnaire before and 1 month after the intervention.

Intervention

Initially, sixty 1st-year students were enrolled in the study, namely thirty nursing and thirty midwifery students. All students completed the GHQ, and then, 46 students with general health scores above 23 were selected and randomly assigned to either of the groups. Participants in the control group did not receive any RT intervention, whereas their counterparts in the intervention group participated in eight 1.5-h weekly sessions of group RT. Sessions were held by two clinical psychologists at the Faculty of Nursing and Midwifery of Kerman University of Medical Sciences, Kerman, Iran. The first author supervised all sessions. As the study intervention was an educational program, blinding of participants and instructors was impossible. The content of the intervention sessions had been used in a former study[24] and was as follows:

- Session 1: Introducing RT, identity, types of identity, and their characteristics, as well as establishing emotional relationships with group members
- Session 2: Education about how to accept the responsibility of one's own behaviors
- Session 3: Education about anxiety and its management
- Session 4: Education about basic human needs in real life and effective strategies for their fulfillment
- Session 5: Planning for life and problem-solving
- Session 6: Education about how to implement the plans
- Session 7: Education about the negative effects of punishment in a good relationship
- Session 8: Finalization of the program and obtainment of participants' feedback.

The protocol of the group RT intervention was based on Glasser's RT.[25] The protocol and the content of the intervention were discussed and approved in a panel of experts consisted of two psychologists and four psychiatric nurses.

Ethical considerations

This study was approved by the Ethics Committee of Kerman University of Medical Sciences, Kerman, Iran (code: IR. UMU. REC.1394.489). Informed consent was obtained from all participants. They were ensured that their data would be managed confidentially, their participation would be completely voluntary, and their participation would never affect their academic evaluation scores. They were free to unilaterally withdraw from the study.

Data analysis

Data were analyzed using the SPSS software (version 16.0, SPSS Inc., Chicago, USA). The Shapiro-Wilk test was used for normality testing. Its results showed that the distribution of general health scores was normal. Therefore, the paired- and the independent-samples *t*-tests were used, respectively, for within and between group comparisons in terms of the mean score of general health. Moreover, the Chi-square test was used for between-group comparisons in terms of participants' demographic characteristics. The level of significance was set at < 0.05.

Results

Figure 1 shows the participants' flow in the study. All participants were single. The results of the Chi-square test illustrated no statistically significant difference between the intervention and the control groups respecting participants' demographic characteristics [$P > 0.05$; Table 1].

There was no statistically significant difference between the groups respecting the pretest mean scores of general health and its dimensions ($P > 0.05$). The mean scores

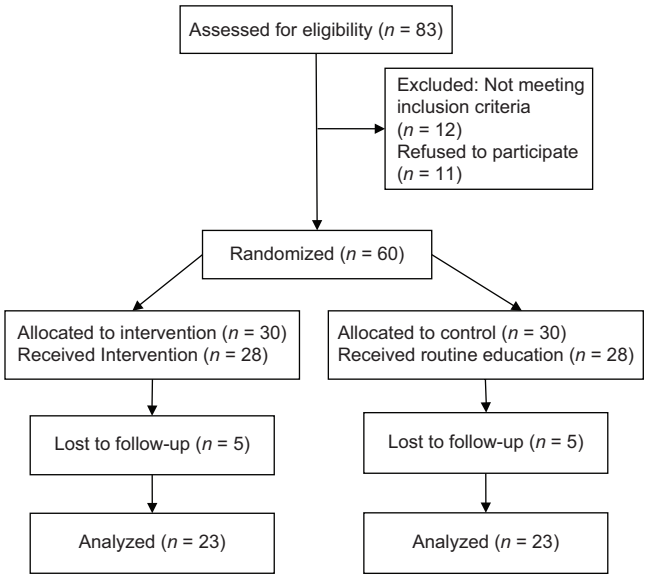

Figure 1: The flow diagram of the study

Table 1: Comparison of the study groups respecting participants' demographic characteristics

Characteristics	Group		*P*
	Control, *n* (%)	Intervention, *n* (%)	
Age (years)			
18	8 (34.8)	9 (39.1)	0.73[a]
19	10 (43.5)	11 (47.9)	
20	5 (21.7)	3 (13.0)	
Field of the study			
Nursing	12 (52.2)	11 (47.8)	0.77[b]
Midwifery	11 (47.8)	12 (52.2)	
Father's education level			
Below diploma	3 (13.0)	3 (13.0)	0.99[a]
Diploma	3 (13.0)	3 (13.0)	
Associate degree	4 (17.5)	3 (13.0)	
Bachelor's degree	7 (30.5)	8 (34.9)	
Master's degree	6 (26.1)	6 (26.1)	
Mother's education level			
Below diploma	5 (21.7)	3 (13.0)	0.81[a]
Diploma	5 (21.7)	3 (13.0)	
Associate degree	4 (17.4)	5 (21.8)	
Bachelor's degree	7 (30.5)	9 (39.2)	
Master's degree	2 (8.7)	3 (13.0)	
Father's occupation			
Employee	9 (39.1)	9 (39.1)	0.98[a]
Self-employed	9 (39.1)	8 (34.8)	
Teacher	3 (13.0)	4 (17.4)	
Unemployed	2 (8.8)	2 (8.7)	
Mother's occupation			
Employee	7 (30.4)	10 (43.5)	0.85[a]
Self-employed	4 (17.4)	3 (13.0)	
Teacher	3 (13.0)	3 (13.0)	
Homemaker	9 (39.2)	7 (30.5)	
Income level			
Low	7 (30.5)	5 (21.7)	0.77[b]
Moderate	11 (47.8)	13 (56.6)	
High	5 (21.7)	5 (21.7)	
Family size			
3	10 (43.5)	14 (60.9)	0.34[a]
4	11 (47.8)	6 (26.1)	
5	2 (8.7)	3 (13.0)	

[a]Chi-squared, [b]Fisher's exact test

of general health and all its dimensions significantly decreased in the intervention group ($P < 0.05$) but did not significantly change in the control group ($P > 0.05$). Therefore, the posttest mean scores of general health and all its dimensions in the intervention group were significantly less than the control group [$P < 0.5$; Table 2].

Discussion

The significant increase in the mean scores of general health and its dimensions in the intervention group and the significantly higher post-test mean scores of general

Table 2: Within- and between-group comparisons of the study groups respecting the mean scores of general health and its dimensions

Dimensions/group	Time		*P*[a]
	Before	After	
Somatic symptoms			
Intervention	7.52 ± 4.21	4.39 ± 3.03	<0.001
Control	7.39 ± 3.63	7.04 ± 3.05	0.270
P[b]	0.911	0.005	
Anxiety			
Intervention	9.22 ± 3.86	5.26 ± 3.24	<0.001
Control	7.83 ± 4.89	7.52 ± 4.20	0.300
P[b]	0.290	0.047	
Social dysfunction			
Intervention	9.83 ± 4.05	6.30 ± 2.85	<0.001
Control	9.48 ± 2.78	9.04 ± 2.14	0.090
P[b]	0.736	0.001	
Depression			
Intervention	6.52 ± 5.30	3.13 ± 4.20	<0.001
Control	5.65 ± 4.69	5.78 ± 4.71	0.470
P[b]	0.559	0.049	
Total			
Intervention	33.05 ± 14.91	19.08 ± 10.27	<0.001
Control	30.34 ± 14.32	29.39 ± 12.38	0.160
P[b]	0.528	0.004	

[a]Paired-samples *t*-test, [b]Independent-samples *t*-test

health and its dimensions in the intervention group denote that group RT positively improved general health among study participants. People who are unfamiliar with their identity usually do not know themselves and their needs and do not accept responsibility toward their behaviors.[26] RT can change an unsuccessful identity through familiarizing individuals with their identity, improving their acceptance of responsibility toward life, helping them find appropriate solutions to problems and focus on their strengths, and motivating them to be realistic individuals. Thereby, it reduces anxiety and improves general health.[26]

Our findings were in line with the findings of several earlier studies. For example, two studies in Iran reported the positive effects of RT on mental health and quality of life among people with blindness[11] and on happiness and quality of life among unsupervised adolescents.[27] A study in Korea also showed that RT was effective in significantly improving subjective well-being and interpersonal relationships among nursing students.[28] Another study in India showed that virtual RT improved psychological well-being among nursing students.[29]

Contradictory to our findings, some previous studies reported the insignificant effects of RT on stress. For example, a study in Iran showed that group RT was ineffective in significantly reducing the symptoms of stress and improving coping

ability among girls.[30] This inconsistency may be due to the differences in the populations, interventions, and primary outcomes of the studies.

Our findings also showed that RT significantly improved the different aspects of general health. For instance, our intervention significantly reduced the mean score of somatic symptoms among students, which is in line with the findings of three former studies.[31-33] Moreover, our intervention significantly reduced the mean score of the anxiety dimension. This is in agreement with the findings of two former studies.[34,35] Similarly, our findings showed that RT significantly reduced social dysfunction which is in line with the findings of two earlier studies.[36,37] Finally, the mean score of the depression dimension of general health also significantly reduced in the intervention group in the present study. This is congruent with the findings of an earlier study.[38]

One of the limitations of the present study was the possibility of between-group information leakage. Moreover, this study was conducted only on a small sample of university students. Future studies with larger samples are recommended to replicate this study at the national level. Studies with long-term follow-up assessments are also recommended to assess the long-term effects of RT.

Conclusion

This study concludes that group RT can improve general health among nursing and midwifery students. The authorities of the universities of medical sciences are recommended to launch programs for mental health assessment and use RT for general health improvement among students. Moreover, studies with larger samples of students from different fields of study as well as nurses and midwives are recommended.

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Conflicts of interest

There are no conflicts of interest.

References

1. Dehghan-Nayeri N, Adib-Hajbaghery M. Effects of progressive relaxation on anxiety and quality of life in female students: A non-randomized controlled trial. Complement Ther Med 2011;19:194-200.
2. Sadock BJ, Sadock VA. Kaplan and Sadock's Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry. Lippincott Williams & Wilkins: Lippincott Williams & Wilkins; 2011.
3. Sedighi E, Bidaki R, Meidani A, Ahmadinia H, Rezaeian M. Mental health status in medical students of Rafsanjan University of Medical Sciences in 2016. J Rafsanjan Univ Med Sci 2018;17:669-80.
4. Rafati F, Shamsi A, Pilevarzadeh M, Rafati S. Mental health and risk facors those in nursing students in Jiroft. Mod Care J 2012;2:137-45.
5. Mousavi F, Taghavi S, Nematzadeh Z. Study of the effect of mental stress on mental health of medical students of Iran Azad university, Tehran medical branch. Iran J Surg 2012;20:1-10.
6. Jimenez C, Navia-Osorio PM, Diaz CV. Stress and health in novice and experienced nursing students. J Adv Nurs 2010;66:442-55.
7. Yazdani M, Esmaeilzadeh M, Pahlavanzadeh S, Khaledi F. The effect of laughter Yoga on general health among nursing students. Iran J Nurs Midwifery Res 2014;19:36-40.
8. Watson ME, Dealy LA, Todorova I, Tekwani S. Choice theory and reality therapy: Applied by health professionals. Int J Choice Theory Reality Ther 2014;33:31-51.
9. Cervantes SN. Aligning reality therapy and choice theory psychology with cognitive psychology. Int J Choice Theory Reality Ther 2018;38:13.
10. Younesi SJ, Khazan K, Jani S, Mahdizadeh Z. The effectiveness of reality therapy concepts on self-esteem of the elderly in the center of Aramesh in Parsabad. J Adv Med Pharm Sci 2017; 12:1-8.
11. Koolaee AK, Mosalanejad L, Mamaghanirad B. The effectiveness of group training of choice theory on quality of life and hope in blind people. Iran Rehab J 2017;15:199-206.
12. Abdi S, Sharifi T, Qazanfari A, Solati K. A comparison of the effectiveness of group reality therapy and positive psychotherapy on irrational beliefs and psychological hardiness in brilliant talent students. J Shahrekord Univ Med Sci 2019;21:31-8.
13. Farnoodian P. The effectiveness of group reality therapy on mental health and self-esteem of students. Int J Med Res Health Sci 2016;5:18-24.
14. Sofla SN, Zarei E. The effectiveness of reality therapy on quality of life, mental health and happiness of parents of children with disabilities. Health Res J 2018;3:95-100.
15. Nematzadeh A, Sary HS. Effectiveness of group reality therapy in increasing the teachers' happiness. Procedia Soc Behav Sci 2014;116:907-12.
16. Delilar S, Havasi N. Effectiveness of reality therapy on reducing academic burnout and increasing student self –control. Iran J Nurs Res 2019;14:63-9.
17. Rajabzadeh F, Makvand Hosseini S, Talebian-Sharif J, Ghanbari Hashemabadi BA. The effect of group new reality therapy based on choice theory on social anxiety disorder in student of university. J Psychol Achiev 2015;22:133-52.
18. Shahrebabak FM, Ghanbarihashemabadi B, Aghamohammadiansherbaf H. The effectiveness of reality therapy in group method to enhance the self esteem of the students of Ferdowsi uversity of Mashhad. Found Educ 2011;11:227-38.
19. Arabpour E, Hashemiyan K. The effectiveness of couple therapy

via reality therapy method on the improvment of intimacy relations of couples. J Educ Psychol 2012;3:1-13.
20. Alipour A, Oraki M, Zarghami M. Comparative effectiveness of cognitive-behavioral group therapy and reality therapy on the quality of life of patients with seborrheic dermatitis. J Nurs Midwifery Sci 2020;7:36.
21. Firth J, Torous J, Nicholas J, Carney R, Rosenbaum S, Sarris J. Can smartphone mental health interventions reduce symptoms of anxiety? A meta-analysis of randomized controlled trials. J Affect Disord 2017;218:15-22.
22. Ahadi HS, Yoosefi LM, Ahmadi E. The comparision of efficacy of group rational-emotive-behavior intervention with group reality therapy intervention in increasing general health in female university student. J Psychol Res 2009;1:1-15.
23. Bakhshayesh H, Bahmani F, Kamali M. Comparative of mental health disabled people of athletic and non-athletic. Iran J War Public Health 2012;5:22-6.
24. Hakimi TL, Fatehizadeh M, Baghban I. Emotional safety training on marital conflicts of married women studying the training effects in Isfahan. Q Womens Stud 2012;10:103-23.
25. Tarugu J, Pavithra R, Vinothchandar S, Basu A, Chaudhuri S, John K. Effectiveness of structured group reminiscence therapy in decreasing the feelings of loneliness, depressive symptoms and anxiety among inmates of a residential home for the elderly in Chittoor district. Int J Commun Med Public Health 2019;6:847.
26. Lojk L, Butorac D, Posavec M, Maras T, Kranželić V, Baković A. Reality therapy training efficiency in helping participants to better their relationships and improve their psychological wellbeing. Int J Choice Theory Reality Ther 2018;37:111-21.
27. Eslami R, Hashemian P, Jarahi L, Modarres Gharavi M. Effectiveness of group reality therapy on happiness and quality of life in unsupervised adolescents in Mashhad. Med J Mashhad Univ Med Sci 2013;56:300-6.
28. Lee ES. Effects of a happiness choice program based on reality therapy on subjective well-being and interpersonal relations in nursing students. J Korean Public Health Nurs 2015;29:503-14.
29. Hemalakshmi J, Vijaylakshmi K, Venkatesan L. Virtual reality therapy upon psychological wellbeing among nursing students. TNNMC J Ment Health Nurs 2018;6:9-14.
30. Mahmoodi J, Gharadaghi A, Zemestani M. The effectiveness of reality therapy training on the identity status and hope in female students. Asian J Med Pharm Res 2013;3:139-47.
31. Sarfo FS, Ulasavets U, Opare-Sem OK, Ovbiagele B. Tele-rehabilitation after stroke: an updated systematic review of the literature. J Stroke Cerebrovasc Dis 2018;27:2306-18.
32. García-Palacios A, Riva G. Virtual reality for anxiety and stress related disorder. A SWOT Analysis. Pervasive Computing Paradigms for Mental Health: 9th International Conference, MindCare 2019, Buenos Aires, Argentina, April 23–24, 2019, Proceedings; Springer; 2019.
33. Bedair R, Al-Talawy H, Shoukry K, Abdul-Raouf E. Impact of virtual reality games as an adjunct treatment tool on upper extremity function of spastic hemiplegic children. Int J Pharm Tech Res 2016;9:1-8.
34. Botella C, Fernández-Álvarez J, Guillén V, García-Palacios A, Baños R. Recent progress in virtual reality exposure therapy for phobias: A systematic review. Curr Psychiatry Rep 2017;19:42.
35. Yuen EK, Goetter EM, Stasio MJ, Ash P, Mansour B, McNally E, *et al*. A pilot of acceptance and commitment therapy for public speaking anxiety delivered with group videoconferencing and virtual reality exposure. J Context Behav Sci 2019;12:47-54.
36. Chubdari A, Kazemi F, Pezeshk S. Effectiveness of reality therapy on the oppositional defiant disorder symptom reduction among students. Cumhuriyet Univ Facu Sci 2015;36:2029-38.
37. Shafiabadi A, Farzad V. The effectiveness of reality therapy on the improvement of couples' family functioning. Arc Hyg Sci 2015;4:120-7.
38. Farmani F, Taghavi H, Fatemi A, Safavi S. The efficacy of group reality therapy on reducing stress, anxiety and depression in patients with Multiple Sclerosis (MS). Int J Appl Behav Sci 2015;2:33-8.