Pharmacophore

ISSN-2229-5402

Journal home page: http://www.pharmacophorejournal.com

THE EFFECT OF ADHERENCE TO TREATMENT INTERVENTION ON THE QUALITY OF LIFE OF SCHIZOPHRENIA PATIENTS

Mehrnaz Esmkhani[1], Soheila Ahangarzadeh Rezaei [2*], Hamid Reza Khalkhali[3]

1. *MSc Student of Psychiatric Nursing, Faculty of Nursing and Midwifery in Urmia*
2. *Assistant Professor, PhD in Nursing,Nursing and Midwifery Faculty, Urmia University of Medical Sciences, Urmia, Iran*
3. *Associate Professor, PhD in Biostatistics, Faculty Member at the Urmia University of Medical Sciences and Health Services*

ARTICLE INFO

Received:
11th Nov 2017
Received in revised form:
23th Mar 2018
Accepted:
25th Mar 2018
Available online:
28th Apr 20

Keywords: *adherence to treatment, education, quality of life, schizophrenia*

ABSTRACT

Background and Objective: Schizophrenia is a complex mental disorder with the severest and the most destructive effects on the quality of life of involved patients. Undoubtedly, the use of anti-psychotic medicines is a core and basis treatment for such patients. The aim of this study is to determine the effect of adherence to treatment intervention on the quality of life of schizophrenia patients.
Materials and Methods: This is a clinical trial where 70 schizophrenia patients were randomly divided into two intervention and control groups in Razi Medical-Educational Center, Urmia. Data was collected using schizophrenic quality of life scale questionnaire (SQLS). The intervention group underwent educational intervention in the form of six lecture and discussion sessions conducted twice a week, each lasting for 60-90 minutes. The collected data of pre and post intervention was analyzed using SPSS16 as well as descriptive statistics, chi-square test, non-parametric test, Mann-Whitney test, Wilcoxon test, Fisher test and dependent-t test.
Findings: According to analyses, there was no significant difference in the mean score of quality of life between the two groups (P =0/280). However, after the intervention, the quality of life in the intervention group improved significantly (P< 0/001). In the beginning of the study, the overall mean score of quality of life in the intervention group was (68/88±24/13). However, at the end of the study it was (42/08±20/25) while the overall mean score in the control group in the beginning and at the end of the study was (66/20±18/74) and (61/20±18/48), respectively (P <0/001).
Conclusion: The implementation of adherence to treatment intervention improved the quality of life in schizophrenia patients. Therefore, paying more attention to this method of treatment seems necessary.

Copyright © 2013 - All Rights Reserved - Pharmacophore

To Cite This Article: Mehrnaz Esmkhani, Soheila Ahangarzadeh Rezaei*, Hamid reza Khalkhali, (2018), "The Effect Of Adherence To Treatment Intervention On The Quality Of Life Of Schizophrenia Patients", ***Pharmacophore, 9(2),*** *85-90.*

Introduction

Schizophrenia is a complex mental disorder with the severest and the most destructive effects on the quality of life of involved patients [1,2]. It involves almost 1% of population. Its mechanism works in a manner that it imposes serious harms to the personal, family and social life of involved patients [3,4]. Undoubtedly, the use of anti-psychotic medicines is a core and basis treatment for schizophrenia patients considering the complexity and severity of this disease [5].
Medicines are very effective in controlling and treating positive symptoms, and negative symptoms, to some extent [6]. Non-adherence to treatment program is an essential problem seen in psychiatric patients. According to WHO, the rate of adherence to medical-therapy in chronic diseases is 50% According to recent studies, non-adherence to treatment ranges from 20% to 60% in psychiatric patients [7, 8]. The majority of studies acknowledge that in addition to controlling current

Corresponding Author: Soheila Ahangarzadeh Rezaei, Assistant Professor, PhD in Nursing,Nursing and Midwifery Faculty, Urmia University of Medical Sciences, Urmia, Iran

symptoms, the type of effective intervention avoids the return of disease, improves the general function of patients and termination of disease [9, 10].
Promoting schizophrenia patients' awareness and knowledge on the acceptance of medicines is an intervention practiced in such patients and their family. This strategy is called adherence to treatment [11, 12]. Adherence to treatment intervention is actually adopting patients' behavior with treatment advises evolving around three main axes: drug regimen, food diet and activity plan [13]. In this intervention, the physicians and members of health care team concentrate on "be" and "not to be" principles and advise patients on practices to be done by them in order to avoid the side-effect of the chronic disease involved [14].
The ever-increasing growth of mental disorder drugs has caused clinical studies to pay attention to several factors, including quality of life, occupational and social rehabilitation and general function of patients, in order to show the efficacy of drug-based, and drug free interventions [15]. The quality of life and mental assessment of patients of their health status are important outcomes considered by these studies by which they can measure the effect of mental and physical diseases on the ability of performing daily activities [16, 17].
According to WHO, the quality of life, is a concept encapsulating physical health, psychological health, social relationships and environment. In other words, the perception of people of their current status correlates with the culture and value system within which they live as well as with the relationships between the perceptions and goals, expectations, standards and priorities [18, 19]. Paying attention to the quality of life is of high importance in chronic psychiatric patients. The quality of life is influenced by many factors including disease symptoms, individual trait and social and economic factors [20]. The prevalence of psychological diseases and their negative impacts is very high. Medical-therapy is considered as an essential, reliable and quick treatment in such patients. Despite their beneficial effects, side effects, long-term treatment and economic loads are the main concerns of such patients. This essentially affects the acceptance of medical-therapy by patients. Nurses more interact with patients and have more relations with them. Therefore, they can play a vital role in providing adherence to treatment intervention. Such educational interventions can affect treatment results. According to investigations, there are few studies on this field. Therefore, this study aims to evaluate the effect of adherence to treatment intervention on the quality of life of schizophrenia patients. It was executed in Razi medical-educational treatment center in Urmia.

Materials and Method

This is a clinical trial registered in Iranian Clinical Trial Center under the registration no. IRCT2016050526347N3. A total number of 70 male and female schizophrenia patients who were admitted in the center were selected in accordance with inclusion and exclusion criteria and participated in the study. Inclusion criteria were 1) schizophrenia cases diagnosed by a psychologist based on SDSM 5 diagnosis indices recorded in the cases' file, 2) minimum age 18 and maximum age 65, 3) minimum literacy of reading and writing (ability of understanding contents) and 4) consent of the patients and their legal guardians. Exclusion criteria were 1) lack of physical disabling disease, 2) no substance addiction and 3) being absent in two successive training sessions.
The samples of this study were selected among schizophrenia patients admitted in Razi Medical-Educational Center, Urmia. When the consent of the legal guardians was obtained in writing, considering the inclusion criteria the samples were selected using convenience sampling method until reaching the considered sample size. The selected samples, then, were grouped into intervention and control groups. To this end, numbers 1 and 2 were written on one side of small paper sheets and the sheets were put into white packets. Patients with inclusion criteria picked up a packet from a box in random. If the number on the selected sheet was 1, the patient was grouped in the intervention group, otherwise he/she was grouped in control group. In this way, 35 patients were grouped in the intervention group and 35 ones were grouped in the control group. In the beginning of study, the quality of life of both groups was assessed using Schizophrenic quality of life scale (SQLS) questionnaire. Both groups received the routine treatment of the department. The intervention group, however, participated in six education sessions twice a week, each lasting for 30-60 minutes. The contents educated in the sessions were as follows. First, schizophrenia and its causes, different treatments and problem solving of medicinal treatments (treatment duration, accurate treatment, following up the treatment in future) were explained in brief. Then, the importance of follow-up procedure and the side effects of drugs were emphasized. Next, relevant stresses were explained and it was educated that how to cope with them. The creation of an environment with the minimum possible stressful factors and promoting coping skills, diet and patients' activity plan and the use of provided services and confronting crises were other contents educated in the sessions. All educations were provided by the researchers in the interview room of hospitalization departments with the same training model. SQLS questionnaire has 30 items about socio-psychological field (15 items), motivation and energy (7 items), and symptoms and side effects (8 items). It uses Likert 5-point scale to score items where scores 0, 1, 2, 3, 4 stand for never, rarely, sometimes, often and always, respectively. The sum of scores ranges from zero to 120 and items 12, 13, 15 and 20 are scored inversely in the meaning that a case with a higher score in the items has a lower (worse) quality of life and vice versa [21]. This questionnaire has been used in international studies [22, 23]. It has been normalized in the study of Foroozande et al (2008) in accordance with Iranian cultural context.
Content validity was used to validate the questionnaire using the opinions of 10 experts. Its scientific validity was approved using re-test and its reliability (r=0.89) was confirmed [21, 24]. In the study of Nikfarjam (2010) test-retest method was used to confirm the scale reliability of study where SQLS questionnaire was filled for 30 cases twice with a one-week interval and the correlation factor was estimated 0.88 [25].
In our study, all cases of the intervention and control groups filled SQLS questionnaire after 8 weeks from the beginning of intervention by which the quality of life of both groups was assessed. Data was analyzed using SPSS16 and descriptive tests of chi-square, dependent-t, Wilcoxon, U Mann-Whitney were analyzed. Sig. level was considered <0.05.

Findings

A total number of 70 cases with 35 cases in the intervention and control groups participated in this study. The following table shows some demographic variables. According to dependent-t test, there is no significant test in the qualitative

variables of age (P=0.287) and total number of hospitalization (P=0.975) between the groups. According to chi-square results, there is no significant difference in the quantitative demographic properties including sex (P_{fisher}=0.797), marital status (P=0.983) and education (P=0.319) between the groups. This implies that both groups are homogeneous before intervention (P>0.05).

Table 1. comparison of the demographic variables of the studied cases separated by intervention and control group

variables \ Groups		Intervention group	Control group	
age	mean±standard deviation	36.06±11.19	38.83±10.40	t=-1.074 df=68 P=0.287
Number of hospitalizations (year)	mean±standard deviation	5±4.06	4.97±3.59	t=0.031 df=68 P=0.975
sex	Male (frequency)	23 (65.7)	25 (71.4)	Fisher=0.797
	Female (frequency)	13 (34.3)	10 (28.6)	
Marital status	Single	20 (57.1)	19 (54.3)	X^2=0.168 df=3 P=0.983
	Married	11 (31.4)	11 (31.4)	
	Divorced	4 (11.5)	5 (14.3)	
education		17 (47.6)	16 (45.7)	X^2=3.516 df=3 P=0.319
		13 (37.1)	17 (48.6)	
		5 (14.3)	2 (5.7)	

In the beginning of this study, both groups had the same mean quality of life score and according to U Mann-Whitney test, there was no significant difference between them (P=0.280) while after intervention, the mean quality of life score was significantly higher in the intervention group than the control group (P<0.001).

According to U Mann- Whitney test carried out at the end of this study, the mean score of SQLS questionnaire significantly dropped at the end of study compared with the beginning of the study (P<0.001) while this drop was not significant in the control group. This implies that the quality of life in the intervention group was improved following the execution of adherence to treatment intervention.

In addition, the results indicated the efficacy of adherence to treatment intervention in the improvement of all dimensions of the quality of life of the intervention group. The difference between groups after the intervention was significant (P<0.05) (tables 2 and 3):

Table 2. comparison of the mean scores of quality of life between the groups before intervention

quality of life dimensions \ Groups	Intervention group	Control group	Statistical tests U Mann-Whitney
	mean±standard deviation	mean±standard deviation	
Socio-psychological	41.00±16.03	39.28±11.96	P=0.204
Motivation and energy	15.57±5.13	15.37±4.47	P=0.733
Symptoms and side effects	12.31±6.21	11.54±6.95	P=0.491
Total score of quality of life	68.88±24.13	66.20±18.74	P=0.280

Table 3. comparison of the mean scores of qualities of life between the groups after intervention

quality of life dimensions \ Groups	Intervention group	Control group	Statistical tests U Mann-Whitney
	mean±standard deviation	mean±standard deviation	
Socio-psychological	24.48±12.72	37.54±12.29	P<0.001
Motivation and energy	11.83±3.92	15.11±4.58	P=0.006
Symptoms and side effects	5.77±4.54	8.54±5.83	P=0.049
Total score of quality of life	42.08±20.25	61.20±18.48	P<0.001

Discussion

This study observed no significant difference in demographic information between the intervention and control groups. This implies the homogenous demographic information of the groups where any change in the dependent variable was originated from the effects of the changes of the independent variable. This study showed no difference in the mean scores of the quality of life between the groups before intervention while the difference was significant after the intervention.

The obtained results indicate the efficacy of adherence to treatment intervention and its positive effects on the mean scores of the quality of life in the studied patients. This agrees with Marsaei et al study. According to Marsaei's study, conducting education intervention in schizophrenic patients for six months improved the quality of life of the patients during and at the end of the intervention [11]. In the study of Foroozande et al, occupational therapy improved the quality of life in schizophrenic patients [21]. The study of Alonso et al showed the considerable effects of medical-therapy in first six months

[26]. Although time seems an important factor in the recovery of schizophrenic patients after beginning medical-therapy, there may be other influential factors. Therefore, medical-therapy should go with educational intervention [11]. Educational interventions in schizophrenic patients and the acceptance of drug regiment by them decrease hospitalization period as well as indirect costs and improve the quality of life. In addition, they improve the general social function of such patients resulting in families' satisfaction and family independency. Thus, adjusting the factors affecting the improvement of adherence to treatment can play a vital role in the promotion of the quality of life [27]. The study of Razali and Yusoff in Malaysia showed that non-adherence to treatment is a common factor in the process of predicting the return of disease in schizophrenia patients. In patients who do not adhere to treatment, the return of disease is 3.7 times higher than those who adhere to treatment on the average [28]. The study of Matsuda and Kohono in Japan showed the efficacy of medical therapy acceptance in schizophrenia patients. However, there was no change in the promotion of knowledge on the diseases and the side effects of medical therapy [29]. Furthermore, the results of our study showed that adherence to treatment increased the scores of socio-psychological and motivation and energy indices. This implies the efficacy of this method in these two dimensions of the quality of life. Regarding the symptom and side effect dimensions, including sleeping problems, vision blurriness, xerostomia and motor problems, there was a significant improvement in the intervention group cases, which is a result of adherence to treatment intervention. This agrees with different studies. Parvin's et al study showed the positive effect of agriculture activities on the quality of life of schizophrenia patients. In addition, it showed the efficacy of group walking on the improvement of a number of physical health indices and the quality of life in schizophrenia patients in Shahkord [30, 31]. Educating social skills and helping psychiatric patients can positively affect their return to home and following up the treatment at homes after discharging from hospital. On the other hand, decreased motivation can severely disturb social function, independent life and interrelationships in such patients [26]. After establishing relationships with schizophrenia patients and inviting them to educational programs, the self-esteem and mood of them can be raised through providing necessary educations and avoiding stressful factors and stimulus [32]. In another study with different education plan, required educations were provided by skilled nurses at the beginning of hospitalization and were continued after discharging from hospital so that the studied cases were being checked-up at their homes. According to the results of that study, the awareness of cases of their diseases and their thoughts were changed and they regularly consumed their drugs and their quality of life was maintained at a satisfied level [33]. In the study of Shamsaei et al, follow-up educations were continued after discharging from hospital and the studied cases were checked-up 3 and 6 months after discharging from hospital. According to their results, those schizophrenia patients who received nursing cares at home, followed their drug instructions more accurately and more regularly compared with control group [34].

Conclusion

According to clinical specialists, the quality of life is the most important index of treatment effect on schizophrenia patients showing their health status [30]. In addition, nurses, as a holistic key persons interacting with patients, especially in psychological departments, play a key role in this regard [35]. According to the aforementioned results, nurses can establish a relationship with patients. In this way, they let patients state their feelings and this enables nurses to provide an educational intervention to them where the adherence of patients to treatment can promote the quality of life. Therefore, it is suggested that during formulating care programs, authorities should make it possible to adopt this treatment method as a part of the drug-free treatment program for the patients.

Acknowledgement

This article, which was derived from a thesis, is a product of a research project approved by the research vice presidency of Urmia University of Medical Sciences registered under the contract No.: ir.umsu.rec.1394.427. The authors are very thankful to the education and research vice presidencies of nursing and midwifery faculty of Urmia University of Medical Sciences and all people aided us. In addition, we are very thankful to the patients and their families as well as the managers and staff of Razi educational-treatment psychology center, Urmia.

References

1. Fortanish KH, Worret PH. Psychiatric Memtal Health Nursing. 3ed. Mosby; 2008: 251-81.
2. Jest DV, Liberman JA, Fassler D, Peele R. Diagnostic and Statistical Manual of Mental Disorders (DSM). 5th ed. American Psychiatric Association 2013: 313.
3. Elder R, Evans K, Nizette D. Psychiatric and mental health nursing: Elsevier Australia; 2008: 219-220.
4. Sadock, Benjamin J, Sadock, Virginia A, Ruiz, Pedro. Kaplan & Sadock's Comprehensive Textbook of Psychiatry. 9th ed. Philadelphia: Lippincott Williams & Wilkins 2009; 1435-1593.
5. Eri Tatsumi, Kayano Y, Toshimichi N, Takeshi H. Effects of occupational therapy on hospitalized chronic Schizophrenia patients with severe negative symptoms. Kobe Journal of Research in Medical Sciences. 2011; 4(57): 145-154.
6. Bonsaksen T, Lerdal A. Relationships between physical activity, symptoms and quality of life among in patients with severe mental illness. The British Journal of Occupational Therapy. 2012; 75(2): 69-75.
7. Mert DG, Turgut NH, Kelleci M, Semiz M. Perspectives on reasons of medication nonadherence in psychiatric patients. Patient preference and adherence. 2015; 9(1): 87-93.
8. Ebrahimi H, Ranjbar F, Namdar H, Mosaaffa F. The effect of therapeutic relationship in schizophrenic patients. The Journal of Urmia Nursing and Midwifery Faculty 2014; 12(6): 491-498. (Persian)
9. Mclntosh AM CL, Lawrise SM, Stanfield Ac. Compliance therapy for schizophrenia. Cochrane Database Syst Rrv. 2009; 3: CD003442.

10. A.B.P. Staring, C.L. Mulder, H.J. DuivenvoordenL, De Haan, M. Van der Gaag. Fewer symptoms vs. more side-effects in schizophrenia? opposing pathways between antipsychotic medication compliance and quality of life. Journal of schizophrenia Research.2009; 5(22): 27-33.
11. Maracy M, Jannesari Z, Omranifard V, SoltaniS. The effect of compliance therapy on quality of life and global function of schizophrenic patients. Journal of Behavioral science Reaserarch center of Isfahan. 2011; 2(9): 114-21. (persian)
12. Omranifard V, Karahmadi M, Jannesary Z, Maracy M. Efficacy of modified compliance therapy for schizophrenia patients. Journal of Research in Medical Sciences. 2012; 17(2): 258-263.
13. Masror Roudsari DD, Dabiri Golchin M, Parsa yekta Z, Haghani H. Relationship between Adherence to Therapeutic Regimen and Health Related Quality of Life in Hypertensive Patients Iran Journal of Nursing (IJN); 2013: 26(85): 44-54. (persian)
14. Nassehi A, Borhani F, Abaszadeh A, Gafari M. Effect of ejuacation of compliance-based model on the quality of life in the astma patients. Hamedan J Res Med Sci. 2012; 2 (20): 32-39. (persian)
15. Mehrabi T, Afshar H, Omranifard V. The investigation of different domains of life quality in schizophrenia. Journal of Research in Behavioural Sciences. 2007; 5(1): 23-7. (persian)
16. Mojarad khah, ghanabari taba. The efficacy of group psycho educational interventions on family performance of patients with mood disorders. 2012; 10(2): 114-123. (persian)
17. Pourshaban M, Parsayekta Z,et al.The effect of food diet training on the quality of life among non- dialysis patients with chronic renal disease. Iran Jornal of Nursing. 2013; 26(82): 11-22. (persian)
18. Andrews FM, Withey SB. Social indicators of well-being: Americans' perceptions of life quality: Springer Science & Business Media; 2012.
19. Organization WH. World Health Organizatin of Quality of Life group.WHOQOLBREF Introduction, Administration and Scoring, Field Trial version. Geneva: World Health Organization. Quality of life Research. 1996.
20. Jones PB, Barnes TR, Davies L, Dunn G, Lloyd H, Hayhurst KP. Randomized controlled trial of the effect on Quality of Life of second-vs first-generation antipsychotic drugs in schizophrenia: Cost Utility of the Latest Antipsychotic Drugs in Schizophrenia Study (CUtLASS 1). Archives of general psychiatry. 2006; 63(10): 1079-87.
21. Forozandeh N, Forozandeh M, Delaram M, Safdari F, Derakhshandeh S, Deris F. The effect of occupational trapy for several dimensions of quality of life in choronic schizophrenic patients. Shahrcord J Res Med Sci 2007; 4(10): 51-57. (persian)
22. Greg Wilkinson, Bernadette Hesdon, Diane Wild, Ron Cookson, Carole Farina, Vimalsharma, Rayfitzpa trick and Crispin Jenkinson. Self-report quality of life measure for people with schizophrenia: the SQLS. BJP 2000; 177(1):42-46.
23. Taha Nur A, Ibrahim M, Rahman A, Shafie A, Rahman A H. Validation of the schizophrenia quality of life scle revision 4 among chronic schizophrenia patients in malaysia. elsevier 2012; 1(1): 82-86.
24. Foruzandeh N, Delaram M, Aiin F, Deris F. The relationship between positive and negative symptoms and quality of life in chronic schizophrenic patients of Sina hospital Juneqan. Journal of Behavioral science Reaserarch center of Isfahan. 2011; 4(9): 295-304. (persian)
25. Nicfarjam M. The efficacy of religious training (prayer) on the improvement of the schizophrenic patients of quality of life at Sina Psychiatric Hospital. AMUJ 2011; 13(4): 133-138. (persian)
26. Alonso J, Croudace T, Brown J, Gasquet I, Knapp MRJ, Suárez D. Health-related quality of life (HRQL) and continuous antipsychotic treatment: 3-year results from the schizophrenia health outcomes (SOHO) study. Value in Health 2009; 12(4): 536-43.
27. Ebrahimi H, Namdar H, Ranjbar F, Mosaaffa F. Relationship between insights into the disease with compliance in schizophrenic patients. The Journal of Urmia Nursing and Midwifery Faculty 2014; 12(5): 354-360. (Persian)
28. Razali SM, MZAM Yusoff. Medication Adherence in Schizophrenia: A Comparison between Outpatients and Relapse Cases. East Asian Arch Psychiatry 2014; 24: 68-74.
29. Matsuda M, Kohno A. Effects of the nursing psychoeducation on the acceptence of meadication and condition-spesific knowledge of pationts with schizophrenia. Psychiatric Nursing Elisvier 2016; 30: 581-586.
30. Parvin N, Rafiee Vardanjani L, Nikfarjam M, Mohammadi A, Mahmoudi A, Deris F. The effect of agriculture activity on quality of life in chronic schizophrenic patients. Irani an Journal of Psychiatric Nursing 2014;7(3): 69-76. (persian)
31. Nikfarjam M, Parvin N, Mohamdi-Ahmad Mahmodi A, Norizadeh F, Rafiee-Vardanjani L. The efficacy of group hiking on some physical health indexes and quality of life of chronic schizophrenic patients: A randomized clinical trial.Journal of Clinical Nursing and Midwifery 2015; 4(2): 43-51. (persian)

32. Maaly. I. El Malky, Merfat. M. Attia, Faten. H.Alam. The effectiveness of social skill training on depressive symptoms, self- esteem and interpersonal difficulties among Schizophrenic patients. International Journal of Advanced Nursing Studies 2016; 5(1): 43-50.
33. Cheragi F, Shamsaei F, Riyazei H. Health and family care needs of psychiatric patients after discharge from the psychiatric center of Hamedan Farshchian. Journal of Nursing and Midwifery Hamedan 2011; 18(2): 15-21. (Persian)
34. Shamsaei F, Cheraqi F, Qalahiha A. The effect of nursing home care in the treatment of patients schizophrenia hospitalized in Hamadan. University of Medical SciencesElam 2007;15(2):32-38. (persian)
35. Nicholas D, Dinah G, Teresa A. The relationship between continuing professional education and commitment to nursing. Nurse Educ Today 2009; 29(7):740-5