



MUSIC THERAPY ASSOCIATED WITH PSYCHOLOGICAL INTERVENTION EFFECT ON INFERTILE PATIENTS QUALITY OF LIFE

CRISTIANA, HAICA ^a FLORIN, ENE ^a

^a*Hyperion University, Faculty of Psychology and Educational Sciences
Department of Psychology*

Abstract

Infertility medical treatment often means repeated assisted reproduction intervention cycles that creates a specific type of emotional distress that can affect quality of life level. We hypothesized that music therapy when associated with psychological intervention has an effect of improving patients' quality of life level more than psychological intervention alone. In this study participated 146 subjects, distributed in two groups by option to music therapy. The psychological intervention consists of cognitive-behavioral therapy and health education. Results show that the quality of life level increased when music therapy is associated with cognitive behavioral therapy.

Keywords: *music therapy, health education, infertility, quality of life.*

1. INTRODUCTION

Infertility medical treatment usually means a number of repeated medical assisted reproduction interventions cycles that create an emotional distress and negative emotions, a loss of unconditionate self acceptance, physical symptoms of distress and cognitive or behavioral difficulties (diminishing attention concentration, disfunctional thoughts and attitudes, changes in life plans), disappointment, despair. Sometimes couple communication and marital relation and also the way they position themselves towards the others are influenced by fertility problems (e.g. avoid social groups where there are children or pregnant women, change their expectations, stigma, inefficient social support), or there are changing the way they feel about and behave to their partner (Galhardo et al, 2011; Boivin et al, 2001; Convington et al, 2006). All these might influence the quality of life level.

In these circumstances it is mandatory that the individuals' mental health and

Corresponding author: Cristiana Haica

E-mail address: cristiana haica@yahoo.com

also their social problems must be taken into consideration along with medical treatment of infertility.

In the last decades have been developed methods, programmes for approaching the psychological problems of the infertile patients such as: cognitive behavioral therapy (CBT), (Rizeanu, 2013), interpersonal psychotherapy (Koszycki et al, 2012), supportive therapy (Noorbala, 2008; Faramazi et al, 2008), emotion-focused and problem-focused coping strategies (Holzle et al, 2002) positive psychotherapy (Seyedi et al, 2016). However, psychoeducation and interventions using cognitive behavioral skill building and stress management techniques seemed to be particularly effective in reducing patient distress (Boivin, 2003; Domar et al, 2000; Rizeanu, 2018).

Music therapy has been used in the last decades in enhancing patients' quality of life in dementia, oncology, intensive care (Bradt et al, 2011; Ueda et al, 2013; Sendelbach et al, 2006), stomatology, anesthesia in surgery, etc. Music therapy is one of complementary therapies used in palliative care for decades. Most palliative care using music therapy is in pain therapy, improving quality of life (Bowers, 2014), diminishing emotional distress, anxiety (Daykin et al, 2006). "Music therapy combined with cognitive restructuring could provide a mechanism to improve patients' sense of control over emotional distress"; this methods associated can be used to assist married couples to cope with emotional distress (Ezegbe et al, 2018).

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVES

To evaluate the effect of music therapy associated with cognitive behavioral intervention on quality of life level of infertile patients.

2.2. HYPOTHESES

We hypothesized that it is a statistic significant difference in QoL level between the subjects who choose to attend music therapy and cognitive behavioral intervention and the subjects who choose to attend only psychological intervention.

3. METHOD

3.1 Participants

146 subjects (73 men, 73 women) took part in this study. The inclusion criteria: married couples, age between 20 and 50 years, diagnosed with infertility and asking for medical treatment in fertility clinics.

Exclusion criteria: any psychiatric problems in their medical history, child birth, pregnancy interruption.

The subjects' distribution in two groups was realised considering their option to participate at psychological intervention and music therapy (*group 1*) or psychological intervention and no music therapy (*group 2*).

Group 1 has sixty subjects (41.1 %) and group 2 has eighty six subjects.

The patients gave written consent for the study after the benefits and the purpose of this study were explained.

All procedures of the research were conducted in secure clinical settings and participants were informed that any digital recordings will be destroyed when completion of the research. All the personal data were anonymised (using a code number). Only the research team has access to the data.

3.2. Instruments

FertyQoL is a “validated instrument to measure quality of life in individuals experiencing fertility problems” (www.fertyqol.com).

The questionnaire has 36 items: 2 are used for an overall evaluation of physical health and satisfaction with quality of life and 34 items -“Core F” grouped in 4 subscales, 6 items each: Emotional, Mind-Body, Relational and Social.

Music Therapy – here used the receptive music therapy (passive listening) inspired from Iamandescu Receptive Music Therapy Technique - the subjects were given a playlist with 16 classic musical fragments specified to have a relaxing or activating effect (Iamandescu, 2004). These fragments are composed by Mozart, Vivaldi, Mendelssohn Bartoldy, L.Van Beethoven, Robert Schumman, Jules Massenet, Serghei Rachmaninov, P.I. Ceaikovski, Debussi, Bach, and Chopin. The subjects have to sort the music according to their preferences in two secondary playlists: music having an activating/tonic/motivating effect and music with relaxation/calming effect. They have to listen the music each time they feel angry, anxious, irritated (relaxation music) or sad, depressed, hopeless, exhausted (activating music), or (if they do not feel as mentioned before) at least three times (sessions) a day, 30 minutes per session, according to their self perceived mood.

3.3. Statistical Analysis

We used SPSS version 20 for data analysis: Mean Scores, Standard Deviation, Independent t-Test. Data was analyzed with ANCOVA unifactorial, partial Eta-squared for ANCOVA.

3.4. Study stages

The subjects who gave informed consent filled in the quality of life questionnaire before starting medical treatment. Then they participated in psychological intervention sessions, with or without music therapy.

The psychological intervention consists of cognitive behavioral protocol of 8 sessions, based on primary prevention, psycho-education. The music sessions are self administrated by subjects at home any time they experience negative emotions, choosing the music they consider relaxing, calming or activating, tonic, optimistic.

The objectives of the psychological intervention are: psychoeducation concerning psychologic aspects of infertility, coping strategies, improve decision making process, conflicts solving, crisis management, communication skills, discussing alternatives to assisted reproduction, stigma diminishing and elimination, using relaxation techniques, cognitive reframing, restructuring negative thinking and dysfunctional attitudes.

The objectives of receptive music therapy are to identify and diminish the negative emotions such as anger, anxiety, sadness, depression, hopelessness, by listening the musical themes that the subjects choosed from the playlist to be adequate for each category of emotion.

When the medical treatment is finished, all the subjects were asked again to fill in the quality of life questionnaire. We mention that this final evaluation took place before the pregnancy test taken; in order not to be influenced by the result. The final scores were compared between the two groups and with initial scores.

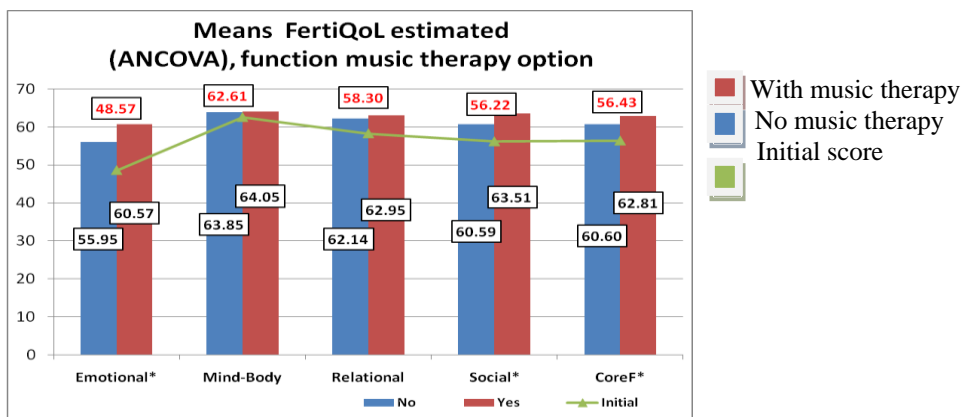
4. RESULTS

The initial mean values of Core FertyQoL and subscales are: CoreFertyQoL 56.43, Emotional 48.57, Mind-Body 62.61, Relational 58.3 and Social 56.22. As we already mention in a previous article (Haica C, 2018), after cognitive behavioral intervention the quality of life increases significantly.

Final mean scores for grup 1 are CoreF 62.81, Emotional 50.57, Mind Body 64.05, Relational 62.95, Social 63.51, and Group 2 (psychological intervention) mean scores are CoreF 60.60, Emotional 55.95, Mind Body 63.85, Relational 62.14, and Social 60.59 (Figure 1).

Multifactorial ANCOVA was used to analyse the effect of music therapy on life quality level (the final mean scores, statistically controlling the initial level of QoL).

Figure1. Means FertiQoL estimated (ANCOVA), function music therapy option



The results indicate a statistic significant difference in QoL scores function of the option for music therapy (when initial QoL level controlled) [f (1.143) = 15.063, p<0.001].

Table 1. Test ANCOVA – CoreF * Music therapy

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	13918.960 ^a	2	6959.480	743.892	.000	.912
Intercept	2604.189	1	2604.189	278.359	.000	.661
coref	10304.353	1	10304.353	1101.422	.000	.885
Music therapy.	140.919	1	140.919	15.063	.000	.095
Error	1337.837	143	9.356			
Total	567613.932	146				
Corrected Total	15256.797	145				

There is a statistic significant difference between recalculated means of Core F of the two groups (p<0.001) 2.201 ± 1.121 .

Group 1 (psychological intervention plus music therapy) has a mean score on CoreF higher than Group 2. The effect is low (eta squared = 0.095).

There is a significant difference on Emotional scale function of music therapy option [f (1.143) =14.369, p<0.001, and a statistic significant difference between recalculated means of Emotional scale of the two groups (p<0.001) 4.615 ± 2.406 .

Table 2. ANCOVA –Emotional* Music therapy

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	16956.310 ^a	2	8478.155	180.756	.000	.717
Intercept	13948.784	1	13948.784	297.391	.000	.675
coref	12617.109	1	12617.109	269.000	.000	.653
Music therapy AP.	673.950	1	673.950	14.369	.000	.091
Error	6707.241	143	46.904			
Total	512239.583	146				

Corrected Total	23663.551	145				
-----------------	-----------	-----	--	--	--	--

a. R Squared = .717 (Adjusted R Squared = .713)

Group 1 (psychological intervention plus music therapy) has a mean score at Emotional scale higher than Group 2. The effect is low (eta squared = 0.091)

There is not a statistic significant difference on Mind-Body scale between the two groups, function of music therapy option [f (1.143) = 0.041, p>0.05].

There is not a statistic significant difference on Relational scale between the two groups, function of music therapy option, controlling the initial level of QoL [f (1.143) = 1.311, p>0.05].

There is a statistic significant difference, function of music therapy option [f (1.143) = 10.827, p<0.01], between recalculated means of Social scale (p<0.01) of 2.925 ± 1.757 .

Group 1 (psychological intervention plus music therapy) has a mean score on Social scale higher than Group 2. The effect is low (eta squared = 0.070).

Discussions

Group 1 (psychological intervention and music therapy) have higher level of QoL than Group 2. The research hypothesis is confirmed.

Music therapy contribution is reflected in improving the way subjects experience negative emotions generated by fertility problems (emotional aspects), and improving the social interactions (social aspects).

Music therapy associated with psychological intervention does not influence the way subjects experience negative physical symptoms (Mind body aspects), nor the way the couple relationship is affected by fertility problems (relational aspects).

Adding music therapy to psychological intervention improves the therapy effect on the QoL level due to music effect of reducing the negative emotions, and improving social relationship of infertile patients.

5. CONCLUSIONS

When patients participate to cognitive behavioral intervention and music therapy, the quality of life level is higher than quality of life level of patients that attend only psychological intervention. Music therapy helps to improve the quality of life especially in its emotional and social aspects and it has no influence on couple relation, or mind body aspects affected by infertility.

In conclusion, the music therapy associated with cognitive behavioral therapy can be used to help infertile couples to better cope with emotional distress.

Received at: 01.02.2019, Accepted for publication on: 12.03.2019

REFERENCES

- Boivin, J. (2003). A review of psychosocial interventions in fertility. *Soc Sci Med.*; 57:2325–2341.
- Boivin, J., Appleton, T.C., Baetens, P., Baron, J., Bitzer, J., Corrigan, E., Daniels, K.R., Darwish, J., Guerra-Diaz, D., Hammar, M. (2001). Guidelines for counselling in infertility: outline version. *Hum. Reprod.*, 16, 1301–1204.
- Bowers, T.A., Wetsel, M.A. (2014). Utilization of music therapy in palliative and hospice care. *J Hosp Palliat Nurs.* ; doi: 10.1097/NJH.000000000000060.
- Bradt, J., Dileo, C., Grocke, D., Magill, L. (2011). Music interventions for improving psychological and physical outcomes in cancer patients. *Cochrane Database Syst Rev.*; 8:CD006911
- Convington, S.H., Burns, L.H. (2006). Counselling the infertile couple. In Burns, L.H. and Covington, S.H. *Infertility counselling: a comprehensive book for clinicians*, 2nd ed ; Cambridge University Press
- Darwish, J., Guerra-Diaz, D., Hammar, M. (2001). Guidelines for counselling in infertility: outline version. *Journal of Human Reproduction*, Vol. 16, p. 1301–1204
- Daykin, N., Bunt, L., McClean, S. (2006). Music and healing in cancer care: survey of supportive care providers. *Arts Psychotherapy* ;33:402–13.
- Domar, A., Clapp, D., Slawsky, E.A., Dusek, J., Kessel, B., Freizinger, M. (2000). Impact of group psychological interventions on pregnancy rates in infertile women. *Fertil Steril.* 73:805–811.
- Ezegbe, B. N., Ede, M. O., Eseadi, C., Nwaubani, O. O., Akaneme, I. N., Aye, E. N., Ede, K. R., Omeje, J. C., Ezurike, C., Onyishi, C. N., Ali, R. B., Eze, N. M., Omeje, G. N., Ofuebe, J., Ugwu, U. (2018). Effect of music therapy combined with cognitive restructuring therapy on emotional distress in a sample of Nigerian married couples. *Medicine*, 97(34), e11637.
- Faramarzi, M., Kheirkhah, F., Esmaelzadeh, S., Alipour, A., Hjjahmadi, M., Rahnama, J. (2008). Is psychotherapy a reliable alternative to pharmacotherapy to promote the mental health of infertile women? A randomized clinical trial. *Eur J Obstet Gynecol Reprod Biol.* 141(1):49–53.
- Galhardo, A., Cunha, M., Pinto-Gouveia, J. (2011). Psychological aspects in couples with infertility, *Sexologies*, Vol. 20, p. 224-228
- Haica, C. (2018). The effect of psychological intervention on infertile couples quality of life during A.R.T. medical treatment. *Romanian Journal of Psychological Studies*, 6(2):3-14.
- Holzle, C., Brandt, U., Lu'tkenhaus, R., Wirtz, M. (2002). Solution-Focused Counseling for Involuntarily Childless Couples. In: Strauß. B. (ed). *Involuntary Childlessness. Psychological Assessment, Counseling and Psychotherapy*. Seattle: Hogrefe & Huber Publishers, p 105–126.
- Iamandescu, I. B. (2004). *Muzicoterapia Receptiva*. București: Info Medica.
- Koszycki, D., Bisserbe, J.C., Blier, P., Bradwejn, J., Markowitz, J. (2012). Interpersonal psychotherapy versus brief supportive therapy for depressed infertile women: first pilot randomized controlled trial. *Arch Womens Ment Health* ;15(3):193–201.

McQueeney, D.A., Stanton, A.L., Sigmon, S. (1997). Efficacy of emotion focused and problem-focused group therapies for women with fertility problems. *J Behav Med.*;20(4):313–331.

Noorbala, A.A., Ramazanzadeh, F., Malekafzali, H., Abedinia, N., Forooshani, A.R., Shariat, M., Jafarabadi, M. (2008). Effects of a psychological intervention on depression in infertile couples. *Int J Gynaecol Obstet*;101(3):248–252.

Rizeanu, S. (2018). Cognitive-behavioral therapy for gambling addiction. In Senormanci, O. (2018). *Cognitive Behavioral Therapy and Clinical Applications*, p 61-81. Rijeka: InTech. DOI:10.5772/intechopen.72671

Rizeanu, S. (2013). *Introducere în psihoterapie*. Bucuresti: Universitara.

Sendelbach, S.E., Halm, M.A., Doran, K.A., Miller, E.H., Gaillard, P. (2006). Effects of music therapy on physiological and psychological outcomes for patients undergoing cardiac surgery. *J Cardiovascular Nurs*; 21:194–200. doi: 10.1097/00005082-200605000-00007.

Seyedi Asl, S. T., Sadeghi, K., Bakhtiari, M., Ahmadi, S. M., Nazari Anamagh, A., & Khayatan, T. (2016). Effect of Group Positive Psychotherapy on Improvement of Life Satisfaction and The Quality of Life in Infertile Woman. *International journal of fertility & sterility*, 10(1), 105-12.

Ueda, T., Suzukamo, Y., Sato, M., Izumi, S.I.(2013). Effects of music therapy on behavioral and psychological symptoms of dementia: a systematic review and meta-analysis. *Ageing Res Rev*.12:628–41. doi: 10.1016/j.arr.2013.02.003.

www.fertyqol.com

Copyright: Submission of a manuscript implies that the work described has not except in the form of an abstract or as part of a published lecture, been published before (or thesis) and it is not under consideration for publication elsewhere; that when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher.
