

## Schizophrenia and personality disorder patients' adherence to music therapy

Hannibal, Niels; Pedersen, Inge Nygaard; Hestbæk, Trine Lundsfryd; Egelund, Torben; Munk Jørgensen, Povl

*Published in:*  
Nordic Journal of Psychiatry

*DOI (link to publication from Publisher):*  
[10.3109/08039488.2012.655775](https://doi.org/10.3109/08039488.2012.655775)

*Publication date:*  
2012

*Document Version*  
Early version, also known as pre-print

[Link to publication from Aalborg University](#)

*Citation for published version (APA):*  
Hannibal, N., Pedersen, I. N., Hestbæk, T. L., Egelund, T., & Munk Jørgensen, P. (2012). Schizophrenia and personality disorder patients' adherence to music therapy. *Nordic Journal of Psychiatry*, 66 (6), 376-379.  
<https://doi.org/10.3109/08039488.2012.655775>

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal -

### Take down policy

If you believe that this document breaches copyright please contact us at [vbn@aub.aau.dk](mailto:vbn@aub.aau.dk) providing details, and we will remove access to the work immediately and investigate your claim.

# Schizophrenia and personality disorder patients' adherence to music therapy

NIELS HANNIBAL, INGE NYGAARD PEDERSEN, TRINE HESTBÆK,  
TORBEN EGELUND SØRENSEN & POVL MUNK-JØRGENSEN

Hannibal N, Nygaard Pedersen I, Hestbæk T, Egelund Sørensen T, Munk-Jørgensen P. Schizophrenia and personality disorder patients' adherence to music therapy. *Nord J Psychiatry* 2012; Early Online 64:1–4.

**Background:** Music therapy is used in psychiatric treatment of severe psychiatric conditions such as schizophrenia, depression and personality disorder. **Aim:** To investigate adherence and predictors for adherence to music therapy treatment in patients diagnosed with schizophrenia or personality disorder. **Method:** Demographic, psychiatric and therapeutic data were collected for 27 patients receiving music therapy treatment over a 1-year observation period and a 1-year follow-up period. Predictors for adherence to music therapeutic treatment were determined by means of regression analysis. **Results:** Drop-out from treatment was low (11.5%) and none of the variables significantly predicted adherence. Lack of significance may be because of type 2 error. **Conclusion:** Patients with severe mental disorder may adhere to music therapy treatment. • *Music Therapy, Patient adherence, Personality Disorder, Schizophrenia.*

Niels Hannibal, Ph.D., Associate Professor Aalborg University; Aalborg University, Kroghstrædet 6, 9220, Aalborg Oe, Denmark, E-mail: hannibal@hum.aau.dk/nijh@rn.dk; Accepted 4 January 2012.

Music therapy with a psychodynamic and relationally oriented approach to treatment is comprised of musical and verbal interventions that are used to create the necessary conditions for psychological change and support. Music therapy requires no musical skills from the patient. The interventions include active and/or receptive music therapy techniques (1). Active music therapy techniques involve the client in making music and may include musical improvisation (2), musical composition such as songwriting (3) or musical performance. Receptive music techniques include listening and responding to music, which is sometimes chosen by the patient or at other times by the therapist (4). Music therapists in psychiatry in Denmark often combine active and receptive techniques depending on the patient's needs and the goals of the treatment (5).

Music therapy may be used to treat severe psychiatric conditions such as acute psychosis, schizophrenia (6), depression (7–9) and personality disorder (10, 11). In Denmark, music therapy is most frequently used in treatment of patients with schizophrenia and personality disorders.

A dose–response relationship has been documented when music therapy is compared with standard treatment,

with dose defined as number of sessions (12). Music therapy has been shown to affect the global state, general symptoms, negative symptoms, depression, anxiety, functioning and musical engagement; large effect sizes have been shown after 16–51 sessions (12). Music therapy can be an effective treatment for people with severe psychotic and non-psychotic mental disorders and may help to improve the global state, symptoms and functioning (12).

## Aims

To investigate adherence to treatment for all patients receiving music therapy in three Danish psychiatric centres, the authors defined adherence to treatment as staying in treatment as long as agreed upon. There was no lower limit to how many sessions were required. Drop-out was used as an indicator of lack of adherence to treatment.

## Material and methods

The researchers reviewed medical records of all patients who began music therapy treatment in the years 2005–2006 in this 1-year follow-up study. The medical team

referred most patients to music therapy; the remaining patients referred themselves. Each institution had individual referral procedures. Data recording procedures did not register specific indications for music therapy treatment, but the data distinguished between patients who had specific reasons for referral to music therapy treatment and those who had no specific reason for referral.

The project was approved by the Danish Data Surveillance Agency. Since only treatment records were used, the project is not within the Danish law of scientific ethical committees.

The following data were collected: demographic variables (age, gender, occupation and level of education), psychiatric variables (diagnosis, medical treatment at treatment start and ending, patient status at treatment start and ending, narco-curare-electroshock therapy treatment) and therapeutic variables (prior therapeutic experience, prior music therapy experience, concurrent therapy, therapy setting, assessment of treatment suitability, specific referral criteria, number of sessions, number of cancelled sessions). The therapist also assessed whether the patients became acquainted with music as a treatment tool and whether they could formulate treatment goals at the end of treatment. For the ease of data collection, data were dichotomised at a low level of detail. There was no assessment of function level (GAF) or registration of co-morbidity.

Clinical staff in the psychiatric departments at Horsens Hospital, Aalborg Psychiatric Hospital and the Centre for Social Psychiatry (Marielund, Kolding) referred participants to music therapy. Treatment settings included open wards, closed wards and day treatment wards/facilities. There were no external benefits, such as special privileges for the patients participating in the music therapy treatment, other than the treatment itself.

Inclusion criteria were all patients who: 1) began music therapy treatment in the period; 2) had an ICD 10 diagnosis and had either an F2 or an F6 diagnosis; and 3) were suitable or possibly suitable for treatment. Exclusion criteria were all patients who: 1) were in treatment when the observation period began; 2) had a diagnosis other than F2 or F6; 3) were unsuitable for treatment; and 4) were in a one-session treatment setting. Of 50 patients who were in music therapy during the study period, researchers excluded 23, and included 27 who initiated treatment during the study period. They were diagnosed with schizophrenia ( $n = 10$ ) or personality disorder ( $n = 17$ ). Of these, 12 were male, and 15 were female. Seven had education beyond public school and only one was employed during the period studied. Participants ranged in age from 19 to 59, with an average age of 30 years. The majority ( $n = 24$ ) were outpatients at the onset of the study, although two were hospitalized during the observation period. Most ( $n = 22$  at the beginning,  $n = 24$  at the end) were receiving medication. The

average dose of music therapy treatment was 18 sessions (standard deviation,  $s = 5.5$ ); and most patients ( $n = 20$ ) received group sessions, whereas only seven received individual music therapy. The group size for patients with personality disorder was between five and seven participants. The group size for patients with schizophrenia was smaller, but the actual size was not included in the data. A total of four patients with schizophrenia received group music therapy in all.

Patients cancelled their sessions 18% of the time. Among those included in the study, 52% of the patients were able to formulate treatment goals during the music therapy and 85% became acquainted with music as treatment.

The study used Fisher's test to explore the associations between adherence and other variables. A multiple regression analysis sought predictors for non-adherence to treatment. Variables used as predictor variables in the regression analysis included gender, age, education, employment, diagnosis, patient status at start and end of treatment, medication at start and end of treatment, prior therapeutic experience with either verbal and music therapy, concurrent therapy, reason for referral, specification of treatment goals, therapeutic setting, treatment suitability, treatment longer than 20 sessions, and familiarity with music as treatment. The analyses did not control for psychiatric facility neither for therapist providing treatment because of limited sample size.

## Results

In total, 24 patients remained in treatment and three dropped out. Adherence to treatment was 90% for patients with schizophrenia and 87% for patients with personality disorder. None of the variables predicted adherence significantly.

## Discussion

The study is a naturalistic follow-up study investigating adherence and identifying predictors for adherence. The findings suggest that it is possible for patients with severe psychiatric illnesses to adhere to music therapy treatment in a psychiatric institution. The findings differ from other non-music therapy studies that find low adherence and high drop-out from psychiatric treatment (13–16). Whether this high level of adherence to treatment is related to music therapy as an intervention, other factors or a combination is not clear.

One recent study describing day treatment for patients with personality disorders (group, individual, group music therapy, cognitive psychotherapy, and drawing therapy) showed that adherence to treatment also may be possible for patients with personality disorder when the approach is intensive psychotherapeutic treatment (17).

The authors reported that 82% of patients with personality disorder remained in treatment.

Adherence to music therapy treatment in this study suggests that the patients may have developed an alliance to the music therapists. Piper et al. (18) reported that drop-out from treatment was related to a weaker alliance, less work, less exploration and greater focus on transference. Johansson & Eklund (19) investigated the development of the helping alliance and early drop-out from psychiatric out-patient care and concluded that factors related to the interpersonal processes seemed important in establishing alliance and for predicting early drop-out. They hypothesised that it is not the general severity of problems that has the highest impact on the establishment of helping alliance. Their multivariate analysis showed that low levels of the cold/distant factor and high levels of motivation and interpersonal sensitivity on the part of the client were important in establishing helping alliance. The most essential variable was the alliance as perceived by the patient. They also showed through logistic regression analysis that low helping alliance, low age and high levels of cold/distant factor predicted early drop-out (19).

The findings in the present study indicate that an alliance may be possible despite general severity of illness, as the population in this study had severe problems of both psychotic and non-psychotic nature. Previous research has shown music therapy to be a means to develop alliance to treatment in patients who abuse alcohol and drugs (20, 21).

The study is limited by the small sample size. This together with the skewed distribution of outcome (24 adherent patients and three drop-outs) may explain the non-significant findings in the predictor analyses for drop-out. The data collected did not include information about some possible confounding variables, such as comorbidity and self-referral. Also the phenomenon of adherence is seen only from a quantitative perspective and not through a qualitative investigation of the experience of the adherence to music therapy treatment.

This study suggests some specific characteristics as indicators for drop-out from music therapy that need to be investigated in multicentre studies with a larger sample such as length of treatment, prior music therapy experience, gender and occupational status. These parameters need to be investigated as possible predictors for non-adherence to treatment in future research.

Moreover, the study shows that adults in psychiatric treatment for mental disorders may adhere to music therapy treatment. Researchers should conduct further research on a large scale targeting specific patient populations and treatment settings. Such research should also include treatment specific variables such as change or decrease in symptoms, increase of function and cost-

benefit parameters such as length of hospitalisation and need for support.

*Acknowledgements*—Thanks to Dr Cathy McKinney, Ph.D., Appalachian State University, Boone, NC, USA, for feedback and criticism.

**Declaration of interest:** The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

## References

1. Wigram T, De Backer J. Clinical applications of music therapy in psychiatry. London: Jessica Kingsley Publishers; 1999.
2. Wigram T. Improvisation—Methods and techniques for music therapy clinicians, educators, and students. London: Jessica Kingsley Publishers; 2004.
3. Baker F, Wigram T. Songwriting methods, techniques and clinical applications for music therapy clinicians, educators and students. London: Jessica Kingsley Publishers; 2005.
4. Grocke D, Wigram T. Receptive methods in music therapy techniques and clinical applications for music therapy clinicians, educators and students. London: Jessica Kingsley Publishers; 2006.
5. Hannibal N. Music therapy in psychiatry in Denmark in 2008: Where, who, how and how much. Unpublished paper at the 6th Nordic Music Therapy Conference 2009: Sounding Relationships 30 April–3 May 2009, Aalborg University, Denmark.
6. Gold C, Heldal T, Dahle T, Wigram T. Music therapy for schizophrenia or schizophrenia-like illnesses. *Cochrane Database Syst Rev* 2005 Apr 18(2):CD004025.
7. Maratos AS, Gold C, Wang X, Crawford MJ. Music therapy for depression. *Cochrane Database Syst Rev* 2008 Jan 23;(1):CD004517.
8. Erkkilä J, Punkanen M, Fachner J, Ala-Ruona E, Pöntiö I, Tervaniemi M, et al. Individual music therapy for depression: Randomised controlled trial. *BJP* 2011;199:132–9.
9. Castillo-Pérez S, Gómez-Pérez V, Velasco MC, Pérez-Campos E, Mayoral MA. Effects of music therapy on depression compared with psychotherapy. *The Arts in Psychotherapy* 2010.
10. Hannibal N. Preverbal transference in music therapy—A qualitative investigation of transference process in the musical interaction. Ph.D. dissertation, Institute for Music and Music Therapy, Aalborg University, December 2000 (in Danish: Præverbal overføring i musikerterapi—kvalitativ undersøgelse af overføringsprocesser i den musikalske interaktion).
11. Christensen NB, Toft J, Petersen B, Lien K. Psychotherapeutic day treatment for patients with severe personality disorder (Psykoterapeutisk dagbehandling af svært personlighedsforstyrrede patienter.) *Ugeskrift for Læger* 2007;169:55.
12. Gold C, Solli HP, Kruger V, Lie SA. Dose–response relationship in music therapy for people with serious mental disorders: Systematic review and meta-analysis. *Clin Psychol Rev* 2009;29:193–207.
13. Fassino S, Piero A, Tomba E, Abbate-Daga G. Factors associated with dropout from treatment for eating disorders: A comprehensive literature review. *BMC Psychiatry* 2009;9:67.
14. Wierzbicki M, Pekarik G. A meta-analysis of psychotherapy dropout. *Prof Psychol Res Pract* 1993;24:190–5.
15. Edlund MJ, Wang PS, Berglund PA, Katz SJ, Lin E, Kessler RC. Dropping out of mental health treatment: Patterns and predictors among epidemiological survey respondents in the United States and Ontario. *Am J Psychiatry* 2002;159:845.
16. Reis BF, Brown LG. Reducing psychotherapy dropouts: Maximizing perspective convergence in the psychotherapeutic dyad. *Psychother Theory/Res/Pract/Training* 1999;36:123–36.
17. Petersen B, Toft J, Christensen NB, Foldager L, Munk-Jørgensen P, Lien K, et al. Outcome of a psychotherapeutic programme for patients with severe personality disorders. *Nord J Psychiatry* 2008;62:450–6.

18. Piper WE, Joyce AS, Rosie JS, Ogrodniczuk JS, McCallum M, O'Kelly JG, et al. Prediction of dropping out in time-limited, interpretive individual psychotherapy. *Psychother Theory/Res/Pract/Training* 1999;36:114–22.
19. Johansson H, Eklund M. Helping alliance and early dropout from psychiatric out-patient care. *Soc Psychiatry Psychiatr Epidemiol* 2006;41:140–7.
20. Silverman MJ. The effect of songwriting on knowledge of coping skills and working alliance in psychiatric patients: A randomized clinical effectiveness study. *J Music Ther* 2011;48:103–22.
21. Silverman, MJ. The effect of lyric analysis on treatment eagerness and working alliance in consumers who are in detoxification: A randomized clinical effectiveness study. *Music Ther Perspect* 2009;27:115–21.

Niels Hannibal, Aalborg University, Aalborg, and Aalborg Psychiatric Hospital, Aarhus University Hospital, Aalborg, Denmark.  
 Inge Nygaard Pedersen, Aalborg University, Aalborg, and Aalborg Psychiatric Hospital, Aarhus University Hospital, Aalborg, Denmark.  
 Trine Hestbæk, Aalborg University, Aalborg, Denmark, and  
 Marielund—Center for Socialpsykiatri, Kolding, Denmark.  
 Torben Egelund Sørensen, Aalborg University, Aalborg, Denmark, and  
 Behandlingspsykiatrien Horsens, Horsens, Region Midt, Denmark.  
 Povl Munk-Jørgensen, Aalborg Psychiatric Hospital, Aarhus University Hospital, Aalborg, Denmark.

[AQ1]