The Arts in Psychotherapy 39 (2012) 333–341

Contents lists available at SciVerse ScienceDirect

The Arts in Psychotherapy

Music therapy techniques as predictors of change in mental health care☆

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ARTICLE INFO

Keywords:
Music therapy techniques
Reproducing music
Outcome predictors
Therapy motivation
Process-orientation

ABSTRACT

The application of music in therapy is realised through different working modalities which can be categorised into three types of techniques: production, reception, and reproduction. These techniques are commonly used in mental health settings in music therapy practice and previous research suggests that specific working modalities might be important predictors of change in music therapy. However, little is known about which ingredients specifically contribute to the outcomes of music therapy. This study aimed to investigate the application of music therapy techniques and whether they predict changes in clinical outcomes in mental health settings with individuals displaying a low therapy motivation. Participants ($N = 31$) were assessed before, during, and after participating in individual music therapy. Music therapy techniques were assessed for three selected therapy sessions per participant. Associations between music therapy techniques and outcomes were calculated using linear models with repeated measures. Results showed that reproduction techniques were used most intensely. In addition, relational competencies (interpersonal and social skills) amongst the participants improved when focusing on reproducing music (e.g. singing or playing familiar songs, learning musical skills). Results indicated that reproduction music therapy techniques may foster the development of relational competencies in individuals with low motivation.

Individuals afflicted with a mental illness may often display difficulty in the areas of emotional responsiveness and social interaction, verbally and non-verbally. Challenges in interpersonal and intrapersonal skills can result in individuals experiencing low motivation for verbal therapies such as psychotherapy or psychological counselling. To that end, mental health care clients with low motivation are frequently referred to music therapy, as the primary medium of interaction is music rather than verbal language (Hannibal, 2005). Although, music therapy has been indicated as an effective intervention with regard to fostering motivation, emotional expression, and relatedness (Gold, Mössler, et al., submitted for publication) additional process-outcome research is needed to identify the most effective music therapy techniques with this particular client group.

In music therapy, musical experiences and the therapeutic relationship developing through them are used as dynamic forces producing therapeutic change (Bruscia, 1998). Relational musical experiences that deepen the therapeutic relationship are fostered by the use of music therapy techniques which are applied within a systematic process between the client and therapist. Music therapy techniques can be understood as working modes offering different musical and relational experiences. These techniques work in tandem with psychotherapeutic techniques (e.g. mirroring, holding, confronting) within specific use of musical parameters (e.g. rhythm, sound, tonality) (Storz, 2000a; Wigram, 2004). Music therapy techniques can be assigned to the following categories: *Production* techniques focus on emotional expression and the creation of the relationship through musical improvisation (e.g. structured, thematic, communicative, trying out, free improvisation) in which the client and therapist create something musically new. *Reproduction* techniques involve the client and therapist playing or singing pre-composed pieces of music as well as learning or practicing musical skills (e.g. guitar chords, melodies on the piano). They may provide a holding structure and framework in which the actualisation of memories can be supported and explored within the context of relationship. *Reception* techniques involve the client listening to live (e.g. music played by the therapist) or recorded music. These

☆ [ClinicalTrials.gov Identifier: NCT00137189].

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0197-4556/$ – see front matter © 2012 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.aip.2012.05.002

musical experiences may be used to focus on conscious awareness of the client's current mental state, emerging associations, as well as to facilitate relaxation or pain management (Storz, 2000a, 2011). In each of the three categories of music therapy techniques, both the therapist and client contribute mutually and are engaged in a therapeutic process within the context of relating and communicating. Thus, the choice of techniques will also be the result of this mutual process.

Previous research in mental health care has provided supporting evidence that specific factors in music therapy are of importance. According to these findings, techniques focusing on musical communication, expression, and transformation may be of relevance (Danner & Oberegelsbacher, 2001) when working with clients with psychosomatic problems in mental health care. Another study found that music therapy-specific techniques (e.g. free improvisation, songs) were associated with bigger improvement compared to less specific techniques not unique to music therapy (e.g. free play, puppet play) in children and adolescents (Gold, Wigram, & Voracek, 2007). Although psychotherapy research has demonstrated that specific factors are of little importance to produce psychotherapeutic change (Cooper, 2008; Lambert & Ogles, 2004; Wampold, 2001), music therapy research is sparse in this area and more research is needed in order to support or challenge this notion. Outcome studies in adult mental health care have mainly investigated music therapy techniques in one of the two ways: (a) either several techniques were applied within individual or group music therapy but were not statistically tested in terms of their particular impact on outcomes (De l'Etoile, 2002; Tang, Yao, & Zheng, 1994; Yang, Li, Weng, Zhang, & Ma, 1998), or (b) one main technique applied within a session was investigated for various outcomes (Grocke, Bloch, & Castle, 2009; Silverman & Marcionetti, 2004; Talwar et al., 2006). In terms of external validity, focusing on only one technique when investigating music therapy may not appropriately reflect effective common clinical practice in mental health care. In this setting it is more common to implement production, reproduction as well as reception techniques as they are related to differing therapeutic topics and goals which may all be vital within the same therapeutic process (Storz, 2004).

In the present study we aimed to examine whether different types of music therapy techniques can explain some of the variance in outcomes of clients in mental health care with low therapy motivation. In this context, it was important to first understand which music therapy techniques are being used within this client population. Examining music therapy techniques in this field is of clinical interest as it may contribute to a better understanding of how clients can improve their engagement into therapeutic processes.

Specifically, the main objectives of this study were to explore:

- which music therapy techniques are applied within music therapy in clients with mental illness presenting with a low therapy motivation, and
- whether music therapy techniques predict changes in clinical outcomes related to the development of ego-strength, relational competencies, and quality of life.

Method

This was an exploratory study using a naturalistic, observational design with pre, post and intermediate tests of clients who began music therapy. It used data from an international multicentre randomised controlled trial (Gold, Mössler, et al., submitted for publication; Gold et al., 2005) that had shown positive effects as well as additional material concerning the use of music therapy techniques in the same clients. It should be emphasised that the present study only used data from the experimental group of that trial. Furthermore, it only used data from those sites where the additional data were available.

Music therapy in this study was guided by a manual of resource-oriented principles (Rolvsjord, Gold, & Stige, 2005). That manual describes desirable attitudes of the therapist but does not impose any restrictions on particular techniques. The use of techniques was allowed to vary from client to client, similar to clinical practice outside the study, and therefore it was possible to examine their application and potential impact.

Data collection was carried out at one decentralised psychiatric centre in Nordfjordeid (Norway) and one psychiatric clinic in Linz (Austria). Data were collected from a range of different outcome measures used within the overall multicentre study as well as therapy journals. Therapy journals were used as source for assessing music therapy techniques quantitatively.

Participants

We included clients with any non-organic mental disorder according to ICD-10 criteria (F1–F6). Within this population, we included only those who met one or more types of low motivation (Gold, Mössler, et al., submitted for publication; Gold et al., 2005) because having difficulties to engage in verbal therapy is typical reason for referral to music therapy (Hannibal, 2005). Specifically, participants had to meet at least one of the following criteria:

- The client is lacking or has insufficient insight into illness.
- The client has difficulties talking about feelings or problems.
- The client wants a "medication cure", s/he does not believe in talking.
- The client has not achieved sufficient improvement in previous psychotherapy.

This was based on the judgement of the interdisciplinary team, i.e. of all professionals directly involved in the client's treatment. The final decision to refer a client to the study was made and signed by the ward clinician, i.e. the person with primary responsibility of the client's treatment plan. Clients suffering from severe mental retardation or a life-threatening illness were excluded from the study (Gold et al., 2005).

We initially included 40 participants for the present study (Austria: 23; Norway: 17). However, due to drop out and resulting missing values in outcome assessments, the usable sample size was reduced to $N = 31$ (Austria: $n = 22$; Norway: $n = 9$).

The most frequent diagnoses were schizophrenia, schizotypal or delusional disorder (ICD-10: F2, $n = 14$), affective disorder (F3, $n = 8$), and personality disorder (F6, $n = 6$). The remaining three participants presented either a neurotic/somatoform disorder (F4, $n = 2$) or a mental and behavioural disorder due to psychoactive substance abuse (F1, $n = 1$). The sample thus included similar numbers of participants with psychotic ($n = 14$) and non-psychotic ($n = 17$) disorders. The most frequent types of low motivation were not having achieved sufficient improvement in previous psychotherapy ($n = 21$) and difficulties in talking about feelings or problems ($n = 20$; overlaps possible). There were 19 male and 12 female participants. The mean age was 37 with a range from 18 to 59. Most of the participants ($n = 29$) received music therapy as inpatients; two were out-patients and one attended a day-clinical setting.

Participants were offered up to 26 sessions of individual music therapy over a course of three months in addition to standard care. The sessions were offered twice a week, lasting 45 min each (Gold et al., 2005). The average number of music therapy sessions received was 19, ranging from 12 to 25. Music therapy was conducted by three therapists trained at master's level in music