The feasibility and acceptability of neurologic music therapy in subacute neurorehabilitation and mood outcomes for patients

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Introduction

A growing body of research has shown neurologic music therapy (NMT; Thaut and Hoemberg, 2014) can support functional recovery in neurorehabilitation whilst contributing towards creating an enriched environment and raising mood and motivation to engage in other therapy programmes (Magee et al., 2017; Rushing et al., 2018; Grau-Sánchez et al., 2020). NMT has been found to be feasible, acceptable and helpful in acute stroke rehabilitation (Street et al., 2020).

Objective

This study assessed the feasibility and acceptability of a new one-day per week NMT post in a subacute neurorehabilitation centre over 15 months. The NMT was contracted as part of the multidisciplinary team (MDT) for 7.5 hours per week. MA students were hosted on placement for 10 hours per week during term-time, covering 10 months of the data collection period. Permission to collect data as part of standard care for a service evaluation was granted by the centre involved. Verbal consent was given by all patients, relatives and staff for data to be collected, published and presented anonymously.

Methods

Data were collected towards three assessment criteria:

1. Demographic data were collected as part of usual care. Data on number of sessions offered and attended, reasons for non-attendance, type of session, intervention used and who the referral was from were collected.
2. Questionnaires asked patients, staff and relatives to rate the helpfulness of NMT as part of the MDT overall and towards 5 therapeutic aims ('speech and communication', 'walking and mobility', 'concentration', 'arm and hand movement', and 'motivation and mood'). There was space for additional comments, with prompting questions.
3. Visual Analog Mood Scale (VAMS, Stern et al., 1997) data were collected pre- and post-a single NMT session

Results

Demographics

During the data collection period, 49 patients received 318 sessions of NMT (Figure 1). 72% of referrals came from physiotherapy, occupational therapy, or both. Speech and Language therapists were involved in 22% of referrals.

Gender	Male	25 (51%)
	Female	24 (49%)
Age (average)		68.7 years(SD 17.5)
Type of session	Group	24 (49%)
	Individual	13 (27%)
	Both	11 (22%)
Number of sessions	Offered	382
	Attended	318 (83%)
	Declined	29 (8%)
	Missed	35 (9%)
Time between referral and first session (average)		10.2 days (SD 7.9)

Figure 1. Demographic information; type of session; number of sessions attended; time between referral and first session.

Helpfulness of NMT for Specific Aims

All questionnaire respondents (n=36) rated music therapy as quite helpful, helpful or very helpful as part of the multidisciplinary team. NMT was rated as most helpful towards concentration, arm and hand rehabilitation and mood and motivation (Figure 2). This was supported in qualitative feedback.

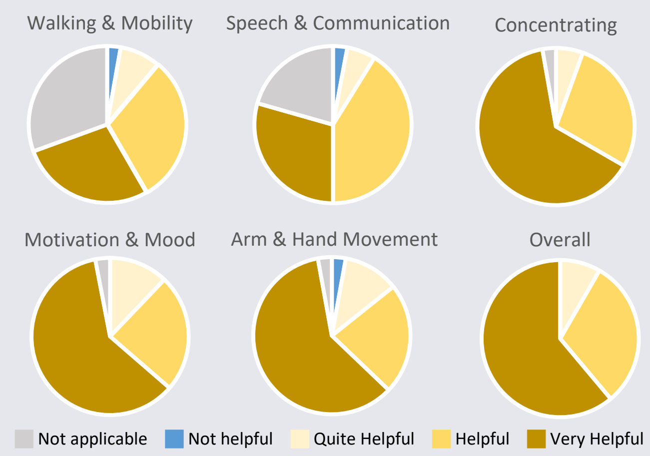

Figure 2. Helpfulness of music therapy within subacute neurorehabilitation

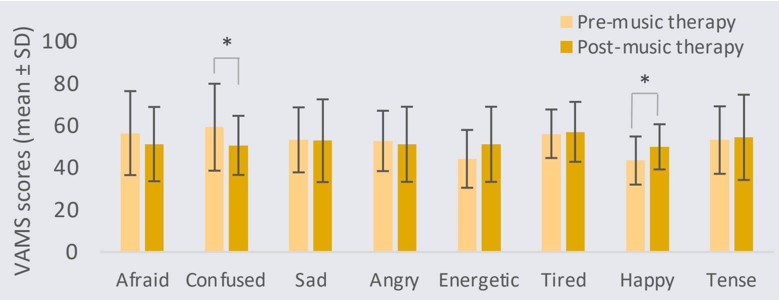

Figure 3. VAMS scores pre- and post-a single NMT session (n=24). * p<0.05

Mood Pre- and Post-Sessions

VAMS scores (n=24) showed a reduction in 'confused' (8.6, p=0.045, effect size 0.49) and an increase in 'happy' (-6.5, p=0.03, effect size =-0.12) (Figure 3) after NMT sessions.

Conclusions and Future Studies

This study found a one-day per week NMT post to be feasible, acceptable and helpful in subacute neurorehabilitation. Questionnaire and qualitative data suggest NMT was considered most helpful for movement, concentration and mood and motivation, with the latter supported by VAMS scores. Of 382 sessions offered, 318 were attended and 29 declined, supporting findings that patients were motivated to attend NMT and enjoyed the sessions.

Future studies should:

- Look at the feasibility of NMT in other centres, with a focus on multiple-day per week services and the inclusion of collecting functional data
- Compare effects of NMT on mood with other interventions in the MDT
- Explore the correlation between effect on mood and functional outcomes, engagement in rehabilitation programmes and length of stay through randomised control trials and single case studies

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