

## ARTICLE

# A synopsis of the MusiQual feasibility study into the effectiveness of music therapy in palliative care inpatient settings

**Jenny Kirkwood**

Independent scholar, UK

**Lisa Graham-Wisener**

Queen's University Belfast, UK

**Tracey McConnell**

Queen's University Belfast, UK

**Sam Porter**

University of Bournemouth, UK

**Joanne Reid**

Queen's University Belfast, UK

## ABSTRACT

The research team involved in conducting the MusiQual study – carried out in Belfast, Northern Ireland by Queen's University Belfast, Every Day Harmony Music Therapy, and Marie Curie Northern Ireland – aimed to ascertain the feasibility of carrying out a larger multicentre trial into the effectiveness of music therapy in improving the quality of life of palliative care inpatients. This synoptic paper summarises a number of publications which resulted from developing and implementing the MusiQual study. Those publications include the main findings paper (Porter et al., 2018) and a number of supplementary publications: a systematic review of the literature (McConnell et al., 2016a), a realist review of the literature (McConnell & Porter, 2016), a critical realist evaluation (Porter et al., 2017a), an outline of the theoretical model which resulted from the realist review of the literature (McConnell & Porter, 2016), and the treatment manual for music therapy in palliative care drafted for use in the potential multicentre trial and recently published (Kirkwood et al., 2019). The purpose of this synopsis is to consolidate information in one single, accessible place in order to advance knowledge in this area of work and support the evidence-informed practice of music therapists and others in this field.

## KEYWORDS

music therapy,  
palliative care,  
end-of-life care,  
quality of life,  
theoretical model,  
critical realist  
approach

### Publication history:

Submitted 30 Jan 2019

Accepted 8 Aug 2019

First published 4 Jan 2020

## AUTHOR BIOGRAPHIES

**Jenny Kirkwood** completed her postgraduate diploma in music therapy with MusicSpace Italy in Bologna in 2007. She worked for Every Day Harmony Music Therapy from 2007, and as Music Therapy Manager from 2016 until December 2018. In 2015 she was awarded her MA in Music Therapy and in 2017 she trained as a Neurologic Music Therapist. Her clinical work to date has mainly been in learning and physical disability and paediatric palliative care. [[kirkwoodj78@gmail.com](mailto:kirkwoodj78@gmail.com)] **Lisa Graham-Wisener**, Lecturer, School of Psychology, Queen's University Belfast. [[L.Graham-Wisener@qub.ac.uk](mailto:L.Graham-Wisener@qub.ac.uk)] **Tracey McConnell**, Research Fellow, Queen's University Belfast. [[t.mcconnell@qub.ac.uk](mailto:t.mcconnell@qub.ac.uk)] **Sam Porter**, Research Lead, University of Bournemouth. [[porters@bournemouth.ac.uk](mailto:porters@bournemouth.ac.uk)] **Joanne Reid**, Research Lead, Queen's University Belfast. [[j.reid@qub.ac.uk](mailto:j.reid@qub.ac.uk)]

## INTRODUCTION: BACKGROUND TO THE MUSIQUAL STUDY

The authors of this paper summarise the various strands of the work completed to date by the MusiQual study group. This group was initially a partnership between researchers and clinical experts from Queen's University Belfast, Every Day Harmony Music Therapy (Belfast, Northern Ireland), and Marie Curie Northern Ireland. The name MusiQual was adopted as shorthand by the study team due to the focus on music therapy for quality of life of patients in palliative care. The research work conducted by the MusiQual team led to ascertaining the feasibility of a phase III multi-site randomised control trial into the effectiveness of music therapy for improving the quality of life of palliative care patients.

The first step in the MusiQual study was the completion of the systematic review of the existing literature in this area (McConnell et al., 2016a), and after identifying a gap in research knowledge, the protocol for the study was developed (McConnell et al., 2016b). Taking a critical realist approach to the research, whilst the study itself was ongoing, the MusiQual team also incorporated an analysis of the processes and mechanisms involved in music therapy in this context in order to strengthen the findings. First, a realist review of the literature (McConnell, 2017a) was completed, followed by a critical realist evaluation (Porter et al., 2017a) which further strengthened the theoretical model developed. Following the conclusion of the study itself, a survey was completed of current music therapy practice in palliative care across the UK (Graham-Wisener et al., 2018) in order to position this local study within the wider UK context, and a treatment manual based both on the theoretical model developed and the clinical work of the therapists involved in the study was created for use in the potential future multi-site trial (Kirkwood et al., 2019). The most important aspects of these various strands of work have been summarised here in chronological order so as to illustrate how this study developed over the period of its completion. It is hoped that presenting all of these elements in one single, accessible place will both advance knowledge in this area of work, and will also support music therapists and others in this field to access the design and outcomes of the study to inform their own practice. In this way they can provide their most valuable contribution to the music therapy profession and go some way towards beginning to address the gap in current evidence that was first identified.

## SYSTEMATIC REVIEW OF THE EXISTING LITERATURE (MCCONNELL ET AL., 2016)

The first step in the process was the completion of a systematic review of the literature, completed by Tracey McConnell and David Scott, research fellows at Queen's University Belfast, along with Sam Porter, then acting head of the School of Nursing and Midwifery at the same university. The database search for relevant articles for this review was concluded in April 2015, and this literature review only reflects the literature available at that time.<sup>1</sup>

In examining the evidence base, the review updated a previous Cochrane Review completed in 2010 (Bradt & Dileo, 2010) which had concluded that, while the evidence base at the time was not sufficient to support the use of music therapy in end-of-life care, "results indicate that music therapy

---

<sup>1</sup> For reference, a number of relevant papers published in the last four years (until July 2019) are provided in the Appendix (not an exhaustive list).

may have a beneficial effect on the quality of life of people in end-of-life care” (Bradt & Dileo, 2010, p. 5). A number of single studies were identified as reporting music therapy as being effective for enhancing spirituality (Wlodarczyk, 2007), reducing tiredness and drowsiness (Horne-Thompson 2008), and alleviating discomfort and sadness (Nguyen, 2003).

With the addition of three further eligible studies, the MusiQual affiliated authors who conducted the updated review concluded that, while several studies have suggested that music therapy may improve the quality of life of palliative care patients, many of them had a high risk of bias (McConnell et al., 2016a), and that more high-quality, large-scale studies were needed. Of specific interest, in this updated review, with the addition of the study by Gutschell et al. (2013), the results of the meta-analysis indicated a significant effect for pain reduction, specifically

that there is a significant effect for music therapy in reducing pain among palliative care patients. This is an important finding given that pain is a common symptom reported by palliative care patients in a wide range of life-limiting illnesses (McConnell et al., 2016a, p. 879).

Although insufficient evidence was identified to support the effectiveness of music therapy overall, participants in the qualitative studies included in the McConnell et al. updated literature review indicated that they found music therapy beneficial in helping patients express difficult emotions, helping patients and families find closure, and improving staff mood and resilience (O’Callaghan & Hiscock, 2007; O’Kelly & Koffman, 2007).

Thus, at this stage the need for a large-scale study was identified, but also the need for a feasibility study which could test the procedures and protocol to be used to ensure that they were fit for purpose and thus that the end trial would be as robust as possible. The use of a feasibility study, although a significant undertaking in itself, was considered by the MusiQual study team to be especially important given the nature of randomised controlled trials both in music therapy and also in palliative care, as outlined below.

## Randomised controlled trials (RCTs) in music therapy and in palliative care

While this is not the context for an extensive discussion, in the medical community RCTs are often identified as the so-called ‘gold standard’ of evidence, and might be more likely to be funded or commissioned (Baker, 2015; Evans, 2003; Wigram & Gold, 2012; Wigram, Pedersen & Bonde, 2002). RCT designs, however, can be a challenging fit for a discipline such as music therapy. The requirements of an RCT can sit in contrast to the flexible and person-centred nature of the daily clinical work of practising music therapists (Baker, 2015; Wigram, Pedersen & Bonde, 2002). Blinding is also challenging as clients obviously know when they have had music therapy, and it can be difficult for this knowledge not to affect their study responses. Indeed, in the MusiQual feasibility study (Porter et al., 2018) it became clear very early on that the researcher had to be unblinded and a different process for data collection and analysis put in place, mainly due to patients’ strong desire to recount their experiences of music therapy. Also problematic is the standardisation of the treatment approach required to ensure fidelity across sites. The effect that strict manualisation of a therapy process might

have on the intervention itself has to be carefully considered alongside the need for music therapy to actually be delivered in a way that is as close to real life as it can be (Rolvjord et al., 2005).

Not dissimilarly, there are significant issues with carrying out RCTs in palliative care, to the extent that LeBlanc (2013, p. 278) writes: "large scale RCTs have historically been considered unfeasible in this setting". The challenging factors (Reid et al., 2015) include recruitment, attrition rates, the ethical implications of engaging people with such enhanced vulnerability, and patient burden. Thus, the need identified by the MusiQual team for a feasibility study in the first instance was clear, and funding was obtained via a Northern Ireland Public Health Agency Research and Development Enabling Award. The protocol for the feasibility study was published in 2016 (c.f., McConnell et al., 2016b).

## THE FEASIBILITY STUDY PROTOCOL (MCCONNELL ET AL., 2016)

The feasibility study aimed: to test the procedures and tools to be used; to estimate recruitment and attrition rates; and to calculate the sample size required for a phase III RCT to evaluate the effectiveness of music therapy in improving the quality of life of palliative care patients in an inpatient hospice setting. As a secondary outcome we also considered what the results of this smaller study could tell us about this effectiveness, albeit without statistical significance at this stage. At least 52 patients were to be recruited and data was collected using the McGill Quality Of Life questionnaire (MQOL) (Cohen et al., 1995), which was reported in Albers et al. (2010) to have the "best clinometric quality rating, content validity, construct validity and internal consistency in a review of quality of life questionnaires" (McConnell et al., 2016a, p. 3). Patients were randomised (1:1) to the intervention or control group, and those in the intervention group received two 30-45-minute music therapy sessions per week for up to three weeks in addition to care as usual. This three-week duration was originally estimated as being suitable based on average length-of-stay information from the hospice. Data would be collected at baseline, week one, week three and an additional follow-up at week five to assess retention of outcomes.

For the purposes of the study, the music therapy approach used was defined as:

a creative process of musical interaction where the client engages while singing or playing, listening to music or extemporaneously creating a melody, rhythm, song or instrumental piece. In the sessions, the music therapist uses music in various formats to meet the patients' specific needs. In doing so, they 'make use of the therapeutic relationship established with the patient to meet clinical goals and employ a systematic therapeutic process that includes assessment, treatment and evaluation'. (McConnell et al., 2016a, p. 3)

Approval from the Office of Research Ethics Committee Northern Ireland (ORECNI) was obtained prior to beginning the study (Reference number 16/NI/0058). The study was performed in accordance with the declaration of Helsinki. A more detailed explanation of the informed consent process can be found in the published protocol (McConnell et al., 2016b). The music therapy sessions began at the Marie Curie Hospice in Belfast in June 2016.

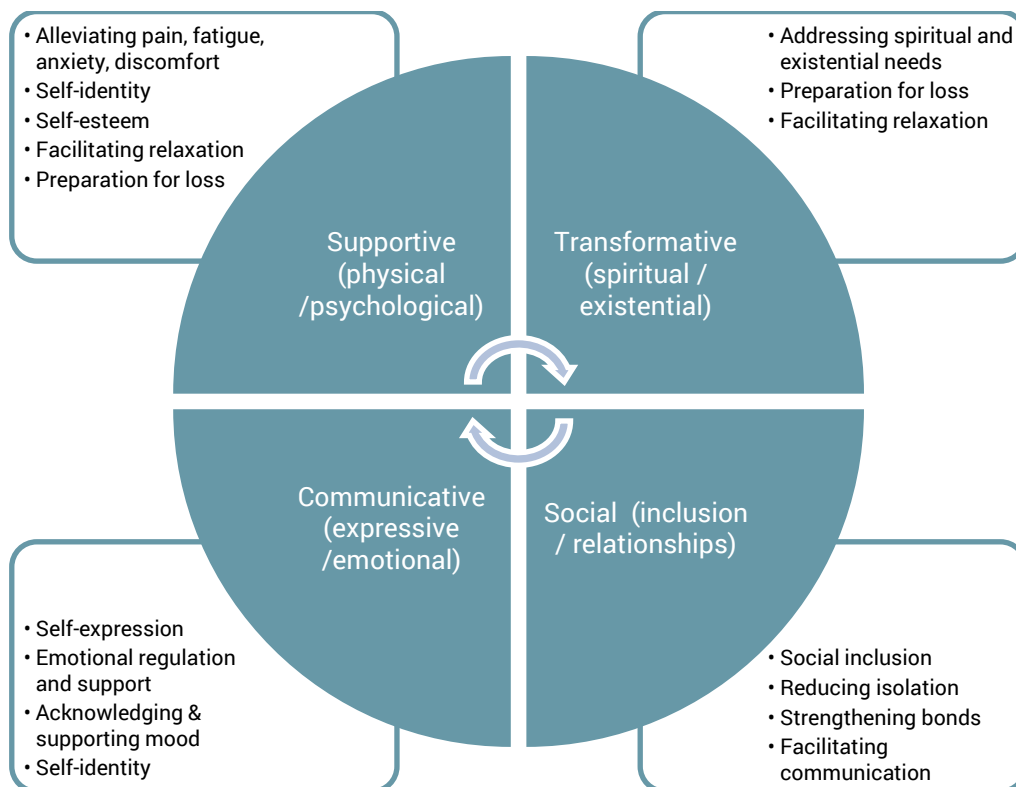
## REALIST REVIEW OF THE EXISTING LITERATURE (MCCONNELL & PORTER, 2016)

While the feasibility study (and future RCT) would examine the effectiveness of music therapy in quantitative terms, the MusiQual team also incorporated an analysis of the processes and mechanisms involved in music therapy in this context in order to strengthen the findings. The next step, then, in this parallel process, was the completion of a realist review of the existing literature (McConnell & Porter, 2016).

The objective of this review, which included 51 articles, was to better understand how music therapy might benefit palliative care patients – what are the therapeutic mechanisms in operation, who do they work for, and what contextual mechanisms can promote or inhibit the successful implementation of music therapy? In other words, what works, for whom, and in what context?

### What works? Four-domain theoretical model for music therapy in palliative care

The result of this analysis of the therapeutic mechanisms in action in music therapy in palliative care settings was the delineation and consolidation of a theoretical model for music therapy in palliative care (Figure 1) based on four domains. This is a development of a palliative care model for music therapy put forward by Dileo and Dneaster in 2005 which incorporated supportive, communicative and transformative domains. Based on the current literature, a fourth social domain was added, and the model has been illustrated as below:



**Figure 1:** The four-domain theoretical model for music therapy in palliative care

1) *The Supportive domain (physical/psychological)*: music therapy aims to provide physical and/or psychological support to the patient. Research has increasingly demonstrated the synergistic effect of both physical and psychological factors on levels of pain perception (Bradt, 2010). Negative psychological states, such as fear, anxiety and emotional distress can result in higher levels of pain, while pain can in turn result in higher levels of psychological distress. A number of studies have demonstrated the positive impact of music therapy on brain structures that control anxiety and stress levels (Fachner et al., 2013; Raglio et al., 2015). Furthermore, music therapy can alleviate psychological and physical distress through a number of therapeutic mechanisms, such as helping the individual reframe their identity from that of a sick or dying patient to that of themselves as an empowered individual with experiences to enjoy, positively affecting their self-identity and self-esteem, helping them to reconnect with happy memories, alleviating pain (which can be through distraction and influencing attention), influencing positive affect or improving mood, reducing anxiety, fatigue, discomfort and distress. The aim of music therapy can be as straightforward at times as facilitating relaxation, or it can address matters such as preparation for loss both for the patient and for their significant others.

2) *The Communicative domain (expressive/emotional)*: music therapy can provide an accessible and facilitated vehicle for emotional regulation via a safe and supported channel for the expression of difficult emotions. An underlying mechanism of music therapy for palliative care patients can be the cathartic effect of relief from repressed emotions (O'Callaghan, 1996; Clements-Cortes, 2004; O'Callaghan & Hiscock, 2007; O'Kelly & Koffman, 2007) and a release of frustrations felt about their situation (Leow, 2010). Musical improvisation can help patients identify and express difficult or painful emotions, aided and supported by the therapist (Heath & Lings, 2012). When music therapy is delivered as a group therapy where visitors can also partake, research suggests this lowers levels of symptoms of bereavement for families and caregivers (O'Callaghan & Barry, 2009). Patients' moods can be acknowledged, supported and, if appropriate, reframed. Self-identity can be promoted and communicated to others. The music therapy process can support renewed connections with significant others.

3) *The Transformative domain (spiritual/existential)*: music therapy can provide a safe mechanism whereby patients might transcend their current situation and perhaps as a result transform their experience of it to some degree. Music therapy can provide existential or spiritual comfort, providing the means for patients to cognitively reframe beyond their immediate context by enjoying simple pleasures such as laughter, positive energy, relaxation, and having fun with music (McClellan et al., 2012). Music enables end-of-life patients "to extend beyond the immediate context to achieve new perspectives" (Aldridge, 1999 p. 107). Clinical work in this domain can include preparation for loss for both patients and significant others, and can take tangible form in the shape of a life review or other legacy work resulting in something concrete that lasts and can be left for others, providing comfort and a sense of continued connection for loved ones during bereavement (Cadrian, 2006).

4) *The Social domain (inclusion/relationships)*: music therapy can strengthen bonds between patients and significant others, thus facilitating communication between them, reducing isolation and promoting social inclusion. Music therapy can impact on the sense of community within a setting overall (O'Kelly, 2002) and can have the effect of humanising the setting. The legacy function of music therapy mentioned above can contribute to the strengthening of social bonds. By providing a space



for the expression of difficult emotions, either verbally or non-verbally, music therapy can help reduce the isolation often experienced by palliative care patients, lifting the mood of patients, families and staff, and improving communication with staff. In this way, music therapy can improve patient care, and can contribute to improved relationships with families (Heath & Lings, 2012; O’Kelly & Koffman, 2007).

### Who does it work for?

At the time that the referenced realist review was concluded (December 2015), no particular trends emerged from the existing literature about whom music therapy would be effective for, as there was no substantive information available about which patients would be more likely to take up music therapy - an idea which the therapists in the MusiQual team consider would likely be in keeping with the opinion of most music therapists, that music therapy is accessible and indeed beneficial to a wide range of clients.

### In what context?

Contextual mechanisms identified which can promote the successful implementation of music therapy included organisational support, protected time and space, understanding of the aims of music therapy by other professionals, belief of other professionals in the effectiveness of music therapy, and the integration of the music therapist into the multidisciplinary team. In short, these mechanisms highlight the importance of buy-in in the settings in which we work.

It could be surmised that this realist review did not reveal anything that music therapy clinicians themselves do not already know, and in fact this is recognised in the review itself when it states “that frameworks similar to ours may be available in the grey literature that we did not explore and also as tacit knowledge within the minds of experienced music therapists” (McConnell et al., 2017a, p. 8). But it is important to highlight that this is the outcome of a review of a total of 51 studies in this area. By collating all of this information in a single summary, and thus providing a theoretical model based on the evidence of these 51 studies, this review can be seen as a vital point of reference for any music therapists working in this field since it is based on a full and exhaustive examination of the existing literature at that time.

## CRITICAL REALIST EVALUATION: INTERVIEWS AND FOCUS GROUPS (PORTER ET AL., 2017A)

The next step in the work to complement the feasibility study was the completion of a critical realist evaluation (Porter et al., 2017a). This was a mixed methods qualitative study which made use of the open text in questionnaires from patients ( $n = 11$ ), as well as interviews and focus groups with a range of palliative care practitioners from the Marie Curie Hospice in Belfast where the study was being carried out (seven physicians, seven nursing staff, two social workers and three allied health professionals), seeking to understand their perspectives on music therapy’s impact in their work

setting, and the factors which influence its successful implementation. The music therapist delivering the intervention was also interviewed.

In short, these interviews and focus groups sought to ascertain whether the results of the previous realist review of the literature could be related to what was actually being seen and experienced in the Marie Curie Hospice in Belfast during the course of our feasibility study. The three main objectives were the same – to identify, in relation to the music therapy intervention, what works (therapeutic mechanisms), who it works for, and the context in which it works.

## What works?

The same four domain areas of the theoretical model outlined above were used to structure the discussion of therapeutic mechanisms identified in these focus groups and interviews.

1) *Supportive domain (physical/psychological)*: Participants highlighted the ability of music to reconnect patients with happier memories, to identify key moments in patients' lives that helped define important relationships, to help them have fun again (healthcare practitioners (HCPs) expressed surprise at the upbeat nature of the music chosen by patients). They referred to patients' enjoyment of playing instruments and the sense of achievement and playfulness involved, and how music therapy sessions could relax patients and lift their mood. The music therapy sessions were seen as something to look forward to, as benefitting emotional wellbeing since "it can act as a distraction from physical and psychological suffering" (Porter et al., 2017a, p. 2), and in particular as "reframing their identities from patients to people with unique pasts, interests and personalities" (Porter et al., 2017a, p. 4).

Perhaps most significantly for music therapists:

While intuitively clear to practising music therapists, patient reports further highlighted that the music alone was not the key therapeutic resource, but that the music therapist in combination with the music was central to meeting therapeutic outcomes. The key therapeutic mechanism appeared to be the relationship between the patient and music therapist. This is the music therapist's primary aim at the start of the therapeutic process to facilitate clinical goals for each patient. Patients reported feeling a deep connection with the music therapist that surpassed the expectations they had of the therapy. The act of sharing and creating the musical experience together appeared to strengthen this connection, along with the therapist's ability to help them feel listened to and bringing a sense of fun. (Porter et al., 2017a, p. 5)

2) *Communicative/expressive domain (emotional)*: Participants in these groups (both practitioners and patients) reported how music therapy helped patients "express themselves in a way they never thought they could" (Porter et al., 2017a, p. 5). An additional benefit was also identified in that music therapy also supported and enhanced communication between patients and healthcare practitioners by helping practitioners get to know better their patients' preferences, needs and values, which was seen as facilitating and improving patient-centred care.

3) *Transformative domain (spiritual/existential)*: The key therapeutic mechanisms identified in the literature were the "search for meaning, transcendence, creating a lasting legacy, and the comfort that



this legacy could provide to both patients and their families” (McConnell et al., 2016). Practitioners and patients in the critical realist evaluation reported how music therapy had a way of helping patients “surpass their current position and find peace” (Porter et al., 2017a, p. 6). The importance of finding a sense of meaning was highlighted, with one patient stating: “[the creation of a legacy CD] helped me see my life has been worthwhile” (Porter et al., 2017a, p. 6).

4) *Social domain*: A key therapeutic mechanism identified in the literature was music therapy’s ability to strengthen social bonds with loved ones. This localised study highlighted the importance of the ‘products’ of music therapy for facilitating communication and ongoing connections, for example the creation of legacy CDs for loved ones. Another area highlighted was the impact that music therapy had on the sense of community of the setting. Music therapy was seen as reducing isolation, it was calming and pleasant, and it “helped humanise the hospice setting” (Porter et al., 2017a, p. 6). Clearly ‘humanising’ the hospice setting can have indirect benefits for members of staff as well.

### Who does it work for?

As stated above, the literature review (conducted at the time the study referenced above was completed) did not provide definitive information on who was more likely to take up music therapy, or specific benefits for certain types of patients – indeed, the overall consensus from HCPs was that music therapy benefits were universal. Any perceived difference actually lay in what patients were hoping to gain from their sessions. Examples were given of patients who had strong religious beliefs using the music therapy sessions almost as a means of spiritual practice, or patients who found it difficult to verbalise feelings finding that music therapy could “ease psychological anguish” (Porter et al., 2017a, p. 8).

### In what context?

Again, the findings identified in the literature were supported by experience in practice, in particular the importance of the music therapist being embedded in the multidisciplinary team, and interacting and communicating with other members of staff on a regular basis. Practitioners also felt that a potential music therapy service would benefit from having considerable flexibility in its delivery model in order to be fully integrated into the multidisciplinary team, and thus able to respond more effectively to the unpredictability of patients’ disease trajectory.

## SURVEY OF CURRENT MUSIC THERAPY PRACTICE IN PALLIATIVE CARE ACROSS THE UK (GRAHAM-WISENER ET AL., 2018)

Service delivery and data collection for the feasibility study itself was completed in July 2017. In October 2017 an awareness-raising event – ‘The Hidden Value of Music Therapy’ – was hosted by the Marie Curie policy department at Parliament Buildings at Stormont in Belfast. This event gathered a number of stakeholders in palliative care in Northern Ireland to share with them the work that was being done. It was supported by the British Association for Music Therapy both in person and through the dissemination of a questionnaire to its members across the UK, thus placing this local study within

the wider UK context. The outcomes of this survey have been published separately in the *BMJ Supportive & Palliative Care* (Graham-Wisener et al., 2018). What stood out most markedly from the responses was the lack of statutory funding in this area. The majority of respondents reported funding sources to be joint NHS/charity funding, charitable funding, hospice self-funding, or time-limited grant funding, whereas only 10.9% of respondents reported their work with Palliative and End-of-Life Care (PEOLC) clients to be supported through dedicated statutory sector funding. The most common treatment goals identified were supporting psychological needs and improving quality of life, which supports the need for rigorous trials to be conducted in this area. An additional finding was that evaluation of existing music therapy services in PEOLC is largely based on informal feedback. This lack of formal evaluation at the programme level, where music therapy services are provided, highlights the need for establishing the use of validated outcome measures in routine practice.

### OUTCOMES OF THE FEASIBILITY STUDY (PORTER ET AL., 2018)

The research team members concluded that it is feasible to carry out a Phase III multicentre randomised controlled trial to evaluate a short music therapy intervention with a hospice in-patient population, and that this would add significantly to the existing evidence base.

The three-week intervention was found not to be viable for a large-scale study in PEOLC, determined by the attrition rate; with 71% lost, an insufficient number of patients survived to the three-week follow-up for the purposes of the trial. The decision was taken to move the primary end point to week 1, when 33% were lost. This decision led to lengthy discussion within the study team regarding the ethical implications of potentially stopping a patient's therapy sessions at the end of one week simply because the requirements of the trial have been fulfilled, even though they may still be in the hospice and could stand to benefit from further sessions. This discussion led the research team back to highlighting the importance of building a flexible service delivery model into plans for a future large-scale trial. Although previous research by several different authors has demonstrated that one session can be enough to obtain a therapeutic effect and benefit for the patient (Horne-Thompson & Grocke, 2008; Nguyen, J., 2003; Wlodarczyk, N., 2007), discussion also revolved around difficulties that this change could create in relation to therapeutic intent and the establishment of the therapeutic relationship and goals within such a short timeframe. It was agreed that the larger trial would plan for three sessions in one week to allow for one of these to function as an initial assessment/introductory session. It was felt that the potential burden of three sessions within one week would be outweighed by the potential benefit, and also the additional flexibility this would allow for patients (e.g., if a session is missed due to ill-health or other factors, the patient can still receive enough sessions to be a viable participant in the study).

The McGill Quality of Life questionnaire (MQOL; Cohen & Mount, 2000) was generally found to be acceptable at baseline. Although attrition was high overall, non-completion was not found to be due to the burden of the questionnaire. The MQOL is a 16-item questionnaire divided into five sub-measures: physical symptoms, physical wellbeing, psychological wellbeing, existential wellbeing, and support. The higher the score, the better the quality of life of the patient, and it has been suggested that a difference of 1 to 2 points in the overall score is equivalent to the difference between an average and a good day, and between a bad and an average day.

The change from baseline to week one was in favour of music therapy but was not statistically significant, as would be expected for a feasibility study with a small sample size. This overall outcome is an aggregation of the score for each of the different sub-measures. The individual scores for each of these sub-measures indicated a statistically significant improvement in existential wellbeing, which explores the “perception of purpose, meaning in life, and the capacity for personal growth and transcendence” (Lo et al., 2001, p. 389), a positive outcome given the small sample size. There was also a non-statistically significant improvement in both the areas of physical symptoms and psychological support. The sub-measure of support – which covers the “aspects of feeling supported, and the world as caring” (Lo et al., 2001, p. 392) – showed a smaller non-statistically significant improvement, but there was also a statistically significant reduction in physical wellbeing. While the physical sub-measures had not initially been perceived as being areas of specific interest, this reduction in physical wellbeing was surprising, given that the closely related domain of physical symptoms by contrast had shown a strong improvement. The improvement in physical symptoms corroborates the finding of the initial systematic review that music therapy may be effective in helping to reduce pain in palliative care patients. Worsening of physical wellbeing is harder to explain, in particular given the contrast between two sub-measures which therapists would expect to be similar. It is worth noting that the physical wellbeing domain consists of just one question simply asking how the person has felt, physically, over the previous two days. Music therapists would struggle to contemplate the hypothesis that music therapy might negatively impact on physical wellbeing, and there is no other clinical evidence in music therapy to suggest that this might be the case. It could be considered that it was possible for music therapy to positively impact on more acute and potentially transient or temporary physical symptoms, such as pain, in line with the findings described previously, whereas making a significant positive impact on a patient’s overall wellbeing was more difficult, especially taking into account their often advanced end-of-life stage. At the very least, the results from these particular sub-measures highlight the importance of not cherry-picking only those sub-measures where we might expect to see music therapy have an impact, and also serve as a reminder to exercise caution when drawing conclusions from small-scale feasibility or pilot studies.

## TREATMENT MANUAL FOR MUSIC THERAPY WITH PALLIATIVE CARE INPATIENTS

As part of the preparation for a phase III multicentre RCT, a music therapy treatment manual has been developed to be used to ensure treatment fidelity. No treatment manual was used in the feasibility study in order to keep the intervention as close to real-life music therapy as possible. The music therapy intervention manual was then devised with a pragmatic approach, based entirely on records of the clinical interventions carried out by the therapists in the feasibility study, as well as using the outcomes of the realist review as reference and structure. As was hoped, and indeed expected, all of the therapists’ various interventions with different patients throughout the study fitted within this theoretical model developed from the literature. It is difficult to delineate, define and clearly express what takes place in music therapy and reduce it to a two-dimensional explanation and representation on the page. The manual created aims to maintain a sufficient degree of flexibility and spontaneity for the therapist by presenting the intervention as a series of options for the therapist to follow, backed

by the finding from the critical realist review that those who engaged with music therapy tended to select particular mechanisms within the portfolio of possible interventions on offer. Given the consideration that this manual could be of use and interest to other music therapists working in this field, it has been published in the *British Journal of Music Therapy* (Kirkwood et al., 2019).

## CONCLUDING REMARKS

The importance of partnership working was highlighted throughout this study, which itself was a partnership between Every Day Harmony Music Therapy, Queen's University Belfast and Marie Curie Northern Ireland, and took place with the support of a much wider Trial Steering Committee. While plans are in place to seek funding for the phase III multi-site RCT, and extended partnerships with hospices, universities and music therapy providers have already been established so that this trial can be developed effectively. Recognition at this stage must go to all those involved at Queen's University Belfast and Marie Curie Northern Ireland, to the effort and dedication they have shown in furthering music therapy research and, as a result, contributing to our profession in helping to develop music therapy services of the highest possible quality for palliative care patients.

## Funding statement

The feasibility study described herein was funded by a Northern Ireland Public Health Agency Research and Development Enabling Award.

## REFERENCES

- Albers, G., Echteld, M. A., de Vet, H. C., Onwuteaka-Philipsen, B. D., van der Linden, M. H., & Deliëns, L. (2010). Evaluation of quality-of-life measures for use in palliative care: A systematic review. *Palliative Medicine*, 24(1), 17-37.
- Aldridge, D. (1999). *Music therapy in palliative care: New voices*. London: Jessica Kingsley Publishers.
- Bradt, J. and Dileo, C. (2010). Music therapy for end-of-life care. *The Cochrane Database of Systematic Reviews*, 2010(1), doi:10.1002/14651858.CD007967.pub2
- Cadrin, M. L. (2006). Music therapy legacy work in palliative care: creating meaning at the end of life. *Canadian Journal of Music Therapy*, 12(1), 109-137.
- Clements-Cortes, A. (2004). The use of music in facilitating emotional expression in the terminally ill. *The American Journal of Hospice and Palliative Care*, 21(4), 255-260.
- Cohen, S. R., Mount, B. M., Strobel, M. G., & Bui, F. (1995). The McGill Quality of Life Questionnaire: A measure of quality of life appropriate for people with advanced disease. A preliminary study of validity and acceptability. *Palliative Medicine*, 9(3), 207-19.
- Cohen, S. R., & Mount, B. M. (2000). Living with cancer: "Good" Days and "Bad" Days—What produces them? Can the McGill Quality of Life Questionnaire distinguish between them? *Cancer*, 89(8), 1854-1865.
- Dileo, C., & Dneaster, D. (2005). Music therapy at the end of life: State of the art. In C. Dileo & J. Loewy (Eds.), *Music therapy at the end of life* (pp. 14-27). Cherry Hill, NJ: Jeffrey Books.
- Fachner, J., Gold, C., & Erkkela, J. (2013). Music Therapy modulate fronto-temporal activity in rest-EEG in depressed clients. *Brain Topography*, 26(2), 338-354.
- Graham-Wisener, L., Watts, G., Kirkwood, J., Harrison, C., McEwan, J., Porter, S., Reid, J., & McConnell, T. (2018). Music therapy in UK palliative and end-of-life care: A service evaluation. *BMJ Supportive & Palliative Care*, 8(3), 282-284.
- Gutgsell, K.J., Schluchter, M., & Margevicius, S. (2013). Music therapy reduces pain in palliative care patients: A randomized controlled trial. *Journal of Pain and Symptom Management*, 45, 822-31.
- Heath, B., & Lings, J. (2012). Creative songwriting in therapy at the end of life and in bereavement. *Mortality*, 17(2), 106-118.
- Horne-Thompson, A., & Grocke, D. (2008). The effect of music therapy on anxiety in patients who are terminally ill. *Journal of Palliative Medicine*, 11, 582-590.
- Kirkwood, J., Graham-Wisener, L., McConnell, T., Porter, S., Reid, J., Craig, N., Dunlop, C., Gordon, C., Thomas, D., Godsall, J., & Vorster, A. (2019). The MusiQual treatment manual for music therapy in a palliative care inpatient setting. *British Journal of Music Therapy*, 33(1), 5-15.
- LeBlanc, T. W., Lodato, J. E., Currow, D. C., & Abernethy, A. P. (2013). Overcoming recruitment challenges in palliative care clinical trials. *Journal of Oncology Practice*, 9(6), 277-282.

- Leow, Q. H. M., Drury, V. B., & Poon, W. H. (2010). A qualitative exploration of patients' experiences of music therapy in an inpatient hospice in Singapore. *International Journal of Palliative Nursing*, 16(7), 344-350.
- Lo, R. S. K., Zhoe, K. C. H., Li, C. Y. P., Yeo, W., Johnson, P., & Mak, Y. (2001). Cross-cultural validation of the McGill Quality of Life questionnaire in Hong Kong Chinese. *Palliative Medicine*, 15, 387-397
- McClellan, S., Bunt, L., & Daykin, N. (2012). The healing and spiritual properties of music therapy at a cancer care centre. *Journal of Alternative and Complementary Medicine*, 18(4), 402-407.
- McConnell, T., Scott, D., & Porter, S. (2016a). Music therapy for end-of-life care: An updated systematic review. *Palliative Medicine*, 30(9), 877-883.
- McConnell, T., Graham-Wisener, L., Regan, J., McKeown, M., Kirkwood, J., Hughes, N., Clarke, M., Leitch, J., McGrillen, K., & Porter, S. (2016b). Evaluation of the effectiveness of music therapy in improving the quality of life of palliative care patients: A randomised controlled pilot and feasibility study. *Pilot and Feasibility Studies*, 2(70).
- McConnell, T., & Porter, S. (2016). Music therapy for palliative care: A realist review. *Palliative and Supportive Care*, 15(4), 454-464.
- Nguyen J. (2003) *The effect of music therapy on end-of-life patients' quality of life, emotional state, and family satisfaction as measured by self-report*. Master's thesis, Florida State University, USA.
- O'Callaghan, C.C. (1996). Lyrical themes in songs written by palliative care patients. *Journal of Music Therapy*, 33(2), 74-92.
- O'Callaghan, C., & Barry, P. (2009). Music therapists' practice-based research in cancer and palliative care: Creative methods and situated findings. *Voices: A World Forum for Music Therapy*, 9(3). Retrieved from [www.voices.no/mainissues/mi4000999053.php](http://www.voices.no/mainissues/mi4000999053.php)
- O'Callaghan C., & Hiscock R. (2007). Interpretive subgroup analysis extends modified grounded theory research findings in oncologic music therapy. *Journal of Music Therapy*, 44, 256-281.
- O'Kelly, J. (2002). Music therapy in palliative care: current perspectives. *International Journal of Palliative Nursing*, 8(3), 130-136.
- O'Kelly, J., & Koffman, J. (2007). Multi-disciplinary perspectives of music therapy in adult palliative care. *Palliative Medicine*, 21(3), 235-243.
- Porter, S., McConnell, T., Clarke, M., Kirkwood, J., Hughes, N., Graham-Wisener, L., Regan, J., McKeown, M., McGrillen, K., & Reid, J. (2017a). A critical realist evaluation of a music therapy intervention in palliative care. *BMC Palliative Care*, 16, 70.
- Porter, S., McConnell, T., & Reid, J. (2017b). The possibility of critical realist randomised controlled trials. *Trials*, 18, 133.
- Porter, S., McConnell, T., Graham-Wisener, L., Regan, J., McKeown, M., Kirkwood, J., Clarke, M., Gardner, E., Dorman, S., McGrillen, K., & Reid, J. (2018). A randomised controlled pilot and feasibility study of music therapy for improving the quality of life of hospice inpatients. *BMC Palliative Care*, 17, 125
- Raglio, A., Attardo, L., Gontero, G., Rollin, S., Groppo, E., & Granieri, E. (2015). Effects of music and music therapy on mood in neurological patients. *World Journal of Psychiatry*, 5(1), 68-78.
- Reid, J., Scott, D., & Porter, S. (2015). Challenges in palliative care research: Experience from a randomised controlled trial in refractory cancer cachexia. *Palliative Medicine and Hospice Care*, 1(2), 1-3.
- Rolvjord, R., Gold, C., & Stige, B. (2005). Research rigour and therapeutic flexibility: Rationale for therapy manual developed for a randomised controlled trial. *Nordic Journal of Music Therapy*, 14(1), 15-32.
- Wlodarczyk, N. (2007). The effect of music therapy on the spirituality of persons in an in-patient hospice unit as measured by self-report. *Journal of Music Therapy*, 44(2), 113-122.

## APPENDIX: SELECTION OF REFERENCES PUBLISHED SINCE 2015

- Clements-Cortés, A. (2016). Development and efficacy of music therapy techniques within palliative care. *Complementary Therapies in Clinical Practice*, 23, 125-129.
- Clements-Cortés, A. (2017). Singing and vocal interventions in palliative and cancer care: Music therapists' perceptions of usage. *Journal of Music Therapy*, 54, 336-361.
- Clements-Cortés, A. (2018). Relationship completion in palliative care music therapy: Clinical case example-Part 1. *Music and Medicine*, 10(2), 80-90.
- Clements-Cortés, A. (2018). Relationship completion in palliative care music therapy: Clinical case research overview and results-Part 2. *Music and Medicine*, 10(2), 91-97.
- Peng, C. (2018) Our shared humanity—Music as a means of facilitating conversations on end-of-life Care. *JAMA Oncology*, 4(6), 771-772.
- Preissler, P., Kordovan, S., Ullrich, A., Bokemeyer, C., & Oechsle, K., (2016). Favored subjects and psychosocial needs in music therapy in terminally ill cancer patients: A content analysis. *BMC Palliative Care*, 15, 48.
- Schmic, W., Rosland, J. H., von Hofacker, S., Hunskaar, I., Bruvik, F., (2018). Patient's and health care provider's perspectives on music therapy in palliative care - an integrative review. *BMC Palliative Care*, 17(1), 32.
- Vesel, T., Soham, D., (2018). Music therapy and palliative care: Systematic review. *Journal of Pain and Symptom Management*, 56(6), 75.
- Warth, M., Koehler, F., Weber, M., Bardenheuer, H. J., Ditzen, B., & Kessler, J., (2019). "Song of Life (SOL)" study protocol: A multicenter, randomized trial on the emotional, spiritual, and psychobiological effects of music therapy in palliative care. *BMC Palliative Care*, 18(1), 14.
- Gao, Y., Wei, Y., Yang, W., Jiang, L., Li, X., Ding, J., & Ding, G., (2019). The effectiveness of music therapy for terminally ill patients: A meta-analysis and systematic review. *Journal of Pain and Symptom Management*, 57(2), 319-329.
- You, H., Ross, S., (2018). The impact of music therapy in paediatric palliative care in residential hospice. *Journal of Pain and Symptom Management* 56(6), 75.

Ελληνική περίληψη | Greek abstract

## Μια σύνοψη της μελέτης σκοπιμότητας MusiQual σχετικά με την αποτελεσματικότητα της μουσικοθεραπείας σε ξενώνες ανακουφιστικής φροντίδας

Jenny Kirkwood | Lisa Graham | Tracey McConnell | Sam Porter | Joanne Reid

### ΠΕΡΙΛΗΨΗ

Η ερευνητική ομάδα που συμμετείχε στη διεξαγωγή της μελέτης MusiQual, η οποία διεξήχθη στο Μπέλφαστ της Βόρειας Ιρλανδίας από το Queen's University Belfast, το Every Day Harmony Music Therapy και το Marie Curie Northern Ireland, στόχευε στη διαπίστωση της σκοπιμότητας μιας μεγαλύτερης πολυκεντρικής δοκιμής σχετικά με την αποτελεσματικότητα της μουσικοθεραπείας για τη βελτίωση της ποιότητας ζωής των τερματικών ασθενών σε ξενώνες ανακουφιστικής φροντίδας. Αυτό το συνοπτικό κείμενο συνοψίζει μια σειρά δημοσιεύσεων, οι οποίες προέκυψαν από την ανάπτυξη και εφαρμογή της μελέτης MusiQual. Αυτές οι δημοσιεύσεις περιλαμβάνουν το βασικό έγγραφο ευρημάτων (Porter et al., 2018) και μια σειρά συμπληρωματικών δημοσιεύσεων: μια συστηματική ανασκόπηση της βιβλιογραφίας (McConnell et al., 2016a), μια ρεαλιστική ανασκόπηση της βιβλιογραφίας (McConnell & Porter, 2016), μια κριτική ρεαλιστική αξιολόγηση (Porter et al., 2017a), μια περίληψη του θεωρητικού μοντέλου που προέκυψε από την ρεαλιστική ανασκόπηση της βιβλιογραφίας (McConnell & Porter, 2016) και το εγχειρίδιο θεραπείας για τη μουσικοθεραπεία στην ανακουφιστική φροντίδα το οποίο σχεδιάστηκε για χρήση στην πιθανή πολυκεντρική δοκιμή και δημοσιεύθηκε πρόσφατα (Kirkwood et al., 2019). Σκοπός αυτής της σύνοψης είναι να συγκεντρώσει τις πληροφορίες σε ένα ενιαίο, προσβάσιμο μέρος για να προωθήσει τη γνώση σε αυτόν τον τομέα εργασίας και να υποστηρίξει τους μουσικοθεραπευτές και άλλους σε αυτόν τον τομέα για την τεκμηριωμένη πρακτική.

### ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ

μουσικοθεραπεία, ανακουφιστική φροντίδα, φροντίδα στο τέλος ζωής [end-of-life care], ποιότητα ζωής, θεωρητικό μοντέλο, κριτική ρεαλιστική προσέγγιση