

**Evaluating a continuing professional development course on cognitive functions
for Music Therapists working in care homes**

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Abstract

Scarce research to date has addressed the aspect of Continuing Professional Development (CPD) as a key requirement for qualified music therapists. The present study investigated the benefits of a CPD course based on cognitive neuropsychology, which aimed to develop music therapists' knowledge and skills in care home settings. The course included 32h of activities spread across 3 months and was attended by 31 music therapists. This course was evaluated using a mixed-methods approach including a semi-structured interview and a quantitative questionnaire. The results revealed that the CPD course brought different benefits meeting the needs of the therapists working in the care homes, which, included: i) improved general knowledge of music cognition, ii) broadened thinking about music therapy practice and clients' abilities, and iii) an additional clinical and theoretical framework. These results are consistent with previous literature, highlighting the importance of providing advanced training for music therapists. Crucially, the findings highlighted the need for different strategies, techniques and pedagogical approaches in CPD courses, in function of the work setting, to improve attendees' clinical skills. In addition, the study outlines how a CPD course may be tailored to enhance specific skills and transfer of learning in line with workplace demands.

Introduction

Continuing Professional Development (CPD) is a fundamental requirement to maintain music therapists' professional credentials. The European Music Therapy Confederation (EMTC) states: "The music therapist shall make all reasonable attempts to maintain and extend her/his knowledge and skills by means of appropriate in-service training and supervision, i.e., Continuing Professional Development (CPD)" (A. 3.4, EMTC, 2010). In addition to maintaining their competence, CPD enables qualified therapists to acquire new skills, knowledge and abilities required to work in specific clinical settings. CPD is also a key to fostering the development of music therapy as a viable healthcare discipline (Jensen et al., 1990; Kern & Tague, 2017). During their qualifying training, music therapists develop different skills, such as clinical, psychological, medical, research and musical to be able to work in different clinical settings (developmental, ageing, special needs, psychiatric) (Goodman, 2011). To provide the best possible training, it is important to study the effects of different strategies, techniques, and approaches aimed at improving clinical skills in students and therapists (Baker & Krout, 2011; Jackson & Gardstrom, 2012; Schwartzberg & Silverman, 2011). To enhance the development of music therapists' clinical skills and broaden their clinical perspectives, training programs are increasingly employing teaching staff from a wide variety of professional, clinical, educational and theoretical backgrounds (Dvorak et al., 2017). There is an increasing emphasis on neuroscientific and cognitive theories in addition to the psychoanalytic, psychodynamic and humanistic approaches (Hsu et al., 2015; Sena Moore & LaGasse, 2018). Furthermore, CPD courses on the psychological effect of music making are becoming the standards of proficiency within the profession (Harrison, 2015). Although these training programmes all have robust theoretical underpinnings, they may not include the advanced training needed to specialise therapists in a particular clinical field. Therefore, professional development courses may complement the qualifying programmes to deepen music therapists' knowledge of specific clinical settings and populations (Edwards, 2015).

The present study underlines how CPD activities may foster specific competencies of music therapists working in care homes. By exploring the relevance of cognitive-neuroscientific education, a CPD course based on cognitive neuropsychology was created to further music therapists' knowledge and skills in the

context of institutional neurocognitive-decline care. The aims were to examine the potential benefits of the CPD course in music therapists' professional development. The training was located in the workplace and informed by the conversations with the managers. The following research questions guided the current study:

- 1) What are the participants' perceptions of the CPD course?
- 2) Does the training improve therapist sensitivity to the clients' needs?
- 3) Does the training influence music therapists' clinical approach?
- 4) What characteristics should the trainer have to efficiently guide the learning experience?
- 5) What pedagogical experience could be suitable to foster knowledge acquisition?

Background analysis covers aspects of addressing the curricular limitations of music therapy training courses (Bruscia, 1989; Groene & Pembroke, 2000; Kern & Tague, 2017; Wyatt & Furioso, 2000) addressed below.

CPD for music therapists

Few studies have explored the effects of CPD in music therapy, considering how novice music therapists are perceived at workplaces and factors that lead music therapists to pursue advanced education. A previous study of music therapy clinical practice (Braswell et al., 1979), showed that over 50% of the participants felt that they would pursue a degree in psychology or special education to feel more prepared for and confident in their job performance. Other studies (Ferrer et al., 2012; Silverman, 2007) found that many music therapy educators and leaders had an advanced degree in psychology or special education-related fields. In a survey of 123 dual-trained therapists in music therapy and counselling, Sevcik et al. (2017) found that 64.3% of these respondents pursued a second qualification to advance their clinical education and personal growth. The study highlighted also how dual-trained music therapists strengthened their professional identity as a music therapist even after receiving advanced education in another related field. In another survey (Kern and Tague, 2017), 66% of the 2459 music therapists whose organisations are affiliated with the World Federation of Music Therapy stated that they felt the need to pursue more professional training opportunities

leading to another credential. Short online courses, self-study opportunities and advanced clinical training have been seen as possible opportunities that would be beneficial to their professional development. The study revealed that therapists perceived professional development activities as a way to “ultimately provide high-quality service for their clients and patients over time” (Kern & Tague, 2017 p.20). A study regarding music therapists’ involvement in clinical research, Henley et al. (2020) found that the training used to teach the study protocol to the music therapists involved in the project was considered a useful professional development opportunity. This enabled the therapists involved in the project to learn new aspects, which could be integrated into their practice. Furthermore, the interaction of music therapists with other professionals to exchange research information, helped music therapists to feel more confident in: i) using the acquired knowledge in their practice; ii) writing clinical documentation; iii) improving verbal communication with staff, families and patients. The findings also highlighted that therapists found it important to pursue advanced training and coursework within or outside their place of work. Despite these findings, some music therapists were concerned about delving into non-music therapy practice despite their acknowledgement of the need for expanding their knowledge (Henley et al., 2020; Sevcik et al., 2017). This posits the notion of preserving “the ability of music therapists to practice within their scope of practice without the need for ‘out of field’ licenses” (Cassity, 2007; p. 92).

When considering senior care settings - that are also the targeted settings in the current study - Hilliard (2004) conducted a survey of 382 care home administrators to understand how novice music therapists are perceived when they start to work in this field. The results highlighted that the hired music therapists were not clinically trained in care home or palliative care to meet their clients’ specific needs. Hilliard (2004) suggested that training centres and universities should incorporate more training regarding the clinical uses and benefits of music therapy in end-of-life care. This stresses the need for training tailored to specific clinical settings as trainees acquire, adapt and use specific knowledge when they are able to understand the relationship between training and work practice (Bates et al., 1997; Odell-Miller et al., 2020). There is also evidence of how music therapists should have specific skills and knowledge when they work in care home settings (Sevcik et al., 2017). Moreover, professional development activities that are implemented by the workplace have been identified as a useful strategy. Expert music therapists working in care home settings could design on-site

clinical training to enhance professional development of trainee therapists. This may foster the process of transferring learning from the training to the workplace (Axtell et al., 1997; Kontoghiorghes, 2008). A successful training programme should be based on contents that are meaningful to the participants, including both theoretical and practical aspects, as well as development of practice-relevant knowledge and skills (Gauld & Miller, 2004).

When designing professional development courses, the characteristics of the instructors should also be considered as they could influence the learning experience. According to the literature, a trainer should be reliable and effective (Nikandrou et al., 2009), displaying a directive behaviour and mental flexibility. Additionally, a trainer should be able to use different instructional styles and collaborative experience (e.g., song-writing) based on the trainees' needs and situational demands (Baker & Krout, 2012; Nikandrou et al., 2009).

As music therapy is increasingly gaining recognition as a non-pharmacological intervention, it is necessary for music therapists to have a complete education and clearly defined competencies (Bunt, L. & Hoskyns, 2002; Decuir & Vega, 2010; Goodman, 2011; Kern & Tague, 2017; Kim, 2016; Wigram & Gold, 2006). Therefore, universities should address this with training programmes that are tailored to meet music therapists' professional needs (Wyatt & Furioso, 2000).

In sum, music therapy as a professional discipline is yet to address the issue of training students in response to the needs of the workplace (Goodman, 2011; Storz et al., 2014). While extensive clinical research has been reported in the music therapy journals, there have been very few publications about the pedagogy of music therapy training (e.g., Baker, 2007; Baker & Krout, 2012; Thompson, 2020) and the effectiveness of professional development courses. Furthermore, it is still not clear to what extent music therapists are aware of the barriers and limitations of the current music therapy education (Lloyd et al., 2018). Additionally, neurocognitive topics are often overlooked in the professional development of music therapists (Storz et al., 2014; Thaut, 2010). The present study aims to fill this gap by exploring the relevance of cognitive neuropsychology as part of a CPD course for music therapists working in care home settings.

Method

In order to investigate learning processes, content and possible influences brought by the course on the music therapists' modus operandi, a mixed method approach was employed, including a semi structured interview and a quantitative questionnaire.

Participants

This project was developed through previous collaborations between the study's researchers and MHA – Methodist Homes, a national charity providing care, accommodation and community services to older people in the UK. The charity has a well-established relationship with several universities, as it supports research especially in the field of music therapy. Furthermore, the charity seeks to facilitate the continuing professional development of its therapists with its resources, such as monthly meetings and trainings. In consideration of the professional development needs supported by the charity, it was proposed to design an ad-hoc training to improve their music therapy CPD provision.

Participants were 31 qualified music therapists (with a two-year master's degree in Music Therapy) working for MHA (see Table 1 for demographic data). All music therapists attending the training were volunteers, and their attendance expenses were covered by the care home provider. Although all the therapists knew each other, each of them worked independently in assigned care homes. As a standard of the training for MHA's music therapists, all of the therapists attended the CPD course at the same time.

The group of participants involved in this study was sufficient to reach a high degree of saturation (Fusch & Ness, 2015). This allowed for the type of analyses used to capture the majority of themes in a homogenous sample, i.e., $n > 12$ interviews (Guest et al., 2020).

The current study was implemented in agreement with the recommendations of the British Psychological Society. All participants signed an informed consent form and were assured of confidentiality and anonymity of their data in accordance with the Declaration of Helsinki. Ethical approval was received from MHA's Ethics and Research Committee.

Table 1 Demographic data for the sample of Music Therapists.

Age [range/mean(SD)]	22-64 / 36.84 (11.74)
Gender [Female n (%)/male n (%)]	25 (80.65) / 6 (19.35)
Years of MT experiences [mean(SD)]	4.6 (4.18)

* *MT* = music therapy

Need Analysis

In order to design a course addressing the music therapists' professional needs to meet the expectations of their workplace (Axtell et al., 1997; Kontoghiorghes, 2002; Nolan, 1995), a need-analysis was conducted through a qualitative semi-structured interview. The participants were two managers of MHA's music therapists. The semi-structured interview addressed three main topics:

- 1) What scientific knowledge should be provided to the music therapists that work in care homes?
- 2) What training would be useful to improve music therapy practice in care homes?
- 3) What pedagogical approach could be suitable to develop the music therapists' competencies in care homes?

A content analysis approach based on the constant comparative method (CCM; Corbin & Strauss, 2014) was employed for the data analysis. Findings highlighted that the neuroscientific and cognitive approaches, widely used in rehabilitation settings of individuals with neuro-cognitive decline, were considered important to improve music therapists' thinking and practice. This does not mean changing music therapists' therapeutic goals, but rather giving them new ways of thinking that could enhance the process of achieving the therapeutic aims for their clients. This is particularly important as novice therapists who start to work in care home settings find that they would benefit from some specialized training to deal with the distinctive needs of their clients (Hilliard, 2004).

From the need analysis the following topics were found to be relevant for the professional development of the music therapists: 1) a basic understanding of cognition, 2) the knowledge of different types of dementia and their links with cognitive and behavioural aspects, 3) an understanding of the connection between music therapists' techniques and cognitive functions, 4) learning an approach to foster effectively the identification and understanding of clients' needs, and 5) familiarity with the relevant outcome

measures that could be used in the music therapy practice and for communication with other relevant professionals.

The CPD course

The CPD course was designed on the aspects that emerged from the need analysis. In line with previous insights (Hilliard, 2004; Thaut, 2010), this course combined educational aspects regarding clinical and, more in general, beneficial uses of music exercises in care home settings. Furthermore, topics regarding the link between cognitive processes and music perception were incorporated to broaden music therapists' therapeutic perspective. To enhance the practicability of the content, and to support the learning process and skills development, the CPD course included both theoretical and practical aspects, e.g., the use of video analyses, case studies and song-writing (Baker & Krout, 2011, 2012; Gauld & Miller, 2004).

The course consisted of 32 hours spread over a three-month period to cover the identified topics. The first sessions aimed to provide the basic neuropsychological information on cognitive functions (attention, memory, executive functions, motor planning, motor disorders, and speech and language). For each cognitive function, a short video example of a music therapy session was shown to help attendees to understand the link between each type of cognitive function and their practice. The subsequent sessions provided the basic information on brain structure, cognitive ageing and the main types of dementia (Alzheimer, Parkinson, Vascular, Fronto-temporal, Lewy Bodies, Huntington). In addition, some tools used to assess clients' Cognitive Reserve (e.g., CriQ: Nucci et al., 2012), cognition (e.g., MMSE, Folstein et al., 1983; MOCA, Nasreddine et al., 2005), behavioural disorders (e.g., NPI, Cummings, 1997) and mood (e.g., GDS, Sheikh & Yesavage, 1986) were presented. The sessions focusing on evaluation and anamnesis methods were tailored to help therapists recognise a client's relevant medical and life history to create a therapy treatment tailored to participants' needs (Biasutti & Mangiacotti, 2018; 2021).

To foster and consolidate the learning process, the didactic approach was based on offering knowledge and models from an expert to music therapists and learning through participation and sharing of experiences. During the CPD course, the participants had the opportunity to discuss, to ask questions and to share personal knowledge related to each topic. Practical aspects were based on case-study discussion and implementation of

possible music therapy interventions, based on the content of the training. During the workshops, different games and song-writing experience were used to enhance attendees' understanding and learning process. For example, in the *case-study* workshop the participants were divided into subgroups, where each was given a description of a hypothetical patient's medical and psychological history. Based on the information received, therapists had to discuss and design a possible music therapy intervention that could be used to foster the patient's cognitive abilities. During the *song-writing activity*, participants also worked in subgroups where each was assigned to a particular type of neurocognitive disorders. The task for each group was to create a song incorporating relevant information learned in relation to the assigned disorder. Furthermore, the participants were given some assignments to help them develop and apply the concepts provided during the face-to-face sessions. An online tutor was available to support these participants' activities.

As the characteristics of the instructor could influence attendees' learning experience, the trainer was chosen on the basis of the need analysis output. It was considered that the trainer would have to have empathic skills, leadership and mental flexibility (Nikandrou et al., 2009), in order to adapt the learning content to meet the attendees' needs using a learner centred approach and experiential learning. The training course was administered by the first author, an expert PhD psychologist specialized in neuroscience, neurocognitive rehabilitation, music cognition and pedagogy, with teaching experience in different cultural contexts. The trainer did not know the participants before the start of the activities.

Assessment

As part of the mixed methods design, data was collected with a semi-structured interview based on 12 open and 20 Likert-scale questions, with the aim of examining the subjective potential benefits of the CPD course for the attendees. The interview was designed to employ both qualitative and quantitative data to provide a more nuanced understanding of the findings (Adejimi et al., 2010). The qualitative part based on the open questions was designed to allow participants a degree of freedom to explain their thoughts and to highlight underlying, important and contradictory aspects of the course (Horton et al., 2004). The open questions aimed to explore the participants' perspectives on: i) the characteristics and aspects of the training; ii) the outcomes and possible benefits of attending the course in line with the specific clinical setting. The

quantitative data included responses to the Likert-scale questionnaire ranging from 1 (strongly disagree) to 5 (strongly agree), to assess four main aspects of the training: i) the benefits obtained by music therapists from the training, ii) the characteristics of the training, iii) the characteristics of the trainer, and iv) the perceived value of the training. The quantitative questionnaire was adapted from Biasutti (2011) and Biasutti, Hennessy, & Vugt-Jansen (2015). The Likert scale measure was chosen to investigate the degrees of respondents' agreement on different aspects of the course. Content validity of the whole questionnaire (open and Likert questions) was assessed by three experts on music psychology, education, and cognitive psychology. The experts judged whether the questionnaire items were essential and representative to assess the aim of the study. The final questionnaire (see Appendix) was modified accordingly with the experts' suggestions. To reduce social desirability bias (Paulhus, 1984), the answers to the questionnaire were collected by the music therapists' managers in an anonymised form within 2 weeks after the end of the course.

Data analysis

Qualitative and quantitative data were analysed using different techniques. For the qualitative data (answers to the open questions of the semi-structured interview), an approach based on Grounded Theory (Glaser & Strauss, 1967) was used as a theoretical and an inductive method based on the constant comparative method (CCM: Corbin & Strauss, 2014; see also Biasutti, 2013) was employed through ATLAS.ti (Scientific Software Development GmbH), a software for qualitative text analysis. Frequencies of the obtained codes were also computed.

Concerning the quantitative questionnaire, basic descriptive statistics (mean, standard deviation) of the Likert scales (1÷5) were analysed and Cronbach's alpha (α) as a reliability test was computed using SPSS statistics 25.

Results

Qualitative results

The qualitative part of the assessment (open questions) provided various scenarios of aspects and changes brought by the CPD course. Two main themes emerged from the analysis: i) the *characteristics of the*

course (questions 1, 2, 10, 11, 12) and ii) *the outcomes and benefits* (questions 3 to 9). Table 2 presents some relevant quotes from the participants. Words reported in quotation marks are important keywords or phrases, quoted in participants interviews.

Table 2 *Examples of participant emerging concepts from the interviews*

Dimension	Question	Interview excerpts
Characteristic of the course	1) What were the most interesting aspects of the training?	<i>“The idea of what kinds of questions to ask family and the client themselves in the first session I found really useful as so far in my work I struggle with this aspect, especially with transferring my previous experience with doing evaluations with children, to dementia work. I also found the detail into the different types of dementia and what areas of cognition are affected interesting”</i>
	2) What were the main aspects of the training that were useful for you professionally?	<i>“Understanding the deficits and experiences of decline experienced by our residents and the impact that this has. Then what the impact would be on our work and how we can adapt practice to support effectively”</i>
	10) What were the aspects of the training that need to be improved?	<i>“More time spent on ways to share insights with various staff in our workplace that can be easily understood”</i>
	11) Was the workshop well implemented?	<i>“Yes, I enjoyed and benefitted from these very much as I am quite a ‘visual’ learner”</i>
	12) Any other comments?	<i>“It would be good, if possible to have these trainings repeated ‘every so’ often to consolidate/update etc.”</i>
Outcomes and benefits	3) What have you changed in your professional line of work as a result of your participation in the course?	<i>“I have changed the way I look at a resident’s engagement in an individual session, thinking back to what type or types of dementia they have. I have been able to engage some residents more positively by using a wider variety of approaches based on the information I know about their specific type of dementia”</i>
	4) How has the training influenced your ability to design and implement a MT* treatment?	<i>“Having awareness of the cognitive impact has provided a greater understanding of how/why a resident is responding or not in a particular way. Understanding the condition and how it progresses, helps the progression of the therapy.”</i>
	5) How has the training influenced your ability to define the goals of MT sessions?	<i>“My goals remain to lessen the neuro-psychiatric symptoms of the client, increase their sense of wellbeing and look at ways in which I can support and improve modes of communication and relationship between them and carers/relatives. I can use my new understanding to talk to relatives and carers about ways in which they might be able to work more effectively and positively with residents. I would probably not use most of the terms that I now use in clinical notes etc, but bring this knowledge out through Plain English.”</i>
	6) How has the training influenced your ability to thinking your client’s skill development?	<i>“I think the training has influenced my ability to try a wider range of interventions in order to better assess my client’s skill development. It also has helped me to be aware of skill deficits that might be present based on the person’s specific form of dementia.”</i>
	7) How has the training influenced your ability to interact with your clients?	<i>“Understanding different aphasic, apraxia and agnostic aspects of dementia has helped me to give clients time to formulate what they want to communicate, giving them enough space to do so without feeling rushed or pressurized. Deeper understanding of</i>

		<i>the stages and different aspects of the neurological side of dementia helps me to try to find different ways to sit with the emotional aspects of the disease and support and meet my clients in that, including an understanding of the beneficial effects of other non-musical sensory experience e.g. touch.”</i>
	8) How has the training influenced your ability to define and implement the MT assessment?	<i>“By looking through medical history in their care plans, when I come across brain assessment tests I have more understanding of them and why they have been used, as well as how they have come to the results.”</i>
	9) How has the training influenced your ability to reflect upon the MT sessions?	<i>“I am now able to think about aspects of the client’s cognitive function and how they are using what remains to help them adapt to their life in residential care. I try to reflect on how the musical and non-musical content of the sessions has been influenced by the client’s response to their declining cognitive function as well as unprocessed experiences from the past (and how these may now be confused by cognitive decline).”</i>

* MT = music therapy

i) Characteristics and aspects of the course (questions 1, 2, 10, 11, 12)

Regarding the first category *characteristics and aspects of the course*, all music therapists found that they had a positive learning experience that allowed them to better understand: i) their clients’ cognitive functioning, ii) the link between their musical practice and clients’ responses and iii) the importance of cognitive assessment and the anamnestic evaluation. In detail, 73.3% of the participants found the sessions about the different types of dementia and how they affect individuals and their brain very useful. 66% of the music therapists highlighted how the course gave them a better understanding of different aspects of cognition (memory, attention etc.) and how these functions are affected and linked with the aging process and different types of dementia. From those, 20% found the video examples and case studies to be useful activities to consolidate the information acquired. Attendees reported how the training gave them a better insight into how different actions and cognitive functions are linked (46%) and how they relate to musical aspects (53%). For 20% of the participants, an interesting aspect was learning about cognitive assessment and how to “independently diagnose” the participant, since music therapists do not always have access to clients’ relevant life and medical information in care homes. Only one participant commented on the concept of *cognitive reserve* as interesting for “how it affects the progression of dementia”. Cognitive reserve is understood as the amount of learning, skills and knowledge acquired during the whole lifespan (and not only in childhood), which may explain the ability of some individuals with high cognitive reserve to show only minor symptoms

during the course of neuro-degenerative damage by effectively and flexibly using compensatory brain network. This concept is therefore closely related to neurobiological processes of learning, and in more recent studies, it is considered able to predict not only the evolution of neurocognitive symptomatology, but also the effect of cognitive stimulation/rehabilitation of individuals with neurocognitive disorders (Devita et al., 2019; Mondini et al., 2016; Montemurro et al., 2019). In relation to the workshops, participants (93%) stated that the workshops were well implemented, engaging, and enabling them to consolidate and reflect on the information learned and discussed. The *song writing experience* was particularly appreciated. Participants felt that they could “remember information from the song even more than anything else”. Only one participant found the practical experiences uncomfortable, even though the idea to use interactive activities to motivate the team to discuss was appreciated. Concerning possible suggestions on how to improve the course, 46% suggested to offer the course in smaller chunks with more sessions, given the amount of information to acquire and process. 20% reported that it would be useful to have more practical workshops and moments of sharing between attendees, to assess and consolidate the knowledge acquired. For another 20%, there was nothing to improve. One participant commented on the fact that the training course “lacked the harsh reality of the disease and how the person living with the disease and their family cope with it” since music therapists need to be compassionate and empathic in their work.

ii) Outcomes and possible benefits of attending the course (questions 3 to 9)

The following section summarises the content analysis of the open questions regarding *outcomes and possible benefits* of the course. Since each question of this category highlights specific and important aspects of the training, the results are presented by regrouping the questions into two subcategories i) *design of the music therapy interventions* (questions 3,4,5,8,9); ii) *interaction and relationship with clients* (questions 6 & 7).

iiia) Design of the music therapy interventions

Regarding what types of changing has brought the course in the music therapist professional line of work (question 3) several aspects such as *evaluation approach, language, awareness of the types of deficits and thinking process* where highlighted. Specifically, the music therapists (67%) reported to “think” more

about the “cognitive stages” or “types of dementia” of their clients to “engage residents more positively”. 60% stated the use of different approaches to balance the psychodynamic aspects of their work with the new cognitive understanding. This would allow them to engage people with music through additional considerations and in a more “dynamic way”. Another 60% highlighted more awareness of clients’ cognitive limitations, capabilities and needs. Finally, 53% reported to have been able to use a newly acquired technical language with the “relevant terms” cogent to their work especially when writing their reports and communicating with other professionals about music therapy’s effects on clients’ cognition. When investigating how the training influenced music therapists’ ability to design and implement their therapy (question 4) the 80% of the participants reported becoming more “targeted and efficient” in their approach to treating their clients. They were able to make “better judgements” and to “better understand” the relationships between a client’s behaviour and their types of deficits. In particular, 74% mentioned that they started to “adapt” their therapy based on the analyses of a client’s dementia symptoms, implementing new “musical prompts” to tailor the treatment. 20% of the therapists stated an *anticipation process* involving thinking, gaining more information for future referrals, to have a “better picture” of the client and to “know what to expect”. This *anticipation process* helped therapists reduce their feelings of apprehension related to the first meeting with a client, by giving them the possibility to prepare in advance some material tailored to the individual. 13% of the participants highlighted changes in their ability to utilise the history of the client (e.g., particular emotional events and hobbies) to guide their musical contents and/or the conversational part of the therapy. One participant stated the need to further study the information received during the training to familiarize themselves with the materials. In relation to the ability to define goals for music therapy sessions (question 5), participants (73%) reported that the training made them more “goal-focused”. It helped them to better understand and be more aware of the realistic therapeutic goals concerning the residents, and to consider using more tailored and specific music-making methods. 33% of participants reported that their goals did not change, however, 60% of them reported to “think of goals with a broader picture”. 13% of the participants reported to have started communicating with care home staff about possible ways of interaction and stimulation that could be used with residents in everyday life to improve their quality of life and wellbeing.

It also emerged from the analyses that the training could influence music therapist's abilities in defining and implementing their music therapy assessment (question 8). In particular, 46% reported how the training made them more aware of and "confident" in utilizing personal history. and how to interpret medical reports to better identify the needs and characteristics of their clients. 40% of the participants had started to take into consideration the cognitive levels of their clients to get a more "detailed" and "robust" assessment. For another 40%, the training provided them with an understanding of how important is to use a variety of tools such as the NPI (Neuropsychiatric Inventory test; Cummings, 1994), the CRIq (Cognitive Reserve Index Questionnaire; Nucci et al., 2012) or other specific cognitive tests in the assessment process (one participant did not reply to the question). Concerning how the training influenced a therapist's abilities to reflect upon the music therapy session (question 9), 66% of the participants highlighted that the training offered them "new ways to reflect" upon sessions, thus contributing to a fuller understanding of the whole range of their clients' needs. In particular, 40% of them specified to have started to focus on cognitive parameters such as attention, memory, motor and musical skills. 6% of the participants reported that the training helped them to reflect on the session "weekly" to monitor cognitive processing. Only one participant stated a negative aspect, namely, to spend less time in reflecting on the sessions and the emotional needs of the participants from a psychoanalytic standpoint.

iib) Interaction and relationship with clients

Different influences of the training on attendees' ability to think on their client's skill development (question 6) were highlighted. Music therapists reported some changes in their thinking, with 60% of the therapists being more "aware" of the need for identifying clients' cognitive and musical "dormant skills" by better understanding clients' remaining skills which are not in use due to the lack of the support and stimulation required. 27% mentioned the concept of plasticity and how the learning process could induce a change in the connections and organisation of the neural networks. 13% expressed that they became more "confident" to utilize a "wider range of interventions" such as improvisation, instruments, singing and other tools to better assess their clients' skill development. Only one participant reported that the training did not specifically influence their process of thinking. Another participant expressed a need for more familiarization

with the materials taught. The training seems also to have influenced attendees' abilities to interact with their clients (question 7). In particular, the 60% of the participants reported that the training gave them a wider knowledge on how dementia affects a person's brain, making them more aware of how to use a different type of approach and alternative methods to interact with their clients. It emerged that a therapist utilised *touch* to facilitate the client's attentional processes since this sensory function may be retained in advanced dementia. 33% of the respondents pointed out how the training influenced the communication aspects, in that they felt to be more "confident" in dealing with communications with clients. For instance, respecting the timing of communication and finding ways of communication that could be more accessible to and helpful for the target population. 20% of the participants reported that when interacting with their clients, they start to focus their attention not only on a client's behaviour and emotional state but also on their cognitive abilities, to "understand their strengths as well as try to strengthen their weaknesses". Two participants reported that the training did not influence their ability to interact with care home residents, while one participant felt to be more "compassionate".

Quantitative results

The results are summarised in Table 3. Cronbach's α was calculated as a reliability measure of the 20 individual items of the Likert's questionnaire. Total $\alpha = .920$, no substantial increases in alpha value could have been achieved by eliminating any of the items. Cronbach's α of the four categories of the questionnaire was calculated: *benefits obtained by music therapists* (questions 3,4,7,8,10,11; $\alpha = .765$; mean = 4.05; SD = .63); *characteristics of the training* (questions 1,2,5,6,9,12,14; $\alpha = .743$; mean = 4.27; SD = .68); *trainer characteristics* (questions 13,15,16,17; $\alpha = .857$; mean = 4.41; SD = .61); *perceived value of the training* (question 18 to 20; $\alpha = .887$; mean = 4.40; SD = .73). For the interpretation of the results, a threshold of 3.5/5 (70% of the rating scale score) was chosen to indicate an *agreement*.

Table 3. Means and SD of the scores obtained for each question.

Categories	Item	Mean	SD
Benefits	3	4.47	.516
	4	4.07	.594
	7	4.20	.676
	8	4.13	.743

	10	3.47	.516
	11	4.00	.756
Training characteristics	1	4.60	.507
	2	4.60	.507
	5	4.40	.632
	6	4.40	.828
	9	4.40	.507
	12	4.20	.775
	14	3.27	.033
Trainer characteristics	13	4.27	.594
	15	4.40	.632
	16	4.33	.724
	17	4.67	.488
Perceived value	18	4.40	.828
	19	4.47	.743
	20	4.33	.724

Benefits obtained by Music Therapists.

Participants agreed that the training brought changes especially in the way of thinking about the client's ability and potential (question 3) and seeing music therapy practice from a different point of view (question 7), by better understanding how their practice is linked with specific cognitive functions. A score under the threshold was given to the question investigating whether the training *changed the way to interact with clients* (question 10).

Characteristics of the training.

All the participants evaluated the training in a positive way. They stated that it was a *useful* experience (question 1), that it *gave new information* on cognitive functioning and different types of dementia (questions 2, 5, 6 respectively) and that the workshop experiences were *valuable* (question 9). Under threshold score was given to question 14, investigating whether *the number of lessons were sufficient*.

Trainer characteristics

All participants scored this aspect of the training positively. Participants agreed that the information provided during the training was *well explained* (question 13) and that the trainer was *well prepared, able to*

reply properly at the questions and gave useful suggestions during the teaching sessions (question 15, 16, 17 respectively).

Perceived value of the training

All the participants valued the training. They agreed that they would like to *know more* on the taught topics, and they *will recommend* the course to other music therapy colleagues. Furthermore, all of them agreed that this kind of training should be implemented in universities' formal training.

Discussion and Educational Implication

In this study, we analysed the effects of a continuing professional development course for music therapists working in care homes for older adults who may experience cognitive decline. The course focused on the cognitive and neuropsychological notions in ageing. A mixed methods approach was employed to evaluate the course, using a semi-structured interview and a quantitative questionnaire.

Findings highlighted that the music therapists considered the course a useful opportunity for acquiring knowledge on music cognition. This widened their ways of thinking of their music therapy practice and clients' skills and gave them an alternative framework for practice and assessment (research question one). This is in line with the findings of Sevcik (2017), showing that music therapists pursuing further study on music therapy-related fields perceived enhanced clinical skills. The analyses revealed also that the perceived value of the course was very high. Music therapists argued that the training should be incorporated into university curricula. This, therefore, supports the literature suggesting that universities should address music therapists' professional needs in a variety of contexts and foster strategies and methodology (Kim, 2016; Nolan, 1995; Thaut, 2015), particularly for senior care settings (Hillart, 2004). In this regard, the CPD course offered an opportunity to improve strategies and methodology within music therapists' practice and to broaden music therapists' curricular and practical experience (Bruscia, 1989; Decuir, 1989; Groene, et al. 2000; Kern and Tague, 2017; Wyatt, 2000). Our findings are also in line with Axtell et al. (1997) and

Kontoghiorghes (2002), suggesting that on-site clinical trainings are a useful educational approach to foster the transfer of learning to meet job requirements.

The results further highlighted that the course improved music therapists' knowledge of the link between a client's cognitive performance and behaviour (research question two). The training made participants more *aware* of their client's attitudes by considering how the clients' residual skills pertained to their musical abilities (e.g., people with deficits in inhibitory control may not be able to follow a regular pulse and may present perseveration in rhythmic motor patterns). Music therapists foster their ability to improve the wellbeing, neuropsychiatric symptoms and quality of life of their clients with a person-centred multidisciplinary therapeutic approach. From the analyses, the notion of the music therapist's *future-self* emerged. The *future-self* is the vision that the participants have about themselves in the future, with many therapists indicating that the newly acquired knowledge of cognitive functions is a part of their future vision. This concept is related to the pedagogical perspective of the affordance of learning stimulated by the training. Music therapists were able to acquire, use and adapt the cognitive knowledge to foster and better interpret matters arising from their psychodynamic background process.

The integration of the two methods (cognitive-neuropsychological and psychodynamic) foster music therapists' abilities to better target symptoms, possible outcomes and to adjust their therapy accordingly (research question three). This is consistent with other scholars who express the importance, for music therapists, to study the effects of different strategies, techniques and approaches to improve their clinical skills (Baker & Krout, 2011; Jackson & Gardstrom, 2012; Schwartzberg & Silverman, 2011). In detail, the training helped music therapists to enhance their self-efficacy and competence in the assessment process. Participants started to feel more confident in utilising the personal and medical history of their clients. They felt that they developed a better understanding of the relationship between medications and cognitive-behavioural states of the clients. For example, some participants found it useful to know that psychotropic drugs may take up to two weeks to help with symptom relief and that they can cause specific side effects (e.g., insomnia, sleepiness, dizziness, nausea, headache, etc.) depending on the class they belong to (antidepressants, antipsychotics, mood-stabilizer). Knowing the side effects, helped therapists to be aware that patient's behaviours displayed

during therapy could be related to patient's drug therapy (e.g., dizziness/headache during the music therapy session) rather than being linked to the proposed type of music therapy interventions. This could help therapists to adapt their intervention accordingly, for example, finding the most appropriate time of day for therapy and avoiding the time of taking the drug. Furthermore, these information may help therapists to feel more confident in their approach with a positive impact generated on their own self-esteem.

The knowledge acquired furthered their understanding of the applicability of some tools such as the NPI (Neuropsychiatric Inventory). For some of the music therapists, the test was perceived as a "paperwork routine" to use as a pre-post assessment, without having a clear understanding of how the assessment information could be used to improve their clinical practice. After the training, the therapists reported a better understanding of how the psychiatric behaviours could be related to types/stages of dementia, which could be linked with specific cognitive deficits (e.g., patients with a diagnosis of Parkinson's usually experience depression, apathy and anxiety due to the awareness of their cognitive limitations, such as executive dysfunction). Furthermore, some music therapists highlighted how the use of cognitive tests could positively affect their practice. Moreover, participants stressed the usefulness of the CRIq (Cognitive Reserve Index questionnaire) as a tool to facilitate the collection of client's historical information. CRIq's questions and structure, seems to help and guide the therapist on the interview process with the caregiver. Furthermore, CRIq helps gain useful information that could be used as a trigger during music therapy intervention (e.g., knowing that the participant was a professional classical dancer allows the therapist to better target the musical interaction from the beginning of the therapy). These findings are in line with other research on the trainees' ability to successfully manipulate, integrate and transfer specific information to the workplace when they are able to understand the relationship and the relevance of the training in the work practice (Axtell et al., 1997; Bated et al., 1997; Kontoghiorghes, 2002).

Given the growing consideration that music therapy is getting into rehabilitative context, music therapists are more likely to deal with medical professionals and to come across medical assessments in which a specific technical-scientific terminology is used. *Communication* and *use of technical language* were other important aspects that emerged from the analysis of the open questions. The training offered the opportunity

to learn a specific technical language and allowed attendees to feel more confident in interpreting medical notes and tests, when communicating with other professionals and explaining the therapeutic benefits to caregivers. The participants started to use technical language in their notes. The training helped them to shape their knowledge in a new field and the language, per se, could help to express that knowledge, as discussed by Herndl and Nahrwold (2000). The analysis of the quantitative questionnaire revealed that the therapists did not feel that the training changed the way they interacted with their clients (Question 10). However, this result is inconsistent with the analysis of the open questions, which shows that the training did increase their knowledge on dementia types and cognitive functioning. This knowledge enabled them to have a full understanding of the client as whole person and their needs, not only in the client's behaviour and emotional aspects but also in their cognitive abilities. For examples, the participants found it useful to learn how cognitive residual skills may vary depending on the level of cognitive severity and type of disorder. For example, people with Alzheimer disease are likely to experience, in the early stage of the decline, more memory and language problems compared to people affected with Parkinson's in which executive functions (e.g., problem solving, speed of thinking) are more affected. Another important highlighted information concerned the use of touch with severely impaired people (a resilient sense to cognitive decline) as a way to foster communication. During the discussion, participants generated different ideas on how to use touch with severely impaired people within their practice. Examples were provided regarding the use of musical instruments with different textures, and the use of songs or improvisational activities associated with different tactile elements. All these practical examples were found useful by the attendees to tailor the therapeutic intervention based on participants' cognitive needs. Furthermore, the CPD course allowed the therapist to use a wide variety of approaches (e.g., the use of rhythmic auditory cueing to enhance motor and gait performance in Parkinson's patients; see Dalla Bella et al., 2018; Ghai et al., 2018) which help clients to capitalise on their strengths as well as to compensate for their weakness. These findings are supported by the reliability analysis that was computed from participants Likert scale responses. In particular, the specific factors *Benefits obtained by music therapists* ($\alpha = .765$) and *Training characteristics* ($\alpha = .743$) demonstrated that useful new information was obtained from the training. This new information allowed the therapists to better understand the link between their therapeutic practice and the cognitive functioning of their clients, thus bringing changes

in the interaction with them. The quantitative analysis revealed that the perceived value of the training was considered very high and music therapists agreed that aspects of the training should be incorporated into university curriculum. Elements such as the explanation of the cognitive and brain differences across neurocognitive disorders could provide relevant topics, in agreement with the literature suggesting that universities should address music therapists' professional needs and foster strategies and methodology (Nolan, 1995; Kim, 2016; Tauth 2015) especially for senior care settings (Hillart, 2004).

Although the majority of the participants in the present study perceived the importance of expanding their knowledge in music therapy-related practice, the results partly support the findings by Cassity (2007), suggesting that some music therapists are concerned about delving into the *out of field* disciplines. Even if they understood some limitations of their music therapy education, some participants of the current study felt that they spent less psychoanalytic time in reflecting on the session and on the emotional needs of the participants. However, 60% of the participants found a balance between the psychodynamic aspects and the newly acquired understanding of cognition. This may be since many Music Therapy schools are more anchored in their germane music therapy approach. To improve music therapists' training, it is important that tutors and clinical supervisors should consider encouraging their students, from the first years of training, to be open to the possibilities of integrating different methodological approaches to refine and improve their therapeutic skills.

Concerning the characteristics of the trainer (research question four), the results are in line with the literature (Nikandrou et al., 2009). An effective educational experience requires a trainer to be reliable and effective, engaging with mental flexibility skills and be able to use different instructional styles based on attendees' needs and situational demands at work.

Finally, in relation to research question five, the analyses confirmed the importance of including practical aspects in the course, to foster knowledge and support skill development (Gauld & Miller, 2004). The attendees reported that the workshops helped them to consolidate and reflect about the information learned and discussed. The *case-study* and *song-writing* workshops were found particularly useful and engaging. Moreover, the *song-writing* experience was found to be an enjoyable practice that helped them to

develop a deeper understanding of the information learned. This supports the idea (Baker & Krout, 2011; 2012) that the role of collaborative peer song-writing is a “fun and creative way to debrief and explore solution” (Baker & Krout, 2011, p. 144) and to facilitate students’ reflection and learning process.

Limitations and future research

Different limitations should be considered in this study such as the short amount of training hours (32) and the short period of delivery (three months). In addition, a limited number of participants attended the course and there was no follow-up for assessing the long-term effects of the course. Further development on music therapy pedagogy is needed. Additional research should investigate the long-term effects of CPD courses by designing adequate follow-up assessment and evaluate possible learning impacts with different research methods. For example, the learning impact could be analysed by i) measuring the quality of client care, pre- and post- CPD training; ii) collecting the opinions of managers/care staff on the perceived changes in music therapists’ practice; iii) assessing the effectiveness of CPD courses through multidimensional constructs that include music therapists’ professional and personal features (e.g., professional self-efficacy, resilience, coping strategies). Moreover, cross-country studies are needed to understand contextual instances of the process.

Conclusion

In this study, we explored the educational implications of a CPD course covering aspects of cognitive neuropsychology, music cognition, neurocognitive disorders and psychological assessments. Accordingly, we investigated the impact of this course on the perceived levels of proficiency of music therapists working in care home settings. The course offered specific skills and knowledge to music therapists in line with the needs of the care home settings, highlighting that specific educational activities are relevant to the profession (Bates et al., 1997; Hillart, 2004; Sevcik et al., 2017). The study stressed the importance of designing CPD trainings using different strategies, techniques and approaches for improving clinical skills in students and therapists (Baker & Krout, 2011; Jackson & Gardstrom, 2012; Kern and Tague, 2017; Schwartzberg & Silverman, 2011). CPD courses could be perceived by music therapists as opportunities to develop professionalism and

improve personal knowledge through new experiences (Harrison, 2015). Furthermore, this study indicated that universities and stakeholders might consider offering training on cognitive functions and neurocognitive disorder, from a neuropsychological perspective, to enhance music therapists' skills and transfer of learning to meet the requirements of workplaces.

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Appendix

Music Therapists Continuing Professional Development Course

Gender F M Other

- 1) How long have you been working as music therapist (in years)?
- 2) How many hours in a week do you spend working as music therapist?
- 3) **Qualification:**
 - Bachelor degree (please specify) BA Hons Music
 - Master degree (please specify) Msc Music Therapy
 - Conservatoire diploma
 - Other
- 4) How many years was the Music Therapy Degree?
- 5) **You work mainly with:**
 - Children
 - Elderly
 - Psychiatric patients
 - People with special educational needs

Open questions of the semi-structured interview

- 1) What were the most interesting aspects of the training?
- 2) What were the main aspects of the training that were useful for you professionally?
- 3) What have you changed in your professional line of work as a result of your participation in the training?
- 4) How has the training influenced your ability to design and implement a MT treatment?
- 5) How has the training influenced your ability to define the goals of MT sessions?
- 6) How has the training influenced your ability to thinking your client's skill development?
- 7) How has the training influenced your ability to interact with your clients?
- 8) How has the training influenced your ability to define and implement the MT assessment?
- 9) How has the training influenced your ability to reflect upon the MT sessions?
- 10) What were the aspects of the training that need to be improved?
- 11) Was the workshop well implemented?
- 12) Any other comments?

* *MT = music therapy*

Express your level of agreement with the following statements:

Strongly disagree (=1)	Disagree (=2)	Neither agree nor disagree (=3)	Agree (=4)	Strongly agree (=5)
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1) The training was useful	1	2	3	4	5
2) The cognitive training gave me new information	1	2	3	4	5
3) The training changed my way of thinking about the client's ability	1	2	3	4	5
4) The training helped me to understand how cognitive function is related to music	1	2	3	4	5
5) The training gave me enough information relating the cognitive functioning	1	2	3	4	5
6) The training gave me enough information on different types of dementia	1	2	3	4	5
7) The training helped me to see my MT practice in a different point of view	1	2	3	4	5
8) The training helped me to understand how music can stimulate the brain	1	2	3	4	5
9) The workshops experiences were useful	1	2	3	4	5
10) After the training, I changed the way I interact with clients	1	2	3	4	5
11) After the training, I understand better how my exercises are linked with specific cognitive functions	1	2	3	4	5
12) The training was well implemented	1	2	3	4	5
13) The information during the training was well explained	1	2	3	4	5
14) The number of lessons were sufficient	1	2	3	4	5
15) The trainer was able to reply properly at the questions	1	2	3	4	5
16) The trainer gave useful suggestions	1	2	3	4	5
17) The trainer was well prepared	1	2	3	4	5
18) I am interest to know more about this topic	1	2	3	4	5
19) I think that this training should be implemented in university practice	1	2	3	4	5
20) I will recommend this course to other MT colleagues	1	2	3	4	5

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