## WHAT IS MUSIC THERAPY?

# HOW DOES IT WORK AND WHAT EVIDENCE DO WE HAVE?



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#### INTRODUCTION

This resource has been compiled on behalf of the British charity *Music as Therapy International*. This is in response to requests from people pioneering the use of music therapy in countries where it is not a widely recognised or established form of intervention.

Our aim was to provide an overview of what music therapy is and the research and evidence which demonstrates its value to people facing a range of challenges throughout life. We hope this resource will help answer the questions: What is Music Therapy? How does it work and what evidence do we have?

There are many different approaches to music therapy worldwide and we have not attempted to compare the efficacy or impact of particular approaches. We have included research relating to music therapy and 'music interventions' in their broadest sense.

We have approached this by reviewing over 1000 papers, articles, presentations, theses and books. We have sought to include research which represents international music therapy practice. We have not knowingly excluded nor emphasised particular research methods. Where there is debate about findings we have included research which represents differing views. We have omitted research where findings were inconclusive due to issues relating to methodology.

Our starting point is to establish how music therapy is defined, with reference to the British Association of Music Therapy and the World Federation of Music Therapy. 'Considering Research' discusses how music therapy research has evolved and some of the questions remaining about its rigour and the approaches favoured. The subsequent summaries reflect areas of particular interest (and often funding). Just because one client group has less research to support statements defining the potential benefits of music therapy, doesn't mean music therapy is not impactful. It simply highlights areas where more research is needed to explore the impact that practitioners and clinicians see on a daily basis.

What helps to support music therapy practice in these less explored fields, is some of the wider research into why music helps and the neurological evidence we have as to how humans respond to music and the processes which affect people's minds and bodies. This is explored in Section 4.

Sections 5-9 provide summary pages relating to different client groups. These have been translated into the different languages of the local practitioners and music therapy pioneers who have requested this resource. Every statement is supported with references to the key pieces of research which have been cited as evidence of the scope and impact of music therapy.

The abstracts for these key pieces of research are then provided in a series of Appendices, alongside additional relevant research (including areas of debate, individual case studies or research which focuses on very specific conditions etc.) and wider reading. These Appendices are available in English only.

#### WHAT IS MUSIC THERAPY?

In many countries, music therapy is a recognised clinical discipline with well-evidenced benefits to people with disabilities, emotional difficulties, mental health difficulties and a wide variety of special needs<sup>1</sup>.

Music therapy is now a truly international practice; developments in South America, Africa, Asia and Australia are as vital as those in the United States and Europe. There are now 61 music therapy associations across Europe, some more focused on professionalization than others, sometimes more than one in any particular country.

Nordoff-Robbins Music Therapy, Analytical Music Therapy, Benenzon Music Therapy, The Bonny Method of Guided Imagery and Music, and Behavioural Music Therapy represent the "Five International Models of Music Therapy Practice," which were defined and presented at the 1999 World Congress in Washington D.C. To contemporise this list we could add Neurologic Music Therapy<sup>2</sup> and Community Music Therapy<sup>3</sup>.

There is great variety within these different ways of working with regard to the emphasis placed on active participation, receptive (listening) techniques and improvisation, as well as differences in the music therapist's role. What they do all have in common is the underlying belief in the power of music to affect us on a deep level, regardless of illness or disability<sup>4</sup>. So we cannot attempt to answer the question "What is music therapy?" and embrace the variety of approaches in use worldwide. Instead we offer two music therapy bodies' responses:

#### The World Federation of Music Therapy:

"Music therapy is the professional use of music and its elements as an intervention in medical, educational, and everyday environments with individuals, groups, families, or communities who seek to optimize their quality of life and improve their physical, social, communicative, emotional, intellectual, and spiritual health and wellbeing. Research, practice, education, and clinical training in music therapy are based on professional standards according to cultural, social, and political contexts." 5

#### The British Association of Music Therapy

"Music plays an important role in our everyday lives. It can be exciting or calming, joyful or poignant, can stir memories and powerfully resonate with our feelings, helping us to express them and to communicate with others.

Music therapy uses these qualities and the musical components of rhythm, melody and tonality to provide a means of relating within a therapeutic relationship. In music therapy, people work with a wide range of accessible instruments and their voices to create a musical language which reflects their emotional and physical condition; this enables them to build connections with their inner selves and with others around them.

Music therapists support the client's communications with a bespoke combination of improvised or pre-composed instrumental music and voice, either sung or spoken. Individual and group sessions are provided in many settings such as hospitals, schools, hospices and care homes, and the therapist's

<sup>&</sup>lt;sup>1</sup> Dileo Maranto (1993)

<sup>&</sup>lt;sup>2</sup> Hurt-Thaut & Johnson (2015)

<sup>&</sup>lt;sup>3</sup> Stige et al. (2010)

<sup>&</sup>lt;sup>4</sup> Dasgupta & Majumdar (2014); Aigen (2014); Baker & Wigram (2004)

<sup>&</sup>lt;sup>5</sup> World Federation of Music Therapy (2016)

approach is informed by different theoretical frameworks, depending on their training and the health needs which are to be met."

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<sup>&</sup>lt;sup>6</sup> British Association of Music Therapy (2019)

#### CONSIDERING RESEARCH

Research has been a key factor enabling the growth of the music therapy profession and its statutory recognition, and is essential to its survival as a healthcare discipline<sup>7</sup>. Existent research demonstrates the effectiveness of music therapy in many areas including:

- Effect on mood and affect
- Emotional support for clients and their families
- Psychosocial growth
- Physiological responses (e.g. heart rate, respiration)
- Neurophysiological functioning
- Pain perception
- Physical rehabilitation
- Speech, language and communication
- Movement<sup>8</sup>

Collections of accounts of clinical case material constitute a body of anecdotal evidence. Additionally there is a wealth of quantitative and qualitative research. McFerran and Rickson define these two approaches, both of which use rigorous scientific methods:

"Quantitative research in music therapy aims to control a range of variables in order to demonstrate the relationship between the music therapy intervention and the outcome, thus proving its benefit. In contrast, qualitative research attempts to capture the richness of the client's experience and to value an individual's experiences." <sup>9</sup>

Early music therapy research was predominantly quantitative and drew heavily on behavioural principles, observing measurable change in response to musical interventions. However, towards the end of the 20th century music therapists had begun to recognise considerable limitations in using quantitative research methods to explore psychotherapeutically based work<sup>10</sup>. Psychodynamic changes, such as sense of identity, self-esteem and expression of emotions such as frustration, anger, loss and fear, have proved difficult to capture with quantitative designs. In contrast, qualitative research has proved effective for capturing both spoken descriptions and musical material offered by clients, and the musical dialogues between the therapist and the clients.

The next research challenge is to respond to the increasing demand for evidence based approaches<sup>11</sup>. Wigram highlighted the difficulties in finding a tool that meets the rigorous demands of evidence based practice and yet accounts for the flexibility of the creative processes in music therapy<sup>12</sup>. However, contemporary research demonstrates music therapists are finding ways to meet the demands of Random Controlled Trials without losing therapeutic integrity and ways to synthesise findings from qualitative research. Questions remain regarding whether we should develop our own hierarchical model of evidence-based music therapy or whether we should get away from the idea of hierarchy of evidence all together? Whilst evidence-based practice fits the *treatment* model of music therapy, how relevant is it to other models?<sup>13</sup> Whilst research

<sup>&</sup>lt;sup>7</sup> Darnley-Smith & Patey (2003)

<sup>&</sup>lt;sup>8</sup> World Federation of Music Therapy (2016)

<sup>&</sup>lt;sup>9</sup> McFerran & Rickson (2007)

<sup>&</sup>lt;sup>10</sup> Wigram (1993)

<sup>&</sup>lt;sup>11</sup> Ansdell, Pavlicevic & Procter (2004)

<sup>12</sup> Wigram (1999) in Casey et al. (2011)

<sup>13</sup> Bradt (2008)

approaches continue to evolve, it seems that multiple perspectives continue to bring the most rigorous approach to investigation into music therapy<sup>14</sup>.

The resource strives to consolidate these multiple perspectives and to consolidate a wide range of music therapy research findings.

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<sup>&</sup>lt;sup>14</sup> Lincoln (2005)

#### **WORKING WITH YOUNG CHILDREN**

Music therapy has an important role to play in early intervention programmes for young children (up to 5 years). It can:

- Promote the development of verbal communication
- Promote the development of non-verbal communication skills (such as: Turn taking, eye contact, anticipation and listening)
- Develop attention and concentration
- Develop a young child's awareness of themselves and others
- Develop cognitive skills
- Boost self-esteem and confidence
- Build resilience<sup>15</sup>.

#### The Evidence Base

Even before birth, babies are part of a social world. Hearing the sound of the mother's voice, and those of people around her, gives the baby direct access to the social world into which she will be born<sup>16</sup>. This power of hearing *in utero* is evidenced by, among much other research, research into the cries of newborn babies which showed the influence of the rise and fall in the tonality of language they hear in the womb: The cries of German infants had a falling tonality, whereas the cries of French infants had a rising tonality<sup>17</sup>. A further study corroborated these findings by observing differences in the pitch contours of Swedish and German infants that also corresponded to the intonation contours of their respective languages<sup>18</sup>. Research also tells us that newborns can distinguish elements of rhythm, pitch and melody<sup>19</sup>, knowledge which, over time, the infants use to learn about the world around them and to acquire language<sup>20</sup>.

The baby is also aware of her mother's heartbeat and the rhythms of her movement. These experiences have in common with music, the elements of melody, rhythm and harmony; and this leads us to think that every human born, has within them innate musicality<sup>21</sup>. All music therapy practice is based on this understanding and music therapy literature has drawn significantly from child developmental studies, which emphasise the musicality of the pre-verbal exchanges between a mother and a newborn infant. These exchanges establish non-verbal interaction and underpin their early relationship<sup>22</sup>. Mothers and babies negotiate and share a flexible musical pulse between them: constantly adapting their tempi, intensity, motion, shape and contour of their sounds, movements and gestures in order to synchronise their non-verbal communication and emotional states<sup>23</sup>.

<sup>15</sup> Quin (2013)

<sup>16</sup> Murray & Andrews (2000)

<sup>&</sup>lt;sup>17</sup> Mampe et al. (2009)

<sup>&</sup>lt;sup>18</sup> Prochnow et al. (2017)

<sup>&</sup>lt;sup>19</sup> Papousek (1996)

<sup>&</sup>lt;sup>20</sup> Vosoughi et al. (2010)

<sup>&</sup>lt;sup>21</sup> Hadley (2010) in Quin (2013); Shoemark (2016)

<sup>&</sup>lt;sup>22</sup> Aldridge (1996); Bunt (1994); Hughes (1995); Pavlicevic (1990; 1991; 1995); Ruud (1998); Trehub (2001); Shoemark (2016) Malloch & Trevarthen (2018)

<sup>&</sup>lt;sup>23</sup> Beebe (1982); Papousek & Papousek (1989); Stern (1985); Trevarthen & Malloch (2008); Pavlicevic (2000); Malloch (1999); Trehub (2001)

Music Therapy with young children builds directly on the children's predisposition to be social and drawing out the innate musicality with which we are all born<sup>24</sup>. It promotes the socio-emotional well-being of a young child by replicating the primary attachment relationship, usually held between the mother and infant, offering secure and responsive and interactions through music-making.

Bjørkvold (1992) argues that the spontaneous musicality that occurs within child culture is much closer in form and function to the concept of developmental play than to the traditional adult concept of music<sup>25</sup>. Such play affords a child the opportunity to explore, to engage, to act out, to share and to experiment with emotions, expressions, communication<sup>26</sup>. Through play, a child can start to discover *themselves*:

"It is in playing and only in playing that the individual child or adult is able to be creative and to use the whole personality, and it is only in being creative that the individual discovers the self." (Winnicott, 1971)

The following research-based examples demonstrate the value of music therapy for young children:

- Music therapy for young children together with their parents can strengthen bonds, meet psychosocial needs of both the parent and the child, and promote positive parenting<sup>27</sup>.
- Music therapy increases sleep duration and enhances sleep quality in premature infants<sup>28</sup>
- Music therapy (in groups or individually) offers effective early intervention to address the needs of young children with additional needs<sup>29</sup>.
- Music therapy can nurture social development<sup>30</sup>, interaction<sup>31</sup> and communication skills<sup>32</sup>.
- Music therapy can stimulate cognitive functioning<sup>33</sup>, including literacy and numeracy skills<sup>34</sup>.
- Music therapy can encourage creative and spontaneous play<sup>35</sup>.
- Music therapy can develop concentration and attention<sup>36</sup>.
- Music therapy can boost self-esteem and confidence<sup>37</sup>.
- Music therapy can aid self-regulation in young children<sup>38</sup>.
- Music therapy can help young children build resilience<sup>39</sup>.
- Music therapy with young children can foster secure attachment relationships, valuable to relationships in later life<sup>40</sup>.
- Music therapy can support the emotional development of young children<sup>41</sup>.

<sup>&</sup>lt;sup>24</sup> Quin (2013); Shoemark (2016)

<sup>&</sup>lt;sup>25</sup> Forrester (2008)

<sup>&</sup>lt;sup>26</sup> Streeter (2001)

<sup>&</sup>lt;sup>27</sup> Abad & Williams (2006); Allgood (2005); Archer (2004); Ayson (2008); Ettenberger et al. (2014); Hibben (1992); Jacobsen et al. (2014); Molyneux (2005); Nicholson et al. (2008); Oldfield et al. (2012); Oldfield & Bunce (2001); Pasiali (2011); Pasiali (2013); Pasiali (2014); Pavlicevic (1990); Shoemark (1996); Stensæth (2013); Vlismas et al. (2013); Walworth (2009); Wetherick (2009); Woodward (2004); Ettenberger et al. (2016); Yang (2015)

<sup>28</sup> Kale & Pitre (2016)

<sup>&</sup>lt;sup>29</sup> Allgood (2005); Braithwaite & Sigafoos (1999); Humpal (1991); Jonsdottir (2002); Kennedy (2008); Kin et al. (2008); Stensæth (2013); Thompson et al. (2013); Wetherick (2009); Woodward (2004)

<sup>30</sup> Walworth (2009); Wetherick (2009)

<sup>&</sup>lt;sup>31</sup> Thompson et al. (2013); Young (2006); Burrell (2011)

<sup>&</sup>lt;sup>32</sup> Braithwaite & Sigafoos (1999); Forrester (2009); Hallam (2010); Humpal (1991); Jacobsen et al. (2014); Kennedy (2008); Kin et al. (2008); Nicholson et al. (2008); North (2014); Pasiali (2014); Woodward (2004); Burrell (2011)

<sup>33</sup> Forrester (2009); Standley; Hughes (1996); Wetherick (2009); Burrell (2011)

<sup>&</sup>lt;sup>34</sup> Colwell (1994); Hallam (2010); Register (2001)

<sup>&</sup>lt;sup>35</sup> Hallam (2010); Hibben (1992); Nicholson et al. (2008); Oldfield et al. (2012); Pasiali (2013); Walworth (2009)

<sup>&</sup>lt;sup>36</sup> Hallam (2010); Kin et al. (2008); Robb (2003); Standley; Hughes (1996); Burrell (2011)

<sup>&</sup>lt;sup>37</sup> Hallam (2010); Woodward (2004)

<sup>&</sup>lt;sup>38</sup> Malloch et al. (2012); Shoemark (2008); Burrell (2011)

<sup>&</sup>lt;sup>39</sup> Pasiali (2011)

<sup>&</sup>lt;sup>40</sup> Pasiali (2013); Bunt (2002); Vlismas et al. (2013); Maselko et al. (2010); Maclean (2016); Shoemark (2016)

<sup>&</sup>lt;sup>41</sup> Pavlicevic (1990); Pasiali (2014); Bunt (2002); Wetherick (2009)

oung (2006); Burrell (2011)		

• Music therapy can promote physical development<sup>42</sup>.