

Music in Paediatric Hospitals

Nordic Perspectives

Lars Ole Bonde &
Kjersti Johansson (Eds.)



Norges
musikkhøgskole
Norwegian Academy
of Music



CREMAH
Senter for forskning
i musikk og helse

Music in Paediatric Hospitals – Nordic Perspectives

Lars Ole Bonde &
Kjersti Johansson (Editors)

Series from Centre for Research in
Music and Health (CREMAH), vol. 11

NMH Publications 2020:6

NMH Publications 2020:6
© Norwegian Academy of Music and the authors

ISSN 1893-3580
ISSN 2535-3756 (online)
ISBN 978-82-7853-286-7 (printed)
ISBN 978-82-7853-287-4 (pdf)

Norwegian Academy of Music
P.P. box 5190 Majorstua
0302 OSLO

Phone.: +47 23 36 70 00
E-mail: post@nmh.no
nmh.no

Typesetting and printing: Bodoni, Oslo, 2020

Contents

Editors' preface	iii
Interview with Trygve Aasgaard <i>Karette Stensæth</i>	vii
Development of family-centred care informing Nordic neonatal music therapy <i>Alexandra Ullsten, Tora Söderström Gaden & Julie Mangersnes</i>	1
Pedagogical tact in music education in the paediatric ward: the potential of embodiment for music educators' pedagogical interaction <i>Taru-Anneli Koivisto & Sanna Kivijärvi</i>	25
How are multicultural considerations playing a role in music therapy practice? A Nordic music therapist's experiences from working in a paediatric hospital setting in Peru <i>Sarah Helander & Gustavo Gattino</i>	45
Music therapy as procedural and treatment support in paediatric healthcare: a review of the literature from a Nordic perspective <i>Maren Mellingen</i>	81
Resonance between theory and practice: development of a theory-supported documentation tool for music therapy as procedural support within a biopsychosocial frame <i>Tone Leinebø Steinhardt & Claire Mathern Ghetti</i>	109
Music therapy for children going through haematopoietic stem cell transplantation <i>Lena Ugglå & Lars Ole Bonde</i>	141
Music and health promotion in Danish/Nordic hospitals – who and how? An essay <i>Lars Ole Bonde</i>	149

Editors' preface

It may seem a paradox that the idea of including music in the treatment of physical and mental problems is as old as culture itself, and yet the inclusion of music in the everyday practice of modern hospitals is sadly a rare phenomenon. Especially when the patients are children (and adolescents) with life-threatening diseases it may seem obvious that music can make a difference, not only as a diversion in seemingly endless hospital days but also as an adjunct treatment, e.g. assisting painful medical procedures, helping sick children relax and sleep – or expressing themselves culturally, as human beings – helping to maintain their identity as non-patients. However, in modern evidence-based medicine documentation of a treatment effect is required if the hospital doors are to open to experts in music medicine or music therapy.

In countries like Germany, Australia and USA there is a quite long tradition of 'music inclusion' in paediatric hospitals. However, in the Nordic countries we are only at the beginning of this process, as witnessed by the Norwegian pioneer Trygve Aasgaard in a special preface to this anthology. The anthology was initiated by Norwegian Academy of Music's Centre for Research in Music and Health (CREMAH), which wanted to make a contribution towards the development of an evidence base and – at the same time – provide an invitation to hospital managers and health politicians to use the potentials of music medicine and music therapy and the competencies of professionals in these fields in a steady improvement of paediatric health care with a humanistic profile.

Based on experiences in and ideas from a Norwegian supervision group for music therapists working in paediatric hospitals in Oslo, CREMAH decided to invite a larger group of Nordic practitioners and researchers to describe their practices and projects. We arranged a symposium at the Norwegian Academy of Music in February 2018, where all participants presented their project/article ideas and got immediate feedback from each other and the editors' group. The next step was a meeting at the Nordic Music Therapy Conference in Stockholm in June 2018, where a few new potential authors were identified. In early 2019 chapters were submitted and the review process began. The group then gave an international presentation at the European Music Therapy Conference in Aalborg in June 2019. The review process continued for the next six months, and – because a few planned contributions were cancelled – it was decided to add the chapters by Uggla and Bonde in order to make a (more or less) complete overview of the current situation in the Nordic countries.

As mentioned above, Trygve Aasgaard is a central figure in the development of paediatric music therapy in the Nordic countries. He was the first music therapist to work systematically in a paediatric ward in Norway, and he was the first Nordic music therapist to earn a PhD degree in the field, studying his own work with children composing songs during their hospital stay and their ways of sharing them with family and friends. Aasgaard's contribution to the field has been invaluable with regards to clinical practice, research and teaching. Therefore, we are delighted to introduce this anthology with an interview with Aasgaard where he shares some of his experience, knowledge and reflections. Thank you, Karette Stensæth, for this idea and for conducting the interview.

We should also like to thank all the authors – with Norwegian, Swedish, Finnish and Danish affiliations – for their contributions, providing an anthology that covers a range of topics and perspectives. The articles give insights into both selected practice areas within the paediatric hospital setting, research, theory, and core concepts – with discussions and reflections on the particular Nordic contexts.

The first three chapters all explore different concepts in various ways. Alexandra Ullsten, Tora Söderström Gaden and Julie Mangersnes provide a historical background for the development of *family-centred care* before introducing and discussing the evolving Nordic approach in neonatal music therapy within the framework of family-centred care. Taru-Anneli Koivisto and Sanna Kivijärvi's article elaborates on the theoretical concepts of *pedagogical tact* and *embodiment* and discusses how these concepts could enable music educators to operate in complex educational settings in paediatric wards. Sarah Helander and Gustavo Gattino present a study exploring the experiences of a Nordic music therapist working in a paediatric hospital setting in Peru. The authors discuss the importance of including *multicultural perspectives* and cultural considerations in music therapy – both when cultural differences are apparent and in meetings with subtler cultural differences.

Music therapy as procedural support is covered in the next two chapters. First, Maren Mellingen reviews available Nordic literature and discusses implications for clinical practice, research and methodology as well as theory development. Next, Tone Leinebø Steinhardt and Claire Ghetti present a documentation tool for music therapy as procedural support. The authors argue that the documentation tool they have developed may be a means to further music therapists' reflections on the processes occurring in music therapy as procedural support and helpful in effectively communicating these processes and reflections to interdisciplinary staff.

In the next chapter Lena Ugglå and Lars Ole Bonde provide a summary of Ugglå's doctoral study, evaluating and exploring music therapy within the context of haematopoietic stem cell transplantation. Although this is not a peer reviewed original article, it was important for us to include Ugglå's pioneering work in this anthology, as it is a strong contribution to music therapy practice and research in the Nordic countries.

As the last chapter of this anthology we have included a revised translation of an article by Lars Ole Bonde, originally published in Danish in the *Nordic Journal of Arts, Culture and Health (1)*¹, here published with permission from NJACH Editors and Universitetsforlaget, Oslo. It is an essay providing an overview of health promotion through music activities and interventions in Danish/Nordic hospitals during the last twenty years, with special emphasis on paediatrics. The essay includes a discussion of theoretical rationales and practical problems related to these relatively new initiatives.

Finally, we should like to thank the group of distinguished international reviewers who have contributed to the high academic standard of the anthology: Unni Johns, Monika Nöcker-Ribaupierre, Joanne Loewy, Wolfgang Schmid, Xueli Tan and Cochavit Elefant. We are also grateful to the Norwegian Academy of Music, and in particular Anders Eggen, for skilful and precise editing and support.

Copenhagen/Oslo,
Lars Ole Bonde and Kjersti Johansson

Interview with Trygve Aasgaard

Karette Stensæth

On 13 January 2020 I paid a visit to Trygve Aasgaard at his home. Trygve is seen as a pioneer for the use of music therapy in paediatrics in Norway. His practice has also paved the way for the field in the rest of the Nordic region, and his voice therefore has a natural place in this anthology. Together with the editors of the anthology we decided that I would interview Trygve.

As well as hearing Trygve's views, we also wanted to provide a brief historical summary and create a kind of context for the fledgling work currently taking place in the field. The interview was conducted in Norwegian, then transcribed, lightly edited and translated.

Let's start with the beginning, Trygve. Can you say something about how and why music therapy was introduced in paediatrics in Norway?

In 1994 I was working as a music therapist at Hospice Lovisenberg in Oslo. I'd only been there a few months when I received a request from a childhood cancer support charity asking whether I'd be interested in a permanent role at the child health clinic at Rikshospitalet. I accepted and started work there in 1995. On the first few visits I would be taken to a small room (designed for physiotherapy) where 5, 6, 7, 8 children stood lined up. I'd not been told what to do, or why, but I had to get to know them, and we did so through music. After about three weeks, I think it was, I was told that being confined to this tucked-away room was not enough. I should come down to the foyer in the child health clinic where they had a grand piano. There I could really get on with the music sessions. Every Tuesday at the same time for 45 minutes. Having held a couple of music sessions there I was given free rein to work individually with the children in their rooms, including in the isolation units. Entry to the isolation units was very strict, but as long as I observed the hygiene procedures – which were stringent – I was free to come and go.

A few months after I started working at Rikshospitalet I was asked by Ullevål University Hospital whether I wanted to do the same thing there. Again I accepted, but working conditions were slightly different. At Rikshospitalet I had my own little office, and right

from the start I had a good rapport with Sverre Lie (chief consultant and professor), who had recommended me for the job. There was none of that at Ullevål. You could say that the working conditions were rather miserable, but I managed to get a digital piano and the necessary musical equipment and worked extensively with individual patients and their next-of-kin. I was also fortunate to be able to follow patients from one hospital to the other when they were undergoing bone marrow transplants (stem cell treatment). It was amazing to learn what it was like to be a leukaemia patient when normal chemotherapy failed. The music therapist also became a kind of companion who was there to support their health in both good and bad times at the hospital.¹

How much did you work back then?

My hours weren't clearly defined – I did a lot of other work, too (I was assistant professor in mental health at Aker School of Nursing and music therapist at Hospice Lovisenberg, but also free-lance musician/trombonist, specialising in early music brass/wind instruments) – but I'd often be at Rikshospitalet two days a week and at Ullevål one day a week plus numerous short visits in the evenings or on weekends. I also attended weekly seminars in Mesnali near Lillehammer with various groups such as children with radiation damage from previous treatments or families who had lost a child to cancer in the past year.² In the summers I was invited to something called Meaningful Holidays, where families with “cancer children” spent a week by the seaside or in the mountains.³ There I would often be in charge of the final concert for the adults where the children (patients and siblings) would perform for the grown-ups. And of course there would be rehearsals in the days leading up to that with soloists and different “bands”. My work in children's clinics really was a big part of my life in the late 1990s.

What international practices and literature on the subject were there back then?

Research and literature on music therapy in paediatrics were very limited when I started out.⁴ In 1994 two German music therapists, Barbara Griesmeyer and Wolfgang Bossinger (1994), published a book called *Music Therapy for Children with Cancer*. I read it thoroughly,

1 See also chapter 6 in this anthology presenting Lena Ugglå's work with children going through stem cell transplantation.

2 Organised by the Norwegian Cancer Society for families with children suffering from cancer.

3 Idem. See also: <https://www.barnekreftforeningen.no/node/214>

4 See also chapter 4 in this anthology providing a literature review of music therapy as procedural support and also a brief summary of the international development of music therapy in paediatrics.

contacted Barbara and was soon invited to join a working group comprising German and Belgian music therapists, among them Inge Bracke from Leuven. I made new international contacts at one of the very first international seminars on palliative music therapy. It took place at Sobell House in Oxford, and for the next two years I was invited there as a speaker. The thing is, when you talk about paediatric practice it's quite a broad umbrella term. I received my salary from the child cancer charity. But one of the conditions I set was that I would work with every child I believed could benefit from my music work. Maybe 75% of my hospital practice involved children with cancer. These were the children who would often spend the longest time in hospital, although I also worked extensively with young people who had received heart transplants, who had serious anorexia, various neurological conditions and so on.⁵

Could much of your work in the children's clinics be classed as palliative music therapy?

I've never been very keen on putting music therapy activities into palliative (or curative or preventive) pigeonholes. Much of what music therapists do, irrespective of client group, has a pain relief or palliative element to it. Pain relief can be intimately linked to providing care. In fact, the way I see it music therapy can also be care work to a greater or lesser extent; a view that might be interesting to explore further through research.⁶

Interest in "palliative music therapy" grew with the emergence of the hospice movement in the 1970s. As early as in 1984 Susan Munro wrote a book called *Music Therapy in Palliative/Hospice Care* (Munro, 1984). She was Swiss but worked in Montreal in Canada at one of the first palliative hospital wards in the world. It was an informative book, albeit far too problem-orientated to my taste. I was just concerned with the fact that "my" patients, adults and children alike, in a hospice or in a hospital, were actually alive! There are no particular techniques reserved solely for patients on their deathbed. Music can be used to relieve pain and distressing symptoms such as nausea or to promote desired physiological parameters in people close to or far from the moment they depart life. In many of my texts on palliative music therapy for children I have also described patients who had been seriously ill, but who survived (Aasgaard, 1999, 2001, 2004, 2006). And I've done so with a clear conscience.

5 Music therapy with children with cancer is still a substantial part of music therapists' practice in paediatric hospitals, see for example chapter 6 and 7 in this anthology.

6 See for instance the discussion on family-centred neonatal pain management in chapter 1 in this anthology.

I have the impression that your focus would shift easily between the individual patient and the institutional environment?

Absolutely! In terms of understanding what the work involves, I wanted to understand and improve people's health (etc.) and help them live fulfilling lives while also taking an interest in what you could call *music medicine*, which was exclusively based on individual psychophysiological problems.⁷ However, by the time I started working in the children's clinics I'd also developed a keen interest in milieu therapy in inpatient psychiatric treatment of adolescents and adults (Aasgaard, 1999; Aasgaard & Ærø, 2011). That way the children's clinics became a sort of laboratory for trying out different music-related activities where the objectives were more general, and perhaps more vague, than when working with individual patients. The weekly music sessions in the foyer at the Rikshospitalet children's clinic became an arena for activities where patients – and sometimes their siblings, next-of-kin and hospital staff, including the chief consultant and kindergarten teachers – sang, performed music, improvised and dramatised fairy tales together. The trick was of course to enable as many people as possible to gain something positive from it. The children were instrumental soloists, ranging from “three dongs on the cymbal” to renditions of Grieg's lyrical pieces on the piano or performances of songs they had created, often using tunes written by music therapy students or me. The chief consultant would also provide accompaniment on the piano while the music therapist played the trombone or recorder. One father impressed us with a drum solo on the congas, and so on. Next-of-kin would sometimes come and tell us later – after around an hour – that they'd forgotten they were in a hospital.

Music therapist Stine Camilla Blichfeldt Ærø continued to develop the concept with her “shift change sessions”, which took place at a time of day when more staff were able to take part. The patients really got to see doctors and other staff in new and unexpected roles! Calling this traditional music therapy would be misguided (Aasgaard & Ærø, 2011).

Through my research into how young leukaemia patients created their own songs and what significance the songs might have had (Aasgaard, 2002), I eventually became convinced of how many psychosocial activities were meaningful to the patients and their families and that a family perspective was crucial in order to understand – and perhaps also to genuinely help – the sick child to improve their health despite serious illness.⁸

7 Music medicine – as different from music therapy – in paediatrics is addressed in chapters 1, 4 and 7 in this anthology.

8 See chapter 1 in this anthology for more about a family-centred perspective.

In 1999 I wrote a chapter entitled “Music Therapy as Milieu in the Hospice and Paediatric Oncology Ward” in the anthology *Music Therapy in Palliative Care. New Voices*, edited by David Aldridge (1999). There I proffered a definition of ‘music environmental therapy’: “A systematic process of using music to promote health in a specified environment inside or outside of institutions” (p. 34). This definition was later incorporated into the concept of “community music therapy”, which has been useful in understanding music therapy at a system level. Today some of the things I helped develop could perhaps be described as *health musicking* (Stige, 2012)? Yet I also see music therapists in hospitals use environmental therapy as a theoretical term for their practices. At least I get the impression that today’s music therapists working in Norwegian children’s clinics have no problems switching their perspectives. I actually finished my engagement in paediatric music therapy writing two more general chapters on how music and art can be part of a truly integrative paediatric oncology (Aasgaard & Edwards, 2012; O’Callaghan & Aasgaard, 2012).⁹

Would you say that children with cancer have other characteristics than children with other life-threatening diseases?

Almost all the children in the children’s clinic, not least those with cancer, were healthy children who went to kindergarten or school and who had wide range of skills, varied interests and big social networks. And then suddenly they are patients. They might have had an accident or been diagnosed with cancer, which quickly takes them away from much of their normality: away from their peers, their home, many of the things that make for a good life. Their lives become “high-tech-driven”, i.e. filled with blood tests, x-rays, chemotherapy, stem cell treatment, surgery and radiation therapy, MRI and so on. They may be isolated for weeks, emaciated and with a changed appearance. It’s as far from everyday life as you can get. Music therapists hope to bring elements of normal life and happiness back into their lives, thus giving a boost to the patients and perhaps also their next-of-kin at a difficult time in their lives. The hospital school also helps with this. One of the teachers told me: “To us, every child aged between 6–7 and 15 is a ‘pupil’. If you start calling them patients, then many of them will realise that they are nearing the end.”

Do the hospitals and wards you have worked at take an interest in music?

I dare say that one distinctive feature of the university hospital is that many people there are simply very knowledgeable about music. There is probably an expectation that the music

⁹ Chapter 2 in this anthology emphasises interdisciplinary insights and describes contributions of music educators to the use of music and arts.

therapist has to deliver, purely musically speaking. We can safely say that you will need every musical skill you've got and that you quickly work out where you need to improve. I chose to step out and put myself on display in the public areas. That can be taxing. Once I gave a lecture at a big hospital in Germany where I showed how, in Norwegian children's clinics and in addition to my one-to-one work, I would organise processions through the corridors with slapstick humour and put on puppet theatre in the music sessions. My German audience were less than amused! One of the four music therapists working in a German institution said: "I'm sorry, Dr Aasgaard. We cannot concern ourselves with such things here". When I asked why he responded that people would think they were clowns. I had to ask him whether it was wrong for music therapists to spread laughter and fun. Yes, that was wrong, they believed. When they were doing therapy – remember this was a neurological hospital with seriously ill young and old patients – they had a subordinate member of staff take the patient to the therapy room where most of the music therapy took place. Other music therapists have also said they don't want to be observed while working. One therapist once told me that "I've only done this once before, and the whole hospital might hear that I played it wrong or did something that wasn't entirely successful."¹⁰

Do you get the impression that music therapists in the field today work in the same way that you did?

I had to find my way and was allowed to do so. So I found that there was room for my somewhat anarchist, or at least improvisational, approach. Working conditions for music therapists in many big hospitals around the world are probably much more clearly (and possibly also more narrowly) defined now than they were then.¹¹

Indeed, it might have something to do with today's music therapy training courses benefiting from extensive research and new findings.

I'd also like to mention that to market your psychotherapeutic credentials to the hospitals, you must demonstrate a clear therapeutic role. In any case, I've found that attitudes towards more milieu-based approaches are becoming ever more positive.

10 Stories like these highlight the need for music therapists to communicate the therapeutic relevance of their work to other health professionals in a comprehensible manner. Chapter 5 in this anthology discusses such challenges.

11 See for instance chapter 2 and 5 in this anthology for more about working conditions and music practitioners' roles in hospitals today.

We must also remember that there are still big differences around the world as to the perspectives on young patients.¹² Many music therapists in children's clinics worldwide never have to deal with the patients' families. The very idea of bringing in the family might be alien since family members are only able to visit once in a while.

You seem to have been especially keen to promote health in the middle of all the pain that probably still exists in modern children's clinics. Is that right?

Much of my learning curve was in a decade where there was a lot of "learning by doing", certainly. By jumping in at the deep end and trying things out, I ended up doing things every day that weren't much to brag about. But today I'm happy that I took some risks. After all, there aren't many potentially fatal outcomes when you're dealing with music. I've also learnt a great deal from some of the music therapy students at the Norwegian Academy of Music. My interest in salutogenesis has been a constant almost all of the time. One of the founders of the positive psychology movement, Martin Seligman, said something along the lines of "don't try to fix what's wrong, but build what's strong". I remember the first time I had explained to me the behavioural traits of different types of people, with some being "origins" and others "pawns". This thing about pushing people towards the "origins" is relevant to health work. It goes like this: "origins" have a certain realistic hope of succeeding, they use realistic reasoning and, eventually, take responsibility for their lives. A "pawn", on the other hand, is passive and frequently assumes the role of the victim amid a feeling of hopelessness. I met a large number of patients back when I was working with adults as a paramedic and for a care charity and, sometimes, I would meet entire families that seemed to be "pawns". Of course, when you go to hospital and have many of your usual attributes and roles taken away from you, it is possible to experience enduring hopelessness. But it doesn't do you any good. I think music therapy, almost regardless of client group, has the potential to promote a sense of achievement and hope. And as my mentor and friend David Aldridge, who sadly passed away this spring, said: music can be an excellent tool for *performing health* in yourself. I'd also like to add: "including in families and next-of-kin, who can sometimes suffer at least as much as their sick family member."

Where do the terms "origins" and pawns" come from?

As far as I'm aware it was Richard DeCharms, a professor of education and psychology, who in 1976 coined the term to describe different groups after studying behavioural traits in students.

12 Chapter 3 in this anthology discusses cultural, or multicultural, perspectives in depth.

The anthology in which this interview will appear has a Nordic perspective. Can you talk a bit more about how Nordic music therapy in this particular field came about?

I think Anne Olofsson, music therapist at Karolinska University Hospital in Stockholm, was the first music therapist in the Nordic region to work with cancer patients (Olofsson, 1993). Her primary focus was on adults, though. Around the same time that I began working at Rikshospitalet in Oslo, Ingrid Michaelsen started as a music therapist for children and adults at Karlstad Central Hospital. I was invited to lecture for medical and other staff in Karlstad, and Ingrid came to Oslo to participate in the music session at the children's clinic, where she impressed everyone by illustrating songs on a big blackboard at lightning speed as we sang. In around 2000 I presented my practice and lectured on the music therapy course at Aalborg University, where I also defended my PhD dissertation (Aasgaard, 2002). Eventually teachers and students began to practise the profession. Worldwide there were very few music therapists working in paediatrics in the 1990s. Those who did were mostly in Australia and Germany and some in the US, Israel and the UK.

Is there a typically Norwegian approach to music therapy in children's clinics?

I think there is. I think, but don't know for certain, that despite the hierarchical nature of hospitals in Norway and elsewhere, it may be easier in Norway than in other countries to involve different staff groups in the music sessions. I also think that wards in Norwegian hospitals provide a fairly safe setting for trying out new things. And it's great to see that there are now music therapists affiliated to all children's clinics in Norwegian university hospitals and that the aforementioned milieu perspective that I helped develop can perhaps be seen as having some of the markers of something "typically Norwegian". Still, it's the individual contact with the patient/family during the course of the therapy that makes up the core of music therapy in paediatric practice.

Thank you so much for the interesting chat, Trygve. And thanks for everything you've done for music therapy in paediatrics.

References

- Aasgaard, T. (1999). Music therapy as milieu in the hospice and paediatric oncology ward. In D. Aldridge (Ed.), *Music therapy in palliative care: New voices* (pp. 29–42). London: Jessica Kingsley.
- Aasgaard, T. (2001). An ecology of love: Aspects of music therapy in the pediatric oncology environment. *Journal of Palliative Care*, 17(3), 177–181.
- Aasgaard, T. (2002). *Song creations by children with cancer: Process and meaning*. (PhD Dissertation). Aalborg University, Aalborg.
- Aasgaard, T. (2005). Song creations by children with cancer - process and meaning. In D. Aldridge (Ed.), *Case study designs in music therapy* (pp. 67–96). London: Jessica Kingsley.
- Aasgaard, T. (2006). Musikkterapi i palliativ behandling og omsorg. *Musikkterapi*, 2006(4), 22–23.
- Aasgaard, T. (2010). The future use of music products in palliative care: A commentary on Baxter and O'Callaghan's article. *Australian Journal of Music Therapy*, 21, 21.
- Aasgaard, T. & Edwards, M. (2012). Children expressing themselves. In A. Goldman, R. Hain & S. Liben (Eds.), *Oxford textbook of palliative care for children* (Second edition). Oxford: Oxford University Press.
- Aasgaard, T. & Ærø, S. B. (2011). Musikkterapeut på en sykehusavdeling for barn: Helsefremmende arbeid for både pasient og miljø. In K. Stensæth & L. O. Bonde (Eds.), *Musikk, helse, identitet*. (pp. 141–160). Oslo: Norwegian Academy of Music.
- Griessmeier, B. & Bossinger, W. (1994). *Musiktherapie mit krebserkrankten Kindern (Praxis der Musiktherapie, Vol. 13)*. Stuttgart: Gustav Fischer.
- Munro, S. (1984). *Music therapy in palliative/hospice care [original: Musiktherapie bei Sterbenden]* (Second edition). St. Louis: MMB Music.
- O'Callaghan, C. & Aasgaard, T. (2012). Art therapies including music therapies. In A. Längler, P. Mansky & G. Seifert (Eds.), *Integrative pediatric oncology*. London: Springer.
- Olofsson, A. (1993). Music therapy in cancer care: When there are no words. In P. del Campo (Ed.), *7th World Congress in Music Therapy* (pp. 560–570). Available in D. Aldridge (Ed.): *Music Therapy Info Vol. II* (CD-Rom). Universität Witten-Herdecke 1999.
- Stige, B. (2012). Health musicking: A perspective on music and health as action and performance. In R. MacDonald, G. Kreutz & L. Mitchell (Eds.), *Music, health, and wellbeing*. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199586974.003.0014>

Karette Stensæth

Centre for Research in Music and Health, Norwegian Academy of Music

P.O. box 5190 Majorstuen

0302 Oslo

Norway

tel. +47 23 36 72 30

e-mail: kst@nmh.no

Development of family-centred care informing Nordic neonatal music therapy

Alexandra Ullsten, Tora Söderström Gaden & Julie Mangersnes

Abstract

Since the 1990s, the concept of family-centred care, where the family and healthcare staff share responsibility for the infant's hospital care, has been part of an ongoing paradigm shift in neonatal care globally. The public health care system with family-friendly parental leave policies might be one of the reasons that the Nordic countries today are at the forefront of welcoming and including parents and partners in the care of their infant round the clock. When implementing neonatal music therapy (NICU MT) in the context of Nordic health care, music therapy models of practice as well as research ought to be defined and shaped by the family-centred care model, which today is considered best practice. The Nordic context also offers favourable conditions for further developing NICU MT approaches in line with family-centred care. NICU MT was first developed in the USA in the 1980s and the interventions were infant-focused, emphasising the infant's physical and medical needs, which was the existing care focus in neonatal care at that time. Neonatal music therapy and research in the Nordic countries is still in its infancy. Systematic implementation work was first initiated in Karlstad, Sweden in 2010 and in Akershus and Oslo, Norway in 2017.

This essay provides the international music therapy field as well as other professionals in paediatric and neonatal health care an insight into the evolving Nordic approach of NICU MT. The conclusion of this essay is that the family-centred care approach in the Nordic NICUs, combined with the progressive family politics in the Nordic countries with generous parental leave schemes and gender equality in childcare, afford important prerequisites to further develop NICU MT as a truly family-centred approach.

Keywords: *neonatal music therapy, Nordic perspective, family-centred care, infants, pain management*

Introduction

Imagine being an infant or a small child, left alone in a huge, unfamiliar place that smells and sounds frightening with strangers taking care of you without any chance of meeting or hugging your parents¹ for weeks, months or even years! Imagine being that parent who must abandon your critically ill child during long periods. In the 1940s and 1950s, infants and children were hospitalised for long time periods, especially for chronic illnesses. A hospital stay could be extended for several years where the child and the parents had no or little physical and emotional contact. The parents were either not allowed to visit or were just allowed to visit once per week and then perhaps just seeing their child behind a windowpane. Both Spitz (1945, 1946) and Bowlby (1958) revealed the devastating effects on infants' and children's emotional well-being of separation from their parents in routine hospital care. There are many traumatic stories about these family separations (Jolley & Shields, 2009).

The infant's brain is sensitive to both beneficial and harmful influences in infancy (Hart, 2011). Much of brain growth takes place while the infant is dependent on the parent. Developmental neuroplasticity allows for adaptation, preparing the infant for a challenging environment, but it also bears a risk for maladaptation in extreme or mismatched environmental conditions (Brummelte, 2017). Early-life adversity and trauma involve a substantial risk for the developing brain, whereas a stimulating and enriched environment on the other hand, has long-term effect on infants' neurological structure and neurochemistry, enlarging or altering the infant's brain (Schore, 2001; Hart, 2008, 2011). The parent's attuned care regulates the infant's brain development and the parent's voice, which is intrinsic in the interplay between parents and infants, is the primary source of bonding along with touch, eye contact, smell, taste and movement (Hart, 2011). Music therapy and music-based interventions, both live and recorded, have been found to have a measurable positive short-term physiological and behavioural impact on hospitalised infants and on their parents (for more detailed reviews see Ullsten, Eriksson, Klässbo & Volgsten, 2018 and Stegeman, Geretsegger, Phan Quoc, Riedl & Smetana, 2019). A growing body of research now shows that hospitalisation of an infant is a very stressful experience for the whole family and that parents and the parents' vocal stimulation are underutilised tools in the care of the hospitalised infant (Griffin, 2006).

This essay provides a historical background of the development of family-centred care, which has laid the foundation for the evolving Nordic approach with parental involvement

1 A note on terminology is in place here. In this article we refer to parents as the legal guardians and we include single parents, fathers, partners and other primary caregivers.

in neonatal music therapy (NICU MT). This essay also introduces the current clinical situation and research of Nordic NICU MT, all within the framework of family-centred care. When viewed from a global perspective, the Nordic health care systems in Sweden, Norway, Denmark, Finland and Iceland are quite similar with for example family-friendly parental leave policies. However, our position in this essay is based on our own pioneering research and clinical work as well as implementation processes within a Swedish and Norwegian context. This explains the emphasis in this essay on NICU MT in Sweden and Norway. The overall structure of the essay is chronological, starting with a historic overview of the evolution of the concept of family-centred care within global and Nordic paediatric and neonatal health care. The published literature on family-centred care was systematically reviewed in the databases CINAHL, PubMed and Google Scholar using the keywords “family-centred care”, “NICU”, “parents” and “history”. The essay continues with a historical review of the development of NICU MT and the Nordic cultural adaption process of NICU MT in Sweden and Norway. We reflect upon and discuss the efforts and benefits of complying with the principles of family-centred care when establishing a Nordic NICU MT approach with parental participation. A snowballing search method was used for reviewing literature in the neonatal music therapy sections. The paragraph about music therapy in neonatal pain management, which is an area in great need of active methods to involve parents, is based on research by the first author of this essay. The essay concludes with implications for future NICU MT practice and research within a Nordic family-centred care context.

Development of family-centred care

Family-centred care (FCC) is considered a cornerstone philosophy of current paediatric health care globally and there is an international agreement about the importance of family-centred care in neonatal and paediatric settings (Dennis, Baxter, Ploeg & Blatz, 2017). FCC is an approach to health care rather than a care model that is respectful of and responsive to individual family values, emphasising the patient’s and family’s emotional, social, and developmental needs (Davidson et al., 2017; Ding et al., 2019). The core concepts in FCC are dignity and respect, information sharing, participation and collaboration in care (Institute for Patient and Family-Centred Care, 2010). FCC ensures that care is planned around the whole family, not just the individual child, and that all the family members are recognised as care recipients. FCC also comprises for example a culturally competent and respectfully supportive parent-professional collaboration and continuous information sharing (Jolley & Shields, 2009).

In the middle of the 20th century, paediatric care was generally unaware of the child's developmental, social and psychological needs. It was highly focused on the child's physical and medical needs (Jolley & Shields, 2009). Nursing and medicine were slow to change, but after World War II and with the help of the two British theorists and investigators, John Bowlby and James Robertson, who researched and elucidated the traumatic effects of separation of mother and child, various models of FCC started to gain ground globally (Jolley & Shields, 2009). Parents gradually became highly influential in improving the care for their hospitalised children. In 1959, the British government published a report of an inquiry into conditions in children's hospitals, commonly known as the "Platt Report". British parents who were committed to ensuring the recommendations of the Platt Report were put in place, formed one of the world's first health consumer organisations (Jolley & Shields, 2009).

In the United States, FCC in *neonatal* care was evolving as a grassroots consumer-driven movement in the early 1990s as patients and families began to seek more control over their care (Harrison, 1993; Johnson, 2000; Gooding et al., 2011). In 1992, a group of American parents who were knowledgeable about the neonatal intensive care units (NICUs) from personal experiences and from their work in support organisations, disability rights groups and hospital ethics committees, met with physicians and discussed the problems described by parents and explored possible solutions (Harrison, 1993). Parents were frustrated over the way they and their infants were treated in the NICU. The parents spoke for instance about difficulties in obtaining accurate information about their infant's conditions, treatments, and prognoses, of parental exclusion from medical and ethical decision-making and of the undertreatment of infants' pain. A document of ten principles, "The Principles for Family-Centered Neonatal Care," was the beginning of a paradigm shift (Harrison, 1993).

In the Nordic countries the shift towards FCC followed almost the same path as in the UK and in the USA. Until the 1940s and 1950s, most of the children in the Nordic countries were born at home. After that time, home births decreased and the infants were born in hospitals where infection control and medical interventions increasingly led to improved health outcomes in perinatal care (Jackson & Wigert, 2013). Care for the mother and infant shifted during this time from in-home, patient-, and family-focused care to the hospital and staff as gatekeepers of the infant, with families treated as bystanders. Parents were only allowed to visit their infants during certain visiting hours and see the child through a windowpane. There were no high-tech intensive care units for premature born and sick newborns in Sweden until the 1970s (Jackson & Wigert, 2013). In Norway, the first neonatal unit was established at Rikshospitalet in the late 1960s. In the 1970s, many county hospitals still did not have separate children's wards or neonatal units, and the most recently founded unit in Norway was not established until 1988 (Moen, 2017). In the 1980s and 1990s, there

was a shift of focus in neonatal care towards a more family-centred approach based on respect for the infant's and parents' needs, cooperation with the parents and sharing of information (Fegran, Helseth & Slettebø, 2006). Even though FCC was introduced in the Swedish NICUs in the 1990s, it was not until the 21st century that the neonatal intensive care units started to more actively include both parents, and possible siblings in the infant's care round the clock.

According to The Norwegian Neonatal Healthcare Atlas (Moen, 2017), Sweden and Norway have some of the world's best treatment results for preterm infants measured in survival. In this Norwegian analysis of admissions and treatments of infants at NICUs in Norway, the factors which contribute to this fortunate situation are stated as; "good antenatal care", "good foetal medicine follow-up" and the "high level of expertise among Swedish and Norwegian obstetricians and neonatologist" (Moen, 2017, p. 22). This report only mentions FCC once, in the context of "other factors that have been documented to have an effect on the length of stay" (Moen, 2017, p. 66). Recent systematic reviews and meta-analysis have linked FCC to improved infant's weight gain, shorter length of stay in the hospital and improved survival quality among hospitalised preterm infants as well as improved parent-reported outcomes, parent satisfaction, skills, and knowledge (Ding et al., 2019; Yu & Zhang, 2019). However, FCC is a broad concept and clinicians have varied perceptions of and expectations about what the core concepts of FCC comprise and how to translate these values into action (Dennis et al., 2017). Since standardised FCC interventions and core outcome measures are still lacking, research has difficulties comparing results to show the clinical effectiveness of FCC (Ding et al., 2019). FCC still has some groundbreaking work left to do.

Nordic family friendly policies reinforce family-centred neonatal care

Even if most infants are still cared for in traditional multi-bed, open-bay NICUs, the Nordic countries are at the forefront of welcoming and including parents in the everyday care of their infant. In Sweden, Norway, Denmark, Finland and Iceland, the awareness of family-centred care is very high and in constant growth. Parents are welcome to stay close to their infant most of the time with no restrictions in visiting hours. More and more NICUs in the Nordic hospitals are today built (or rebuilt) to welcome parents round the clock, with separate family rooms, couplet care for mother and infant with zero-separation, bedside rounds and opportunities for siblings to stay in family rooms with no restrictions on visiting hours.

The public healthcare system is an important factor in this paradigm shift and for the sustainability of the implementation of FCC in the Nordic countries. According to the general social security system in the Nordic countries, hospitalised children have a legal

right to have at least one parent present during hospitalisation. If a child is seriously ill and there is a significant threat to the child's life or if the child receives treatment for their illness and the child's life is in danger without this treatment, both parents have the right to compensation with paid care leave to be with their child for an unlimited number of days (Sweden) or for a total of 1300 days (Norway). The doctor must write a statement which includes a diagnosis and a description of the child's illness and treatment. Other factors in this implementation process were the introduction of international rules and conventions in the 1980s and 1990s. The Nordic network for children's rights and needs in health care (NOBAB) was founded in 1980 in Norway. This Nordic standard stated that sick children have the rights to have their parents present during hospitalisation and they should have the same opportunities as healthy children to develop through play, schooling and social connections with loved ones (NOBAB §§ 2, 3, 6, 7). In 1989, the United Nations Convention on the Rights of the Child was adopted and ratified a year later. Nations that ratified this convention are bound to it by international law. All Nordic countries have ratified the convention, which for example states that infants and children should not be separated from their parents against their will.

Today, we know from research how important the physical facilities in the NICU are in establishing physical and emotional parent–infant closeness. Physical closeness refers to being spatially close and emotional closeness refers to parental feelings of being emotionally connected to the infant, experiencing feelings of love, warmth and affection (Flacking et al., 2012). The most important factor supporting parent–infant closeness is the opportunity for the parents to stay overnight. Having other children or a long travel distance from home to the hospital have no impact on parent–infant closeness (Raiskila et al., 2017). In most parts of Europe, the fathers are not actively involved in the care of a sick hospitalised infant. In the Nordic countries, the situation is reverse. The fathers with the highest proportion of parental presence in Europe were in the Swedish neonatal units with 96,1% of the fathers present in the NICU, with Norway on 80,4% (Raiskila et al., 2016). The possibility for Nordic fathers to partake in skin-to-skin contact (SSC) with their hospitalised infant facilitates a more equal parenthood (Olsson, Eriksson & Anderzén-Carlsson, 2017). Fathers experiencing SSC express a feeling of improved self-esteem, closeness to their infant and a feeling of equality with the mother, compared to fathers of a healthy newborn where the father returns to work soon after the birth (Olsson et al., 2017). Both the hospitalisation of the newborn and the social benefits in the health care system offer the fathers in the Nordic countries a chance to be even more involved in their infant's development (Olsson et al., 2017), as well as in music therapy interventions.

Implementation of music therapy in Nordic paediatric and neonatal care

The first music therapy inspired project in Sweden was introduced in paediatric habilitation in the beginning of the 1980s (Westerholm, 1983). Music therapy service is today available in a few paediatric² wards in Sweden (Säfsten, 2017; Uggla et al., 2016, 2018). In Norway, music therapy was first introduced in paediatrics in the late 1990s (Ærø & Aasgaard, 2011) and is now relatively established in the paediatric departments at five out of six university hospitals in Norway. In Finland, one music therapist is working in a paediatric hospital, but the music therapy practice is located within child psychiatry. In Denmark, music therapy is for example represented in paediatric oncology research (Sanfi, 2015). However, there are currently no permanent music therapy positions in paediatric care in Denmark.

NICU MT is an even younger discipline in paediatric care. Globally, NICU MT is still in its initial stages of development (Shah et al., 2017), and in its infancy in Nordic neonatal care. In NICU MT, the music therapist specialised in neonatal music therapy methods coaches the parents to use their voices to sing with their infant to enhance mutual co-regulation, interaction, attachment and promote the social, emotional and neurological development of the hospitalised infant. The first research findings that showed that premature infants in the NICU benefit from auditory stimulation were published in nursing research in the 1970s (Katz, 1971). Neonatal music therapy research began in the 1980s and 1990s with the pioneering work of Jayne Standley at Florida State University, USA. The existing care focus in neonatal care at that time, which also influenced NICU MT, emphasised the infant's physical and medical needs. The study undertaken by Standley's student Janel Caine (Caine, 1991), who used a study design with recorded auditory stimulation, opened up a new context of practice for music therapy (Shoemark & Dearn, 2016). Professionals in the NICU were protective of their fragile patients and initially there was resistance to music being present in the NICU since all sounds were perceived as noise (Standley, 2014). Research from the music therapy field, traditionally not included in medical treatment in the NICU, was met with scepticism (Standley, 2014). NICU MT developed in different parts of the world from the late 1990s and onwards in the USA (Loewy, 2000), Germany (Nöcker-Ribaupierre, 1999), and Australia (Shoemark, 1999).

The first systematic Nordic NICU MT implementation process started in Sweden at Central-sjukhuset in Karlstad by the music therapist and first author, Alexandra Ullsten, with the first referrals in March 2010. The first Swedish NICU research project was initiated by the

² Music therapy practice and research in child psychiatry is beyond the scope of this article.

first author in 2012 (Ullsten et al., 2016, 2017b, 2018), followed by another ongoing NICU MT research project in Stockholm starting in 2014 (Haslbeck & Hugosson, 2017). Recently, two temporary music therapy services in paediatric care/NICU was initiated in Uppsala and Stockholm. In Norway, a few music therapists have for shorter periods worked in neonatal intensive care (e.g. Kvalbein, 2011), and a few master projects have contributed with initial clinical experiences (e.g. Oveland, 1998; Dahl, 2012; Rundgren, 2013). These experiences form an important background for recent, more systematic efforts for implementation, which started in 2017 at Akershus University Hospital. Music therapist Tora S. Gaden initiated a 2-year project on program development and implementation with funding from Extrastiftelsen (now led by Catharina Janner) (Gaden & Overå, 2018). Julie Mangersnes followed with initiating NICU MT services at Oslo University Hospital, Rikshospitalet in Norway later in 2017. NICU MT research in Norway began with a meta-analysis (Bieleninik, Ghetti & Gold, 2016). In 2017, the international multi-site RCT “Longitudinal Study of music Therapy’s Effectiveness on Premature infants and their parents” (LongSTEP) was launched, which will be the first study to investigate the long-term effects of music therapy on parent-infant bonding (Ghetti et al., 2019). In Finland, the first NICU MT research was introduced in 2006 (Teckenberg-Jansson, Huotilainen, Pölkki, Lipsanen & Järvenpää, 2011). The NICU MT service in Finland today is voluntary and research project-based (Kostilainen et al., 2018; Virtala & Partanen, 2018). In Denmark, the first pilot study with NICU MT investigated the effects of live music therapy on infants’ stress and parental wellbeing at Aalborg University Hospital (Haslund, 2015), but there are no music therapists working in the NICU field today.

Challenges for neonatal music therapy in Sweden and Norway

When the first author initiated music therapy in a Swedish NICU back in 2010, there were various predictable as well as unforeseen challenges on parallel levels. On the organisational level there were abrupt changes in leadership and staff and the physical facilities offered a multi-bed, open-bay unit where parents were jammed in between the cots. On a professional level, the possibilities for NICU MT training were limited to the USA and did not exist in Europe. The dearth of Swedish context-sensitive and family-centred NICU MT interventions and research became an issue for the implementation phase, when existing research literature and models of practice were infant-focused and lacked parental involvement. It became obvious that models of practice are not directly transferable across cultural contexts and health care systems. And then there was the noise issue which posed the challenging question: “To add more sound to an already noisy environment, how can that improve the situation for the premature infants?” A couple of years later, in 2013, the newly built NICU opened at Centralsjukhuset in Karlstad, which was designed to support parent-infant closeness and couplet care with separate family-rooms. The implementation

work with music therapy changed dramatically for the better. From now on, music therapy service could be offered individually with each family including siblings, in their family room.

The Norwegian Music Therapy Association has contributed to rapidly increasing interest among the Norwegian music therapists to work with premature and ill term infants and their families. The association has the past years arranged introductory courses in the model “First Sounds: Rhythm, Breath, Lullaby (RBL)” (Loewy, 2016) with Joanne Loewy from New York, providing a theoretical base for NICU MT work. These courses in combination with a steadily growing body of international research in NICU MT have presumably contributed to the implementation processes in Norway at Akershus University Hospital and at Oslo University Hospital Rikshospitalet. These two processes have continued parallel at each site with the second and third authors supervising each other along the way. To be two music therapists in the work of implementation is to occupy a fortunate position. The initial challenges from the implementation process in Sweden concerning the cultural adaption of NICU MT have been observed in Norway as well. Though, adding music to the NICU environment has mostly been accepted among staff.

The current situation with highly involved parents seems to be ideal for the Nordic family-centred neonatal music therapist to work in partnership with parents, guiding them to be equally involved in the infant-directed communication and facilitating a chance for also the fathers and partners to form an early attachment with the infant. The family-centred neonatal music therapist faces both cultural and musical challenges daily (cf. Zimmerman & Bauersachs, 2012, cf. Haslbeck, 2014). Sweden and Norway are today culturally diverse societies. There were for example an increased number of refugees during 2015 and 2016. Yet, every family in the NICU, regardless of heritage, could be considered as a unique entity, a “subculture”, with its own musical history, musical preferences and with unique inter-generationally transmitted attachment patterns (Shah, Fonagy & Strathearn, 2010). This gives cause for the neonatal music therapist to individualise and tailor the music therapy interventions. The music chosen for the music therapy interventions is culturally sensitive with a base in the family’s own musical preferences. Live singing is used as a developmental stimulus as well as a relational act of love and care. It is a resource parents always have available, yet, not always in active use. In these cases, the music therapist may work as a facilitator in empowering parents to communicate with their infant in an infant-directed mode. The interactions with the neonatal music therapist also give the family a possibility to get to know new songs and for siblings to learn how to engage with the vulnerable infant. The visit from the family-centred music therapist offers a chance to share musical backgrounds and “songs of kin” – melodies that has been used within a family’s history or are representative of the culture of that family’s community (Loewy et al., 2013).

NICU MT is used to promote normalisation in an advanced medical environment. The NICU MT in Sweden and Norway is humanistic resource-oriented (Rolvjord, 2016) and informed by developmental psychology and attachment theories (e.g. Trevarthen, 1980; Stern, 2000; Schore & Schore, 2008; Malloch & Trevarthen, 2009), the biopsychosocial model (Engel, 1977, 1980) and the biopsychosocial neuroaffective developmental psychology model (Hart, 2008, 2011). The RBL-model is the basis for music therapy practice in both Sweden and Norway but has been modified to fit routines and needs of the specific units and the context of the Swedish and Norwegian welfare system, culture and health care. The role of the music therapist is as guide, supervisor and role model for the parents, also offering family support and psychoeducation. Working as a music therapist in the context of family-centred care is not always about offering musical experiences. It also involves being available to parents as a supportive, present, empathic part (Shoemark & Dearn, 2008).

Theoretical foundations of family-centred care

Parents' protests, as mentioned above, against being separated from their critically ill term or premature infants can be seen as an enactment of common sense as well as being in line with theories of infant development and parent-infant bonding. This includes the transaction model of development (Sameroff, 2009), attachment theory (cf. Bowlby, 2008), the notion of parental mentalisation as foundation for care giving sensitivity (Fonagy et al., 2002), and the psychological preparation for parenthood (Berg Brodén, 2004; Raphael-Leff, 2018). Infants need their parents, and parents demonstrate the need to be with their infant. The infant represents hope for the future and the parents are motivated to do their very best to provide their child with optimal conditions for development (Gaden & Trondalen, 2018). Infants are born with an innate capacity and the need for social interaction and communication and are dependent on sensitive, emotionally available parents to regulate them and respond to their needs in order to develop the capacity of self-regulation and develop a sense of self (Schore, 2001; Stern, 2000; Fonagy et al., 2002). Parental availability, presence and sensitivity are all crucial elements for healthy development of the emotional bond between parent and infant (Hansen, 2010). However, entering parenthood is also entering a period of vulnerability associated with an increased risk of depression and other mental health problems that can impact parents' capacity to care for their infant (Slinning, Hansen, Moe & Smith, 2010). Stern (1995) suggests that with the birth of a child, the mother enters into a new psychic organisation – the motherhood constellation – that will shape a new set of action tendencies, sensibilities, fantasies, fears and wishes (pp. 171). A preterm birth does not only result in premature infants; parents also enter parenthood prematurely.

The time for mental preparation and psychological changes that normally occur during pregnancy up until birth are shortened and many parents feel overwhelmed and unprepared. Parents of preterm infants are at greater risk of experiencing stress, anxiety and depressive symptoms which in turn affect their ability to sensitively care for their child (Korja et al., 2008; Shaw et al., 2009). In addition, preterm and ill newborns are not fully fit for social interaction. Their social signals can be weak and hence difficult to understand and their physiology difficult to regulate.

Both infants and parents are particularly vulnerable during NICU hospitalisation, in a high-tech environment where stress and isolation is part of everyday life (Ramezani, Shirazi, Sarvestani & Moattari, 2014). This indicates a need for additional support in communication, regulation and an environment that fosters physical and emotional closeness. It would be inconsistent with the values of FCC to separate infants and parents. In family-centred care the family has the greatest influence over the child's health and well-being, and because of this influence, families must be supported in their role as caregivers (Johnson, 2000).

Family-centred neonatal pain management

From a family-centred care perspective parents are an underused resource in neonatal pain management. FCC has come a long way in welcoming and including parents in the everyday care of their infant. However, the role of the parents in infant pain management is a relatively new area of research and practice, even in the Nordic context (Palomaa, Korhonen & Pölkki, 2016). Parental participation in neonatal pain relief is associated with improved infant pain care (Axelin et al., 2015; Courtois et al., 2016; Palomaa et al., 2016) and lower pain scores (Courtois et al., 2016).

Infants cared for in the NICU experience on average between 7 and 17 painful procedures per day and very few receive appropriate pharmacological and nonpharmacological analgesic therapy (Carbajal et al., 2015; Roofthoof, Simons, Anand, Tibboel & van Dijk, 2014; Cruz, Fernandes & Oliveira, 2016). Repeated, cumulative and inadequately treated procedural pain in addition to separation from the parent, will not just harm the infant physically and psychologically in the short term, but might also jeopardise the new family's attachment process and mental health in the long term.

Infant pain and pain management became a strongly disputed subject in the late 1980s when it was established that newborn infants, both premature and term born, are capable

of experiencing pain (Anand & Hickey, 1987), and implicitly remembering trauma (Noel et al., 2015). For decades, the prevailing belief in the medical community was that infants have no memories of painful experiences, nor a present perception or localisation of pain, or that infants are capable of experiencing pain in a manner similar to that of adults, and therefore the human infant is not capable of perceiving pain (Anand & Hickey, 1987). As a consequence of these traditional views, infants underwent numerous painful and invasive procedures, including surgery, without any pain treatment (Anand & Hickey, 1987). Today, about 30 years later, despite increased knowledge and the existence of international and national guidelines, pain management and pain assessment are not optimally provided in neonatal care. Too often, pain still goes untreated in the infant population admitted to the NICU and infants and parents are still separated during painful procedures, despite an increasing awareness regarding pharmacological and non-pharmacological analgesic strategies (Carbajal et al., 2008).

Parents' participation in infant pain management has quite recently become a focus for research in nursing pain science. Hopefully, the family-centred advances in neonatal pain care will also inform neonatal music therapy. NICU MT in neonatal pain management and pain research is not yet fully evidence-based and far from being family-centred. In the neonatal pain research literature, there is a dearth of music therapy studies and a domination of music medicine research, which usually uses pre-recorded music offered by medical personnel without the presence of the parents. In procedural pain management, recorded lullabies and recorded maternal voice have shown to have certain positive effects on infants' behavioural pain indicators (Bo & Callaghan, 2000; Butt & Kisilevsky, 2000; Chou, Wang, Chen & Pai, 2003; Tramo et al., 2011; Bergomi et al., 2014; Pölkki & Korhonen, 2014; Azarmnejad et al., 2015; Shabani et al., 2016; Chirico et al., 2017; Qiu et al., 2017; Shah et al., 2017; Shukla et al., 2018). In music medicine research, recorded music during skin puncture is considered to be a simple, convenient, inexpensive and complication-free intervention (Azarmnejad et al., 2015; Kurdahi Badr et al., 2017; Shah et al., 2017). The first author of this article has elsewhere argued against this uninformed use of music in neonatal pain management (Ullsten, 2017a).

The research by Ullsten et al. (2016, 2017b) was the first RCT to measure the pain-relieving effects of *live* lullaby singing on behavioural and physiological pain responses during venipuncture in preterm and term neonates. By providing standard pain management for all involved infants only additive effects of the live lullaby singing could be assessed. The results did not show any significant pain-alleviating effects on the infants' pain responses during venipuncture, but the lullaby singing significantly calmed the infants' respiration before venipuncture and also showed a non-significant trend towards higher oxygen saturation

levels during the whole procedure in the lullaby intervention versus the control condition. There were non-significant indications of fewer and shorter skin punctures with lullaby singing. There were no indications in the data that live lullaby singing was harmful or stressful (Ullsten et al., 2017b). The live lullaby singing in this study was not performed by a parent but by a music therapy student in training.

Implications for future research and practice

NICU MT implementation in the Nordic countries has been initiated by single music therapists. When the implementation process started in Sweden 2010 and seven years later in Norway, the only available research results (as well as the only available NICU MT training and models of practice) were still infant-focused and came from American or Australian NICU care contexts. The three authors of this article have all trained in the RBL-model from New York. We have had some initial struggles to implement NICU MT into the Nordic family-centred neonatal care and adapt the models of practice to find a more culturally sensitive Nordic approach to our clinical work. We know from research that cultural sensitivity and context is of crucial importance for knowledge translation (Squires et al., 2015). Working in a Nordic NICU where families are present 24/7 puts new demands on the music therapist and requires other music therapy skills, even music psychotherapy skills. Every NICU MT intervention that is initiated must be acted and mediated through and together with the parents, in addition to a continuous negotiation with the staff and the leadership of the NICU.

Emotional support for the parents is found to be the least developed aspect of FCC globally (Raiskila et al., 2016; Davidson et al., 2017). Both nurses and parents have acknowledged that providing emotional support is a challenge for the NICU staff, which opens up an opportunity for new skills and actors to provide parental emotional support (Raiskila et al., 2016). This function could be one of the more important ones for the Nordic NICU music therapist to pursue and to research. The music therapist can provide emotional verbal and non-verbal support for the whole family, not just the parents, but the parents *together* with the hospitalised infant and possible siblings. In their meta-analysis, Bieleninik et al. (2016) found that maternal anxiety was significantly reduced for mothers of premature infants who participated in music therapy during kangaroo care (KC) compared to KC alone. As elevated maternal anxiety is associated with post-partum depression and impaired parenting, this aspect of NICU MT is important to emphasise in both clinical practice and NICU MT research. The ongoing research study LongSTEP, investigates music therapy's

effectiveness on parent-infant bonding, parent well-being and infant development during the child's first two years of life, and will fill a gap in the research literature by providing insight into longer-term impact of music therapy with premature infants and their caregivers (Ghetti et al., 2019).

Another research field of great interest for the Nordic NICU music therapist is the hospitalised infant's language development. The sensory deprivation and paucity of language exposure experienced by hospitalised preterm infants are problematic also in the Nordic NICUs. Music therapists are well suited to promote optimal input, and to train parents and staff in how to increase language exposure safely and appropriately (Sanchez & Spittle, 2019).

Neonatal music therapists in the Nordic countries can be truly family-centred also in neonatal pain management research. No study, as far as we are aware, has so far assessed the pain-alleviating effects of infant-directed *live* singing performed by a *parent* during venipuncture. When we study the theoretical rationales for including family-centred NICU MT in neonatal pain management, the arguments are overwhelming for starting to prescribe parents as their infant's pain management! Emotionally available and well-informed parents have the biopsychosocial and multimodal resources to alleviate their infant's pain through infant-directed singing (Ullsten et al., 2018). The multimodal parental infant-directed singing offers the parent–infant dyad experiences of pleasure, happiness, love and joy instead of pain, worry and stress. Shared pleasure has the capacity to dissolve a negative painful affective spiral (Ullsten et al., 2018). We suggest future research to further investigate what kinds of NICU MT interventions, combinations and methods that are effective in a painful context and the role of the music therapist in neonatal pain management. Nordic music therapy researchers have a huge opportunity to claim this new and fairly unexplored pain management field of family-centred NICU MT. The trend in neonatal nursing research nowadays is to invite the parents already at the planning stage when designing clinical studies. Participatory action research (PAR) is a method often used in knowledge translation, where researchers and participants/parents collaborate to understand a problem and change it for the better. PAR might be an exciting new path to research music therapy in family-centred pain care, allowing parents to guide the music therapists to find efficacious pain-alleviating music therapy interventions and perhaps make it easier to implement research results in clinical practice.

Now is the time to build on and deepen our predecessors' work from the past. We need to develop a Nordic family-centred perspective on neonatal music therapy in clinical programs, research and specialised training, which are culturally sensitive to the Nordic public health care systems. As music therapists, we find it essential that Nordic family-centred

neonatal care should offer music therapy to their patients and families. But, as of present, our services are rarely requested. It is not enough to have specialised training in NICU MT within the music therapy community. Other professions and programs need to be informed of NICU MT services in order to create a demand. Research and training go hand in hand and may create more positions for neonatal music therapists in the Nordic countries. Culturally sensitive Nordic neonatal music therapy research that involves parents and staff is important to spread the word and build new models of practice. We suggest that Nordic NICU MT defines the specific neonatal care goals that only music therapy may bring about, like for example emotional support for the whole family including siblings. When these music therapy interventions, that respond to specific care needs, are evidence based within a Nordic health care context, a demand for NICU MT might grow resulting in more positions in the field. We have previously seen how FCC started as a grassroots movement in the UK and in the USA and then spread globally to finally be considered as best practice. Perhaps Nordic NICU MT needs to partner up with the Nordic parent patient organisations to gain legitimacy and together with the parents articulate the need for music therapy in the NICU. The circumstances for the neonatal music therapists in the Nordic countries are advantageous, with the parents present 24/7. We need to take advantage of that framework and create a win-win situation for the infants and families, the neonatal care and neonatal music therapy.

References

- Anand, K. J. & Hickey, P. R. (1987). Pain and its effects in the human neonate and fetus. *The New England Journal of Medicine*, 317(21), 1321–1329.
- Axelin, A., Anderzén-Carlsson, A., Eriksson, M., Pölkki, T., Korhonen, A. & Franck, L. S. (2015). Neonatal intensive care nurses' perceptions of parental participation in infant pain management: A comparative focus group study. *The Journal of Perinatal & Neonatal Nursing*, 29(4), 363–374.
- Azarmnejad, E., Sarhangi, F., Javadi, M. & Rejeh, N. (2015). The effect of mother's voice on arterial blood sampling induced pain in neonates hospitalized in neonate intensive care unit. *Global Journal of Health Science*, 7(6), 198–204.
- Berg Brodén, M. B. (2004). *Graviditetens möjligheter: en tid då relationer skapas och utvecklas*. Stockholm: Natur och Kultur.

- Bergomi, P., Chieppi, M., Maini, A., Mugnos, T., Spotti, D., Tziella, C. & Scudeller, L. (2014). Nonpharmacological techniques to reduce pain in preterm infants who receive heel lance procedure: A randomized controlled trial. *Research and Theory for Nursing Practice*, 28(4), 335–348.
- Bieleninik, Ł., Ghetti, C. & Gold, C. (2016). Music therapy for preterm infants and their parents: a meta-analysis. *Pediatrics*, 138(3), 1–17. e20160971.
- Bo, L. K. & Callaghan, P. (2000). Soothing pain-elicited distress in Chinese neonates. *Pediatrics*, 105(4), 1–5.
- Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psycho-Analysis*, 39, 350–373.
- Bowlby, J. (2008). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.
- Brummelte, S. (2017). Introduction: Early adversity and brain development. *Neuroscience*, 342, 1–3.
- Butt, M. L. & Kisilevsky, B. S. (2000). Music modulates behaviour of premature infants following heel lance. *Canadian Journal of Nursing Research*, 31(4), 17–39.
- Caine, J. (1991). The effects of music on the selected stress behaviors, weight, caloric and formula intake, and length of hospital stay of premature and low birth weight neonates in a newborn intensive care unit. *Journal of Music Therapy*, 28(4), 180–192.
- Carbajal R., Rousset A., Danan C., et al. (2008). Epidemiology and treatment of painful procedures in neonates in intensive care units. *Jama*, 300(1), 60–70.
- Carbajal, R., Eriksson, M., Courtois, E., Boyle, E., Avila-Alvarez, A., Dovland Andersen, R., Sarafidis, K., Pölkki, T., Matos, C., Lago, P., Papadouri, T., Attard Montalto, S., Ilmoja, M-L., Simons, S., Tameliene, R., van Overmeire, B., Berger, A., Dobrzanska, A., Schroth, M., Bergqvist, L., Lagercrantz, H., Anand, K.J.S. (2015). Sedation and analgesia practices in neonatal intensive care units (EUROPAIN): Results from a prospective cohort study. *The Lancet Respiratory Medicine*, 3(10), 796–812.
- Chirico, G., Cabano, R., Villa, G., Bigogno, A., Ardesi, M. & Dioni, E. (2017). Randomised study showed that recorded maternal voices reduced pain in preterm infants undergoing heel lance procedures in a neonatal intensive care unit. *Acta Paediatrica*, 106(10), 1564–1568.
- Chou, L. L., Wang, R. H., Chen, S. J. & Pai, L. (2003). Effects of music therapy on oxygen saturation in premature infants receiving endotracheal suctioning. *Journal of Nursing Research*, 11(3), 209–216.
- Courtois, E., Cimerman, P., Dubuche, V., Goiset, M. F., Orfèvre, C., Lagarde, A., . . . Nanquette, M. C. (2016). The burden of venipuncture pain in neonatal intensive care units: EPIPAIN 2, a prospective observational study. *International Journal of Nursing Studies*, 57, 48–59.

- Cruz, M. D., Fernandes, A. M. & Oliveira, C. R. (2016). Epidemiology of painful procedures performed in neonates: A systematic review of observational studies. *European Journal of Pain*, 20(4), 489–498.
- Dahl, H. H. (2012). *To change so much with just so little. En kvalitativ studie om hvordan musikkterapeuter som jobber på nyfødteintensivavdelinger opplever sitt arbeid og sin arbeidshverdag.* (Master thesis). Griegakademiet, University of Bergen, Bergen.
- Davidson, J. E., Aslakson, R. A., Long, A. C., Puntillo, K. A., Kross, E. K., Hart, J., ... & Netzer, G. (2017). Guidelines for family-centered care in the neonatal, pediatric, and adult ICU. *Critical care medicine*, 45(1), 103–128.
- Dennis, C., Baxter, P., Ploeg, J. & Blatz, S. (2017). Models of partnership within family-centred care in the acute paediatric setting: a discussion paper. *Journal of advanced nursing*, 73(2), 361–374.
- Ding, X., Zhu, L., Zhang, R., Wang, L., Wang, T. T. & Latour, J. M. (2019). Effects of family-centred care interventions on preterm infants and parents in neonatal intensive care units: a systematic review and meta-analysis of randomised controlled trials. *Australian Critical Care*, 32(1), 63–75.
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *American Association for the Advancement of Science*. 196(4286), 129–136.
- Engel, G. L. (1980). The clinical application of the biopsychosocial model. *The American Journal of Psychiatry*. 137(5), 535–544.
- Fegran, L., Helseth, S. & Slettebø, Å. (2006). Nurses as moral practitioners encountering parents in neonatal intensive care units. *Nursing Ethics*, 13(1), 52–64.
- Flacking, R., Lehtonen, L., Thomson, G., Axelin, A., Ahlqvist, S., Moran, V. H., Ewald, U. Dykes, F. (2012). Closeness and separation in neonatal intensive care. *Acta Paediatrica*, 101(10), 1032–1037.
- Fonagy, P., Gergely, G., Jurist, E. L. & Target, M. (2002). *Affect regulation, mentalization and the development of the self.* London: Karnac Books.
- Gaden, T. S. & Overå, M. (2018) Samspill – Musikterapi til syke nyfødte. *PAIDOS* 36(1), 10–12.
- Gaden, T. S. & Trondalen, G. (2018). Bonding through music: Music therapy as health promotion for mothers and children at a public health clinic. In L. O. Bonde & T. Theorell (Eds.) *Music and public health: a Nordic perspective*, pp. 151–166. Cham: Springer.
- Ghetti, C., Bieleninik, Ł., Hysing, M., Kvestad, I., Assmus, J., Romeo, R., Ettenberger, M., Arnon, S., Vederhus, B.J., Gaden, T.S., Gold, C. (2019). Longitudinal study of music therapy's effectiveness for premature infants and their caregivers (LongSTEP): protocol for an international randomized trial. *BMJ Open*, 9(8), 1–16. e025062. doi: 10.1136/bmjopen-2018-025062

- Gooding, J. S., Cooper, L. G., Blaine, A. I., Franck, L. S., Howse, J. L. & Berns, S. D. (2011). Family support and family-centered care in the neonatal intensive care unit: origins, advances, impact. *Seminars in perinatology*, 35(1), 20–28.
- Griffin, T. (2006). Family-centered care in the NICU. *The Journal of perinatal & neonatal nursing*, 20(1), 98–102.
- Hansen, B. R. (2010). Affektive dialoger. Fra regulering til mentalisering. In V. Moe, K. Slinning & M. Bergum Hansen (Eds.) *Håndbok i sped- og småbarns psykiske helse*. Oslo: Gyldendal Akademisk.
- Harrison, H. (1993). The principles for family-centered neonatal care. *Pediatrics*, 92(5), 643–650.
- Hart, S. (2008). *Brain, attachment, personality: An introduction to neuroaffective development*. London: Karnac Books.
- Hart, S. (2011). *The impact of attachment: Developmental neuroaffective psychology*. New York, NY: WW Norton.
- Haslbeck, F. B. (2014). The interactive potential of creative music therapy with premature infants and their parents: A qualitative analysis. *Nordic Journal of Music Therapy*, 23(1), 36–70.
- Haslbeck, F. B. & Hugosson, P. (2017). Sounding together: Family-centered music therapy as facilitator for parental singing during skin-to-skin contact. In M. Filippa, P. Kuhn & B. Westrup (Eds.) *Early vocal contact and preterm infant brain development: Bridging the gaps between research and practice*, pp. 25–37. Cham: Springer.
- Haslund, H. (2015). Music therapy in a Danish NICU - enhancing attachment and parenting. Poster, The 8th Nordic Music Therapy Congress, Oslo, Norway.
- Institute for Patient and Family-Centered Care (2010). www.ipfcc.org/about/pfcc.html (2019-07-31).
- Jackson, K. & Wigert, H. (2013). Historik och rättigheter i ett familjecentrerat perspektiv. In K. Jackson. & H. Wigert (Eds.) *Familjecentrerad neonatalvård*, pp. 15–30. Lund: Studentlitteratur.
- Johnson, B. H. (2000). Family-centered care: Four decades of progress. *Families, Systems, & Health*, 18(2), 137–156.
- Jolley, J. & Shields, L. (2009). The evolution of family-centered care. *Journal of pediatric nursing*, 24(2), 164–170.
- Katz, V. (1971). Auditory stimulation and developmental behavior of the premature infant. *Nursing Research*, 20(3), 196–201.
- Korja, R., Savonlahti, E., Ahlqvist-Björkroth, S., Stolt, S., Haataja, L., Lapinleimu, H., ... & PIPARI Study Group. (2008). Maternal depression is associated with mother–infant interaction in preterm infants. *Acta Paediatrica*, 97(6), 724–730.

- Kostilainen, K., Wikström, V., Pakarinen, S., Videman, M., Karlsson, L., Keskinen, M., Scheininc, N. M., Karlsson, H. & Huutilainen, M. (2018). Healthy full-term infants' brain responses to emotionally and linguistically relevant sounds using a multi-feature mismatch negativity (MMN) paradigm. *Neuroscience letters*, 670, 110–115.
- Kurdahi Badr, L., Demerjian, T., Daaboul, T., Abbas, H., Hasan Zeineddine, M. & Charafeddine, L. (2017). Preterm infants exhibited less pain during a heel stick when they were played the same music their mothers listened to during pregnancy. *Acta Paediatrica*, 106(3), 438–445.
- Kvalbein, S. M. G. (2011) Musikterapi – et naturlig supplement til utviklingsrettet nyfødtsorg. *PAIDOS* 29(4),156–159.
- Loewy, J. V. (2000). *Music therapy in the NICU*. New York, NY: Satchnote Armstrong.
- Loewy, J., Stewart, K., Dassler, A.-M., Telsey, A. & Homel, P. (2013). The effects of music therapy on vital signs, feeding, and sleep in premature infants. *Pediatrics*, 131(5), 902–918.
- Loewy, J. V. (2016). *First Sounds: Rhythm, Breath, Lullaby Trainer Compendium*. New York, NY: Satchnote Armstrong.
- Malloch, S. & Trevarthen, C. (2009). *Communicative musicality: Exploring the basis of human companionship*. Oxford: Oxford University Press.
- Moen, A. (2017). *The Norwegian Neonatal Healthcare Atlas. An analysis of admissions and treatments of infants at units for sick neonates in Norway in the period 2009–2014*. Tromsø: Senter for klinisk dokumentasjon og evaluering.
- NOBAB Nordic network for children's rights and needs in health care. <http://www.nobab.se/index.php> (2018–09–08)
- Noel, M., Palermo, T. M., Chambers, C. T., Taddio, A. & Hermann, C. (2015). Remembering the pain of childhood: Applying a developmental perspective to the study of pain memories. *Pain*, 156(1), 31–34.
- Nöcker-Ribaupierre, M. (1999). Premature birth and music therapy. In T. Wigram & J. De Backer (Eds.) *Clinical applications of music therapy in developmental disability, paediatrics and neurology*, pp. 47–65. London: Jessica Kingsley.
- Olsson, E., Eriksson, M. & Anderzén-Carlsson, A. (2017). Skin-to-skin contact facilitates more equal parenthood: A qualitative study from fathers' perspective. *Journal of Pediatric Nursing: Nursing Care of Children and Families*, 34, e2–e9.
- Oveland, S. (1998). *Meningsfulle øyeblikk i musikkterapi: Et musikkterapisjunkt med premature spedbarn og deres foreldre*. (Dissertation). Universitetet i Oslo, Oslo.
- Palomaa, A. K., Korhonen, A. & Pölkki, T. (2016). Factors influencing parental participation in neonatal pain alleviation. *Journal of Pediatric Nursing*, 31(5), 519–527.

- Pölkki, T. & Korhonen, A. (2014). The effectiveness of music on pain among preterm infants in the NICU: A systematic review. *The JBI Database of Systematic Reviews and Implementation Reports*, 12(4), 354–373.
- Qiu, J., Jiang, Y. F., Li, F., Tong, Q. H., Rong, H. & Cheng, R. (2017). Effect of combined music and touch intervention on pain response and b-endorphin and cortisol concentrations in late preterm infants. *BMC Pediatrics*, 17(38), 1–7.
- Raiskila, S., Lehtonen, L., Tandberg, B. S., Normann, E., Ewald, U., Caballero, S., Varendi, H., Toome, L., Nordhøv, M., Hallberg, B., Westrup, B., Montiroso, R. & Axelin, A. (2016). Parent and nurse perceptions on the quality of family-centred care in 11 European NICUs. *Australian Critical Care*, 29(4), 201–209.
- Raiskila, S., Axelin, A., Toome, L., Caballero, S., Tandberg, B. S., Montiroso, R., .. & Lehtonen, L. (2017). Parents' presence and parent–infant closeness in 11 neonatal intensive care units in six European countries vary between and within the countries. *Acta Paediatrica*, 106(6), 878–888.
- Ramezani, T., Shirazi, Z. H., Sarvestani, R. S., & Moattari, M. (2014). Family-centered care in neonatal intensive care unit: a concept analysis. *International journal of community based nursing and midwifery*, 2(4), 268–278.
- Raphael-Leff, J. (2018). *The psychological processes of childbearing*. New York: Routledge.
- Rolvjord, R. (2016). Resource-oriented perspectives in music therapy. In J. Edwards (Ed.) *The Oxford handbook of music therapy*, pp. 557–576. Oxford: Oxford University Press.
- Roofthoof, D. W., Simons, S. H., Anand, K. J., Tibboel, D. & van Dijk, M. (2014). Eight years later, are we still hurting newborn infants? *Neonatology*, 105(3), 218–226.
- Rundgren, A.C. (2013). *Kuvøsesang: Effekt av sang og lyrespill på premature barn i neonatal intensiv enhet på sykehus - en kvantitativ studie*. (Master thesis). Norwegian Academy of Music, Oslo.
- Sameroff, A. (2009). *The transactional model*. Washington, DC: American Psychological Association.
- Sanchez, K. & Spittle, A. (2019). The language environment of the hospitalized neonate. *Acta paediatrica*, 108(6), 1172–1172.
- Sanfi, I. (2015). Music therapy for the reduction of chemotherapy-induced side effects in children with cancer: Two randomized controlled studies. *European Journal of Integrative Medicine*, 7(supplement 1), 21–21.
- Schore, A. N. (2001). The effects of early relational trauma on right brain development, affect regulation, and infant mental health. *Infant mental health journal*, 22(1-2), 201–269.
- Schore, J. R. & Schore, A. N. (2008). Modern attachment theory: The central role of affect regulation in development and treatment. *Clinical Social Work Journal*, 36(1), 9–20.

- Shabani, F., Nayeri, N. D., Karimi, R., Zarei, K. & Chehrazai, M. (2016). Effects of music therapy on pain responses induced by blood sampling in premature infants: A randomized cross-over trial. *Iranian Journal of Nursing and Midwifery Research*, 21(4), 391–396.
- Shah, P. E., Fonagy, P. & Strathearn, L. (2010). Is attachment transmitted across generations? The plot thickens. *Clinical child psychology and psychiatry*, 15(3), 329–345.
- Shah, S. R., Kadage, S. & Sinn, J. (2017). Trial of Music, Sucrose, and Combination Therapy for Pain Relief during Heel Prick Procedures in Neonates. *The Journal of Pediatrics*, 190, 153–158.
- Shaw, R. J., Bernard, R. S., DeBlois, T., Ikuta, L. M., Ginzburg, K. & Koopman, C. (2009). The relationship between acute stress disorder and posttraumatic stress disorder in the neonatal intensive care unit. *Psychosomatics*, 50(2), 131–137.
- Shoemark, H. (1999). Indications for the inclusion of music therapy in the care of infants with bronchopulmonary dysplasia. In T. Wigram & J. De Backer (Eds.) *Clinical applications of music therapy in developmental disability, paediatrics and neurology*, pp. 32–46. London: Jessica Kingsley.
- Shoemark, H. & Dearn, T. (2008). Keeping parents at the centre of family centred music therapy with hospitalised infants. *The Australian Journal of Music Therapy*, 19, 3–24.
- Shoemark, H. & Dearn, T. (2016). Music therapy in the medical care of infants. In J. Edwards (Ed.) *The Oxford handbook of music therapy*, pp. 24–52. Oxford: Oxford University Press.
- Shukla, V. V., Bansal, S., Nimbalkar, A., Chapla, A., Phatak, A., Patel, D. & Nimbalkar, S. (2018). Pain control interventions in preterm neonates: A randomized controlled trial. *Indian pediatrics*, 55(4), 292–296.
- Slinning, K., Hansen, M., Moe, V. & Smith, E. (2010). *Håndbok i sped- og småbarns psykiske helse*. Oslo: Gyldendal akademisk.
- Spitz, R. A. (1945). Hospitalism: An inquiry into the genesis of psychiatric conditions in early childhood. *The psychoanalytic study of the child*, 1(1), 53–74.
- Spitz, R. A. (1946). Hospitalism: A follow-up report on investigation described in Volume I, 1945. *The psychoanalytic study of the child*, 2(1), 113–117.
- Standley, J. M. & Moore, R. S. (1995). Therapeutic effects of music and mother's voice on premature infants. *Pediatric Nursing*, 21(6), 509–12.
- Standley, J. M. (2014). Premature infants: Perspectives on NICU-MT practice. In *Voices: A World Forum for Music Therapy*, 14, 2.
- Stegemann, T., Geretsegger, M., Phan Quoc, E., Riedl, H. & Smetana, M. (2019). Music therapy and other music-based interventions in pediatric health care: An overview. *Medicines*, 6(25), 1–12.

- Stern, D. N. (1995). *The motherhood constellation: A unified view of parent-infant psychotherapy*. London: Karnac Books.
- Stern, D. N. (2000). *The interpersonal world of the infant: A view from psychoanalysis and developmental psychology*. New York: Basic Books.
- Squires, J. E., Graham, I. D., Hutchinson, A. M., Linklater, S., Brehaut, J. C., Curran, J., ... & Fiander, M. (2015). Understanding context in knowledge translation: A concept analysis study protocol. *Journal of advanced nursing*, 71(5), 1146–1155.
- Säfsten, N. (2017). Imse vimse spindel – sångernas betydelse i arbetet med svårt sjuka barn och ungdomar. In A. Sandell, I. Hammarlund, A-K. Kuuse & L. Johnels (Eds.) *Möten, musik, mångfald. Perspektiv på musikterapi*, pp. 77–87. Göteborg, Sweden: Förbundet för musikterapi i Sverige (FMS).
- Teckenberg-Jansson, P., Huutilainen, M., Pölkki, T., Lipsanen, J. & Järvenpää, A. L. (2011). Rapid effects of neonatal music therapy combined with kangaroo care on prematurely-born infants. *Nordic Journal of Music Therapy*, 20(1), 22–42.
- Tramo, M. J., Lense, M., Van Ness, C., Kagan, J., Doyle Settle, M. & Cronin, J. H. (2011). Effects of music on physiological and behavioral indices of acute pain and stress in premature infants: Clinical trial and literature review. *Music and Medicine*, 3(2), 72–83.
- Trevarthen, C. (1980). The foundations of intersubjectivity: Development of interpersonal and cooperative understanding in infants. In D. R. Olson (Ed.) *The Social Foundations of Language and Thought*, pp. 316–342. New York: Norton.
- Uggla, L., Bonde, L. O., Svahn, B. M., Remberger, M., Wrangsjö, B. & Gustafsson, B. (2016). Music therapy can lower the heart rates of severely sick children. *Acta Paediatrica*, 105(10), 1225–1230.
- Uggla, L., Bonde, L. O., Hammar, U., Wrangsjö, B., & Gustafsson, B. (2018). Music therapy supported the health-related quality of life for children undergoing haematopoietic stem cell transplants. *Acta Paediatrica*. 107(11), 1986–1994.
- Ullsten, A., Eriksson, M., Klässbo, M. & Volgsten, U. (2016). Live music therapy with lullaby singing as affective support during painful procedures: A case study with microanalysis. *Nordic Journal of Music Therapy*, 26(2), 142–166.
- Ullsten, A. (2017a). Family-centred music intervention: An emotional factor that modulates, modifies and alleviates infants' pain experiences. *Acta Paediatrica*, 106(3), 361–362.
- Ullsten, A., Hugoson, P., Forsberg, M., Forzelius, L., Klässbo, M., Olsson, E., . . . Eriksson, M. (2017b). Efficacy of live lullaby singing during procedural pain in preterm and term neonates. *Music and Medicine*, 9(2), 73–85.
- Ullsten, A., Eriksson, M., Klässbo, M. & Volgsten, U. (2018). Singing, sharing, soothing–biopsychosocial rationales for parental infant-directed singing in neonatal pain management: A theoretical approach. *Music & Science*, 1, 1–13. 2059204318780841.

- Virtala, P. & Partanen, E. (2018). Can very early music interventions promote at-risk infants' development?. *Annals of the New York Academy of Sciences*.
- Westerholm, B. (1983). *Musik i samspel på barnsjukhus*. (Socialstyrelsen 1983:7). Stockholm: Liber
- Wigert, H., Hellström, A. L. & Berg, M. (2008) Conditions for parents' participation in the care of their child in neonatal intensive care - a field study. *BMC Pediatrics*, 8(3), 1–9. doi:10.1186/1471-2431-8-3
- Yu, X. & Zhang, J. (2019). Family-centred care for hospitalized preterm infants: A systematic review and meta-analysis. *International Journal of Nursing Practice*, 25(3), 1–9, e12705.
- Zimmerman, K. & Bauersachs, C. (2012). Empowering NICU parents. *International Journal of Childbirth Education*, 27(1), 50–53.
- Ærø, S. C. B. & T. Aasgaard (2011). Musikkterapeut på en sykehusavdeling for barn: Helsefremmende arbeid for både pasient og miljø. In K. Stensæth and L. O. Bonde (Eds.) *Musikk, helse, identitet*. pp. 141–160. Oslo: Norges musikkhøgskole.

Alexandra Ullsten^{a,b}, Tora Söderström Gaden^{c,d}, & Julie Mangersnes^e

^a Department of Musicology, Örebro University, Örebro, Sweden; ^b Centre for Clinical Research, Region Värmland, Karlstad, Sweden; ^c The Grieg Academy Music Therapy Research Centre, Bergen, Norway.

^d NORCE, Bergen, Norway; ^e Oslo University Hospital, Rikshospitalet, Oslo, Norway.

*Corresponding author:

Alexandra Ullsten

Department of Musicology

Örebro University, Örebro, Sweden and Region Värmland, Karlstad, Sweden

Music and Art Therapy Department

Central Hospital

SE-651 85 Karlstad

Sweden

+46 54 61 78 39

e-mail: alexandra.ullsten@regionvarmland.se

Disclosure statement

The authors have no conflicts of interest to declare.

Funding

Centre for Clinical Research, Region Värmland, Karlstad, Sweden

Pedagogical tact in music education in the paediatric ward: the potential of embodiment for music educators' pedagogical interaction

Taru-Anneli Koivisto & Sanna Kivijärvi

Abstract

This article aims to contribute to the current theoretical and practical understanding of music educators' pedagogical tact through a theoretical lens of embodiment within a children's hospital. Embodied pedagogical tact as a form of practitioner knowledge can effectively serve as a means for music educators, working along healthcare professionals, in the interdisciplinary field of healthcare. The article argues that intertwining pedagogical tact with an epistemological view that relies on the mind-body connection, enables music educators to operate in complex educational situations in paediatric wards. It is concluded that bodily reflections may serve as key competencies beyond musical skills for the educator in navigating through emotional arousal, while supporting the well-being of children and their families in a tactful, sensitive manner.

Keywords: *embodiment, healthcare, music education, paediatric ward, pedagogical tact*

Introduction

The purpose of this article is to enrich the theoretical basis of music practitioners' work in hospitals. In Finland, among other countries, there is an increasing number of initiatives at the political, practical and theoretical levels that justify the art practitioners' entries into the most fragile of healthcare environments, such as palliative care wards, neonatal intensive care units and oncological wards (Dileo & Bradt, 2009; Liikanen, 2010). However, scholarly discussions in the field of music in healthcare have generally focused on medical, therapeutic and rehabilitative frameworks. Music education has been part of curriculum and teaching in hospital schools (Ruiz & Álvarez, 2016), and musicians performing in hospitals is

a well-established practice (Preti & Welch, 2013). Regarding music practitioners' work in bedside music alongside families and hospital communities, more research and professional debate is required. This debate would enable the construction of music practices in a more systematic manner¹ and the organisation of future education and interdisciplinary work of music educators, as well as facilitating professional music practitioners' (e.g. musicians, folk musicians' or ethnomusicologists') work overall. In this article, we look beyond the concept of the "healing power of music" by examining music educators' pedagogical tact in and through embodiment in the context of paediatric care (Merleau-Ponty, 1962/2014; van Manen, 1991). With the healing power of music, we refer to approaches taking music as an entity with its own ontology and laws of subordination (see DeNora, 2013) that is difficult to evaluate, examine or explicitly describe.

In the context of music, health and wellbeing, music education has been mainly introduced in the framework of *community music* that has an objective of increasing access to music activities outside conventional institutional settings (Higgins, 2006; Hallam & MacDonald, 2008). Another intriguing concept is *health musicking* (or *health musicing*), an interdisciplinary area of research and practice where professionals and volunteers are engaged in health-promoting music practices in social and healthcare contexts (Bratt-Rawden, Trythall & DeNora, 2009; Ruud, 2012; Stige, 2012). *Care music* can be described as musicking (or musicing) mainly in care environments and mainly by music professionals (Foster, 2014). A conceptual framework of music, health and wellbeing was introduced by MacDonald, Kreutz and Mitchell in 2012 (see MacDonald, 2013). This framework is focused on music education, music therapy, everyday uses of music and community music as an interdisciplinary theoretical model that allows a broad understanding of participation in musical activities. The context of this study is delineated from these frameworks by contributing to the under-researched theory and practice of music education in the specific context of paediatric care. We use the designation of "music educator" to refer to a music practitioner. A music educator is assumed in this article to be a professional, who has an education and maintains a professional degree in her own discipline.

Specifically, this article does not aim to analyse any similarities or differences in music-related professions in healthcare settings. Instead, we intend to provide some interdisciplinary insights applicable to a variety of music-based professional practices. This article argues that intertwining pedagogical tact with an epistemological view that relies on the

1 For example, there are viewpoints that music can be detrimental to the babies' development (see Standley, 2003); for instance, in cases of neurological overstimulation or overstepping the sound level recommendations. Therefore, education and professional knowledge of music practitioners should follow evidence-based practices when entering these fragile environments.

mind-body connection could help music educators understand in a more profound way their work in paediatric wards. Our research question is: *How could concepts of embodiment and pedagogical tact enable music educators to operate in complex educational situations in paediatric wards?* Embodiment offers ways to rethink music educational processes, situations and environments, as it fundamentally emphasises that the mind-body connection forms the core of consciousness (Merleau-Ponty, 1962/2014). Hence, a starting point for this article is that a human being is embodied all the time. Embodiment is not something that music educators convey to the people that they work with; rather, it is a theoretical insight intertwined holistically in music educational practice. In this article, we contribute especially to theoretical and conceptual understandings of practitioners' work and emphasise that there is no empirical enquiry as part of this examination. However, we use some empirical vignettes in the form of short story, constructed from the main author's experiences in the field, in order to make the theoretical analysis more concrete and accessible.

In the next section, the context of the paediatric ward for music educators' work is discussed, followed by an enquiry combining music educators' pedagogical tact and embodiment. Finally, we reflect on the ways in which embodied pedagogical tact may support the wellbeing of a child and their family in the setting of a paediatric ward. Embodied sensitivity and balance of power relations between the educator and students in educational interaction are also discussed.

Music educators in healthcare settings

The Finnish healthcare system and parallel systems in the other Nordic welfare states are characterised by the individual's right to access social welfare and healthcare services. The objective of healthcare services requires that everyone is treated fairly; social inclusion and participation are encouraged, and everyone's health and functional capacity are supported. The availability of public services includes preventive, primary and specialised healthcare as well as environmental healthcare (Ministry of Social Affairs and Health, 2018). Although many private enterprises and non-governmental organisations also provide services, hospital districts provide specialised medical care services that cannot be expediently incorporated into primary healthcare (Ibid.). In this study, we focus on specialised medical care in a paediatric context, where the treatment of the most severe diseases and disorders of newborns (i.e. neonates), children and youth are conducted.

Currently, health and social services in Finland are undergoing the most comprehensive reforms since the introduction of the Primary Health Care Act of 1972. By reshaping structures and services, the aim of the current reform is to reduce inequalities in health and wellbeing, improve access to services and curb costs (see Regional Government, Health and Social Services Reform, 2018). Simultaneously, in the healthcare sector, engagement with art and health promotion has increased, and there is a growing number of professional music practitioners who call themselves, for example, *hospital musicians*, *care musicians* and *health musicians* (Bonde, 2011; Ruud, 2012). In the Finnish context, this means that professional musicians, music educators or other professionals conduct their work through active music-making with both patients and the wider hospital community. This way, their work is interlinked with social justice and cultural rights discourses, which have been promoted through governmental initiatives (Liikanen, 2010; Stickley & Clift, 2017) during the past two decades. Overall, there is very little research on interdisciplinary music practitioner knowledge in the field which could help in mediating and integrating knowledge between different branches of music-related research within practice. This fragmentation has already generated under-theorised musical practices in the music educators' expanding working environments in healthcare (MacDonald, 2013; Koivisto & Lilja-Viherlampi, 2019). Accordingly, the practical discussion beyond the effects and impacts (referred earlier as the "healing power of music") of music remains rather scarce, and there is a risk of simplification and misinterpretation that may lead to non-critical, popularised narratives that exaggerate the benefits of music in healthcare settings (see Bradt, 2018; Tervaniemi, 2018).

It is common practice that music educators work on a regular basis in hospital schools in Finland² (Merimaa, 2009), and the National Core Curriculum is the key political and practical instrument for teachers working in hospital schools. Besides hospital schools, music education is not a common practice in the Finnish healthcare context. In Finland, the paediatric ward usually indicates that specialised treatment and care of children and young people aged 0–18 years is conducted in the wards³ (FINLEX, Act on Specialized Medical Care, 1062/1989), so the setting entails adolescents as well. In paediatric care, the interdisciplinary ward team normally consists of the head of department, specialists in paediatrics, a head nurse, nurses, a department secretary and at least one rehabilitation assistant. The wards cooperate with, for example, physiotherapists, nutritionists, psychiatric

2 The thorough five-year teacher education in universities, involving a great amount of practical training, is linked with autonomy and broad respect for teachers in everyday life; this view is also applied in master's programs in music education. Additionally, four-year music pedagogue bachelor's degrees are awarded from Universities of Applied Sciences; moreover, the first official in-service training for community musicians (including an option for hospital musicians' training), started in 2017.

3 The Regional State Administrative Agencies are responsible for planning, guidance and supervision concerning specialised medical care within their area of operation.

nurses, psychiatrists, teachers and healthcare chaplains. They may also collaborate with early childhood educators and healthcare clowns. During the past decade, music practitioners with diverse backgrounds have started to work in paediatric care. These professionals call themselves hospital musicians (working mainly in public hospitals), care musicians (working mainly in eldercare and other care environments) and music educators (having a pedagogical or interactional emphasis in their work); typically, they work part-time and as part of short-term projects, often funded by grants (Koivisto & Lilja-Viherlampi, 2019). Within this article, we decided to call these practitioners music educators because the emphasis is on exploring educational and pedagogical aspects of their practice. In the context of the paediatric ward, music educators work, for example, in neonatal intensive care units, oncological and haematological wards, and paediatric surgery and neurology wards.

In paediatrics, there are numerous challenges faced by healthcare professionals when encountering and interacting with patients and their families (Aagaard & Hall, 2008; van der Heijden et al., 2016). Instead of reaching out to attain personal growth and development, such patients may be chronically hospitalised, in pain and fearful of dying, under stress and dealing with various emotions (Hall, 1987; Kortessluoma & Nikkonen, 2006; Rollins, 2004). Despite the family-centred care implemented in hospital wards, there can be changes in family dynamics, parental interaction and in the levels of parents' own anxiety (Preti & Welch, 2004; Shoemark & Dean, 2016). This indicates that considerable sensitivity and holistic comprehension of the vulnerability of children and families, as well as the contextual and situational understanding of the environment, is required from music educators entering the hospital environment.

Healthcare personnel have multiple responsibilities and liabilities, and in Finland they have specific obligations under the Health Care Act⁴ (FINLEX, 1326/2010). While the competencies and responsibilities of healthcare personnel tend to be focused on the treatment and cure of children's conditions, the work of music educators aims to contribute primarily to the cultural wellbeing of children, their families and personnel. Therefore, a key element from the educational perspective is to actively encourage arts educators to adopt an ethos that demonstrates concepts of inclusion, equality and accessibility in their research and practice; this is particularly pertinent when justifying music educators' work in healthcare. In fragile healthcare environments, the objectives and means of achieving and maintaining high-quality practices require alternative ways of conceptualising music education. Cultural wellbeing, a concept linking to (cultural) equality, is spreading fast in Finland as

4 Some of these obligations, such as the confidentiality obligation, ethical codes and hygiene instructions, are assigned to the music educators' practice as well, and hospitals may require non-disclosure agreements and cooperation contracts from music educators and/or the organisations they represent.

well as in other Nordic countries (see Lehtikoinen & Rautiainen, 2016), facilitating cross-sectoral discussion and collaboration from practical to political levels. Lilja-Viherlampi and Rosenlöf (2019) define cultural wellbeing as one's own experience of and connection to culture and arts that thereby increases one's wellbeing. Given this background, we aim to contribute to knowledge-creation in this area by building a conceptual framework that combines embodiment and pedagogical tact when working in paediatrics.

The relationship between music educators' pedagogical tact and embodiment

In the context of this article, pedagogical tact (van Manen, 1991) is integral to the entirety of a music educator's professionalism. In our view, pedagogical tact includes both pedagogical thoughtfulness and sensitivity; it is a way for educators to grow, change and deepen their insights as a result of holistic reflection. The concept of pedagogical tact relates to the theoretical framework of embodiment, a mind-body unity, through which individuals are able to sense others' actions, feelings, intentions and thoughts (Lakoff & Johnson, 1999; van Manen, 1991, 1992; Merleau-Ponty, 1962/2014; Shapiro, 2010; see Bonde, 2017). Pedagogical tact is acquired largely through association with other people and requires shared activities to be imparted from one to the other.

More specifically, pedagogical tact is defined through the different types of reflection that can take place. These reflective types are *anticipative*, *active* or *interactive*, *mindful*, and *recollective*. *Anticipative reflection* occurs before the interaction begins. This type of reflection enables educators to be deliberate about possible alternatives on the courses of (inter) action, enabling them to approach situations in an organised manner. This is followed by *interactive* or *active reflection*, which takes place during the interaction, "allowing educators to decide virtually on the spur of the moment" (1991, pp. 512–513). Van Manen maintains that the reflection can also be *mindful*, which is not produced by conscious reflection (van Manen, 1991). This could also be referred to by using the term *pre-consciousness*, a central notion in the field of embodiment studies (Lakoff & Johnson, 1999; Merleau-Ponty, 1962/2014; see Bonde, 2017). Some types of reflection contain an unwritten, unspoken and hidden understanding that is held by an educator through previous experience, whereas other types are more explicit (van Manen, 1991).

Music educators' pedagogical tact is based on their experiences, observations, insights, emotions, intuition and internalised understanding (van Manen, 1991, 1992). It thus has an

essential connection to the concept of embodiment, whereby there exists a pre-consciousness of how and where the body is. Embodiment abandons the Cartesian mind-body division and offers ways to rethink music educational processes, situations and environments, as it fundamentally emphasises that the mind-body connection forms the core of consciousness (Merleau-Ponty, 1962/2014; Shapiro, 2010). In other words, embodiment suggests that the mind, reasoning and knowledge are inherently shaped by the body (e.g. Lakoff & Johnson, 1999; Shapiro, 2010). In addition, embodiment theories suggest subjectivity is embodied, relational and social; that is, individuals come to know the world, others and themselves through their bodily interactions (Lakoff & Johnson, 1999; Sutela, Kivijärvi & Anttila, in press). Accordingly, van Manen (2008, p. 21) argues that “The ultimate success of teaching actually may rely importantly on the ‘knowledge’ forms that inhere in practical actions, in an embodied thoughtfulness, and in the personal space, mood and relational atmosphere in which teachers find themselves with their students”. Pedagogical tact, therefore, may depend exactly upon the internalised and embodied, but thoughtful, habits and qualities that constitute actual teaching (van Manen, 2008).

Pedagogical tact is “a form of practical knowledge that realizes itself in the very act of teaching” (van Manen, 2008, p. 16). For example, in hospital settings “teaching” takes place in the actual moment when the music educator enters the paediatric ward and starts to interact with the people present in that moment. The pedagogical space requires keen attention from a music educator, and sensitivity is needed when creating practical knowledge on how the musical moments are taking place; whether there will be singing, playing, improvising, discussion, or exploration of music-making themes. In practical terms, a music educator’s pedagogical tact is achieved through seeing, hearing, smelling, tasting, touching and emotional arousal as the educator connects with the educational environment and interactional processes (see Juntunen & Hyvönen, 2004; Sutela, Ojala & Juntunen, 2017). Given this, we argue that pedagogical tact can be achieved and manifested through embodiment, which can help music educators operate in complex educational situations in paediatric care.

Pedagogical tact in and through embodiment in paediatric care

A music educator working in a paediatric ward will frequently encounter children and families going through a challenging physical, psychological and emotional process, and, in many cases, a multi-level crisis (Aasgaard, 2002; Hartling et al., 2013). For the music educator, these kinds of settings will require sensitivity when interacting with others and

in relation to space and place. In the context of this article, these complexities are referred to in conjunction with the concept of pedagogical tact (van Manen, 1998). As such, the notion of embodiment may advance the navigation in and through pedagogical situations that include the vulnerability of both child and family at many levels: fear of pain or death and various ethical aspects. According to van Manen (1998), the professionals within the healthcare setting should come to accept their own emotional lives, which is an essential aspect of their professionalism as are their differing work assignments, personalities and backgrounds.

In the hospital setting, a concentrated moment of shared music-making will most likely be abruptly interrupted at some point. The pressing schedules of procedures, a child's emerging pain or visiting guests are typical interruptions, of which shared music-making is one part. In hospitalised life (Lupton, 2012), these kinds of interruptions combined with a hospital's soundscape, create a unique atmosphere and setting for music education, challenging the music educators' traditional ways of working (Livesley et al., 2016; van der Heijden et al., 2016). In what follows, we reflect on exemplary music educational situations from the standpoint of pedagogical tact (van Manen, 1991, 1998) and embodiment (e.g. Lakoff & Johnson, 1999; Merleau-Ponty, 1962/2014). The context for this analysis is set within a Neonatal Intensive Care Unit (NICU) and adolescents' care unit within a paediatric ward in a Finnish hospital.

Embodied pedagogical tact in the Neonatal Intensive Care Unit

The following introductory vignette is constructed from the main author's experiences in the field.

When I walk into the room, there are two babies in the incubators and three nurses nurturing them. I start with humming a lullaby and playing Finnish kantele. My voice is very low, just recognisable, slowly strengthening. I observe at the same time the atmosphere of the room and the wellbeing of the newborn. In one bed, a baby is stretching her fingers. Her head is turning towards the voices and music, and her small toes are curling in response. I start to play for her, interact with her, react to her movements, and get closer to her incubator. After fifteen to twenty minutes of playing in different places in the room, I start to move to another room. The atmosphere seems to be quite calm and relaxed. A nurse is looking into my eyes, but no words are exchanged.

A NICU is an intensive care unit specialising in the care of premature or ill newborn infants. When entering this unit that offers highly specialised care for children in critical stages, a music educator aims to enhance the wellbeing of the child, family and hospital personnel. The educational interaction may have medically-oriented features and objectives, such as decreasing the heartbeat of the neonate, and artistic views in selecting repertoire, instruments and musical tools, but the focus of the work is in the advancement of the holistic wellbeing of the parents and the newborn (Staricoff & Clift, 2011; van der Heijden et al., 2016). The music educator's bodily capacities to assess complex situations in a hospital setting and handle their emotional response can be hypothesised as a key competency in this context. Accordingly, central aspects involve whether the pedagogical situation is suitable within the ward schedule and present atmosphere, whether the newborn is receptive to the music, or if the music should be directly addressed to the newborns, families or to the ward as a whole. The ensuing practice of the music educator will be based not only on those present in the ward but will function as confirmation for the educator's body schema, which will adjust according to finding the best approach to work in these complex situations.

The NICU environment can be a contradictory atmosphere: on one hand, a neonate is very vulnerable, and it is likely that encountering a child in such a fragile condition elicits various emotional responses from care professionals and families. On the other hand, the physical environment is impersonal, including the soundscape in the room which can be harsh as a result of various electronic and measurement devices. There may also be other newborns in the room vocalising or crying. The reactions of hospital personnel and parents can also vary towards music educational activities. The staff and family members may be observing or participating in the music-making process and commenting on it, but not necessarily. The modern neonatology environment is parent-friendly; for example, kangaroo care is recommended to be delivered by parents of newborns and may include parental singing (Aden et al., 2016; Haslbeck et al., 2016). Depending on the circumstances, the atmosphere of the ward can also be stressful (Loewy et al., 2013), even though these types of environments are increasingly family-oriented and friendly.

Music education in this kind of environment does not rely on conventional music pedagogical skills, such as designing and planning the instrumentation, repertoire or consistency of exercising musical skills. Neither are there considerations of such virtues as the "good teacher" or "musical talent". Instead, the pedagogical interaction can be described as highly tactful, denoting that the educator is carefully observing the situation and the people in it, adapting his or her interactions accordingly (van Manen, 1991). Van Manen (1991) refers to this practice as *anticipative* reflection.

To advance pedagogical tact and multimodal reflection in NICU environments, the educator focuses on their own embodied reactions and the newborn's movements and vocalisations: how the baby is stretching their fingers, turning their head towards voices, or reacting to music. This kind of sensitivity is essential and emphasises the priority of bodily perception over reasoning, thus opposing the Cartesian body and mind division (Merleau-Ponty, 1962/2014). This kind of focus and reflection, in the here and now, helps in finding meaning and direction for music education. When the parents are present, the music educator can advance the reflection between the newborn and the parents. This may take place in and through (*inter*)*active reflection* while engaging the parents to interpret the child's gestures, movements and facial expressions (van Manen, 1991). This can enhance the parents' understanding of the child as a holistic being, beyond illness and need for medical care, and help them to adapt to a situation that differs drastically from their expectations and ideals regarding family life. In such emotional and unsettled situations, it is important for the music educator to use all presented ways of reflection before, during and after music-making in order to professionally facilitate the wellbeing of the family and also to evaluate whether or not the music should be employed in the situation.

Embodied pedagogical tact in adolescent care

The following introductory vignette is constructed from the main author's experiences in the field.

I knock on the door of a single room for a young patient. He is going home today and waiting for his parents. I have not met him before, but I had a short briefing with the ward staff, and I know that he is waiting for me. He has agreed to make some music with me. He has a plaster on his leg. Immediately when I open the door, I probe and try to experience the atmosphere inside the room. This time the patient seems wary, but friendly enough for me to enter. He is not in pain, I reflect, but seems to be missing something; maybe friends or parents. The afternoon atmosphere in the whole ward is very calm, sleepy almost. I hesitate and think of what kind of music he would prefer to start with. There are some instruments in my bag. We look at them together. There is a güiro, a pair of maracas and claves, a triangle and chimes. I have a guitar with me. He takes the güiro and starts to play it in his own, personal way. I start to sing a "school song", and he shows me that he is familiar with it. He plays in his own rhythm, and I try to follow him as carefully and relaxed as I can. We talk a little about the instrument and continue playing. After the session, his parents come. I say goodbye to the young patient, and I wish him all the best. When I leave the room, I am wondering if I will ever

see him again. I wonder also if this session was in any way meaningful for him. Perhaps it was a joyful moment only meant for that time in the hospital.

When working in a paediatric hospital, a music educator may visit multiple wards within one day. After the NICU environment, there may be, for example, an adolescent waiting in another unit. Usually, the wards are designed with the supposition that small children will be receiving treatment there; adolescents are not particularly highlighted. This also applies to music education, as a young person going through treatment may have different interactional needs or preferences than a younger child, such as those regarding his or her privacy. In practice, this means that music may provide the young patient with multiple identifiable meanings that are personal and of which all cannot be shared, or that the music educator has to reflect upon the space in the individual room in a more careful manner; for example, they may need to assess what is an appropriate physical distance between them and the adolescent, or they may need to consider the size of the room in relation to the intensity of the music.

In van Manen's (1991) terms of pedagogical tact, *anticipatory reflection* may include aspects such as reading the personal space in the hospital room and entering this personal space in pertinent ways, if entering at all. This connects with the questions of subjectivity and sensitivity regarding power relations between the adolescent and the music educator. Accordingly, as van Manen (1991) presents, a pedagogical situation between a child and an adult is never an equal one but requires high-level active thoughtfulness. Encountering an adolescent going through bodily transformations due to both age and illness may be challenging, requiring sensitivity and even creativity, and the need to act with care and respect. As van Manen (2008) writes, professionals may overestimate their abilities to understand what other people feel. He summarises this by stating: "...we may believe that we are in a certain way caring and are treating his or her physical and psychological needs, but if this person's experience of what we say and do differs from what we believe we do, then we may need to suspend our belief in favour of the person's experience" (van Manen 2008, p. 8). This entails questions of how the educator supports not only self-determination and autonomy, but also identity development of the child in, and through, music education. Regarding this, van Manen (1998) reminds us that the body is always involved in awareness, and this should be recognised in the health-care setting. This includes setting objectives for personal growth and musical agency in the situation at hand. In addition, it is important to consider how to support the adolescent's social abilities when it comes to connecting with peers during and after the treatment, and through music and musical activities. An *active* or *interactive reflection* (van Manen, 1991) may determine, for example, whether the child at this age can be approached with lullabies, children's songs or popular music repertoires. The reflection also contains embodied views,

such as the level of intensity or emotional response for the adolescent in the shared moment, varying from comfort to consolation, refreshment to joy (see Saarikallio & Erkkilä, 2007).

Equally relevant to matters of repertoire, instrument selection, material, timeframe or any other content regarding the musical activities, is the embodiment of the adolescent as well as the music educator. This entails, for example, appropriate ways of sharing space, physical closeness and maintaining distance in the situation (van Manen, 1991; see DeNora, 2013). It may be that the adolescent with a chronic condition is identifying themselves as a patient and has adopted the hospital environment at the embodied level (Prete & Welch, 2004; see Aasgaard, 2002). It cannot be expected that educational work with an adolescent patient has similar grounds as with “non-ill” adolescents who have grown up in environments that are presumably more appropriate for their development. Music-making also creates a new kind of framework for being in the world within the hospital setting. In this framework of music education, it is essential that the adolescent adequately interprets the social relations at hand in order to rebuild her identity beyond the hospital setting.

Discussion and conclusions

In this article, we have enquired how the concepts of embodiment and pedagogical tact could empower music practitioners’ work, and we have articulated the emerging environment of music education practices, namely within the setting of a paediatric ward in a children’s hospital. In order to contribute to the theoretical and practical views of music educators’ transforming professionalism, as well as interdisciplinary views of music, health and wellbeing, we have presented a non-medical, conceptual premise of understanding the profession through both embodiment and pedagogical tact. This kind of theoretical commitment and practical understanding, which goes beyond the narratives and discourses regarding the “healing power of music”, may open up a window for understanding, evaluating and exploring musical practices in reflective ways, just as van Manen (1991) presented in his conceptualisation of pedagogical tact.

On the basis of our theoretical enquiry, pedagogical tact intertwined with embodied knowledge is integral to the entirety of music educators’ professionalism when working with children in healthcare. In such an environment, a music educator certainly needs conventional pedagogical skills and knowledge; however, they are not relying solely on these but rather need to develop pedagogical sensitivity and thoughtfulness to deepen their insights in a more holistic, embodied manner. We encourage music practitioners to explore beyond

implicit and intuitive practices, moving towards more explicit and conscious reflection of their practice in order to enhance practitioner knowledge in the field. Anticipative, active and mindful reflection occurring before, during and after music-making in the paediatric wards gives a music educator a pathway to deepen and transform their pedagogical insights in healthcare settings, which are quite new environments for many educators. In practice this means, for example, thinking of the whole ward as a pedagogical space, including the ward's corridors, nurse stations, halls, individual rooms, as well as understanding that all relationships within the ward have importance before, during and after the actual singing, playing, improvising or listening to music together. These reflections also include the notions that the music educator may herself have intriguing questions, feel unsettled or experience ethical dilemmas that arise unexpectedly in the moment and within the music practices.

The realisation of embodied and tactful pedagogical knowledge starts in the actual moment when the music educator enters the hospital ward, and the ward environment as a pedagogical space requires great attention and sensitivity from the music educator. Through multimodal sensitivity and interaction, the music educator is able to recognise the needs of the children, their families and hospital personnel in music-making situations, and then select the appropriate themes and musical activities in the moment. Emotional arousal of the music educator is a natural part of pedagogical tact, as well as maintaining a professional attitude when encountering ethical problems or people's fear of pain or death. This calls for a focus and reflection on elements that can aid in finding meaning and direction for music practices, which, in these cases, may include a whole range of emotional challenges and burdens being experienced by the patients presented by life.

While this article seeks to contribute to active, interactive and mindful reflection of pedagogical tact when working with children and adolescents in paediatrics, future research could also focus on *recollective reflection* (van Manen, 1991, pp. 512–513). Recollective reflection offers a lens for understanding the child's, educator's and the wider community's lived experiences. Intertwining pedagogical tact with an epistemological view that relies on the mind-body connection enables holistic reflection, which helps music educators to operate in complex educational situations within the paediatric ward. Regarding embodied pedagogical tact when working with particular paediatric situations and contexts discussed in this article; that is, those related to babies and adolescents, active and interactive reflection introduced by van Manen (1991) offers a key for relating with children and their families with care and respect.

Despite the equity-oriented pedagogical insights presented in this article, it would be naïve to assume that a “non-ill” professional, in this case a music educator, does not run the risk of

objectifying the children, their families or other people in the hospital community. Through recognition of—not necessarily acceptance of—potential imbalances in power relations, the music practitioner, children and their families may have more genuine opportunities in reconstructing their expectations and ideals regarding illness, health, life, family life or social relationships. In and through this kind of embodied practice as a tactful, sensitive pedagogy, a music educator may professionally engage at an interdisciplinary level within the ward community. This way, music educators may have the opportunity to facilitate cultural wellbeing and promote children's rights to access culture, even when they are hospitalised for longer periods.

In conclusion, the conceptual discussion presented in this article offers a window for exploring and advancing the underrepresented research area of music education in healthcare. Hopefully, this article also enriches the understanding of interdisciplinary professionalism in the field of the arts, health and wellbeing, which has been relatively disjointed, particularly in theoretical discourse. More generally, the findings emphasise the opportunity for personal growth and learning as a basic cultural right (Lehikoinen & Rautiainen, 2016) that should be guaranteed in various life situations. A clear focus on the common goal, that is, the wellbeing of children and their families, could offer a way forward in restructuring modern healthcare environments and in establishing a stabilised position for music practitioners' professionalism. In this article, we have emphasised the professional practices and views of music education, but we wish to embrace and acknowledge all other collaborators and levels of music-making in the field: from music therapists and healthcare professionals using music medicine to individuals and communities using music for self-recovery, and from voluntary music practitioners to performing artists.

In the future, music education programs and in-service training should consider new conceptualisation models that can be implemented in the field of healthcare. A major challenge is to help future music educators to cope with emotional arousal, highly sensitive and reflective practices, and ever-changing working environments, such as those presented in this article. Seeing a child and their family in the middle of the intensive medical treatment, requires the perspective of a holistic lens from the music educator themselves. This involves an understanding of the embodied and tactful sensations experienced firstly within the practitioner themselves, and secondly, being able to take action within the ward environment as a result of these reflections. Additionally, it would be useful to incorporate interprofessional efforts that could be taken during the educational programs, such as teacher-healthcare professional collaborations, shadowing practices, or joint thesis seminars in order to strengthen interdisciplinary cooperation.

References

- Aasgaard, T. (2002). *Song creations by children with cancer: Process and meaning*. (Doctoral dissertation). Aalborg University, Aalborg. Retrieved from https://vbn.aau.dk/ws/portalfiles/portal/317450226/trygve_aasgaard_thesis_150909.pdf.
- Aagaard, H., & Hall, E. O. (2008). Mothers' experiences of having a preterm infant in the neonatal care unit: a meta-synthesis. *Journal of Pediatric Nursing*, 23(3), 26–36. <https://doi.org/10.1016/j.pedn.2007.02.003>.
- Aden, U., Hugoson, P., Kostilainen, K., Mikkola, K., Mårtensson, G., Lagercrantz, H., Westrup, P., Fellman, V. & Huotilainen, M. (2016). The impacts of maternal singing during kangaroo care on mothers and infants. *European Journal of Pediatrics*, 175(11), 1425–1425.
- Batt-Rawden K., Trythall S. & DeNora T. (2007). Health musicking as cultural inclusion. In J. Edwards (Ed.), *Music: Promoting health and creating community in health care contexts* (pp. 64–82). Cambridge: Cambridge Scholars Press.
- Bonde, L. O. (2011). Health musicing - music therapy or music and health? A model, empirical examples and personal reflections. *Music and Arts in Action*, 3(2), 120–140.
- Bonde, L. O. (2017). Embodied music listening. In M. Lesaffre & P.-J. Maes (Eds.) *Routledge companion to embodied music interaction* (pp. 269–277). New York: Routledge.
- Bradt, J. (2018). *NMTC 2018. Music therapy in healthcare: Challenges and opportunities for enhancing access to care. Keynote*. Nordic music therapy congress 2018, Stockholm.
- DeNora, T. (2013). *Music asylums: Wellbeing through music in everyday life*. Farnham: Ashgate.
- Dileo, C. & Bradt, J. (2009). On creating the discipline, profession, and evidence in the field of arts and healthcare. *Arts & Health: International Journal for Research, Policy & Practice*, 1(2), 168–182. <https://doi.org/10.1080/17533010903046984>.
- FINLEX. Finnish Ministry of Justice. *Act on specialised medical care 1062/1989*. Downloaded October 2nd, 2018 from <https://www.finlex.fi/en/laki/kaannokset/1989/19891062>.
- FINLEX. Finnish Ministry of Justice. *Health care act 1326/2010*. Downloaded October 2nd, 2018 from <https://www.finlex.fi/fi/laki/kaannokset/2010/en20101326>.
- Foster, B. (2014). *Understanding music care and music care delivery in Canadian facility-based long term care*. Research paper. Retrieved from <https://tspace.library.utoronto.ca/bitstream/1807/72440/1/Foster%20MRP.pdf>.
- Hall, D. (1987). Social and psychological care before and during hospitalisation. *Social Science & Medicine*, 25(6), 721–732.

- Hallam, S. & MacDonald, R. (2008.) The effects of music in educational and community settings. In S. Hallam, I. Cross & M. Thaut (Eds.), *Oxford handbook of music psychology* (pp. 471–480). Oxford: Oxford University Press.
- Hartling, L., Newton, A. S., Liang, Y., Jou, H., Hewson, K., Klassen, T. P. & Curtis, S. (2013). Music to reduce pain and distress in the pediatric emergency department: A randomized clinical trial. *JAMA Pediatrics*, 167(9), 826–835.
- Haslbeck, F., Loewy, J., Filippa, M., Hugoson, P. & Kostilainen, K. (2016). Sounding together: Family-centered music therapy in neonatal care from a European perspective. *Nordic Journal of Music Therapy*, 25(1), 90.
- Higgins, L. (2006). *Boundary-walkers: Contexts and concepts of community music*. (Doctoral dissertation). University of Limerick, Limerick. Retrieved from <https://leehigginscommunitymusic.files.wordpress.com/2010/01/boundary-walkers-lee-higgins-phd-2006.pdf>.
- Juntunen, M. & Hyvönen, L. (2004). Embodiment in musical knowing: How body movement facilitates learning within Dalcroze eurhythmics. *British Journal of Music Education*, 21(2), 199–214.
- Koivisto, T. A. & Lilja-Viherlampi, L. M. (2019). Sairaala- ja hoivamusiikkityön käsitteistöä ja tietoperustaa jäsentämässä. In L. M. Lilja-Viherlampi (Ed.) *Musiikkihyvinvointia! Muusikkona sairaala- ja hoivaympäristöissä* (pp. 9–42). Turku: Turku University of Applied Sciences.
- Korttesluoma, R. & Nikkonen, M. (2006). “The most disgusting ever”: Children’s pain descriptions and views of the purpose of pain. *Journal of Child Health Care*, 10(3), 213–227.
- Lakoff, G. & Johnson, M. (1999). *Philosophy in the flesh*. New York: Basic books.
- Lehikoinen, K. & Rautiainen, P. (2016). *ArtsEqual policy brief 1/2016. Cultural rights as a legitimate part of social and health care services*. Retrieved from <http://www.artsequal.fi/documents/14230/0/PB+Art+in+social+services/b324f7c4-70e3-4282-bc77-819820b9a6d4>.
- Liikanen, H. (2010). *Art and culture for well-being: Proposal for an action programme 2010–2014*. Ministry of Education and Culture, Finland. Retrieved from <http://urn.fi/URN:ISBN:978-952-485-918-9>.
- Lilja-Viherlampi, L. M. & Rosenlöf, A. M. (2019). Moninäkökulmainen kulttuurihyvinvointi. In I. Tanskanen (Ed.), *Taide töissä - näkökulmia taiteen opetukseen sekä taiteilijan rooliin yhteisöissä* (pp. 20–39). Turun ammattikorkeakoulun raportteja 256. Turku: Turku University of Applied Sciences.

- Livesley, J., Cavanagh, A., Charnock, E., Garrow, A., Lee, A. & Long, A. (2016). *Music-making with hospitalised children outcomes for children, families, hospital staff and musicians from LIME medical notes (2) and songbirds projects: A research report*. Manchester: University of Salford. Retrieved from <http://www.artsandhealth.ie/wp-content/uploads/2017/02/Music-making-with-Hospitalised-Children.pdf>.
- Loewy, J., Stewart, K., Dassler, A. M., Telsey, A. & Homel, P. (2013). The effects of music therapy on vital signs, feeding, and sleep in premature infants. *Pediatrics*, 131(5), 902–918. <https://doi.org/10.1542/peds.2012-1367>.
- Lupton, D. (2012). *Medicine as culture: Illness, disease and the body*. London: Sage. doi: <http://dx.doi.org/10.4135/9781446254530>.
- MacDonald, R. (2013). Music, health, and well-being: A review. *International Journal of Qualitative Studies on Health and Well-being*, 8(1), 206–235. <https://doi.org/10.3402/qhw.v8i0.20635>
- Merimaa, E. (2009: 37). *Selvitys erityiskoulujen ja sairaalaopetuksen asemasta, tehtävistä ja rahoituksesta kehittämishdotuksineen*. Ministry of Education, Finland. Helsinki: Yliopistopaino. Retrieved from <http://urn.fi/URN:ISBN:978-952-485-753-6>.
- Merleau-Ponty, M. (1962/2014). *Phenomenology of perception [phénoménologie de la perception]*. Oxon: Routledge.
- Ministry of Social Affairs and Health, Finland. (2018). *Health care in Finland*. Retrieved from http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/69930/URN_ISBN_978-952-00-3395-8.pdf
- Preti, C. & Welch, G. F. (2004). Music in a hospital setting: A multifaceted experience. *British Journal of Music Education*, 21(3), 329–345.
- Preti, C. & Welch, G. F. (2013). Professional identities and motivations of musicians playing in healthcare settings: Cross-cultural evidence from UK and Italy. *Musicae Scientiae*, 17(4), 359–375.
- Regional government, health and social services reform. (2018). Finnish Government. Retrieved from <https://alueuudistus.fi/en/frontpage>.
- Rollins, J. (2004). *Arts activities for children at bedside*. Washington, DC: WVSA Arts Collection.
- Ruiz, G. & Álvarez, A. G. (2016). Music education at hospital schools in Spain and Sweden: Paths between governing and knowledge. *European Education*, 48(4), 258–273.
- Ruud, E. (2012). The new health musicians. In R. MacDonald, G. Kreutz & L. Mitchell (Eds.) *Music, health, and wellbeing* (pp. 76–87). New York: Oxford University Press.
- Saarikallio, S. & Erkkilä, J. (2007). The role of music in adolescents' mood regulation. *Psychology of Music*, 35(1), 88–109.
- Shapiro, L. (2010). *Embodied cognition*. New York: Routledge.

- Shoemark, H. & Dean, T. (2016). Music therapy in the medical care of infants. In J. Edwards (Ed.) *The Oxford handbook of music therapy* (pp. 24–52). Oxford: Oxford University Press.
- Standley, J. M. (2003). *Music therapy with premature infants: Research and developmental interventions*. Silver Spring, MD: The American Music Therapy Association.
- Staricoff, R. L. & Clift, S. (2004). *Arts in health: A review of the medical literature*. Research report 36. London: Arts Council England.
- Stickley, T. & Clift, S. (Eds.) (2017). *Arts, health, and wellbeing: A theoretical inquiry for practice*. New Castle upon Tyne: Cambridge.
- Stige, B. (2012). Health musicking: A perspective on music and health as action and performance. In R. MacDonald, G. Kreutz & L. Mitchell (Eds.) *Music, health, and wellbeing* (pp. 197–209). Oxford: Oxford University Press.
<https://doi.org/10.1093/acprof:oso/9780199586974.003.0014>.
- Sutela, K., Ojala, J. & Juntunen, M. (2017). Embodiment and ethnographic sensitivity in narrative inquiry. *Bulletin of the Council for Research in Music Education*, 210–211, 43–60.
- Sutela, K. Kivijärvi, S. & Anttila, E. (In press). Moving encounters: Embodied pedagogical interaction in music and dance educators' expanding professionalism. In H. Westerlund & H. Gaunt (Eds.), *A changing game: Expanding professionalism in music and higher music education*. Routledge.
- Tervaniemi, M. (2018). Neuroscientific findings about musical expertise and music learning - lessons learned? Brain, arts & education - symposium report. *The Finnish Journal of Music Education*, 21(1), 76–79.
- Van der Heijden, M.J., Araghi, S.O., Jeekel, J., Reiss, I. K., Hunink, M. M. & Van Dijk, M. (2016). Do hospitalized premature infants benefit from music interventions? A systematic review of randomized controlled trials. *Plos One*, 11(9), 1–16.
<https://doi.org/10.1371/journal.pone.0161848>.
- Van Manen, M. (1991). *The tact of teaching: The meaning of pedagogical thoughtfulness*. London, Ontario: Althouse Press.
- Van Manen, M. (1992). Reflectivity and the Pedagogical Moment: The Normativity of Pedagogical Thinking and Acting. *The Journal of Curriculum Studies*, 23(6), 507–536.
<https://doi.org/10.1080/0022027910230602>.
- Van Manen, M. (1998). Modalities of body experience in illness and health. *Qualitative Health Research: An International, Interdisciplinary Journal*, 8(1), 7–24.
- Van Manen, M. (2008). Pedagogical sensitivity and teachers practical knowing-in-action. *Peking University Education Review*, 6(1), 2–20.

Taru-Anneli Koivisto* & Sanna Kivijärvi
Sibelius Academy, University of the Arts Helsinki

*Corresponding author:

Taru-Anneli Koivisto
University of the Arts Helsinki, Sibelius Academy
PO Box 30
FI-00097 Uniarts
tel. +35840 5634566
e-mail: taru.koivisto@uniarts.fi

Disclosure statement

The authors have no conflicts of interest to declare.

Acknowledgements

This publication has been undertaken as part of the ArtsEqual project funded by the Academy of Finland's Strategic Research Council from its Equality in Society programme (project no. 314223/2017).

How are multicultural considerations playing a role in music therapy practice? A Nordic music therapist's experiences from working in a paediatric hospital setting in Peru

Sarah Helander & Gustavo Gattino

Abstract

In the field of music therapy, global collaborative research and clinical practice in multicultural settings are evolving. Therefore, there is an important need for integrating a multicultural perspective in music therapy. This study presents a heuristic analysis exploring the role of culture in music therapy, from the perspective of a Nordic music therapist working with paediatric patients in Peru during the autumn of 2017. The connection between cultural differences (Northern Europe and Latin America) and music therapy was explored from a personal and theoretical perspective. From a heuristic inquiry, nine themes were identified which represent the qualities of the music therapist's personal experiences of the role of culture in music therapy practice: 1) Various expectations, 2) Music – the primary language, 3) Finding my role, 4) Expressions & reactions, 5) Time, 6) Interactions, 7) Music & emotions, 8) To connect, and 9) Sharing experiences. The findings of this heuristic analysis reflect upon the importance of self-reflection, cultural sensitivity and the music therapist's responsibility to respect, support and keep an openness to the personal-cultural-musical background of the patient. An awareness of the music therapist's and the patient's cultural backgrounds is needed, as music and culture can be considered as both personal and as phenomena shared with others. Therefore, cultural considerations in music therapy practice can be necessary both in settings where cultural differences might be more apparent and in meetings with subtler multicultural aspects. Nevertheless, it is essential to strive for a balance between cultural considerations and the spontaneous connectivity in the music, in music therapy.

Keywords: Paediatrics, heuristic analysis, multicultural music therapy, here-and-now, intersectionality

Introduction

Music has an ability to cross barriers of cultures and create connections between people regardless of their background (Morris, 2010). Music can help cultural exchange and cultural education (Baines, 2016) and can be seen as a universal language, but music is also linked to culture (Morris, 2010). This raises the questions: is the therapeutic perspective on music universal as well or culturally connected? What is important for the music therapist to take into consideration and be aware of when working across borders of countries, cultures and languages? These questions arose for the first author of this publication in her experience of working in a cross-cultural context in Peru. Yet these questions can be relevant not only in international and cross-cultural music therapy practice and research. Our societies are becoming more and more multicultural as a result of immigrants, multiracial and minority groups and the increasing age gap between generations. The term *multicultural* indicates contrasting elements relating or interacting with each other (Kim & Elefant, 2016). The term multicultural connects to the concept of *intersectionality*, i.e. when these contrasting elements, such as gender, language, class, race, ethnicity, sexual orientation, age, and disability, overlap and contribute to and increase systemic inequalities and discrimination (Tomlinson, 2018). The question of how to respectfully and sensitively interact with patients to enable a safe and beneficial space for the therapeutic process arose during the project of the first author in Peru. As each individual brings their own cultural background into the interaction in music therapy, a cultural sensitivity is essential. The aspects of *cultural sensitivity* consist of knowledge, consideration, understanding, respect and tailoring (Foronda, 2008). Cultural sensitivity also relies on the understanding that one's background, values and biases must initially be considered so one is able to recognise how these may affect their perceptions of others. Furthermore, with a cultural sensitivity perspective one must understand the importance of other people's beliefs and experiences. With global collaborative research and clinical practice in multicultural settings evolving, there is an important need for integrating a multicultural (knowledge, awareness and respect of other cultures) and intersectional (awareness of social relations, social structures and the overlap of various social identities) perspective in music therapy. With this article, the roles and influences of culture in music therapy practice were explored from a personal and theoretical perspective. A heuristic analysis was conducted of the personal experiences of the first author of this publication of working in the public hospital for oncology patients *Instituto Nacional de Enfermedades Neoplásicas* (INEN) and in the public children's hospital *Instituto Nacional de Salud del Niño* (INSN) in the city of Lima, Peru, during the autumn of 2017. This project in Peru followed the first author's music therapy training on the master's programme at Aalborg University in Denmark.

Meeting of traditions

Music therapy traditions

The tradition of music therapy in Denmark started in the 1960s with the use of music in special education. It evolved from a pedagogical perspective influenced by the Nordoff-Robbins approach from the USA and the psychoanalytic and psychodynamic perspectives from Germany and England (Bonde, Jacobsen, Pedersen & Wigram, 2019). Today the Danish tradition of music therapy is based on the psychodynamic approach (Pedersen, 2014). The first Danish Association for Music Therapy (*Dansk Forbund for Musikterapi*, DFMT) was founded in 1969 (Bonde et al., 2019). In 1982 the first music therapy programme in Denmark started at Aalborg University. Over the years the programme has developed and created a partnership with Aalborg University Hospital, where the *Music Therapy Clinic* was established in 1994. Furthermore, the international research programme started in 1993 and the Center for Documentation and Research (*CEDOMUS*) in 2012, sparking an important development for music therapy from a scientific and professional perspective (Bonde et al., 2019).

In South America the music therapy tradition got underway in the 1950s in Argentina and Brazil (Barcellos, 2001) as a group of music educators began applying music in special programmes for children with disabilities (ASAM, 2018). In 1974 the Peruvian Music Therapy Society (*La Sociedad Peruana de Musicoterapia*) was founded by professionals in medicine, psychiatry, psychology and music education (Barcellos, 2001; Zagal, 2004). In 1998 the Music Therapy Society of Peru (*La Sociedad Musicoterapeutica del Perú*) was formed, and since then there has been a growing movement in the country with the Music Therapy Society of Peru, the Peruvian Association for Music Therapy (*La Asociación Peruana de Musicoterapia*) and the Center for Art Therapies' Development (*El Centro para el desarrollo de las Terapias de Arte*) working on developing clinical practice in music therapy and creating music therapy training programmes in Peru (Barcellos, 2001). The theoretical framework was based on the ideas of the Argentinian psychoanalyst Dr Benenson and has developed with influences from various approaches, such as psychoanalytical, behavioural and cognitive therapies (Wagner, 2007). There are still no formal music therapy training programmes or specialisations in Peru (Zagal, 2004).

Healthcare system

Peru is located in western South America, on the Pacific coast. It is the fourth most populous country in South America with more than 32 million inhabitants. Spanish is the official language in Peru, spoken by more than 80% of the population, but there are also

about 150 indigenous languages, of which Quechua and Aymara have official status as well (WPR, 2018). According to statistics on the socioeconomic situation in Peru, around 40% of the population belongs to the medium socioeconomic level, while more than 50% live in poverty, and of these, 20% in extreme poverty (INEI, 2007). There are about 72 ethnic groups in Peru, with roots primarily from Amerindian and Spanish traditions as well as from various Asian, African and other European countries (Nureña, 2009). There are social, political and economic inequalities between cultural groups, creating tensions and challenges in their interactions. Access to healthcare can be a challenge in some areas of the country due to geographical barriers. Strengthening the ongoing health sector reform toward universal health coverage is needed, as well as adapting health services to cultural diversity and improving the health information system (Nureña, 2009). In the last decade there has been a significant improvement in access to health services and in the health of the population of Peru (Alcalde-Rabanal, Lazo González & Nigenda, 2011), especially in child health and nutrition (Huicho, Segura, Huayanay-Espinoza, de Guzman, Restrepo-Méndez, Tam, Barros & Victora, 2016). The health care system in Peru has two sectors, one public and one private. Treatment in the public sector is free, unlike private sector, and there are noticeable differences between the two sectors (Huicho et al., 2016). Denmark, located in Northern Europe, has a population of 5.7 million people (Healthcare Denmark, 2018). With the basic principle of the Danish social welfare system – often referred to as *the Scandinavian Welfare System* – all citizens have an equal right to social security. All health and social services are financed by general taxes, e.g. education is provided free of charge at all levels. All residents in Denmark have access to the public healthcare system, and most services are provided free of charge (Healthcare Denmark, 2018).

Music therapy in paediatric hospital settings

Music therapy as a practice is still quite unknown and uncommon in Peru (Zagal, 2004). In Denmark the tradition for music therapy is further developed, though within the paediatric hospital setting music therapy is new and not yet established compared to many other European countries, the USA and Australia (Sanfi & Bonde, 2019). Paediatrics is the field of medicine working with children and their diseases (Sundhedsstyrelsen, 2018). A child's pattern of health differs from those of an adult, and therefore a child's symptoms, treatment, prognoses and recovery process are also different (Sanfi & Bonde, 2019; Sundhedsstyrelsen, 2018). Working as a music therapist in a paediatric hospital setting differs from other fields of music therapy, as this setting involves a broad range of ages and levels of development, addressing a wide diversity of diseases and needs of the patients (Sanfi & Bonde, 2019). The duration of the child's time at the hospital is uncertain, therefore the focus in the music therapy sessions is usually short-term, on the moment, rather than on creating a long-term

music therapy course. Music therapy sessions can be provided for both hospitalised patients and ambulatory patients, i.e. out-patients visiting the hospital to receive treatment (Sanfi & Bonde, 2019).

The structure of music therapy in paediatric hospital settings is often a short(-term) session which requires flexibility on the part of the music therapist and an ability to create a safe and trusting relationship with the patient in a very short time (Sanfi & Bonde, 2019). Music has an immediate appeal that quickly catches the child's attention, and by using her voice, body language and mimic, the music therapist can engage the child in an interaction. It is through this active interaction that music therapy can change the child's experience of being at the hospital (Aasgaard, 2002). The child needs to receive support and help to cope with diagnosis, treatment and hospitalisation as well as side effects. The family also needs help to cope with the situation and strategies to support its child in the process (Dun, 2013). With a holistic approach to the child's treatment, music therapy can facilitate the child before, during and after medical procedures (Avers, Mathur & Kamat, 2007). The goal of music therapy is to support the child in managing medical procedures, decreasing experiences of anxiety and pain, and working against negative experiences of repeatedly painful procedures that can become traumatic. Another benefit is facilitating the child's co-operation during treatments (Sanfi & Bonde, 2019; Whitehead-Pleaux, Zebrowski, Baryza & Sheridan, 2007). Live music has the advantage of creating an additional activity, offering a distraction during medical procedures or during waiting times (Longhi, Pickett & Hargreaves, 2015). Studies show that live music performed by a music therapist not only helps the child, but the parents and the medical staff to relax as well. When the child and the surroundings around the medical procedure are calmer, the staff is facilitated in performing the procedures. This provides efficiency of care as well as job satisfaction by the staff (Sundar, Ramesh, Dixit, Venkatesh, Das & Gunasekaran, 2016; Whitehead-Pleaux et al., 2007). During medical procedures, the music therapy intervention serves as an interdisciplinary collaboration aligning with the work of the medical team and the medical procedures. It is an individually focused session, following and listening to the child's needs and responses during the procedures (Sanfi & Bonde, 2019).

Connecting to recent studies in this area of music therapy, one study explored the impact of music therapy on paediatric patients based on parental perception of their child's distress during intravenous placement (Ortiz, O'Connor, Carey, Vella, Paul, Rode & Weinberg, 2019). The study found music therapy intervention to enhance adaptive coping strategies and reduce distress in patients (Ortiz et al., 2019). Another music therapy study describes the qualities in interaction with children and their parents in music therapy during and after paediatric haematopoietic stem cell transplantation (Uggla, Mårtensson Blom, Bonde,

Gustafsson & Wrangsjö, 2019). Three main themes emerged from the interviews with the children, the parents and the music therapist: 1) Experiences of competency and recognition of self, 2) Interactive affect regulation as potential for change, and 3) Importance of the therapeutic relationship. The authors concluded that music therapy developed into a significant and helpful experience for the participants and became an important factor in coping with and managing the treatment period at the hospital (Uggla et al., 2019). In a third recent study the researchers analysed the use of live lullaby singing for two premature infants during venepuncture in comparison to only standard care, and the infants' physiological and affective responses emerging before, during and after this procedure (Ullsten, Eriksson, Klässbo & Volgsten, 2017). The authors used video microanalysis and Behavioural Indicators of Infant Pain (BIIP) to assess the different outcomes. The findings suggest that live singing with premature infants is a communicative interaction which may optimise the homeostatic mechanisms of the infant during painful procedures. The study highlighted that it is important in a painful context that the vocal performance is predictable and provide regular and comforting intensity, shape and sequential structures from the start of the live singing intervention (Ullsten et al., 2017).

Theoretical perspective

Music & culture

Music is a complex phenomenon shaped by culture and, at the same time, one that influences culture (Baines, 2016). Music is an important element in social contexts, and its role is contextualised whereby the experience of music is connected to the perceiver's attention and personal cultural context (Chase, 2003). Music can have a fundamental and essential role in a person's life and identity, with the potential to remind him/her of joyful memories, to provide sensation of safety, and to help strengthen the sense of identity (Cominardi, 2014). When working with paediatric patients, encouraging them to explore another person's perspective can be a resource, as this can help them to understand how people in cultures different from their own culture construct knowledge and interpretations of the world, including music (Howard, 2018). As communication is based on learning a system of signs, customs and tendencies unique to every culture and understood by us after repeated experiences, musical understanding is similarly developed (Yehuda, 2002). Reception of music is based on understanding the structure of music (Baines, 2016). When we understand the structures, the music becomes more communicative and opens up for emotional attachment (Ansdell & Pavlicevic, 2005). Music is a culturally derived phenomenon, and

the challenge is finding a balance between cultural considerations and the spontaneous connectivity of music in music therapy (Morris, 2010). There is a risk in perceiving music as a universal language, recognised and accessible to all, as it may create the false notion that multicultural considerations are not necessarily an issue in music therapy (Brown, 2002).

Music therapy – a multicultural engagement

Adapting to a culture, i.e. *acculturation*, is a process of learning the language, the social norms, lifestyles and “hidden rules”. Stige (2002) describes culture as customs connecting to and regulating a group of people and traditions transferred from generation to generation. Culture is also a personal matter, with the music therapist and the patient bringing their own culture into music therapy (Kim & Whitehead-Pleaux, 2015). In the dynamic therapeutic process the music therapist is not an external observer (Mössler, Gold, Aßmus, Schumacher, Calvet, Reimer & Schmid, 2019). According to Stige (2015), music therapy is a cultural engagement, meaning that each person has a cultural identity, and when participating in cultural experiences it promotes socialisation that can improve the person’s quality of life. Music therapists need to understand the role of music within the patient’s culture and familiar environment. Music can offer a contraindication in music therapy if the music therapist is not aware of how specific songs, sounds or genres can affect the patient (Schwantes, 2009). Consulting with cultural liaisons or professionals who are familiar with the present culture is crucial. As music therapists move across borders, taking music therapy into multicultural practices, cultural differences may impact the therapy session and the relationship, and cultural considerations are important, therefore (Gadberry, 2014). Pavlicevic (1997) describes therapy as a mutual meeting where the music therapist and the patient together create their own musical culture. This connects to Stige’s (2002) statement that it is not always possible to adjust completely to the patient’s culture, but the interest and respect communicated by the music therapist are more important than the degree of success in adjusting to those specific cultural codes. Aigen (2001) emphasises that cultural references may facilitate the therapeutic process, but there should not be the assumption that a musical idiom will suit a patient only because the music therapist believes he/she has knowledge of the patient’s musical identity or is able to play in the patient’s cultural style, or that having a similar cultural background will automatically make the music therapy sessions beneficial or easier.

Cultural sensitivity in music therapy

In music therapy it is critical for the music therapist to respect, support and keep an openness to the personal-cultural-musical background of the patient together with an awareness of

cultural sensitivity (Grimmer & Schwantes, 2018). Having a musical cultural understanding is essential, and assumptions should be put aside and not imposed on the patient (Morris, 2010; Wood & Ansdell, 2018). *Cultural sensitivity* is a term used in many contexts when discussing the topic of culture, but with various descriptions of its meaning (Ruddock & Turner, 2007). Through a concept analysis, Foronda (2008, p. 210) defines cultural sensitivity as “employing one’s knowledge, consideration, understanding, respect, and tailoring after realizing awareness of self and others and encountering a diverse group or individual”. As music therapists, an openness to explore one’s own cultural identity, as well as that of the patient, is essential (Donley, 2018). Additionally, it is important to explore personal thoughts on cultural differences and the music therapist’s opinion of the patient’s cultural background (Gonzalez, 2011). Both perspectives of cultural consideration – the music therapist’s self-exploration and the understanding of the patient’s culture – are essential, and differences and similarities that exist between the music therapist and the patient need to be taken into consideration as this may affect the therapeutic process (Hadley & Norris, 2016). As cultural assumptions, cultural values, misinterpretation and culturally unsuitable reactions can occur in the therapeutic process, an awareness of the patient’s cultural world is critical (Bilu & Witztum, 1994). Music is a process based on elusive cultural symbols that contain meanings beyond verbal definitions and is a fundamental element of the cultural experience (Gouk, 2017).

Method

A heuristic analysis design was chosen to explore the role of culture in music therapy and why cultural considerations can be necessary in the field of music therapy. In heuristic methodology one seeks to obtain qualitative depictions that are at the heart and depth of a person’s experience – depictions of situations, events, conversations, relationships, thoughts, values, feelings and beliefs (Moustakas, 1990). This research design has proved to be an inquiry particularly suited to exploring personal, internal and subjective experiences (Borgal, 2015). This approach gives personal descriptions of subjective experiences with the phenomenon being studied (McGraw, 2016). With this analysis, personal experiences of working as a music therapist across borders of language, culture and countries were studied.

According to Moustakas (1990), heuristic research is organised in three main stages: 1) Formulating the question, 2) Exploring and answering the question, and 3) Creating the research manuscript. A heuristic inquiry is a process that begins with a question that has been a personal puzzlement in the search to understand one’s self and the world in which

one lives. Interactions with people have always fascinated the first author of this publication, who is the main object of this study. According to her, there is something captivating about meeting people, sharing a moment together and through that, learning more about that other person. Through meeting others, she finds that she learns more about herself as well. Interacting in music is a particularly amazing experience as here exist other ways of communicating – of expressing oneself, listening to and sharing with each other – and other rules and traditions, creating a possibility for interactions where limits or barriers in other situations might not be present. In music therapy, interactions in various ways can develop. As music is often described as a universal language, she wanted to explore whether the therapeutic perspective on music is also universal or whether it is culturally connected. With an aspiration to understand this experience more fully, she searched for an internship in a country with a culture and language different from hers. From her experiences, the research questions for this heuristic study developed:

Based on a heuristic inquiry, how is culture playing a role in music therapy practice within the interaction between a Nordic music therapist and paediatric patients in a hospital setting in Lima (Peru), according to the perspective of the music therapist in an autobiographical analysis?

There are different ways of answering a question in heuristic research. In this study we used the autobiography design (where the first author, as a music therapist, is the only participant in this study). This design follows trends in social science research focusing on personal narratives (Etherington, 2004). Such narratives can focus on parts or the entirety of one's life, on particular kinds of experiences, or on others at a particular time in one's life (Denzin, 1989). We believe that this is a relevant heuristic design, as it allows a deep comprehension of the first-person experience with the phenomenon (Bruscia, Abbott, Cadesky, Condrón, Hunt, Miller & Thomae, 2005). After defining the type of heuristic research, it is necessary to define how the data will be collected. We have chosen the reports and notes written by the music therapist as the main resource. In addition, we consider information from transcriptions of music therapy sessions and questionnaires conducted and filled out by the music therapist during the development of her clinical practice. These questionnaires were part of another research process conducted by the music therapist and integrated in the same music therapy project in Peru. This second research analysed through a thematic analysis the parents', volunteers' and medical team's perception of the music therapy interventions at the hospitals (Helander, 2018). Following the third main stage suggested by Moustakas (1990) when developing a heuristic study, we wrote the research manuscript. This document has been created according to the different steps suggested by McGraw (2016), who wrote guidelines on how to describe the research processes of a heuristic investigation in music

therapy. The steps proposed by McGraw (2016), adapted from Moustakas (1990), for the research processes in a heuristic approach are:

1. **Initial engagement**
Identifying the focus of the inquiry.
2. **Immersion**
Exploring personal and professional experiences related to the research topic, as well as reading about related topics.
3. **Incubation**
Taking a step back from going deeper into the topic in order to allow experiences and knowledge to integrate, clarify and develop into a new, broader understanding of the topic.
4. **Illumination**
Experiencing a gaining of new awareness, insight or epiphanies as the understanding of the core nature of the topic unfolds.
5. **Explication**
Developing a broader understanding of the topic by comparing and contrasting aspects of the topic that have appeared during the process. New views and alternative explanations are identified as a comprehensive picture of the topic falls into place.
6. **Creative synthesis**
Integrating experiences, insights and understandings to form a coherent description of the meaning of the topic.

Personal perspective

The first author of this publication, being the music therapist who conducted the music therapy sessions at the hospitals in Peru, is a Swedish-speaking Finn originally from Finland, with a BA and a MA in music therapy from Aalborg University, Denmark. In this section of the article, when presenting a personal experience of how culture is playing a role in music therapy based on the music therapist's own experiences of working in a cross-cultural

setting in Peru, the authors found it relevant to describe the personal perspective in the format of the first person.

Initial engagement

I began the process by considering my personal experiences of the connection between culture and music therapy. Before going to Peru I reflected on how to prepare myself for a meeting with a new culture and for working in a new language (Spanish). How would they react to my coming to their hospital as a white, European woman, not being able to speak Spanish fluently? Would they be receptive to music therapy? How would I be able to explain or present myself and my purpose at the hospital? During my time in Peru I regularly kept notes recording personal descriptions of my experiences, thoughts from discussions with my supervisor in Peru and Skype conversations with my university in Denmark. After returning to my studies in Denmark I reflected on my experiences of cultural influences in my work in Peru and my experiences of the role of culture in music therapy practice. Consequently, I became interested in going deeper into exploring the importance of cultural considerations in music therapy.

Immersion

With the focus on cultural influences, I started exploring my personal and professional experiences based on notes I had written before, during and after my time in Peru, and I began structuring the various aspects of the topic through the following mind map (Figure 1).

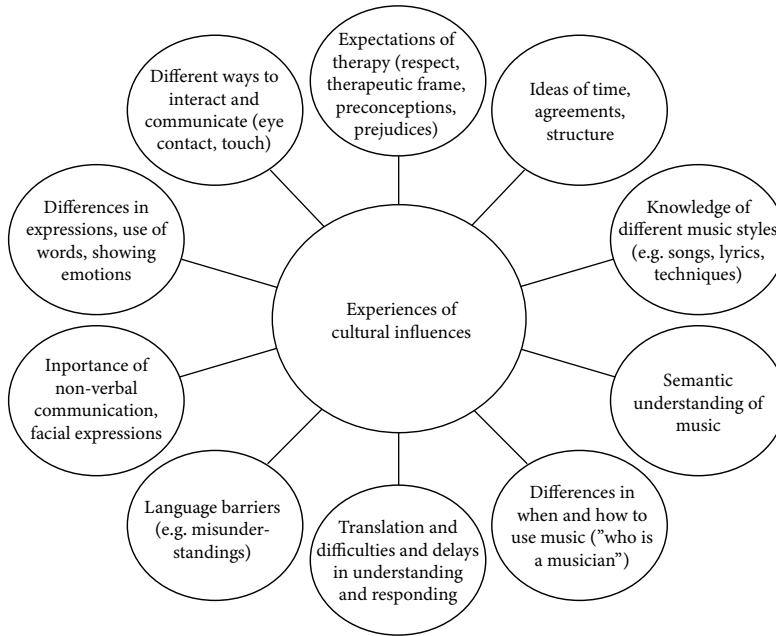


Figure 1. Mind map of my experiences of cultural influences in music therapy

To contextualise the immersion process of my experiences and to provide examples of what happened in the music therapy sessions, the following section contains eight portraits that describe my interactions with patients in music therapy. These quotations are taken from the questionnaires and transcriptions of music therapy sessions that I filled out over the period of the three last weeks of my music therapy project in Peru. These questionnaires were part of another research project integrated in the same music therapy project in Peru, which through questionnaire-based interviews and a thematic analysis analysed the parents', volunteers' and medical team's experiences of music therapy interventions in this hospital setting (Helander, 2018).

Finding my role

Exploring the experience from a professional perspective, I reflected on coming into a new culture, meeting new people, and presenting myself and my cultural background. Based on my cultural background, taking an approach of slowly finding one's place within the structure of the hospital is a respectful way to arrive in a new situation. Due to the language barrier, I was not able to verbally communicate very much in the beginning, which

meant having a quieter and more observant presence. It was not until further into my stay that I discovered how important socialisation and small talk were in this culture and in creating a good connection with my co-workers. Interacting, communicating and being social were also expressed in a different way than in the Nordic countries, e.g. in Finland an interaction typically uses fewer words and gestures, whereas in Peru more words, more hand gestures and greater volume are used to express oneself and to react to each other's expressions. Personally, I found it difficult not to be able to communicate and respond as freely as I would have liked and not to be able to create interactions through verbal communication. However, having a more observant presence created a new experience for me and presented a different side of me. With the challenge of limited skills of communication, I experienced the strength in entering a new setting through mainly observing and taking part gradually. This approach provided me with a different observation of others, of the hospital setting and of myself in this context.

Various expectations

I experienced an important lesson in being professional and learning how to present a distinct role with integrity and confidence, especially as my role (and music therapy) at the hospital was unfamiliar to the other staff members. Once it became clearer to my co-workers that I was a music therapist at the hospital, the communication and teamwork became easier. There remained the challenge of various expectations for my role by the staff and by me. Setting aside the language barriers and not being able to explain music therapy in a deeper way, the whole new experience of working as a music therapist in this particular clinical setting presented its own challenges. In other words, I needed to allow myself time to find out *what* my job entailed and *how* to describe it. The understanding of therapy, its implications and benefits as well as expectations of therapy can be rather different from culture to culture. Therefore, when coming into a new culture I discovered that showing how music therapy could be integrated in this setting was more relevant than trying to explain it. It did not matter whether they thought I was a hospital clown, volunteer, "the music lady", or something else. The important thing was to focus on interacting with the patients and that those moments shared in music therapy could be meaningful and helpful for the patients. The patient, and the interaction with the patient, was my primary focus and purpose of being at the hospital, and once that became clearer to me it was possible to become clearer to my colleagues as well. The hospital staff would make suggestions and requests for how I could help patients. I found it inspiring that they experienced music therapy as relevant and helpful, e.g. during a medical procedure. At the same time I found it important to trust my own knowledge of music therapy and focus on developing my professional decisions on what and how to work as a music therapist in this setting.

Portrait 1

“When entering the room I focused on finding my ground and being observant of the room today and not on my expectations of the room. It was a new experience to not directly look for (or being asked by) a patient who needed me but instead starting to play ‘background music’ for a while. I was not stressed by not having a direct interaction with a patient but I needed to focus to stay grounded as I was ‘just standing there playing music’ and instead working with and following the changes in the environment and the patients in this way.”

Music – the primary language

Even as my role at the hospital began to evolve, I recognised that being able to verbally present myself and my work was not really an option. In addition to the language barriers it was difficult presenting myself in this continuously changing environment of people coming and going. Over time I realised that the music itself presented me, which made the role of music in my work increase. In my meetings with patients, their families and hospital staff, the music itself was the primary language and way of communicating. Therefore, I had to rely on the music, and through this I got to experience the broader possibilities of music as a means of communication as compared with if I had been able to speak Spanish fluently. This enhanced both my personal connection to music as well as my ways of using music to connect to others.

Portrait 2

”I felt that the music changed the environment, it was distracting in a good way from the stressful and boring silence. The baby had a calmer body language, she did not move as much as before we started. She kept eye contact and though she did cry now and then, she laughed as well, and her crying was not hysterical or aggressive, nor lasted for as long as when I first started working with her.”

”Through the interaction, many kids started to talk more, they got more energy (woke up) and laughed. Lots of eye contact. Some got tired, relaxed and fell asleep. Many expressed joy, that the music activity was fun and enjoyable both for the kids playing and for the ones listening to it, even if they do not have the energy or if I was not able to work directly with them, they could be a part of the activity as well.”

Expressions & reactions

When working in a field that requires a connection to one's intuition and inner personal perspective, expressing oneself in a different language is challenging for many reasons. Even if the words might be familiar to me and I might find "a good therapeutic response", my reaction might feel inauthentic. I found that there is an emotional connection to words and expressions, a personal cultural connection to how we react and respond, and a personal cultural expectation to my own and others' reactions. The language barrier could also be helpful sometimes, as it created a distance and helped me to focus on what the patient was sharing without emotionally reacting to how those words might otherwise affect me. This enabled me to maintain an added professional stance instead of becoming too emotionally attached or involved in the therapeutic situation. On the other hand, not working in my native language required a translation process to happen before responding. Even if this process was not always perceived as a conscious step, it was present and made a delay in the response to the patient. Because of the language barriers, I was forced to give myself more time to understand what the patient was expressing and how to react. This "extra" time given to both the patient and me was many times shown to be meaningful, and had the conversation been in my native language, I might afterwards have felt that I had responded "too fast," with less depth of understanding.

Portrait 3

"Most of the kids wanted to play today, both during and between treatments. I also played for some kids while they listened. Development in increased eye contact, relaxed body language, laughing, interacting (with me, their parents or the kid in the next bed). The children mostly wanted to play together, I followed their signs of tempo, rhythm, volume and added vocals, sometimes words as well (the kid's name, talking or asking them in the song). The music helped them to relax, as well as their parents. Some parents wanted to talk a lot with me, making it challenging to keep the interaction and communication with the children, but I tried to involve all of them in the activity, as many parents wanted to take part in some way."

Time

In the Nordic part of Europe and, perhaps, especially among Finns, time is perceived as being quite fixed and non-negotiable. As I sometimes prefer to have a more flexible view on time, I looked forward to experiencing the "South American style" and had expectations of time being perceived differently in Peru. I experienced that when talking about time; there

was a strange combination of both relaxed and stressful attitudes which were often quite confusing. I was not able to expect things to happen in the same way as when something was discussed and planned in the Nordic countries. The word for now (*ahora* or *ahorita*) was used for describing when, for example, a meeting would be held, but it would often mean “at some time it will happen”. Given this flexible understanding of time in relation to the intensive pace at the hospital, the only solution I could find was focusing on the present. In this here-and-now focus, with an uncertainty about time, I also needed to give time to the interaction. This meant allowing more time for patients as well as giving myself time to find a connection to myself with all the changes happening around me. I noticed that I was acclimatising to the culture of Peru in the way they communicated, in expressing myself and with the flexible attitude towards time. But in some ways I remained connected to my Nordic culture by bringing a calmer, less talkative and more patient side into my role as a music therapist. Admittedly, it was sometimes a challenge to find a balance between those two cultures, but also an opportunity to try different ways of communicating and adjusting to the present moment.

Portrait 4

“The girl caught my attention, but it was difficult finding an interaction with her at first. It took some time but with time we found an interaction. It was intense but I felt it to be very important to stay with her. I enjoyed the interaction and it was difficult to stop. The girl wanted to continue. We had a great interaction and I am happy that we got a longer time together. The patients I worked with today all needed time, it was important to give time and stay with them to build an interaction.”

Interactions

When looking at the perspective on music, I was interested in exploring how cultural differences would be noticed in music therapy. Would it be a problem, challenge or barrier in my interaction with patients if I was not familiar with a Latin repertoire, not able to sing in Spanish or play instruments in a Latin musical style? Even though these questions kept coming up now and then during my time in Peru, I found that in the meeting with a patient, it was more about creating an interaction than demonstrating my musical background or the patient presenting his/hers. It was about a meeting between two people and an interaction between the personal cultures of these two people. My most important task was to be there in that moment together with the patient, for in that moment we created music together that became our way of communication and our culture. There were cultural influences

in the musical expressions, but even though I learned and practised Latin rhythms to use in music therapy, I also retained my own music style. I found it important to be authentic in my meetings with the patients. This meant, in my connection to the patient, that I also maintained a connection to myself and my own culture. The music I expressed was created from the music of the patient with my personal interpretation and influences. Especially when I was using receptive music therapy methods with a patient, I found the music I provided being similar to the improvised music I had used in music therapy sessions in Denmark. Creating music to express emotions and support was the main focus, rather than creating music within a Latin music style.

Portrait 5

“The girl started interacting more, she laughed and communicated both through laughter and by playing music. We found an interaction, the girl laughed and interacted with me. When we began, she was kicking a lot and throwing things, but when she realised that she could have some control with me/in the music, she became freer. In our music, she could decide how she would play and she noticed that I followed her. I followed her signs and she did notice mine as well, but she preferred to lead. It created a fun atmosphere and activity which also inspired and captured the attention of other kids. More kids wanted to play and wanted an activity. The music was a fun diversion where the kids could take a lead, show the others.”

Music & emotions

Music is deeply connected to emotions and a way to get in touch with, express and share emotions. This was my experience of using music in another culture, where barriers of fully knowing another person's language and background mattered less. Music created a way to interact and share not only that moment, but the emotions that arose in that moment. Although there were not many common elements in my and the patient's diverse backgrounds, we could find a connection in music. Since the experience of being at the hospital could be quite challenging for the patient, the connection could become a source of strength. With an intensive pace, various opposing needs and emotions, many changes and noises surfacing at the same time, using words alone to deal with the situation was inadequate. When approaching patients, I presented the instruments I had with me and let the patient explore the instruments. I then tried to listen and follow the signs and motions the patient expressed non-verbally, verbally and musically. I knew little of the patient's background, but in our interaction the patient could share expressions, feelings and thoughts. Even

without putting into words the things being shared, the interaction could be supportive and helpful for the patient.

Portrait 6

”The baby’s mother started to cry while I was playing and singing. She said to me and to the mother by the bed beside her, that the music was nice and helpful. That she and her baby liked it. The mother’s body language became more relaxed, less stressful and she started also playing with her kid and in the end holding her child in her arms and singing to her. This was the first time that I got such a strong connection to a parent. Through the kid, I also interacted with the mother. Not only with the focus on the kid but also connecting with the needs of the mother. It was a strong and powerful experience, that the mother felt empowered and found a way to interact with her kid and both started playing with her daughter and then singing for her.”

To connect

Once I began to find my role in this work, I sometimes “forgot” that I was from a different cultural background. This was especially noticeable in new meetings, as a tall, blond girl with a guitar was a surprising and exotic experience for many. This had both advantages and challenges for the interaction. Some people were curious and wanted to ask me about my background, while others became shy or did not know how to interact with me. Children, however, often have a natural openness and interest in exploring new things. I discovered that walking around with a guitar (as well as some shakers and small percussion instruments in my pockets) helped to create an immediate connection to the children – both the sound of music and the sight of the instruments caught their attention. I found that the child often looked at me, especially when I was singing, and I found the eye contact to be strengthening the interaction. In Peru there are easier and more immediate interactions, and the pace can also be faster and more enthusiastic compared to interactions in the Nordic countries. During medical treatments, however, I noticed that interactions between the medical team and the patient were infrequent. When patients were alone, without any family members around them, no one would interact with them. If there was a family member present, only they would often become involved in the medical procedure and interact with the staff. I therefore tried to “be allowed to” stay by the patient’s side to keep eye contact with and

support the patient. If the situation made it possible, I tried to start creating a connection with the patient before the medical procedure took place and then remained until the procedure was over and continued to interact with the patient once the medical team left. Sometimes I was not able to stay next to the patient, but I tried to maintain eye contact if possible or keep a musical interaction going, e.g. keep singing from behind the bed.

Portrait 7

“The boy interacted and kept eye contact with me during the whole treatment and his breathing and body language became more relaxed. I felt that the time flew. I wanted to work with more kids, but I had started taking more time for each patient, for each day. Therefore, I was also not able to reach out to as many kids. But the interaction and the change in his body language gave me the impression to stay with him and that it was a good distraction for him. After the doctors left, I stayed with him until he fell asleep. He did not share a word during our interaction, but kept eye contact with me the whole time.”

Sharing experiences

Exploring the topic from a personal point of view, I came to think about the need to share my work experiences at the end of the day. My studies and previous work experiences in music therapy had been in Danish, and my identity as a music therapist was, in a way, connected to the Danish language. I realised the importance of having supervision in a language where I would be able to describe my experiences freely. Even while expressing myself in English or Danish there was a translation process happening in my mind. In Spanish that process was even more extensive, as I knew only a few expressions and words. After each day the team of volunteers from the NGO I was collaborating with at the hospital met for a debrief and to hear each other's experiences of what happened each day. These meetings and moments reminded me of the importance of working together in and as a team. Even as I was doing my work on my own at the hospital, having a consistent moment for sharing, using sometimes more, sometimes fewer words was really important and necessary to find motivation, inspiration and ways to proceed with our work. Especially, when working abroad, the support of a team becomes even more critical and valuable.

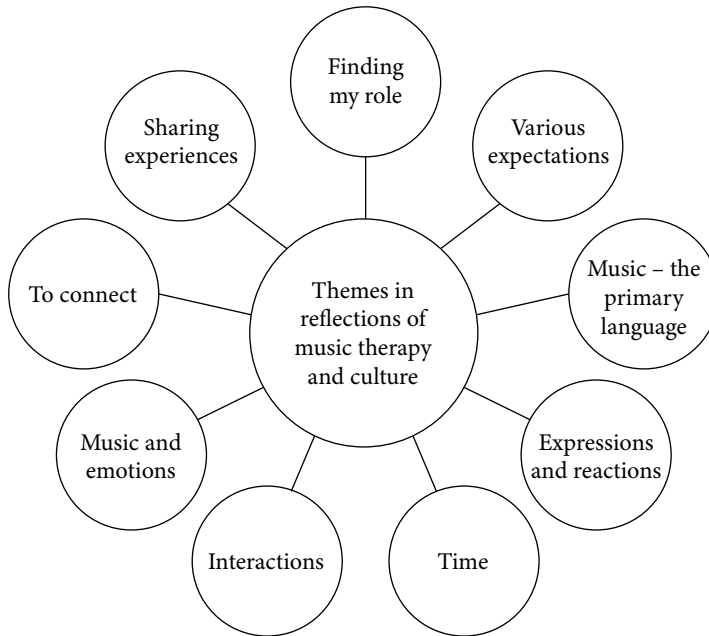


Figure 2. Themes in personal reflections of music therapy practice in a new culture

Portrait 8

“There were big changes all the time, the tempo was intense. There were a lot of sounds and things going on today. At some moments there were many kids seeking and needing attention and support from me and I needed to make a choice who to stay with, who to work with. The room was quite stressful today, with many changes from a lot of crying to a lot of laughter. Even when the room is quieter, there is always a feeling underneath of stress and pain in the room. Some of the nurses, as well as the volunteers, have started to ask me to come along when they are going to a patient. To be a part of the team during the patient’s treatment is an amazing feeling of collaboration and of trying to do the best we can for the patient.”

Incubation & illumination

After some time had passed I re-read my reflections and wrote down a title for each section to portray the different themes I had identified in my descriptions of my experiences. These nine themes (Figure 2) highlight emergent themes describing my experiences with cultural aspects in music therapy. Then I connected these themes with quotations from the questionnaires and transcriptions of music therapy sessions that I filled out during my time in Peru in order to broaden the descriptions of the context where the music therapy interventions were taking place.

Explication

As Morris (2010) suggests, having a common cultural background might make communication easier, and therefore in meetings with other cultures, cultural considerations are needed. But cultural understanding is not enough, both in the case of sharing the same culture or having a different culture to the patient. An openness to the patient's culture is important together with setting assumptions aside and not imposing them on the patient (Morris, 2010). As I see therapy to be a personal exploration, I find it important that the music therapist is respectful and open to the cultural background of the patient. This connects to Stige's (2002) description of culture being both a personal matter and a phenomenon connected to and regulated by a group of people. As I experienced in music therapy, there is not only a meeting between two cultures but between two identities – each having a personal and social cultural background influencing the interaction and the creation of the culture in their meeting. I experienced the importance of being observant and listening to the here-and-now as the interaction is created based on that moment. This view is connected to the description of Pavlicevic (1997) who explains therapy as being a mutual meeting where the patient and the therapist create their own musical culture.

As Baines (2016) speaks of the importance of self-reflection on the therapist's own sense of culture, I reflected more on my cultural background and its meaning in my work as a music therapist. As a Swedish-speaking Finn, I grew up in a country with two very different cultures existing next to each other. Swedish-speaking Finns are a small minority of Finland (5%), and even while sharing the same language as the people of Sweden, those cultures are also quite different. During my adult life I have lived in several countries. This has given me the opportunity to experience different cultures, and it has also had an influence on the development of my personal culture. At times I feel a connection to my Swedish/Finnish roots, in other situations like I am a stranger to the Finnish cultures – both when being in Finland and abroad. My experiences with and education in music therapy,

as well as developing my identity as a music therapist, have involved many languages and cultures. In my experience, there is a special connection to one's native language, as singing or expressing personal thoughts in one's mother tongue offers a special, personal and emotional connection to these expressions. In meetings between different cultures and languages, we get a chance to experience different ways of expression and communication which can be helpful in both understanding others and oneself.

Creative synthesis

The aim of this heuristic analysis was to describe my reflections on my personal experiences, adding a perspective from relevant literature to explore the complex phenomenon of culture and its relation to music therapy and why cultural considerations may be needed in this field. In music therapy there is an opportunity for the patient to get in touch with his/her truly personal core, and it is the music therapist's responsibility to support, respect and listen to the patient in his/her self-discovery. In every meeting between people there is a meeting between personal cultures interacting. This may be obvious in meetings across borders of cultures and countries where strong differences are present, but it is just as important to recognise that there are cultural considerations needed in meetings within similar cultures. In multicultural meetings some cultural signs might be easier to notice, whereas others are more difficult to read and understand. However, what I experienced is that being open to those signs enables interactions across any borders. We might not understand all aspects of the other person's culture, or be able to respond in the same way as the other person does or expects, but this does not mean an interaction cannot be created. In music we can share and express elements that are created from our culture and that we have built in our interaction in music. Finally, in meetings across cultures there will always be misunderstandings. These can be of various degrees – some more challenging than others – but misunderstandings cannot be avoided. Based on my experiences, I found it important to proceed with respect and openness, to dare to try and not be impeded by fear in meetings across cultures. In my experience it is when one tries that one can learn, and in all interactions being respectful, sensitive and open to trying is the key.

Discussion

With the heuristic inquiry, nine themes were identified as various roles of culture in clinical music therapy practice. From the reflections of the music therapist in an autobiographical analysis the themes of various expectations, music becoming the primary language, finding

one's role, variations in expressions, reactions, perception of time and interactions, connecting, expressing and sharing emotions (especially through music), and sharing experiences verbally and non-verbally in a foreign language were discovered as personal experiences of cultural influences in music therapy. Cultural factors can have a more present and more direct influence in some of these themes (Various expectations, Finding my role, Sharing experiences, Expressions & reactions, and Time) in comparison with the other themes (Music – the primary language, Interactions, Music & emotions, and To connect) where elements of culture might not become cultural barriers but may have less of an influence or perhaps become a helpful and useful element in creating an intermusical relationship (Jones, Baker & Day, 2004). The first “group” of themes can be considered to have roles that are more dependent on cultural elements such as language and communication, social hierarchies, social relations, relations of power and beliefs and the perception of aesthetics (Fiske, Dupree, Nicolas & Swencionis, 2016). The second “group” of themes show that the musical interactions develop mainly from forms of non-verbal communication centred in the engagement, shared attention and affective synchrony that are usually developed from the first month of life where there is no clear cognitive identification with cultural differences (Hart, 2008). From this broad perspective on the themes we will now discuss them more in detail and explore their understanding by connecting them with other publications – within and outside of the field of music therapy.

The theme *Various expectations* presents the particular element of music therapy practice involving each participant's unique perception of the music therapy process and of possible ways to interact. A concept related to this theme is *The Field of Aesthetics* established by Carolyn Kenny (2006) within her model described as *The Field Play*. According to Kenny, the aesthetics is the first field presented in an interaction between the music therapist and the patient. The field of aesthetics refers to aesthetic perceptions related to music, especially on the view on beauty. Each person has their own aesthetic musical understanding based on their previous cultural-social experiences, whereby they have acquired their conceptions of what is beautiful to play and listen to (Kenny, 2006). Among the seven phenomenological fields present in the Field of Play model, this is the only one where there are clear boundaries separating the patient's field from the music therapist's field. Considering the results of this research, the expectations arose mainly through the dialogue of the different aesthetic fields of the participants. Neither was sure if the other would accept their aesthetic expressions or perceptions of the music, especially as they did not share the same verbal language to give and receive feedback on their musical expressions. When coming into a new setting the music therapist experienced the need to find her way of working and interacting within that specific culture – the Peruvian culture, the hospital culture, the child's culture and the music therapy culture. Within a multicultural music therapy practice the music therapist

discovered the importance of keeping an awareness of the balance between adjusting to the cultures she met and sticking to her own ways. This connects to the following theme of finding one's role within a setting with various expectations.

In the themes *Finding my role* and *Time* the music therapist expressed the need to understand the context one is in. She searched for her role and place in that specific hospital environment, taking into account the cultural aspects involved in the therapeutic setting (including how time was perceived by the patients on the basis of their subjective perception linked to cultural aspects). These themes can be understood through the concepts of cultural competence and cultural humility (Fisher-Borne, Cain & Martin, 2015). Cultural competence involves understanding and appropriately responding to the unique combination of cultural variables and the full range of dimensions of diversity that the professional (the music therapist) and client, patient, or family brings to the interactions (Fisher-Borne et al., 2015). For cultural competence to be reasonable, the music therapist needs to consider these competences from a perspective of humility. In this sense, cultural humility is defined as having traits of respect, empathy and critical self-reflection on both an intrapersonal and an interpersonal level (Foronda, Baptiste, Reinholdt & Ousman, 2016). In this study the music therapist did not only seek to identify the cultural differences existing in this context in order for her to find her role in the clinical practice but strove to understand these differences and to find ways to respond (cultural competences) with a humble attitude in the interactions with the cultural variations.

Regarding *Time*, the music therapist respected cultural differences and focused on finding a perception of time that could be shared between her and the patient: the here-and-now focus. Psychotherapist Irvin Yalom is one among many therapists who emphasises the here-and-now focus in therapy. According to Yalom (2005), a shorter intervention is required in a hospital setting, the focus being on the dynamics that occur in the session rather than going into the child's past history. The music therapist experienced the strength in being sensitive to the moment, for example by giving more time to the interactions in this high-paced and constantly changing hospital environment. She needed time to translate both verbal and non-verbal signs and expressions in order to know how to respond. Therefore, she gave more time and more silence to the interactions than if she would have been able to respond in her native language. The time within the silence was found to be a powerful tool in music therapy. Within such an intensive hospital setting it was helpful and meaningful to provide a moment where the child could choose the pace of his/her interaction, and this gave the child more control in this setting as well. Interactions in Peru were often quite hectic and at a faster pace compared to interactions in the Nordic countries. The music therapist found value in the more "Nordic" approach of communicating by lowering

the pace, using less verbal communication and being together with the patient in silent and non-verbal interactions. This approach connects to *slow music therapy* – a concept that highlights the importance of being in the here-and-now, appreciating the moments and resting in them to enrich the experience and the interaction (Johansson, 2017). *Slow music therapy* is not about stopping the time or being in a timeless state but rather about being together in the present moment and being sensitive to how the moment develops (Johansson, 2017). Whether the music therapist had only one interaction with a patient or met that same child several times, it was important to be present and meet the child where he/she was in that moment. Even in regularly scheduled therapy sessions, where the music therapist will probably meet the patient over a longer period, it is important to be in the present moment and in that particular session. The process is continuing but cannot be planned out and followed in a step-by-step detailed plan. Johansson (2017) emphasises resting in the moment, capturing the here-and-now and creating a space to develop and deepen the experience. In this study the music therapist experienced the value of giving time to the here-and-now to deepen and develop the interaction with the patient.

The themes *Music – the primary language* and *Music & emotions* represent the possibility of musical communication regardless of the languages spoken by the participants in the clinical setting. This theme is directly related to the concept of *communicative musicality*, created by Malloch and Trevarthen (2018), which explores the intrinsic musical nature of human interaction and is used to explain the root of musical interactions in music therapy (Holck, 2019). Communicative musicality is defined as the innate ability to move, remember and plan sympathetically with others, creating an endless variety of melodic narratives by instrumental music or singing. This can be seen in the communication between a mother and her infant where noticeable patterns of timing, vocal timbre and melodic gesture exist. Without intending to do so, the mother-infant communication follows typical rules of musical performance, with distinct timing and melodic narratives (Malloch & Trevarthen, 2018). In other words, although the understanding of how we perceive music can be culturally learned, the musical interaction originates from a form of basic communication that develop in infants. This is not to suggest that the music therapist copies a mother-infant relationship but that the music therapist can musically increase and strengthen basic forms of interaction, thus encouraging communicative interaction and connection. The findings from this research showed that communicative musicality allows forms of interaction, enables ways of sharing affections and creates non-verbal ways of communication that are significant for both the music therapist and the patients, cultural differences aside.

In the theme *Expressions & reactions* the music therapist presented ways in which both the patients and herself responded in different ways in their interactions. In some situations there

were verbal reactions and in others only forms of non-verbal communication. This theme has an interesting resonance with the concepts of narrative metaphors (Barcellos, 2012) and analogy in music therapy (Smeijsters, 2012). According to Barcellos (2012), it is possible to understand music as metaphorical narratives from a contemporary musicological perspective, where the patient acts as a performer, as a narrator, and the therapist acts as the receiver of musical traces and seeks to give meaning to these musical expressions. The analogy in music therapy has the function of portraying internal states, expressed through music. In this way, what the patient expresses through music is a reflection of how he/she feels internally. There is an equivalence between the musical expressions and the internal experiences of how the patient feels, thinks or acts (Smeijsters, 2012). From the different expressions and reactions found in this research, some of them were centred on metaphorical elements and others on analogical elements. In situations where the interactions involved verbal expression it was important to reflect on what the respective words were connected to in the patient's history. When there is a verbal involvement there is a direct relation to a narrative understanding of what the patient shares and the way the music therapist understands this expression. In the case of this research, the receiver did not have all the resources to understand what was being presented, so there was a need to create analogical situations where expressions and reactions could reflect non-verbally the internal states in the here-and-now.

The music therapist found the cultural differences and language barriers not always to be a challenge but also a way to create an interaction and a resource for sharing with each other their personal backgrounds. This gave the patient some control, a contact with their identity – their life and identity besides being a patient at the hospital – and a resource in being able to show and teach someone else, both verbally and non-verbally. The music therapist's experiences connect to the statement that communication is not only about learning the spoken language but also about the non-verbal signs and expressions and the musical language of the culture (Gadberry, 2014). In interactions there are many things being said in various ways of which some are more observable to a person of that culture, while other signs are only noticeable to a foreigner (Gadberry, 2014). Both music and culture are complex phenomena, providing a sense of the person's identity and background (Baines, 2016; Cominardi, 2014). Yehuda (2002) describes a connection between these two phenomena by saying communication is based on learning a system of signs, customs and tendencies which is unique to every culture and understood after repeated experiences. In the same way our musical understanding is developed.

The themes *To connect* and *Interactions* presented how the music therapist found ways to initiate and develop interactions with patients through music. These themes share aspects with the description of *The Processual Stages*, presented by John Carpenente (2016) on how

to develop an intermusical relationship between the patient and the music therapist. These stages were inspired by the Nordoff-Robbins model and the interaction model by the free play DIRFloortime. According to Carpente, the first step in this process is to follow the patient's lead in the musical interaction. Although the music therapist can initiate a musical interaction, she needs to be aware of the different ways in which the patient shows an interest in music and how he/she is regulated by the musical interactions. The second step is a two-way propositional communication where the patient and the music therapist create different circles of communication in their interaction. The last step is the affective synchrony where the music therapist and the patient share various elements of affection within the musical interaction. These stages of Carpente are evident in the two themes, as these stages were developed to connect and create interactions independent of the cultural differences in repertoire and the difficulties in verbal communication between the participants.

As previously stated, the music therapist has a responsibility to respect, support and keep an openness to the personal-cultural-musical background of the patient (Grimmer & Schwantes, 2018). In this research the music therapist expressed her experiences of cultural influences and differences being present in meetings between multiple cultures. But first and foremost it is a meeting between two people, and although considerations are needed, it is important to use the here-and-now focus as a source for the interaction and to put assumptions aside. The music therapist found that in the mutual meeting in music therapy, regardless of whether or not you are working in your own culture, the music therapist and the patient bring two personal cultural backgrounds into the interaction where a third shared culture evolves. In the heuristic analysis, music was found to be a guide in the session. Music could provide a structure, keep the child's attention, build anticipation and create playful interactions. Music therapy gave the child an opportunity to be heard in an unfamiliar and intense hospital atmosphere where members of the medical team often did not have much time and might not interact or consult with the patient during the often painful procedures. In music therapy the child can receive an interaction with the music therapist, who only seeks to engage in a creative play where the child has the option of control and interaction (Wildman, 2010). Through an emotionally compelling experience of making music together, the patient can have a meaningful and enjoyable moment in the hospital (Wildman, 2010). The interaction, engagement and enjoyment of music in music therapy help the patient to better cope with the time spent in the hospital and contribute to the patient's treatment from a holistic perspective (Longhi et al., 2015; Sanfi & Bonde, 2019; Whitehead-Pleaux et al., 2007).

The theme *Sharing experiences* presented the opportunities and difficulties for the music therapist to communicate her experiences of the music therapy sessions. There was a

challenge in not being able to express her feelings in her mother tongue, in the place of practice and in supervisions. This theme connects to the field exploring the experiences of multilingual people. According to Stavans (2001), changing languages is like imposing another role on oneself, like being temporarily someone else. Koven (2001) asked French-Portuguese bilingual informants to tell the same story in Portuguese and in French, and they were subsequently interviewed about the experience itself. The author found that bilinguals performed quite differently depending on the language being used, suggesting that different languages allow us to “perform a variety of cultural selves” through a range of communicative tendencies and strategies and conversational forms and styles. In another study conducted by Pavlenko (2007), two-thirds of the 1,039 multilingual participants in the study provided evidence through the Bilingualism and Emotion Questionnaire (BEQ) that multi-linguals might feel more authentic in their first language. Therefore, the challenges experienced by the music therapist in this study were beyond the ability of communicating in a language other than her mother tongue, but mainly due to the fact that expressing and describing one’s experiences in a different language require a translation process. One’s original perception of a situation might change in the process of translating the experience into words, especially into a foreign language. Therefore, one’s description of the experience might become quite different from how a person experienced and originally intended to express herself.

Considering previous publications on heuristic investigations, this study can be considered a novel heuristic study in music therapy, as it is the first to present in a first-person analysis how a Nordic music therapist reflects on the role of culture in a clinical music therapy practice performed in a paediatric hospital setting in a Latin American country. In some previous heuristic studies the analyses were also conducted from a cultural perspective. The study of Han (2015) explored music therapy students’ experiences of the respect for cultural identities in relation to music therapy practice with patients from diverse cultural backgrounds. One of the differences of the heuristic inquiry conducted by Han (2015) in comparison with the present study is that the paediatric patients and their families in our study came from similar backgrounds. The study of Bell (2016) also verified how cultural aspects influence the music therapist’s perception of herself. Comparing Bell’s study with our study, Bell explored a music therapist’s reflection on her Métis heritage and how it might influence her personally, instead of verifying how this heritage relates to other cultural backgrounds. In comparison with other heuristic studies, the present research used the same six methodological steps created by Moustkas (1990) and adapted by McGraw (2016) for the music therapy context. In comparison with the other heuristic studies in music therapy, one limitation of this investigation was the absence of a creative product, like a song or a poem at the end of the heuristic analysis, which would offer a more artistic

aspect to the heuristic process. The reason for not using a song or poem as a summary of the creative synthesis was due to the need to creatively summarise the whole heuristic process. Another limitation of the study was the absence of one incubation procedure suggested by Moustskas (1990), i.e. the engagement in activities that were not related to the study during the incubation period. It is important to clarify that this is only one of the two possibilities of the incubation step suggested by Moustskas (1990). Another possibility that was used in this research refers to the recognition of the value of the researcher retreating from intense and focused attention on the topic being explored.

Future perspectives in this field of research point to the need for more heuristic studies based on autobiographical analysis in music therapy. The number is still small, and further studies exploring cultural influences in music therapy practice and research would be important. In addition, it would be significant to see the experiences of other European music therapists in paediatric hospital settings in Latin American countries. From several examples of interactions between different cultures, it would be possible to learn more about subjectivities and the different phenomena present in music therapy from a multicultural perspective.

Conclusion

Multicultural music therapy is evolving due to international collaborations and more multicultural societies. Through a heuristic analysis, the role of culture in music therapy was explored from a theoretical and personal perspective. The heuristic analysis presented the need for multicultural considerations, with an awareness of the patient's culture as well as the therapist's. A person's cultural-musical background is a phenomenon of both personal and interpersonal aspects, and it is important to respect, support and keep an openness to the personal-cultural-musical background of the patient together with an awareness of cultural sensitivity. Presumptions must be put aside in meeting with a patient, both when sharing a cultural background and in meetings across borders of countries, cultures and languages. In the dynamic therapeutic interaction the music therapist is not an observer but is like the patient, bringing his/her own culture into music therapy. The therapy becomes a mutual meeting where the music therapist and the patient together create their musical culture based on the *here-and-now* moment and their backgrounds. Cultural differences can become a way to create a unique interaction and serve as a resource for interactions in music therapy. It is important to remember the music in music therapy, the power of music as communication, and to strive for a balance between considerations and the spontaneous connectivity in music therapy.

References

- Aasgaard, T. (2002). *Song creations by children with cancer - process and meaning*. (Doctoral dissertation). Aalborg University, Denmark.
- Aigen, K. (2001). Music, meaning, and experience as therapy. *Nordic Journal of Music Therapy*, 10(1), 86–99.
- Ansdell, G. & Pavlicevic, M. (2005). Musical companionship, musical community: Music therapy and the process and value of musical communication. In D. Miell, R. MacDonald & D. Hargreaves (Eds.), *Musical communication* (pp. 193–213). New York, NY: Oxford University Press.
- Alcalde-Rabanal, J. E., Lazo González, O. & Nigenda, G. (2011). Sistema de salud de Perú. *Salud Pública de México*, 53(2), 243–254. P.
- ASAM (2018). Asociación Argentina de Musicoterapia, ASAM. Retrieved May 6th, 2018, from <http://asamdifusion.wixsite.com/musicoterapia>
- Avers, L., Mathur, A. & Kamat, D. (2007). Music therapy in pediatrics. *Clinical Pediatrics*, 46(7), 575–579.
- Baines, S. (2016). The role of culture in music and medicine: Considerations to enhance health. *Music and Medicine (Online)*, 8(3), 91–95.
- Barcellos, L. R. M. (2001). Music therapy in South America. *Voices: A World Forum for Music Therapy*, 1(1).
- Barcellos, L. R. (2012). Music, meaning, and music therapy under the light of the Molino/Nattiez Tripartite Model. *Voices: A World Forum for Music Therapy*, 12(3).
- Bell, S. A. (2016). *A music therapist's self-reflection on her aboriginal heritage: A heuristic self-inquiry*. (Master's thesis). Concordia University, Montreal.
- Bilu, Y. & Witztum, E. (1994). Culturally sensitive theory with ultraorthodox patients: The strategic employment of religious idioms of distress. *Israel Journal of Psychiatry and Related Sciences*, 31(3), 170–182.
- Bonde, L. O., Jacobsen, S. L., Pedersen, I. N. & Wigram, S. L. (2019). Music therapy training – A European BA and MA model. In S. L. Jacobsen, I. N. Pedersen & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (pp. 449–468). London: Jessica Kingsley.
- Borgal, S. M. (2015). *A music therapist's use of her voice in end-of-life care: A heuristic self-inquiry*. (Master's thesis). Concordia University, Montreal.
- Brown, J. (2002). Towards a culturally centered music therapy practice. *Voices: A World Forum for Music Therapy*, 2(1), NP.

- Bruscia, K. E., Abbott, E. A., Cadesky, N. E., Condrón, D., Hunt, A. M., Miller, D. & Thomae, L. (2005). A collaborative heuristic analysis of Imagery-M: A classical music program used in the Bonny Method of Guided Imagery and Music (BMGIM). *Qualitative Inquiries in Music Therapy* 2, 1–35.
- Carpente, J. A. (2016). Investigating the effectiveness of a developmental, individual difference, relationship-based (DIR) improvisational music therapy program on social communication for children with autism spectrum disorder. *Music Therapy Perspectives*, 35(2), 160–174.
- Chase, K. M. (2003). Multicultural music therapy: A review of literature. *Music Therapy Perspectives*, 21(2), 84–88.
- Cominardi, C. (2014). From creative process to trans-cultural process: Integrating music therapy with arts media in Italian kindergartens: a pilot study. *Australian Journal of Music Therapy*, 25, 3–14.
- Donley, J. (2018). Multicultural experiential learning: An approach to learning, developing, and maintaining multicultural skills. *Voices: A World Forum for Music Therapy*, 18(2).
- Dun, B. (2013). Children with cancer. In J. Bradt (Ed.), *Guidelines for music therapy practice in pediatric care* (pp. 290–323). Gilsum, NH: Barcelona Publishers.
- Etherington, K. (2004). Heuristic research as a vehicle for personal and professional development. *Counselling and Psychotherapy Research*, 4(2), 48–63.
- Fisher-Borne, M., Cain, J. M. & Martin, S. L. (2015). From mastery to accountability: Cultural humility as an alternative to cultural competence. *Social Work Education*, 34(2), 165–181.
- Fiske, S. T., Dupree, C. H., Nicolas, G. & Swencionis, J. K. (2016). Status, power, and intergroup relations: The personal is the societal. *Current Opinion in Psychology*, 11, 44–48.
- Foronda, C. L. (2008). A concept analysis of cultural sensitivity. *Journal of Transcultural Nursing*, 19(3), 207–212
- Foronda, C., Baptiste, D. L., Reinholdt, M. M. & Ousman, K. (2016). Cultural humility: A concept analysis. *Journal of Transcultural Nursing*, 27(3), 210–217.
- Gadberry, A. L. (2014). Cross-cultural perspective: A thematic analysis of a music therapist's experience providing treatment in a foreign country. *Australian Journal of Music Therapy*, 25, 66–80.
- Gonzalez, P. J. (2011). The impact of music therapists' music cultures on the development of their professional frameworks. *Qualitative inquiries in music therapy*, 6, 1–33.
- Gouk, P. (2017). Introduction. In P. Gouk (Ed.), *Musical healing in cultural contexts* (pp. 1–25). London: Routledge.

- Grimmer, M. S. & Schwantes, M. (2018). Cross-cultural music therapy: Reflections of American music therapists working internationally. *The Arts in Psychotherapy*, 61, 21–32.
- Hadley, S., & Norris, M. S. (2016). Musical multicultural competency in music therapy: The first step. *Music Therapy Perspectives*, 34(2), 129–137.
- Han, H. H. (2015). *A student music therapist's exploration of her cultural identities in relation to music therapy practice in a specialist music therapy centre in Aotearoa New Zealand*. (Masters thesis). Victoria University, Wellington.
- Hart, S. (2008). *Brain, attachment, personality: An introduction to neuro-affective development*. London: Karnac.
- Healthcare Denmark (2018). Healthcare in Denmark – an overview. Retrieved December 15th, 2018, from <https://www.healthcaredenmark.dk/>
- Helander, S. (2018). *Music therapy – a supportive distraction*. (Master's thesis). Aalborg University, Denmark.
- Holck, U. (2019). Communicative musicality – A basis for music therapy practice. In S. L. Jacobsen, I. N. Pedersen & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (pp. 104–111). London: Jessica Kingsley.
- Howard, K. (2018). The emergence of children's multicultural sensitivity: An elementary school music culture project. *Journal of Research in Music Education* 66(3), 261–277.
- Huicho, L., Segura, E. R., Huayanay-Espinoza, C. A., de Guzman, J. N., Restrepo-Méndez, M. C., Tam, Y., Barros, A. J. D. & Victora, C. G. (2016). Child health and nutrition in Peru within an antipoverty political agenda: A countdown to 2015 country case study. *The Lancet Global Health*, 4(6), 414–426.
- INEI (2007). Instituto Nacional de Estadística e Informática. Retrieved May 20th, 2018, from <https://www.inei.gob.pe/>
- Jones, C., Baker, F., & Day, T. (2004). From healing rituals to music therapy: Bridging the cultural divide between therapist and young Sudanese refugees. *The Arts in Psychotherapy*, 31(2), 89–100.
- Johansson, K. (2017). *Gjentakelse i musikkterapi. En kvalitativ instrumentell multipel casestudie*. (Doctoral dissertation). Norwegian Academy of Music, Oslo.
- Kenny, C. (2006). *Music & life in the field of play: An anthology*. Gilsum, NH: Barcelona Publishers.
- Kim, S. & Whitehead-Pleaux, A. (2015). Music therapy and cultural diversity. In B. L. Wheeler (Ed.), *Music therapy handbook* (pp. 51–63). New York, N.Y.: Guilford Press.
- Kim, S. & Elefant, C. (2016). Multicultural considerations in music therapy research. In B. L. Wheeler & K. M. Murphy (Eds.), *Music therapy research* (3rd ed., pp. 187–204). Dallas, TX: Barcelona Publishers.

- Koven, M. (2001). Comparing bilinguals' quoted performances of self and others in tellings of the same experience in two languages. *Language in Society*, 30(4), 513–558.
- Longhi, E., Pickett, N. & Hargreaves, D. J. (2015). Wellbeing and hospitalized children: Can music help? *Psychology of Music*, 43(2), 188–196.
- Malloch, S. & Trevarthen, C. (2018). The human nature of music. *Frontiers in psychology*, 9.
- McGraw, A. H. (2016). First-person research. In B. L. Wheeler & K. M. Murphy (Eds.), *Music therapy research* (3rd ed., pp. 907–934). Dallas, TX: Barcelona Publishers.
- Morris, D. (2010). Music therapy and culture: An essential relationship? *Approaches: Music Therapy Special Music Education*, 2(1), 6–11.
- Mössler, K., Gold, C., Aßmus, J., Schumacher, K., Calvet, C., Reimer, S., & Schmid, W. (2019). The therapeutic relationship as predictor of change in music therapy with young children with autism spectrum disorder. *Journal of autism and developmental disorders*, 49(7), 2795–2809.
- Moustakas, C. E. (1990). *Heuristic research: Design, methodology, and applications*. Newbury Park, CA: Sage.
- Nureña, C. R. (2009). Incorporación del enfoque intercultural en el sistema de salud peruano: la atención del parto vertical Incorporation of an intercultural approach in the Peruvian health care system: the vertical birth method. *Revista Panamericana de Salud Pública*, 26(4), 368–376.
- Ortiz, G. S., O'Connor, T., Carey, J., Vella, A., Paul, A., Rode, D. & Weinberg, A. (2019). Impact of a child life and music therapy procedural support intervention on parental perception of their child's distress during intravenous placement. *Pediatric emergency care*, 35(7), 498–505.
- Pavlenko, A. (2007). *Emotions and multilingualism*. Cambridge: Cambridge University Press.
- Pavlicevic, M. (1997). Music therapy and universals: Between culture and compromise. In M. Pavlicevic (Ed.), *Music therapy in context: Music, meaning and relationship* (pp. 34–48). London: Jessica Kingsley.
- Pedersen, I. N. (2014). Analytiske og psykodynamiske teorier. In L. O. Bonde (Ed.), *Musikterapi: teori, uddannelse, praksis, forskning; en håndbog om musikterapi i Danmark* (pp. 102–118). Århus: Klim.
- Ruddock, H. C. & Turner, D. S. (2007). Developing cultural sensitivity: nursing students' experiences of a study abroad programme. *Journal of Advanced Nursing*, 59(4), 361–369.
- Sanfi, I. & Bonde, L. O. (2019). Music Therapy in Paediatrics. In S. L. Jacobsen, I. N. Pedersen & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (pp. 317–325). London: Jessica Kingsley.

- Schwantes, M. (2009). The use of music therapy with children who speak English as a second language: An exploratory study. *Music Therapy Perspectives*, 27(2), 80–87.
- Smeijsters, H. (2012). Analogy and metaphor in music therapy. Theory and practice. *Nordic Journal of Music Therapy*, 21(3), 227–249.
- Stavans, I. (2001). *On borrowed words. A memoir of language*. New York: Viking Penguin.
- Stige, B. (2002). *Culture-centered music therapy*. Gilsum, NH: Barcelona Publishers.
- Stige, B. (2015). Culture-centered music therapy. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 538–557). New York, NY: Oxford University Press.
- Sundar, S., Ramesh, B., Dixit, P. B., Venkatesh, S., Das, P. & Gunasekaran, D. (2016). Live music therapy as an active focus of attention for pain and behavioral symptoms of distress during pediatric immunization. *Clinical pediatrics*, 55(8), 745–748.
- Sundhedsstyrelsen (2018). Pædiatri. Retrieved May 2nd, 2018, from <https://www.sst.dk/da/viden/specialeplanlaegning/gaeldende-specialeplan/specialeplan-for-paediatri>
- Tomlinson, B. (2018). Category anxiety and the invisible white woman: Managing intersectionality at the scene of argument. *Feminist Theory*, 19(2), 145–164.
- Uggla, L., Mårtenson Blom, K., Bonde, L. O., Gustafsson, B. & Wrangsjö, B. (2019). An explorative study of qualities in interactive processes with children and their parents in music therapy during and after pediatric hematopoietic stem cell transplantation. *Medicines*, 6(1), 28.
- Ullsten, A., Eriksson, M., Klässbo, M. & Volgsten, U. (2017). Live music therapy with lullaby singing as affective support during painful procedures: A case study with microanalysis. *Nordic Journal of Music Therapy*, 26(2), 142–166.
- Wagner, G. (2007). The Benenzon model of music therapy. *Nordic Journal of Music Therapy*, 16(2), 146–147.
- Whitehead-Pleaux, A. M., Zebrowski, N., Baryza, M. J. & Sheridan, R. L. (2007). Exploring the effects of music therapy on pediatric pain: Phase 1. *Journal of Music Therapy*, 44(3), 217–241.
- Wildman, C. (2010). Across beds and cultures: Music therapy with children in a hospital burns unit. In M. Pavlicevic, A. Dos Santos & H. Oosthuizen (Eds.), *Taking music seriously: Stories from South African music therapy* (pp. 93–105). Cape Town: Music Therapy Community Clinic.
- Wood, S. & Ansdell, G. (2018). Community music and music therapy: Jointly and severally. In B-L. Bartleet & L. Higgins (Eds.), *The Oxford handbook of community music* (pp. 453–476). New York, NY: Oxford University Press.
- WPR (2018). Peru population 2018. Retrieved May 2nd, 2018, from <http://worldpopulationreview.com/>

- Yalom, I. D. (2005). The therapist: Working in the here-and-now. In I. D. Yalom & M. Leszcz (Eds.), *The theory and practice of group psychotherapy* (5th ed., pp. 141–200). New York, NY: Basic Books.
- Yehuda, N. (2002). Multicultural encounters in music therapy. A qualitative research. *Voices: A World Forum for Music Therapy*, 2(3), NP.
- Zagal, M. C. R. (2004). Music therapy in Peru: A historical point of view. *Voices: A World Forum for Music Therapy*, NP.

Sarah Helander^{a*} & Gustavo Gattino^b

^aself-employed music therapist; ^bAalborg University, Denmark.

*Corresponding author:

Sarah Helander

tel.: +35 84578768193

e-mail: ellihelander@gmail.com

Disclosure statement

The authors have no conflicts of interest to declare.

Music therapy as procedural and treatment support in paediatric healthcare: a review of the literature from a Nordic perspective

Maren Mellingen

Abstract

Music therapy (MT) is here understood as a relational therapy with the potential to alleviate pain and anxiety in hospitalised children and support them in coping with medical procedures and treatment. Research indicates that children who receive MT as procedural support before, during and after painful or frightening medical procedures are better equipped for coping with future procedures and less likely to develop symptoms of paediatric medical traumatic stress. MT can improve the ability of a child to cooperate, thereby reducing the duration of the procedure. This article explores some of the methodological and epistemological issues in MT as procedural support research, and mixed methods research is suggested as a suitable approach for acquiring new knowledge. Few studies on MT as procedural and treatment support have so far been conducted in paediatric settings in Denmark, Sweden and Norway, and there is a need for more randomised controlled trials (RCTs). The Nordic countries have strong MT traditions, but only a small number of music therapists are currently working with procedural support for children. More studies can lead to inclusion of recommendations of MT as procedural and treatment support in national guidelines for evidence-based clinical practice in these countries as well as serve to further develop the theoretical framework. The available Nordic literature will be reviewed, and important aspects of research, clinical practice and theory development will be discussed from a Nordic perspective while drawing upon the rich international evidence base for MT as procedural and treatment support.

Keywords: *music therapy, procedural support, paediatric care, child traumatic stress*

Introduction

Children in paediatric hospitals are at substantial risk of developing long-term negative effects as a consequence of undergoing painful, frightening or unpleasant medical procedures (Young, 2005). There is a need for supportive interventions that can alleviate the pain and anxiety that young children experience in association with medical procedures (Young, 2005). Research suggests that music therapy (MT) can be helpful to patients and that music therapists can work in clinical paediatric settings employing various MT methods to address stress, anxiety, pain and emotional states in patients (Edwards & Kennelly, 2017; Ærø & Aasgaard, 2011). There is an increasing interest in MT as procedural support for children, and while the evidence base for paediatric MT has become quite substantial, there is a need for more research supporting MT for procedural support as an evidence-based practice (Beer & Lee, 2017; Edwards & Kennelly, 2017). There is considerable diversity across studies in terms of types of music interventions and methodology, and more good quality research is necessary for the development of systematic reviews. The main purpose of this review is to identify the available literature on MT as procedural and treatment support from Denmark, Sweden and Norway which might serve as an indication of recent developments within this area of MT in these countries. Firstly, a brief overview of the historical development of paediatric MT will be presented. Secondly, the rationale for using MT as procedural support will be discussed. Thirdly, studies performed in Denmark, Sweden and Norway on MT as procedural and treatment support identified through a literature search will be subject to analysis. Fourthly, issues regarding study methodology and design in MT as procedural support studies will be considered. Finally, the current use and implementation of MT in paediatric healthcare services in the Nordic countries will be explored, including recommendations for future research and clinical practice.

Literature search strategy

The following search engines and databases were used: Bergen Open Research Archive, Cochrane Library, the Danish National Research Database, the Norwegian Library System, PubMed, and WorldCat. Search terms included "Music", "Music Therapy", "Procedural", "Procedures", "Support", "Intervention", "Child", "Hospital", "Hospitalised", "Paediatric", and "Medical". *The Arts in Psychotherapy*, the *Australian Journal of Music Therapy*, the *British Journal of Music Therapy*, the *Canadian Journal of Music Therapy*, the *Journal of Music Therapy*, the *Journal of the Association for Music & Imagery*, *Music and Medicine*, *Music Therapy Perspectives*, the *Nordic Journal of Music Therapy*, the *New Zealand Journal of Music*

Therapy, Psychology of Music, and *Voices* were all hand-searched. Relevant publications were also identified through the websites of the Nordic MT research centres: the Center for Documentation and Research in Music Therapy (CEDOMUS) at Aalborg University, Denmark, the Royal College of Music in Stockholm, Sweden, the Grieg Academy Centre for Music Therapy Research (GAMUT) at the University of Bergen, Norway, and the Centre for Research in Music and Health (CREMAH) at the Norwegian Academy of Music, Oslo.

Inclusion and exclusion criteria

The following inclusion criteria were used for the literature review: the article was (a) original research (quantitative or qualitative), a review article or a case study, (b) written in English, Danish, Swedish, or Norwegian, (c) conducted in Denmark, Sweden or Norway, (d) published after January 2000, and (e) considering the topic of MT as procedural or treatment support. The following types of articles were excluded: (a) studies with participants in the neonatal period or adults, (b) studies without a music therapist responsible for the intervention, (c) studies not related to medical procedures or treatment, and (d) studies including participants with disorders of consciousness.

Terminology, definitions and distinctions

There is a need for clarification of the terminology, as paediatric healthcare personnel use music in a few ways, with varying incentives. The terms music medicine (MM) and music therapy (MT) are sometimes equivocated and used ambiguously in the literature despite the fact that MT and MM are two very different treatment forms based on different paradigms (Bonde, 2019b). In procedural support research it is therefore important to differentiate between MT and MM interventions (Gooding, Yinger & Iocono, 2016). MT as procedural support can be defined as "(...) the use of music and aspects of the therapeutic relationship to promote healthy coping and decrease distress in individuals undergoing medical procedures." (Ghetti, 2011, p. 6). MT can be defined as a relational and interaction-based therapy form, which can be viewed as a triad consisting of interaction between the child, the therapist and the music (Uggla, Bonde, Hammar, Wrangsjö & Gustafsson, 2018). The presence of the music therapist is seen to contribute as an individual factor to the pain-reducing effect of MT (Schou & Bonde, 2012), and so the therapeutic relationship formed through MT sessions is a key difference between MM and MT (Bonde, 2019b, p. 209). Music employed by other healthcare professionals is often used as means of fleeting distraction (e.g. from pain), whereas it is important in MT in paediatric care to obtain more sustained

attention to the music in order to manage pain and anxiety (Edwards & Kennelly, 2017; Mondanaro, 2013). Live music has the potential for altering musical parameters, thus engaging the child in the musical activity for longer (Edwards & Kennelly, 2017). MM typically refers to the use of specially selected pre-recorded music for music listening in a hospital setting, usually administered by other healthcare personnel than music therapists, with the aim of improving well-being of patients (Edwards & Kennelly, 2017). As reviews often include both MM and MT, it can be challenging to determine the exact level of evidence for MT as procedural support. Several meta-analyses show that MT has a clinically more meaningful effect across somatic treatment forms than MM (Bonde, 2014a, 2019b; Lee, 2016), but more good quality research is needed in order to compare these interventions (Ghetti, 2016). Lastly, medical diagnostic and treatment procedures can be classified into (a) non-invasive and non-painful procedures, (b) invasive and painful procedures, and (c) surgery (Ghetti, 2011; Sanfi, 2012).

Paediatric medical traumatic stress

Children with serious medical conditions have experienced unsafety and are therefore in particular need of safety and control. Being in hospital can create a feeling of helplessness, a sense of foreboding and a feeling of actual or perceived threat or of life being at stake (Nielsen, 2013). Many factors determine what preprocedural expectations, beliefs and coping skills a person has, and their pain response is further influenced by factors related to the present situation in which the procedure is being carried out (Young, 2005). It is important to also keep in mind that ahead of any medical procedure, the child is likely to have experienced an accident or illness, which adds to the pain and anxiety associated with the procedure itself (Nielsen, 2013). Anxiety increases the pain response (Young, 2005) and, conversely, fear of pain increases anxiety (Schou & Bonde, 2012). Medical procedures and treatments are seldom recognised as one of the most frequent causes of post-traumatic stress reactions in young children (Gjems & Diseth, 2011; Nielsen, 2013), and pain is often undertreated in paediatric patients (Diseth & Reinfjell, 2018). Several studies have shown, however, how repeated painful procedures and medical treatments can lead to symptoms in children similar to post-traumatic stress symptoms associated with PTSD¹ (Diseth & Reinfjell, 2018; Kazak et al., 2005; Nielsen, 2013; Stuber, Shemesh & Saxe, 2003; Stuber,

1 Post-traumatic stress disorder (PTSD) in children is a severe, often chronic, and impairing mental disorder seen in some children after exposure to traumatic experiences involving actual or threatened injury to themselves or others (Brent, Cohen & Strawn, 2019). PTSD is characterised by intrusive thoughts and reminders of the traumatic experience(s), avoidance of trauma reminders, negative mood and physiological hyperarousal (Brent et al., 2019).

1996; Young, 2005) and have resulted in a change in medical procedures in children. The youngest children, who are not able to understand the reason behind medical procedures, are at the greatest risk of being traumatised, while older children are generally less affected by medical procedures (Diseth & Reinfjell, 2018; Nielsen, 2013; Sanfi, 2012). Even minor procedures have been shown to cause significant pain and distress in children, and inadequate use of interventions to ameliorate this can predispose children to long-term negative effects (Young, 2005). Long-term effects are partly determined by memories of the painful procedure, which can be accurate in children as young as three years old (Young, 2005). Such memories can become exaggerated, triggering increased distress in future procedures (Noel, McMurtry, Chambers & McGrath, 2010; Young, 2005). Pain experiences in early life directly influence how a person responds to future medical procedures (Young, 2005), and patients with chronic or complex diseases may be reluctant to undergo treatment because of fear that there will be pain involved. Due to the potentially severe consequences, there is a need for early identification and intervention (Diseth, 2009) as initial pain and anxiety management is essential to the prevention of post-traumatic stress symptoms² (Diseth & Reinfjell, 2018). The pain response is to some extent modifiable through pain- and anxiety-reducing interventions (Young, 2005) such as MT, which can help the child regain a feeling of safety, comfort, strength and physical and mental self-esteem (Nielsen, 2013). MT can lower anxiety and modify distorted memories of procedural pain, thereby preventing a continuous negative cycle and lowering the risk of developing paediatric medical traumatic stress (Nielsen, 2013; Young, 2005).

International and historical perspectives

Internationally, there is a long-standing tradition of using music with hospitalised children, particularly in the United States and Australia, which began with MT in neonatology in the United States in the late 1980s (Shoemark & Dearn, 2017). MT support for newborns subsequently evolved in many parts of the world from the 1990s onwards to encompass a wide array of medical contexts where also older children were supported during hospitalisation (Shoemark & Dearn, 2017). MT for newborns as well as the general MT profession are now well established in countries such as Australia, Canada, Germany, Israel, Sweden, Switzerland, United Kingdom and the United States, where much of the clinical work and research has taken place (Shoemark & Dearn, 2017). MT in paediatric settings has evolved

² Pre-procedural psychological assessment and screening tools for the prevention of adverse psychological effects in children receiving medical treatment and their families are discussed in more detail by Diseth & Reinfjell (2018).

along with changes in medical practice and is still growing as a profession in healthcare worldwide (Ghetti, 2016), moving steadily towards becoming an integral part of paediatric care in many Western countries (Mondanaro, 2013). Numerous music therapists are at present employed in paediatric oncology, including in Australia, Germany, Norway, Sweden and the United States (O'Callaghan & Aasgaard, 2012). However, the establishment of hospital-funded music therapist positions continues to pose a challenge for clinical practice and research in several countries including Australia, Norway and the United States (Ghetti, 2016). In line with the growth of the profession, the amount of internationally published literature on paediatric MT has increased significantly since the 1990s (Ghetti, 2016). Over the years a selection of systematic reviews (Klassen, Liang, Tjosvold, Klassen & Hartling, 2008; Yinger & Gooding, 2015), meta-analyses (Bradt, Dileo, Magill & Teague, 2016; Lee, 2016) and RCTs (Robb et al., 2008, 2014; Yinger, 2016) have been published on paediatric MT including procedural support. Both the systematic reviews and meta-analyses point out the need for differentiating between MT and MM interventions, and although findings generally indicate that MT may be effective as procedural support in hospitalised children, there is considerable heterogeneity and a high risk of bias among the studies included. The RCTs investigated the efficacy of MT interventions only and recommend the use of MT for procedural and treatment support as it potentially improves outcomes. Comprehensive introductions to paediatric MT can be found in *The Oxford Handbook of Music Therapy* (Edwards & Kennelly, 2017) and in *Guidelines for Music Therapy Practice in Paediatric Care* (Bradt, 2013). Even though increasing emphasis is placed on providing MT as procedural support as part of a family-centred care model (Edwards & Kennelly, 2017), research on MT with hospitalised children *and their families* has until recently not been very prevalent in the literature and is still being developed in clinical practice (Jacobsen, 2019).

Historical development in the Nordic countries

Norwegian music therapists began working clinically with hospitalised children in the mid-1990s and have since been gradually integrated in some paediatric departments, making them pioneers in the area within the Nordic context (Ærø & Aasgaard, 2011). MT in Norway is historically closely linked to special education work, which provides a developmental perspective on working with procedural support for children, also in being resource-oriented (Ruud, 2008). Early MT work in Norwegian paediatric wards often took place in communal areas where more children and their families could take part³ (Ruud, 2008). This perspective is still relevant, as making institutional changes in the hospital environment can have a positive impact on patients, which in turn may help them cope

3 MT in this setting is known as 'Environmental music therapy' (Sanfi & Bonde, 2019).

better with medical procedures (Ruud, 2008). Paediatric MT is within the Nordic context relatively well established in Norway (Sanfi & Bonde, 2019). In Denmark MT remains a comparatively new and not yet fully integrated treatment form in paediatric medicine and is still being developed within healthcare services (Sanfi & Bonde, 2014). Research in Denmark has so far focused particularly on guided imagery and music (GIM)⁴ for treatment of side effects of chemotherapy and on MT as procedural support (Sanfi & Bonde, 2019). MT in Sweden has had close ties with MT associations in Denmark and Norway for a long time (Hammarlund, Körlin, Johansson, Wallius & Paulander, 2008). Its beginnings can similarly be traced back to special education work and has since expanded to include a number of work areas for music therapists, including paediatric settings (Hammarlund, 1993). Swedish MT also has a tradition of GIM training, practice and research (Hammarlund, 1993). MT in Sweden has been characterised by multidisciplinary work, where music therapists have collaborated with various health professionals as well as art therapists (Hammarlund et al., 2008). The increasing amount of outcome-focused research emphasising specific procedures is testimony to how MT as procedural support is shaped by the field of medicine (Gold, 2012) but can be regarded as an addition to the rich humanistic European MT tradition (Ridder & Bonde, 2019a). The current expansion of MT practice within paediatric healthcare is very much in line with the developments seen in somatic healthcare in Northern Europe in the past few decades (Bonde, 2014b). Due to the development of an holistic and patient-centred medical healthcare model and, by extension, the integration of MT services with healthcare, music therapists in the Nordic countries are opportunely placed for further advancing the use of MT as procedural support (Bonde, 2014b).

Methods in music therapy

Music is used in a systematic way in MT to promote health and positive changes in a child (Bonde, 2019a). MT as procedural support is described in the literature as an augmentative practice that facilitates medical procedures (Bonde & Trondalen, 2019). Music experiences and activities are applied before, during and after completion of the procedure (Sanfi, 2016). For instance, the music therapist can engage the child in MT prior to a procedure, which then continues throughout the procedure itself (Ghetti, 2011). Therapeutic goals of MT as procedural support are (a) to reduce stress, anxiety, pain and the duration of the procedure, (b) to prevent trauma and negative long-term effects, (c) to promote relaxation

4 Guided Imagery and Music (GIM) is a receptive MT method developed in the 1970s in the United States and is often referred to as the Bonny Method of GIM (Trondalen & Oveland, 2008). GIM has grown in popularity in particularly Asia and Europe and is today practised worldwide (Bonde, 2019c).

and well-being, and (d) to support and promote the ability of the child to cope during the procedure and help with mental processing of the experience (Sanfi, 2012, 2016). Methods that are commonly applied across different MT models and orientations are based on improvisation, song-writing, therapeutic use of voice and receptive methods such as music listening and music imagery (Jacobsen & Bonde, 2019). The use of improvisation allows the therapist to motivate and engage the child, offer support and acceptance, and give them the joy of being creative (Sanfi, 2012). In addition, improvisation can be used as means of expressing feelings, to create an understanding of and ascribe a purpose to a situation (Sanfi, 2012). A well-documented approach that is used in improvisation and has been shown to alleviate pain in children is based on *entrainment*, a synchronisation of physiological rhythms and external musical stimuli (Ærø & Aasgaard, 2011). Musical parameters (e.g. frequency, dynamics, melody, tempo and rhythm) can be used in specific ways to affect the autonomic nervous system, the processing of nociceptive stimuli, and a number of physiological processes (e.g. heart rate, respiratory rate and arousal) (Bonde, 2019b). More often than not, the music therapist will consecutively apply a combination of methods (Jacobsen & Bonde, 2019) in order to accommodate the needs of a child throughout the course of a procedure (Reid, 2017; Sanfi, 2016). In summary, MT as procedural support is individualised according to the child's needs and the nature of the procedure (Sanfi & Bonde, 2019).

Literature review: research on music therapy as procedural support in Denmark, Sweden and Norway

Three RCTs have been published on the topic of MT as procedural and treatment support in paediatric settings in Denmark (n=1) (Sanfi, 2012) and Sweden (n=2) (Uggla et al., 2018; Uggla et al., 2016; Ullsten, 2017). Ullsten (2017) focused on MT as procedural support for preterm and term neonates undergoing venepuncture in the form of lullaby singing performed by a music therapist. While beyond the scope of this review, this conforms to a tendency internationally where there appears to be a predilection for clinical trials on MT for neonates or hospitalised infants. The remaining two RCTs will be subject to analysis, the first using MT in relation to peripheral intravenous access (PIVA) in young children (Sanfi, 2012) and the other investigating the efficacy of MT for children undergoing haematopoietic stem cell transplantation (HSCT) (Uggla et al., 2018; Uggla et al., 2016). An interview study (Uggla, Blom, Bonde, Gustafsson & Wrangsjö, 2019) published in relation to the latter and, finally, two selected case studies conducted in Norwegian (Aasgaard, 2002) and Danish (Nielsen, 2013) paediatric departments respectively, will be discussed.

Needle-related procedures

Procedures that require the insertion of needles into a vein can be defined as invasive and can cause pain, elevated anxiety and distress in children to the extent that it is often necessary to hold children still by physical restraint (Sanfi, 2012). Sanfi (2012) assessed the efficacy of MT during needle procedures in a study at a Danish nephro-urological paediatric outpatient clinic. Children were randomly divided into an MT group who received MT directly before, during and after the procedure and a control group on whom the procedure was carried out according to standard PIVA procedure (Sanfi, 2012). The MT intervention comprised receptive, re-creative, improvisational and compositional music experiences (Sanfi, 2012). MT support led to a significant reduction in the duration of the procedure⁵ by 33% compared to the control group, which can most likely be explained in terms of the child cooperating better with the medical staff (Sanfi, 2012). This is a considerable advantage not only for the child and everyone involved, but equally from an economic perspective (Sanfi, 2012). Similarly, child anxiety⁶ was 18% lower in the MT group and thereby significantly reduced by MT support (Sanfi & Bonde, 2014). While the MT intervention did not have a significant effect on child distress, the author found that the parents of the children who had been allocated to the MT group were content with the MT intervention and had found it to be helpful with regard to the medical procedure⁷ (Sanfi, 2012). In summary, the study provides preliminary evidence of the efficacy of MT as procedural support for PIVA by showing that MT reduced anxiety in children, who thereby became more compliant, which in turn reduced the duration of the procedure (Sanfi, 2012). Self-reported pain may be subject to social desirability bias (Sanfi, 2012), but duration of the procedure is an objective, quantitative outcome measure that allows for comparison of results between clinical trials. Because the MT intervention and subsequent assessment of outcome measures were done within a relatively short time frame, it is beyond the realms of the study to predict any possible long-term effects of MT as procedural support intervention (Sanfi, 2012). MT sessions were provided by the same music therapist, and involvement of more therapists in future trials may account for any possible therapist-specific effects (Sanfi, 2012). The results from this trial are likely to be applicable to paediatric settings in Sweden and Norway, where PIVA is performed in a similar way. Arguably, the results may be generalised to children with other diseases undergoing PIVA, but a separate trial would be needed to evaluate whether

5 The duration was measured by a research assistant by use of stopwatches (Sanfi, 2012).

6 The tools used to measure child anxiety levels were Visual Analogue Scales (VAS) and a modified version of the Faces Pain Scale - Revised (FSP-R) (Sanfi, 2012).

7 The author used a Likert-type scale for rating parents' overall satisfaction with the procedure and also included optional comments from parents but underlines that the latter were non-validated data, and that this was not a mixed methods study (Sanfi, 2012).

MT has the same effect on children with more severe or chronic diseases who repeatedly undergo PIVA and other medical procedures (Sanfi, 2012).

Haematopoietic stem cell transplantation

Haematopoietic stem cell transplantation (HSCT) is a hazardous procedure used to treat severe haematological conditions. The treatment involves isolation, poses a substantial risk of complications, and causes high levels of anxiety (Uggla et al., 2018). HSCT leads to a reduction in health-related quality of life (HRQoL)⁸ in children that lasts for up to one to three years after end of treatment (Uggla et al., 2018) and is known to cause post-traumatic stress disorder symptoms or PTSD (Uggla et al., 2016). Hence, specific interventions are called for to mitigate the risk of negative mental health effects (Packman, Weber & Bugescu, 2010).

Heart rate outcomes

Uggla et al. (2016) investigated the effect of MT as a psychosocial intervention for children undergoing HSCT by measuring objective physiological parameters including heart rate (HR). A control group received standard care (i.e. no MT during hospitalisation), and an intervention group received MT sessions (approximately 45 minutes) twice a week during hospitalisation for four to six weeks until donor engraftment was established (Uggla et al., 2016). In the MT sessions the child was invited to sing, play instruments and listen to music with the therapist, and sessions were guided by the child's initiative and involvement (Uggla et al., 2016). Oxygen saturation, blood pressure and HR were measured regularly according to hospital protocol (Uggla et al., 2016). Infection parameters and haematological blood tests showed no difference between the two groups, supporting the fact that they were eligible for comparison (Uggla et al., 2016). HR was the primary outcome of the study, as previous studies have shown a correlation between HR and PTSD, and increased HR has been proposed as an early marker of PTSD risk (Bryant, Salmon, Sinclair & Davidson, 2007; De Young, Kenardy & Spence, 2007). By relying on standard vital sign recordings on the paediatric ward, Uggla et al. (2016) found that children in the MT group had a significantly lower HR compared to the control group that persisted between four and eight hours after the MT intervention, which points towards a potent effect of MT in this context. Although HR can be precisely measured, it is subject to great variability, and changes are inconsistent (Young, 2005). Young (2005) therefore recommends that physiological changes should

⁸ Health-related quality of life (HRQoL) is defined as 'an individual's or a group's perceived physical and mental health over time' (National Center for Chronic Disease Prevention and Health Promotion, 2018). The PedsQL 4.0 generic score scales and PedsQL 3.0 cancer module scores are created for assessment of HRQoL in children (The Pediatric Quality of Life Inventory) (Varni, 2019).

be interpreted with care and treated as corroborative evidence only. However, repeated measurements over a period of time increase the reliability of the data in this trial. While it is likely that the MT effect is also reflected in immunological and endocrinological biomarkers, studying these biomarkers would only be of value for understanding the impact of music if they were all studied in relation to each other and not in isolation (Fancourt, Ockelford & Belai, 2014). As this would require numerous additional blood samples, it would probably defeat the object of reducing stress associated with medical treatment and procedures, and choosing a 'non-invasive outcome measure' such as HR is therefore both practical and sensible (Uggla et al., 2016). The authors propose that significantly lower HR in the MT group potentially reduced the risk of PTSD in these children (Uggla et al., 2016). One might, however, question whether prevention of tachycardia is in fact sufficient for lowering the risk of PTSD. As such, the conclusion that the decreased HR observed in the MT group indicates a reduction in stress levels and possibly a lower risk of developing PTSD may be too strong. A weaker claim might be more appropriate, such as 'an increased HR can to some unknown extent predict PTSD, and as MT interventions led to a reduction in HR, MT interventions could constitute part of preventive measures or early interventions for children that may potentially be at risk of developing PTSD due to HSCT'.

Health-related quality of life outcomes

In a second article the primary outcome measure was health-related quality of life (HRQoL), which was measured using the PedsQL 4.0 generic score scales⁹ and PedsQL 3.0 cancer module scores¹⁰ (Uggla et al., 2018). The MT group received MT sessions during hospitalisation, while the control group received MT in an outpatient setting between discharge and follow-up at six-months (Uggla et al., 2018). Measurements of HRQoL were done in both groups at admission, at discharge and after six months through a set of questionnaires¹¹ (Uggla et al., 2018). At discharge the MT group showed significantly better estimated physical functioning than the control group and showed fewer signs of treatment anxiety and worry (Uggla et al., 2018). At six months, the control group showed improved results in all items measured on the PedsQL 4.0 generic score scales (Uggla et al., 2018). Hence, both groups experienced an increase in scores, indicating a better HRQoL during the time period in which they received MT. In particular, the outcome measures that had been significantly better in the MT group at discharge had remained stable at

9 Measuring (1) physical functioning, (2) emotional functioning, (3) social functioning, and (4) school functioning (Varni, 2019).

10 Measuring pain and hurt, nausea, procedural anxiety, treatment anxiety, worry, cognitive problems, perceived physical appearance and communication (Varni, 2019).

11 Where appropriate (i.e. in the youngest children), parents evaluated their children's status and filled in the questionnaires (Uggla et al., 2018).

follow-up at six months (Uggla et al., 2018). The study design allowed for assessment of both short and long-term effects of MT on the well-being of children undergoing HSCT and made it possible to evaluate the impact of timing of MT interventions with regard to the medical procedures (Uggla et al., 2018). The combined findings of reduced HR four to eight hours after the MT intervention and improved HRQoL that persisted after the end of treatment further strengthen the evidence that MT has positive physiological and mental health effects on children undergoing HSCT and should be offered as a complementary intervention (Uggla et al., 2018).

Discussion of limitations

It is difficult with a small sample that reduces statistical power to produce significant results (Uggla et al., 2018), and low-power experiments are subject to false negatives and false positives, the latter being the most likely in this case. Consequently, the results from this pilot study undoubtedly warrant future studies with larger sample sizes. However, because of the severity of the treatment and vulnerability of these children, all evidence indicating even a subtle improvement in physical functioning and reduction of anxiety is extremely valuable (Uggla et al., 2018). It is questionable to what extent results from this study are generalisable to other procedures and treatments of a less complex and hazardous character. The trial has high reproducibility, and results are likely to be applicable to children undergoing HSCT in Denmark and Norway. Blinding is not possible in the case of MT interventions, and individualisation is intrinsic to MT as procedural support. The quality of RCTs on MT as procedural support may also be reduced by factors such as confounders (e.g. prognosis and medication) being unevenly distributed in children with severe conditions (O'Callaghan & Aasgaard, 2012). Due to the highly subjective nature of outcomes that are measured, such as pain, MT trials in this context may be at risk of positive bias and estimation of larger effects (Nunan & Heneghan, 2018). Arguably, standardised measurement scales (such as questionnaires) used in RCTs often include information that is less relevant to the patient than to the researcher (O'Callaghan & Aasgaard, 2012). Results were not analysed in terms of age or gender of participants, presumably due to small sample sizes.

Music therapy as an interpersonal process

In a third article qualitative aspects of the MT intervention were explored through collaborative research interviews with families both from the MT group and the control group 7–13 months after completion of HSCT treatment (Uggla et al., 2019). The music therapist responsible for the MT intervention also participated in interviews with the intention of recreating the dynamic that had been present during MT sessions and thereby helping

families evoke memories of these interactions (Uggla et al., 2019). Questions were focused on the interpersonal relationships created through MT sessions, and the aim was to identify key elements in the interaction with the music therapist. Three common themes were derived from the data: (1) the experience of MT bringing forward memories of mental states from times when the children had felt at their best self, (2) being emotionally moved by the musicking¹², causing feelings of happiness and a sense of being recognised, thereby allowing for intersubjective affect regulation, and (3) the experience of how essential the therapeutic relationship was for regulating both bodily sensations (e.g. diversion from pain) and emotions (positive and negative) (Uggla et al., 2019). Negative feelings were reinforced in the absence of MT, highlighting not only the importance of the developed relationship with the music therapist but also the importance of creating an optimised framework for MT interventions for children undergoing HSCT (Uggla et al., 2019). The authors conclude that interactions with the music therapist played a significant role in helping children cope during hospitalisation, and they stress the importance of developing MT interventions that include the family of a child undergoing HSCT (Uggla et al., 2019). Uggla et al. (2019) were the first to use this study design in a paediatric setting, and the study is highly relevant for promoting family-centred paediatric MT interventions (O'Callaghan & Aasgaard, 2012). The fact that the data was collected and analysed by the same person is addressed by the authors, as it puts the study at risk of interviewer bias. Results are also susceptible to recall bias in participants, e.g. due to the opportunity to play music during interviews. The study did not illuminate further the topic of the timing of the MT intervention (during or after HSCT), as families were mostly content with and even preferred taking part in MT in the period they had done (Uggla et al., 2019). Although ethical concerns relating to withholding MT support from one group during hospitalisation were perhaps not unfounded (O'Callaghan & Aasgaard, 2012), this study shows that the design was probably justified. While the results are based on personal experiences of MT in a vulnerable setting, the findings are relevant for music therapists working with families during complex medical procedures and treatment.

Case studies

Song creation

Aasgaard (2002) performed five case studies in children undergoing treatment for haematological disease in Norwegian hospitals, using song creation with children and their families. The different elements of the song creation process, which encompassed various

12 'Musicking' is a proposed understanding of music as an activity and form of interaction that has the ability to promote health and thus lies at the heart of MT for supporting hospitalised children (Aasgaard, 2008).

techniques, are explored and analysed in order to gain new insight from their narratives about the potential of song activities in this context to add health and meaning to life, including beyond the hospital setting (Aasgaard, 2002). While the primary focus of the songs was on health and normality, this practice served to alleviate some of the discomfort related to the procedures the children underwent through the expression of emotions in song activities (Aasgaard, 2002). In Denmark a project conducted by Bonde and Sørerensen showed similar results (Sanfi & Bonde, 2019). Children who were currently undergoing treatment at an oncological paediatric ward or as outpatients took part in a number of MT sessions in conjunction with their medical treatment, which helped shifting the focus of the children and their parents from pathology to normality through creativity (Sanfi & Bonde, 2019). The writing and composing of own songs together with the music therapist is a key method in MT as treatment support, but little research was done on this topic before 2000. The case studies by Aasgaard were some of the first published research of this kind (Aasgaard, 2008).

Treatment of traumatic stress symptoms

Sometimes, regardless of what other psychosocial support the child has received, a medical procedure leads to traumatisation of the child (Nielsen, 2013). Nielsen (2013) details a case study from a Danish hospital of a four-year-old boy with two chronic conditions that required numerous medical procedures. After an induction of anaesthesia had not gone according to plan, the boy had panicked and refused all subsequent medical treatment, which was understood as paediatric medical traumatic stress (Nielsen, 2013). Due to the nature of his diagnoses, however, it had been necessary that he undergo the same procedures again, and this had led to further traumatisation manifesting in stress symptoms that negatively affected his everyday life, as well as making future hospitalisation very unpleasant for both the boy and his parents (Nielsen, 2013). He was referred to MT together with his parents and six-year-old brother, who had also shown changes in behaviour as a consequence of the frequent hospital admissions of his younger brother (Nielsen, 2013). The family participated in MT over the course of ten sessions while the boy was not currently being treated in hospital (Nielsen, 2013). By using music and play therapy, song writing and GIM, the author helped the boy change behaviour and learn coping strategies for managing procedures in the future (Nielsen, 2013). Uncomfortable and anxiety-provoking procedures are not only a burden for the child but can be particularly difficult for the parents or guardians and challenging for the healthcare worker responsible for performing the procedure (Aasgaard, 2002; Ærø & Aasgaard, 2011). Parents or guardians and other family members such as siblings should therefore be included in MT sessions whenever possible, as they are the most important psychosocial support the child in hospital has and are at risk of developing post-traumatic medical stress symptoms themselves (Alderfer, Labay & Kazak, 2003; Diseth

& Reinfjell, 2018; Long & Marsland, 2011; Nielsen, 2013; Stuber, 1996). Furthermore, if the parents are not able to cope well with their child undergoing a procedure or experiencing distress and discomfort, this can negatively affect the child (Norberg, Lindblad & Boman, 2005; Sanfi, 2012). Case studies like this are a valuable contribution to research as they are close to clinical practice, and detailed descriptions allow readers to judge for themselves the relevance to their own work and research (Ridder & Bonde, 2019b).

Reflections on research methodology and design

It is a key condition that researchers reflect upon their choice of epistemological position when deciding what method to apply in order to acquire new knowledge on a topic. Ridder and Bonde (2019b) suggest dividing research into three areas of science: (a) exploratory, (b) descriptive, and (c) explanatory (causal) rather than the qualitative versus quantitative paradigm. According to this view, studies with a qualitative design belong to the exploratory area and RCTs to the explanatory, or causal, area. In explanatory research the aim is to identify causal relationships between variables identified in advance (Ridder & Bonde, 2019b). A researcher using a descriptive approach will define the main variables of the study but not make assumptions about their causal relationships (Ridder & Bonde, 2019b). In the case of exploratory research, one does not know what one does not know, and the data, which is often rich and complex and based on few participants, must be approached open-mindedly (Ridder & Bonde, 2019b). Exploratory research might ask how certain phenomena are *experienced* by participants during MT as procedural support and is dependent on words, music and non-verbal communication (Wheeler, 2017).

Mixed methods research

Because MT interventions for procedural support are complex, it is intrinsically difficult to standardise the independent variable (i.e. the MT intervention) in explanatory research, and it is perhaps misleading to understand MT as procedural support interventions as a single variable (O'Callaghan & Aasgaard, 2012; Tråsdahl, 2011). As a result, it is challenging to identify the exact component or combination of components in MT as procedural support intervention (e.g. musical factors, relational factors and ways in which parents are affected by the musicking that the child notices) that is responsible for change in a child and whether they simply disconnect the child from the unpleasant stimuli or rather refocus their attention (O'Callaghan & Aasgaard, 2012). A better approach to addressing such questions may be to collect different types of data through a combination of study

designs, i.e. a mixed methods approach. Although much MT research is gradually becoming more oriented towards the sciences and medicine (Ridder & Bonde, 2019b), mixed methods research is relatively new in MT research (Wheeler, 2017). Most often RCTs do not contain sufficient information as to *why* a particular MT intervention for procedural support is effective, because the experiences of children benefiting from individualised MT sessions cannot be accessed in this type of study (Bradt, Burns & Creswell, 2013). Mixed methods research can incorporate elements such as systematic enquiry, clinical experience and individual patient perspectives, thereby compensating for the problems of only using either a quantitative or a qualitative methodology (Bradt et al., 2013). Despite pragmatic and philosophical concerns over combining methods (Wheeler, 2017), the application and combination of methods from different areas of science is important, as they generate different kinds of knowledge about MT in paediatric settings (Reid, 2017). Mixed methods studies can provide a more comprehensive understanding of mechanisms at play in the topic being investigated, which in turn will render them more applicable to clinical settings (Bradt et al., 2013). Systematically combining different types of data (known as 'merging') is an essential but challenging part of mixed methods research (Bradt et al., 2013). As the authors point out, Ugglia et al. (2019) did not merge results and theirs can hence not be considered mixed methods research (Bradt et al., 2013). By reporting results separately, they do not take full advantage of integrating the objective data (i.e. HR and HRQoL) with the subjective interview data (i.e. participant perspectives) (Bradt et al., 2013). This combining may lead to new insight into data collection in one dataset based on analysis of another dataset. It may determine the degree to which the exploratory data is supported by the explanatory (causal) data, and it may result in increased depth of understanding of the numerical outcome measures based on interviews (Bradt et al., 2013). For instance, exploratory mixed methods studies that include child and parent perspectives may contribute to our understanding of why children respond differently to MT as procedural support (Ghetti, 2016). RCTs on MT as procedural support prove a meaningful addition to the knowledge base insofar as they are based on a sound theoretical framework and take into account interpersonal interactions, and the intervention is carefully documented (Bradt, 2016). The significance of the interpersonal relationships formed in paediatric MT underlines the importance of also applying research methods other than RCTs, which by extension would strengthen evidence-based practice in paediatric MT (Bradt, 2016).

Implementing music therapy in paediatric departments in Denmark, Sweden and Norway

In 2019 the numbers of professional music therapists working in somatic paediatric care were five in Denmark, five in Sweden and ten in Norway (Bonde, 2014a; Due & Ghetti, 2018; Sanfi & Bonde, 2014).

Denmark

Although several clinical MT trials have been conducted in Denmark, more research performed on Danish patient populations has been requested for implementation of MT in paediatric departments (Bonde, 2014a). The profession is now highly present within healthcare and is facing demands for quantitative research (RCTs), a requirement for the inclusion of MT in Danish national clinical guidelines for evidence-based practice (Bonde, 2014a). According to Bonde (2014a), music therapists are part of a good multidisciplinary collaboration and are often involved in pain management (p. 227). Bonde (2014a) suggests that all larger hospitals may in the future employ at least one music therapist who can provide individualised MT interventions to patients as well as develop MM procedures and products that can be used by other health professionals in the hospital (p. 227). MT is recommended in the national guidelines for palliative treatment of children, young patients and their families for alleviation of pain, distress and anxiety as well as for emotional support (Sundhedsstyrelsen, 2018). According to a recent report, fewer than 12% of Danish hospitals use MT as an intervention (Jensen & Nielsen, 2019), even though Sanfi (2012) showed that MT as procedural support was feasible in the clinical setting, was compatible with the working routines of the paediatric department, and was cost-effective as it saved time for physicians and nurses.

Sweden

MT is offered in Swedish healthcare in accordance with national guidelines and is considered an integral part of palliative care (Socialstyrelsen, 2013). However, only a small number of Swedish music therapists currently work in paediatric departments and have the experience and expertise to work with procedural pain and perform research on this topic. Studies such as the ones by Uggla and colleagues are likely to have a positive influence on the implementation of MT services in more Swedish paediatric departments than currently offer MT. The national recommendations emphasise the benefits of MT for the whole family of a child in hospital but point out the lack of research evidence for the effectiveness of MT interventions (Socialstyrelsen, 2013). A main challenge in Sweden is promoting recognition

of MT within healthcare services and elsewhere, which is a common theme in the Nordic countries and to a great extent dependent on more Nordic research (Hammarlund et al., 2008). Increased demand for professional music therapists is predicted, which will require an increase in funding of MT in healthcare (Socialstyrelsen, 2013).

Norway

MT has roots within the humanities in both Denmark and Norway (Ridder & Bonde, 2019b) and there is a qualitative MT research tradition (Tråsdahl, 2011), but this is changing as there is increasing demand for evidence supporting MT within somatic healthcare. MT is recommended in national guidelines as an intervention in palliative care for children and young people (Due & Ghetti, 2018). Due and Ghetti (2018) performed a focused ethnographic case study in a Norwegian paediatric department identifying key challenges with regard to establishing more full-time music therapist positions and developing MT services in paediatric medical settings in Norwegian hospitals, such as the need for documentation, hospital funding and gaining acceptance within the paediatric team. In some cases implementation of MT may require a change in the hospital culture and beliefs among healthcare professionals (Due & Ghetti, 2018). Documentation of MT processes and outcomes in patient journals may increase referrals to MT by other medical personnel and allow for the best possible multidisciplinary care of the child (Due & Ghetti, 2018). The authors conclude that MT practice is still a long way from being systematically integrated in most paediatric departments in Norway as part of the standard treatment offered (Due & Ghetti, 2018).

Ongoing research

There are currently at least two ongoing projects on MT as procedural and treatment support. One is a collaboration between paediatric oncologic departments at Aarhus University Hospital (Denmark), Rigshospitalet Copenhagen (Denmark) and university hospitals in Oslo (Norway), Tromsø (Norway) and Lund (Sweden), investigating music imagery in conjunction with chemotherapy (Sanfi & Bonde, 2019). Another ongoing project is investigating MT for procedural support and pain relief at Haukeland University Hospital (Norway). There is likely to be an increase in national and multisite trials in the Nordic countries such as these, which can provide not only larger sample sizes and better powered studies but also allow for cross-cultural collaboration and examination, transfer of skills and knowledge and broader expertise (Ghetti, 2016).

Suggestions for future research and clinical practice

Even though MT has been shown to effectively reduce anxiety in children, some children already cope well with procedures, irrespective of the MT intervention (Sanfi, 2012). By identifying the children and families who experience the most distress and are the most vulnerable to suffering from harmful effects, interventions can be focused on those most likely to benefit from MT (Sanfi, 2012, 2016; Yinger & Gooding, 2015). Lack of sufficiently large sample sizes is a general problem in MT research, and larger sample sizes would increase reliability of results (Sanfi, 2012). Also, inclusion of more music therapists would enable assessment of potential therapist effects (Sanfi, 2012). When only one MT intervention is performed (which is often the case with MT as procedural support), it is possible to measure and compare the efficacy with other non-pharmacological and pharmacological interventions (Ærø & Aasgaard, 2011; Sanfi, 2012), which might shed light on important properties of MT. A further topic for future research is the *timing* of MT interventions, which in turn could contribute to the development of a framework for MT support regarding specific procedures and treatments (Uggla et al., 2019). There is little research evaluating long-term outcomes of MT as procedural support interventions (Ghetti, 2016), as there are often limited possibilities for follow-up (Sanfi & Bonde, 2019). Long-term interventional studies would allow for investigations into the potential of MT as procedural support to act as a buffer against traumatisation during and after hospitalisation and whether positive effects are sustained over time (Ghetti, 2016; Sanfi, 2012). Paediatric pain is typically assessed either through evaluation of the child's behaviour, physiological parameters or self-report of pain intensity by the child (Young, 2005). However, pain and anxiety reactions in distressed children can be indistinguishable (Edwards & Kennelly, 2017), and there may be discrepancies between outcomes reported by children and by their parents or staff (Sanfi, 2012; Uggla et al., 2018). It is also important to be aware that when using physiological parameters as outcome measures, these may change in response to musical stimuli without being direct indicators of changes in pain and anxiety levels (Yinger & Gooding, 2015). As a consequence, consistent use across studies of instruments for evaluation of pain and anxiety levels, multidimensional assessment of intervention outcomes, and careful reporting of study design and methodology are important (Young, 2005). Detailed reporting of MT interventions contributes to increased validity and reproducibility of results (Bonde, 2019a; Yinger & Gooding, 2015). Ghetti (2011) and Yinger and Gooding (2015) recommend that future studies aim to develop further the theory of MT as procedural support, as knowledge in a field is acquired through a combination of advances in theory and new empirical evidence. A better understanding of for whom, under which procedures, and in what ways different MT approaches are the most beneficial can help clinical decision-making regarding MT (Sanfi, 2012; Yinger & Gooding, 2015). MT researchers in Denmark,

Sweden and Norway are in a privileged position to make further valuable contributions to the development of the theoretical framework of MT as procedural support. Lastly, efforts to establish standardised referral of hospitalised children to MT services are called for in all three countries.

Final remarks

MT as procedural and treatment support is a specialised practice that normally aims to take into account the individual child and their family, the single procedure or longer treatment, and the multidisciplinary organisation of the paediatric department (Sanfi & Bonde, 2019). The literature indicates that MT as procedural support can lower pain and anxiety levels and improve coping abilities in children undergoing medical procedures and treatment, thereby preventing paediatric medical traumatic stress (Nielsen, 2013; Sanfi, 2012; Uggla et al., 2016). MT is currently being integrated in paediatric care in Denmark, Sweden and Norway (Bonde, 2014a), but further good quality research is needed for increased awareness and implementation of MT as part of evidence-based practice in paediatric care.

References

- Aasgaard, T. (2008). Nitten sanger fra isolatet - en casestudie om "livshistoriene" til sanger skapt av barn med ondartede blodsykdommer. In G. Trondalen & E. Ruud (Eds.), *Perspektiver på musikk og helse: 30 år med norsk musikkterapi* (pp. 413–425). Oslo: Norges musikkhøgskole. Retrieved from <https://nmh.brage.unit.no/nmh-xmlui/handle/11250/172678>
- Aasgard, T. (2002). *Song creations by children with cancer: Process and meaning*. (PhD thesis, Aalborg Universitet). Retrieved from <https://vbn.aau.dk/da/publications/song-creations-by-children-with-cancer-process-and-meaning-2>
- Alderfer, M. A., Labay, L. E. & Kazak, A. E. (2003). Brief report: Does posttraumatic stress apply to siblings of childhood cancer survivors?. *Journal of Pediatric Psychology*, 28(4), 281–286. <http://dx.doi.org/10.1093/jpepsy/jsg016>
- Beer, L. E. & Lee, K. V. (2017). Music therapy and procedural support: Opportunities for practice. *Music and Medicine*, 9(4), 262–268. Retrieved from <https://mmd.iammonline.com/index.php/musmed/article/view/515>

- Bonde, L. O. (Ed.). (2014a). *Musikterapi: Teori - uddannelse - praksis - forskning : En håndbog om musikterapi i Danmark* (1st ed.). Århus: Klim.
- Bonde, L. O. (2014b). The current state of music therapy theory? *Nordic Journal of Music Therapy*, 24(2), 167–175. <https://doi.org/10.1080/08098131.2014.987805>
- Bonde, L. O. (2019a). Definitions of music therapy. In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 29–36). London: Jessica Kingsley.
- Bonde, L. O. (2019b). Music medicine and music therapy. In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 209–215). London: Jessica Kingsley.
- Bonde, L. O. (2019c). The Bonny Method of Guided Imagery and Music (GIM). In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 160–166). London: Jessica Kingsley.
- Bonde, L. O. & Trondalen, G. (2019). Perspectives on internationally well-known music therapy models - An introduction. In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 157–159). London: Jessica Kingsley.
- Bradt, J. (Ed.). (2013). *Guidelines for music therapy practice in pediatric care*. Gilsum, NH: Barcelona. Retrieved from <https://www.barcelonapublishers.com/guidelines-music-therapy-practice-pediatric-care>
- Bradt, J. (2016). Research that contributes to evidence-based practice. *Nordic Journal of Music Therapy*, 25(2), 109–110. <https://doi.org/10.1080/08098131.2016.1143176>
- Bradt, J., Burns, D. S. & Creswell, J. W. (2013). Mixed methods research in music therapy research. *Journal of Music Therapy*, 50(2), 123–148. <https://doi.org/10.1093/jmt/50.2.123>
- Bradt, J., Dileo, C., Magill, L. & Teague, A. (2016). Music interventions for improving psychological and physical outcomes in cancer patients. *Cochrane Database of Systematic Reviews*, 2016 (8), CD006911. <https://doi.org/10.1002/14651858.CD006911.pub3>
- Brent, D., Cohen, J. A. & Strawn, J. (2019). Approach to treating posttraumatic stress disorder in children and adolescents. In R. Hermann (Ed.), *UpToDate*. Retrieved from <https://www.uptodate.com/contents/approach-to-treating-posttraumatic-stress-disorder-in-children-and-adolescents>
- Bryant, R. A., Salmon, K., Sinclair, E. & Davidson, P. (2007). Heart rate as a predictor of posttraumatic stress disorder in children. *General Hospital Psychiatry*, 29(1), 66–68. <https://doi.org/10.1016/j.genhosppsy.2006.10.002>

- De Young, A. C., Kenardy, J. A. & Spence, S. H. (2007). Elevated heart rate as a predictor of PTSD six months following accidental pediatric injury. *Journal of Traumatic Stress, 20*(5), 751–756. <https://doi.org/10.1002/jts.20235>
- Diseth, T. H. (2009). Trauma-related dissociative (conversion) disorders in children and adolescents – an overview of assessment tools and treatment principles. *Nordic Journal of Psychiatry, 59*(4), 278–292. <https://doi.org/10.1080/08039480500213683>
- Diseth, T. H. & Reinfjell, T. (2018). Pre-procedure evaluation and psychological screening of children and adolescents in pediatric clinics. In A. P. S. Guerrero, P. C. Lee & N. Skokauskas (Eds.), *Pediatric consultation-liaison psychiatry: A global, healthcare systems-focused, and problem-based approach* (pp. 193–215). <https://doi.org/10.1007/978-3-319-89488-1>
- Due, F. B. & Ghetti, C. (2018). Implementation of music therapy at a norwegian children's hospital: A focused ethnographic study. *Voices, 18*(2). <https://doi.org/10.15845/voices.v18i2.963>
- Edwards, J. & Kennelly, J. (2017). Music therapy for hospitalized children. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 53–65). New York, NY: Oxford University Press.
- Fancourt, D., Ockelford, A. & Belai, A. (2014). The psychoneuroimmunological effects of music: A systematic review and a new model. *Brain, Behavior, and Immunity, 36*, 15–26. <https://doi.org/10.1016/j.bbi.2013.10.014>
- Ghetti, C. (2011). Music therapy as procedural support for invasive medical procedures: Toward the development of music therapy theory. *Nordic Journal of Music Therapy, 21*(1), 3–35. <https://doi.org/10.1080/08098131.2011.571278>
- Ghetti, C. (2016). The future of medical music therapy for children and adolescents. In C. Dileo (Ed.), *Envisioning the future of music therapy* (pp. 62–70). Arts and Quality of Life Research Center, Temple University. Retrieved from https://www.communication.aau.dk/digitalAssets/202/202934_envisioning_the_future.pdf
- Gjems, S. & Diseth, T. H. (2011). Somatic illness and psychological trauma in children: Prevention and treatment strategies. *Tidsskrift for Norsk Psykologforening, 48*, 857–862. Retrieved from <https://psykologtidsskriftet.no/fagartikkel/2011/09/forebygging-og-behandling-av-psykologiske-traumer-hos-somatisk-syke-barn>
- Gold, C. (2012). The importance of being aware of what we don't know. *Nordic Journal of Music Therapy, 21*(1), 1–2. <https://doi.org/10.1080/08098131.2012.641331>
- Gooding, L. F., Yinger, O. S. & Iocono, J. (2016). Preoperative music therapy for pediatric ambulatory surgery patients: A retrospective case series. *Music Therapy Perspectives, 34*(2), 191–199. <https://doi.org/10.1093/mtp/miv031>

- Hammarlund, I., Körlin, D., Johansson, H.-O., Wallius, R. & Paulander, A.-S. (2008). Music therapy in Sweden. In A.-S. Paulander (Ed.), *Voices resources*. Retrieved from https://voices.no/community/index.html?q=country%252Fmonthsweden_june2008
- Hammarlund, I. (1993). Musikkterapi i Sverige. *Nordisk Tidsskrift for Musikkterapi*, 2(1), 32–34. <https://doi.org/10.1080/08098139309477788>
- Jacobsen, S. L. (2019). Music therapy in family therapy. In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 352–356). London: Jessica Kingsley.
- Jacobsen, S. L. & Bonde, L. O. (2019). Methods in music therapy. In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 193–203). London: Jessica Kingsley.
- Jensen, A. & Nielsen, J. B. (2019). *Brug af musik i det danske sundhedsvæsen*. Retrieved from <https://vbn.aau.dk/da/publications/musik-i-det-danske-sundhedsvaesen>
- Kazak, A. E., Kassam-Adams, N., Schneider, S., Zelikovsky, N., Alderfer, M. A. & Rourke, M. (2005). An integrative model of pediatric medical traumatic stress. *Journal of Pediatric Psychology*, 31(4), 343–355. <https://doi.org/10.1093/jpepsy/jsj054>
- Klassen, J. A., Liang, Y., Tjosvold, L., Klassen, T. P. & Hartling, L. (2008). Music for pain and anxiety in children undergoing medical procedures: A systematic review of randomized controlled trials. *Ambulatory Pediatrics*, 8(2), 117–128. <https://doi.org/10.1016/j.ambp.2007.12.005>
- Lee, J. H. (2016). The effects of music on pain: A meta-analysis. *Journal of Music Therapy*, 53(4), 430–477. <https://doi.org/10.1093/jmt/thw012>
- Long, K. A. & Marsland, A. L. (2011). Family adjustment to childhood cancer: A systematic review. *Clinical Child and Family Psychology Review*, 14(1), 57–88. <https://doi.org/10.1007/s10567-010-0082-z>
- Mondanaro, J. F. (2013). Surgical and procedural support for children. In J. Bradt (Ed.), *Guidelines for music therapy practice in pediatric care* (pp. 205–251). Gilsum, NH: Barcelona. Retrieved from <https://www.barcelonapublishers.com/guidelines-music-therapy-practice-pediatric-care>
- National Center for Chronic Disease Prevention and Health Promotion. (2018). Health-related quality of life (HRQOL). Retrieved from <https://www.cdc.gov/hrqol/index.htm>
- Nielsen, A.-M. H. (2013). *Musikterapiens indflydelse på mestringsstrategier hos pædiatriske patienter: Et kvalitativt casestudie af musikerapeutisk praksis med en dreng med traumatisk stress som følge af gentagne medicinske procedurer* (Master's thesis, Aalborg Universitet). Retrieved from [https://projekter.aau.dk/projekter/da/studentthesis/musikterapiens-indflydelse-paa-mestringsstrategier-hos-paediatrikepatienter\(e2a376b3-3bb3-469d-8352-f0aa7f487138\).html](https://projekter.aau.dk/projekter/da/studentthesis/musikterapiens-indflydelse-paa-mestringsstrategier-hos-paediatrikepatienter(e2a376b3-3bb3-469d-8352-f0aa7f487138).html)

- Noel, M., McMurtry, M., Chambers, C. T. & McGrath, P. J. (2010). Children's memory for painful procedures: The relationship of pain intensity, anxiety, and adult behaviors to subsequent recall. *Journal of Pediatric Psychology*, 35(6), 626–636. <https://doi.org/10.1093/jpepsy/jsp096>
- Norberg, A. L., Lindblad, F. & Boman, K. K. (2005). Coping strategies in parents of children with cancer. *Social Science & Medicine*, 60(5), 965–975. <https://doi.org/10.1016/j.socscimed.2004.06.030>
- Nunan, D. & Heneghan, C. (2018). Lack of blinding. Retrieved from <https://catalogofbias.org/biases/lack-of-blinding/>
- O'Callaghan, C. & Aasgaard, T. (2012). Art therapies including music therapies. In A. Längler, P. J. Mansky & G. Seifert (Eds.), *Integrative pediatric oncology* (pp. 45–57). Berlin: Springer. Retrieved from <https://link.springer.com/book/10.1007/978-3-642-04201-0#toc>
- Packman, W., Weber, S. & Bugescu, N. (2010). Psychological effects of hematopoietic SCT on pediatric patients, siblings and parents: A review. *Bone Marrow Transplantation*, 45, 1134–1146. <https://doi.org/10.1038/bmt.2010.74>
- Reid, P. (2017). Music therapy for children and adolescents with cancer. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 67–88). New York, NY: Oxford University Press.
- Ridder, H. M. & Bonde, L. O. (2019a). Evidence-based practice in music therapy. In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 437–445). London: Jessica Kingsley.
- Ridder, H. M. & Bonde, L. O. (2019b). Music therapy research: An overview. In S. L. Jacobsen, I. Nygaard & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 391–409). London: Jessica Kingsley.
- Robb, S. L., Clair, A. A., Watanabe, M., Monahan, P. O., Azzouz, F., Stouffer, J. W., ... Hanson-Abromeit, D. (2008). Randomized controlled trial of the active music engagement (AME) intervention on children with cancer. *Psycho-Oncology*, 17(7), 699–708. <https://doi.org/10.1002/pon.1301>
- Robb, S. L., Burns, D. S., Stegenga, K. A., Haut, P. R., Monahan, P. O., Meza, J. & Haase, J. E. (2014). Randomized clinical trial of therapeutic music video intervention for resilience outcomes in adolescents/young adults undergoing hematopoietic stem cell transplant: A report from the Children's Oncology Group. *Cancer*, 120(6), 909–917. <https://doi.org/10.1002/cncr.28355>

- Ruud, E. (2008). Et humanistisk perspektiv på norsk musikkterapi. In G. Trondalen & E. Ruud (Eds.), *Perspektiver på musikk og helse: 30 år med norsk musikkterapi* (pp. 5–28). Oslo: Norges musikkhøgskole. Retrieved from <https://nmh.brage.unit.no/nmh-xmlui/handle/11250/172678>
- Sanfi, I. (2012). *The effects of music therapy as procedural support on distress, anxiety, and pain in young children under peripheral intravenous access: A randomised controlled trial* (PhD thesis, Aalborg Universitet). Retrieved from [https://vbn.aau.dk/da/publications/music-therapy-as-procedural-support-under-peripheral-intravenous-](https://vbn.aau.dk/da/publications/music-therapy-as-procedural-support-under-peripheral-intravenous)
- Sanfi, I. (2016). Musikterapi i pædiatrien – og dens muligheder i forbindelse med smerter og medicinske procedurer. *Børn og ungesygeplejersken*, (2), 8–13. Retrieved from https://www.musikterapi.aau.dk/digitalAssets/305/305045_sanfi-2016-.pdf
- Sanfi, I. & Bonde, L. O. (2014). Musikterapi med børn med somatiske lidelser. In L. O. Bonde (Ed.), *Musikterapi: Teori - uddannelse - praksis - forskning: En håndbog om musikterapi i Danmark* (pp. 332–338). Århus: Klim.
- Sanfi, I. & Bonde, L. O. (2019). Music therapy in paediatrics. In S. L. Jacobsen, I. N. Pedersen & L. O. Bonde (Eds.), *A comprehensive guide to music therapy: Theory, clinical practice, research and training* (2nd ed., pp. 317–325). London: Jessica Kingsley.
- Schou, K. & Bonde, L. O. (2012). Forskning i musikintervention: Smertebehandling i forbindelse med operation. *Dansk Musikterapi*, 9(1), 34–43. Retrieved from [https://vbn.aau.dk/da/publications/forskning-i-musikintervention-smertebehandling-i-forbindelse-med-](https://vbn.aau.dk/da/publications/forskning-i-musikintervention-smertebehandling-i-forbindelse-med)
- Shoemark, H. & Dearn, T. (2017). Music therapy in the medical care of infants. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 25–52). New York, NY: Oxford University Press.
- Socialstyrelsen. (2013). *Nationellt kunskapsstöd för god palliativ vård i livets slutskede Vägledning, rekommendationer och indikatorer. Stöd för styrning och ledning* (2013-6-4). Retrieved from <https://www.socialstyrelsen.se/regler-och-riktlinjer/nationella-riktlinjer/publicerade-riktlinjer/palliativ-varld/>
- Stuber, M. L. (1996). Psychiatric sequelae in seriously ill children and their families. *The Psychiatric Clinics of North America*, 19(3), 481–493. [https://doi.org/10.1016/S0193-953X\(05\)70302-6](https://doi.org/10.1016/S0193-953X(05)70302-6)
- Stuber, M. L., Shemesh, E. & Saxe, G. N. (2003). Posttraumatic stress responses in children with life-threatening illnesses. *Child and Adolescent Psychiatric Clinics of North America*, 12(2), 195–209. [https://doi.org/10.1016/S1056-4993\(02\)00100-1](https://doi.org/10.1016/S1056-4993(02)00100-1)
- Sundhedsstyrelsen. (2018). *Anbefalinger for palliative indsatser til børn, unge og deres familier*. Retrieved from <https://www.sst.dk/da/udgivelser/2018/anbefalinger-for-palliative-indsatser-til-boern-unge-og-deres-familier>

- Trondalen, G. & Oveland, S. (2008) The Bonny Method of Guided Imagery and Music (BMGIM). In G. Trondalen & E. Ruud (Eds.), *Perspektiver på musikk og helse: 30 år med norsk musikkterapi* (pp. 437–448). Oslo: Norges musikkhøgskole. Retrieved from <https://nmh.brage.unit.no/nmh-xmlui/handle/11250/172678>
- Tråsdahl, O. B. (2011). *Effekt av musikk og musikkterapi med barn på sykehus*. (Master's thesis, Norges musikkhøgskole). Retrieved from <https://nmh.brage.unit.no/nmh-xmlui/handle/11250/172502>
- Uggla, L., Blom, K. M., Bonde, L. O., Gustafsson, B. & Wrangsjö, B. (2019). An explorative study of qualities in interactive processes with children and their parents in music therapy during and after pediatric hematopoietic stem cell transplantation. *Medicines*, 6(1). <https://doi.org/10.3390/medicines6010028>
- Uggla, L., Bonde, L. O., Hammar, U., Wrangsjö, B. & Gustafsson, B. (2018). Music therapy supported the health-related quality of life for children undergoing haematopoietic stem cell transplants. *Acta Paediatrica*, 107(11), 1986–1994. <https://doi.org/10.1111/apa.14515>
- Uggla, L., Bonde, L. O., Svahn, B. M., Remberger, M., Wrangsjö, B. & Gustafsson, B. (2016). Music therapy can lower the heart rates of severely sick children. *Acta Paediatrica*, 105(10), 1225–1230. <https://doi.org/10.1111/apa.13452>
- Ullsten, A. (2017). Efficacy of live lullaby singing during procedural pain in preterm and term neonates. *Music and Medicine*, 9(2), 73–85. Retrieved from <https://mmd.iammonline.com/index.php/musmed/article/view/546>
- Varni, J. W. (2019). The PedsQL measurement model for the pediatric quality of life inventory. Retrieved from https://www.pedsq.org/about_pedsq.html
- Wheeler, B. L. (2017). Music therapy research. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 720–747). New York, NY: Oxford University Press.
- Yinger, O. S. (2016). Music therapy as procedural support for young children undergoing immunizations: A randomized controlled study. *Journal of Music Therapy*, 53(4), 336–363. <https://doi.org/10.1093/jmt/thw010>
- Yinger, O. S. & Gooding, L. F. (2015). A systematic review of music-based interventions for procedural support. *Journal of Music Therapy*, 52(1), 1–77. <https://doi.org/10.1093/jmt/thv004>
- Young, K. D. (2005). Pediatric procedural pain. *Annals of Emergency Medicine*, 45(2), 160–171. <https://doi.org/10.1016/j.annemergmed.2004.09.019>
- Ærø, S. C. B. & Aasgaard, T. (2011). Musikktapeut på en sykehusavdeling for barn: helsefremmende arbeid for både pasient og miljø. In K. Stensæth & L. O. Bonde (Eds.), *Musikk, helse, identitet* (pp. 141–160). Oslo: Norges musikkhøgskole. Retrieved from <https://nmh.brage.unit.no/nmh-xmlui/handle/11250/172307>

Maren Mellingen

Medical student, University of Bergen

tel: +47 974 00 530

e-mail: maren.mellingen@t-online.de

Disclosure statement

The author have no conflicts of interest to declare.

Resonance between theory and practice: development of a theory-supported documentation tool for music therapy as procedural support within a biopsychosocial frame

Tone Leinebø Steinhardt & Claire Mathern Ghetti

Abstract

Music therapists are challenged to communicate the therapeutic relevance of their work in a manner that enables other health professionals to appreciate and comprehend the subtleties and unique contributions of their practices. When music therapists provide support during painful or anxiety-provoking procedures, their nuanced and patient-centred interactions with children may not be fully understood or appreciated by the interdisciplinary team, which may undermine the team's understanding of the therapeutic aim. Music therapists need to convey the theoretical and practical aspects of their work to the interdisciplinary team in a way that is comprehensible yet is consistent with their unique identity and contributions. The purpose of this article is to build from the working model of music therapy as procedural support (Ghetti, 2012) by proposing a documentation tool that provides a practical translation of the various on-going therapeutic processes taking place during procedural support. The music therapy as procedural support documentation tool presented in this article serves a dual purpose: 1) to provide a practical tool that furthers music therapists' reflections on the therapeutic processes occurring in music therapy as procedural support, and 2) to translate that reflection into terms and concepts that can be effectively communicated to interdisciplinary staff to improve continuity of care. We demonstrate the clinical relevance of the documentation tool through use of an illustrative case example. Developing theory-supported documentation tools can contribute to the evolution of professional practice, by helping music therapists and interdisciplinary staff to become more aware of important therapeutic processes. If such a documentation tool strikes a balance between the professional languages, cultures and values of music

therapists and the interdisciplinary staff, it may facilitate more meaningful communication amongst professionals, which in turn may contribute to better biopsychosocial care of paediatric patients and their families.

Keywords: *procedural support, biopsychosocial, documentation, interdisciplinary collaboration*

Introduction

When music therapists write about their work, they contribute to the generation of discourse. This discourse is necessarily situated within the contexts and frames in which music therapists practice, contemplate, and in essence *perform* themselves. Such discourse reflects a system of thinking that is both constituted and executed within and by a system of verbal communication (Ansdell, 2003). How we describe and discuss music therapy (whether the focus is theory, practice or research) then contributes to our understandings of it. Music therapists practicing in medical contexts are posed with the challenge of navigating how to describe their various roles and the nature of their work to their interdisciplinary colleagues.

In the fast-paced environment of a medical hospital, the electronic health record becomes a key avenue for enabling communication between disciplines and promoting collaborative care (Reitz, Common, Fifield & Stiasny, 2012). Patients may transfer between several medical units during a single hospital stay, and staff with busy schedules are challenged to find efficient ways to communicate with each other in a way that assures quality patient care. The electronic health record enables various professionals to track what each person is doing with a patient, allowing them to support each other's efforts and contribute to a shared treatment approach (Reitz et al., 2012). Documenting in the patient's health record enables professionals to provide continuity of care across time and despite variations in care providers (Waldon, 2016).

Through music therapy, a child¹ may connect with resources that can be drawn upon in subsequent challenging situations that present themselves in the medical environment. The music therapist can document about patient preferences, coping strategies, and resources, in such a way that other disciplines can beneficially incorporate such elements into their care of the child and family. For example, a music therapist may document particular support

¹ Here and elsewhere in the text, "child" may refer to an infant, child or adolescent

factors (e.g. child choosing volume, nature and pacing of music used before, during and after the procedure; child's preferences for attending to aspects of the procedure or for alternatively engaging attention elsewhere; child's choice of specific images/sounds/video to play on a tablet or song playlist that is specifically tailored to the procedure) that have been beneficial to the child and that other interdisciplinary team members might be able to implement during a medical procedure. When procedures occur repeatedly over time, some children may develop more fixed support rituals, elements of which can be facilitated in an adapted manner by others in the team, given sufficient preparation from the music therapist. Some of these factors will require the presence and expertise of a music therapist in order to facilitate, while other factors may be effectively incorporated into the standard care practices of other members of the interdisciplinary team when they interact with that child. If the latter, it is important that the team clearly understands the intention behind the supportive use of music and knows how to use the agreed upon strategies to accommodate the child's preferences and needs. Effective interdisciplinary communication enables staff to use or build upon key strategies that are identified through music therapy, in order to improve the quality of family-centred care. Such practices do not negate the unique role and expertise of the music therapist within the team, but instead enhance the quality of care given by the interdisciplinary team when the music therapist is not able to be present.

How music therapists describe music therapy within patient documentation impacts not only the patient's care, but also how interdisciplinary colleagues understand music therapy. Words become the representation of music therapy clinical work within a medical record (Loewy, 2000). Clear and readily comprehensible written communication can facilitate mutual understanding between music therapists and their interdisciplinary colleagues, and promote further collaboration (Edwards & Kennelly, 2016; Leinebø & Aasgaard, 2017). Documenting in the medical record enables other professionals to gain awareness of the therapeutic aims and approaches used in music therapy (Ghetti, 2013), which contributes to their understanding of music therapy practice (Loewy, 2000). When music therapists provide support during painful or anxiety-provoking procedures, their nuanced and patient-centred interactions with children may not be fully understood or appreciated by the interdisciplinary team, which may undermine the team's understanding of the therapeutic role of the music therapist and the music. Music therapists need to convey the theoretical and practical aspects of their work to the interdisciplinary team in a way that is comprehensible yet is consistent with their unique identity and contributions. Flexible documentation tools may facilitate this aim, by helping structure music therapists' reflection and documentation practices in a way that enables interdisciplinary exchange.

The discourse on music therapy in medical settings is expanding in breadth and depth within Norwegian contexts (e.g., Aasgaard, 2002, 2004; Due & Ghetti, 2018; Leinebø & Aasgaard, 2017; Mangersnes, 2012; Noer 2017; Ærø, 2016; Ærø & Aasgaard, 2011; Ærø & Leinebø, 2017). The literature is characterized by music therapists who critically examine their roles within the medical context and interdisciplinary team, and bring salutogenic, humanistic and ecological perspectives to the fore in their work. The current article aims to contribute to this discourse by introducing a theory-supported documentation tool to help frame how music therapists might describe their work when supporting children through painful or anxiety-provoking medical procedures. It is acknowledged that the way this tool is created and used will influence how music therapists will perceive, contemplate and write about their work, which may then influence how other interdisciplinary team members understand such work. Such constructive influence presents both opportunities and limitations.

Contextual considerations

Within the practice of music therapy in paediatric medical contexts, the use of music therapy as procedural support for painful or anxiety-provoking procedures provides a rich ground for examining practice and developing and testing theory. Music therapy as procedural support requires the competence of a qualified music therapist and may be defined as, “the use of music and aspects of the therapeutic relationship to promote healthy coping and decrease distress in individuals undergoing medical procedures” (Ghetti, 2012, p. 6). The process involves a complex interplay of factors related to the child, the context, the music therapist, the music, the procedure, family members and other healthcare workers. It is particularly challenging to support children during prolonged, repeated, and painful procedures, as children may develop traumatic responses to the procedures themselves (Ghetti & Whitehead, 2015; Loewy, 2019; Saxe, Vanderbilt & Zuckerman, 2003).

As music therapists, we have journeyed with children as they encounter, struggle with and persevere through potentially painful and anxiety-producing medical procedures. Tone comes to this work with a background as a trained nurse. She has extensive practical experience being a music therapist within an interdisciplinary team that uses a biopsychosocial perspective to explain and understand the relevance of their work. Tone’s background as a nurse also impacts her familiarity with and appreciation for standardized documentation, which she feels can give care a joint direction, limit misunderstandings between interdisciplinary staff, and enable music therapists to share strategies identified through music therapy that can transfer to other areas of a patient’s care.

Claire has additional qualification in the area of Child Life, a profession that focuses on providing developmentally-appropriate support to children in medical contexts, and has experience supporting children through intensely painful medical procedures. Her theoretical orientation to music therapy practice in medical settings is primarily humanistic and relationship-based, with an appreciation for biopsychosocial and ecological perspectives related to health and to care. After articulating a preliminary theoretical model of how music therapy might serve as procedural support for invasive medical procedures (Ghetti, 2012), Claire is currently interested in further developing the model through critical reflection, including consideration of how ecological perspectives might inform its further development.

We feel that our orientation to music therapy within paediatric medical settings is well represented by Ærø's (2016, p. 55) "Trident for music therapy in pediatrics" (Figure 1). This trident illustrates that music therapists can address physiological, psychological, and environmental aspects of health, and these practices are informed by theory within areas of biology, neurology, psychodynamic psychotherapy, cognitive psychotherapy, resource-oriented approaches and social psychology. Thus, the trident represents clinical practice in paediatric medical settings, and is adapted to a Nordic practice with emphasis on ecological and milieu-oriented approaches. The trident, and the biopsychosocial and ecological perspectives inherent within it, are consistent with our practice of music therapy, and inform our understandings. Our orientation and understandings also impact our valuing of, and approach to, documentation in the area of music therapy as procedural support.

Trident of Music Therapy in Pediatrics

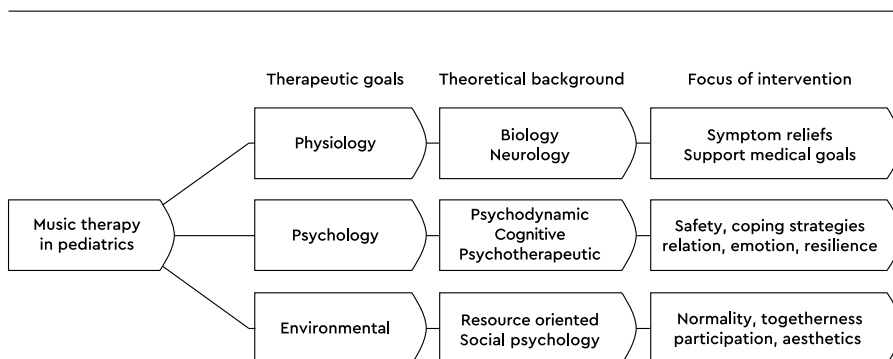


Figure 1. Trident of music therapy in pediatrics (Ærø, 2016, p. 55)

Our shared interest in further exploring theoretical aspects of music therapy as procedural support and a desire to translate the working model into a practice-relevant documentation tool, form our motivation for this article. We hope that generating a practical documentation tool can serve a two-fold purpose: 1) to further music therapists' understandings of the therapeutic processes involved in music therapy as procedural support, and 2) to provide a practical avenue to communicate the processes and outcomes of music therapy as procedural support to interdisciplinary staff in order to improve quality and continuity of care.

In Norway, patients have the right to view and receive a copy of their entire medical record, and to receive a simple explanation of information that is unclear to them (Pasient- og brukerrettighetsloven, 1999, §5-1). In certain parts of Norway, patients over 16 years of age, and parents of child patients under 12 years of age can access medical records digitally (Helsedirektoratet, 2018). The medical record includes information related to diagnosis, course of illness, and treatment; and other information that may be of importance to treatment. Thus, the medical record serves an important communicative function, not only for members of the interdisciplinary team, but also for patients who wish to review specific aspects of their care.

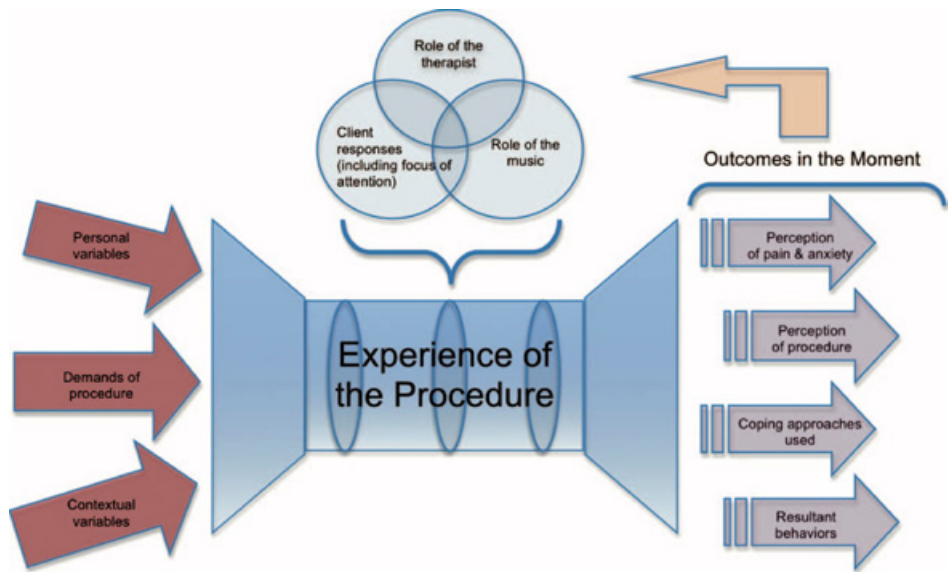


Figure 2. Working model of music therapy as procedural support (Ghetti, 2012, p. 28)

A theoretical model of music therapy as procedural support

Music therapists describe a variety of approaches for using music therapy as procedural support (e.g., Fratianne et al., 2001; Loewy, 2019; Loewy, MacGregor, Richards & Rodriguez, 1997; Mondanaro, 2013), but their rationales for these various approaches differ, and in some cases conflict (see Ghetti, 2012, for further elaboration). For example, there are various conceptualizations related to how music therapy promotes pain and anxiety management during procedures. Some music therapists argue that music therapy enables procedural support by helping a child actively engage their attention in musical and interpersonal interactions with the therapist (and others present) as a means of reducing awareness of painful or anxiety-provoking occurrences during the procedure (e.g., Prensner et al., 2001; Fratianne et al., 2001). Other music therapists posit that the therapeutic means underlying music therapy for pain and anxiety management relate to its ability to integrate the experience, enabling a child “to come into the body by focusing on the breath, heart rate, emotional intention, and resonance, i.e., the feeling of the pain itself” (Loewy et al., 1997, p. 48). The resulting release that comes from integrating the pain experience is understood to diminish pain perception, while also building trust among therapist, child, family and staff (Loewy, 2019, Loewy et al., 1997). Some of these authors do not distinguish between *alternate engagement* and *distraction* and argue that distraction can be perceived by children as manipulative (e.g., Loewy, 2019). In this brief example, one set of music therapists is arguing for the therapeutic importance of *alternately engaging* attention in a sensorily absorbing experience *away* from the pain sensations, while the other set is arguing for the therapeutic importance of acknowledging and integrating current sensations related to the pain (as well as experiences of all those present in the room), and focusing inward before enabling externalizing release (Loewy et al., 1997; Turry, 1997). Despite articulating different rationales for the use of music therapy as procedural support, the aforementioned authors generally agree that music therapy assessment plays a critical role in enabling effective procedural support (Edwards, 1999; Fratianne et al., 2001; Loewy, 2019; Loewy et al., 1997).

Claire found it curious that despite contrasting theoretical rationales regarding procedural support, music therapists report flexibly using a variety of approaches, in order to meet the needs of the patient in the moment. Could there be an overarching theoretical frame that helped explain why music therapists would naturally choose to alternate approaches and/or adjust them in the moment? In order to inductively construct a theoretical frame from the existing music therapy literature, Claire engaged in a process of qualitative document analysis. The process of qualitative document analysis included systematic analysis of 19 journal articles and book chapters, and subsequent synthesis of the data in order to identify key concepts, define those concepts and begin to elucidate the relationships between

concepts in order to develop a preliminary conceptual model (Ghetti, 2012). The model, therefore, is grounded in music therapy clinicians' and researchers' descriptions of how and why they make certain decisions when using music therapy as procedural support.

Theoretical synthesis of the 19 music therapy texts included in the qualitative document analysis led to the identification of concepts that play a key role in the use of music therapy as procedural support: 1) assessment is an ongoing and continuous process that often begins before a procedure and ends after it, 2) this continuous process of assessment influences how a therapist adjusts clinical approaches before, during and after the procedure, which results in an individualized approach to care, 3) preparation prior to procedures is advisable, 4) various individual factors (e.g., developmental level, personality traits, medical and coping history, trauma history, pain history and sensitivity, level of anticipatory distress, level and nature of family support, cultural background, relationships with staff, medications) impact how the patient perceives and/or responds to a procedure, and 5) music therapy can play an important role in assessing and altering the environment in which the patient experiences the procedure, including how caregivers and medical staff interact with the child, how the child perceives the medical staff, or how sensory aspects of the environment can be modified to meet the child's needs or preferences (Ghetti, 2012). In addition, patients' level of engagement in musical processes, and the focus of their attention are dependent upon the role of the music, role of the music therapist, and role of the patient within the process of procedural support. When a music therapist assesses a patient's needs continuously across time and adjusts the role of the music, role of the patient and/or role of the therapist, it is considered to be an example of the concept of *reflexivity*. Claire identified these concepts through the process of qualitative document analysis and proposed relationships among them within a "Working model of music therapy as procedural support" (see Figure 2), which may be summarized as follows:

Multifaceted moderators including personal variables, demands of the procedure, and contextual variables enter into the individual's experience of a procedure. Factors relating to the therapist, role of the music and patient responses combine to serve as a lens that filters the individual's experience of the procedure. This filtering process results in the individual's perceptions of the procedure, perceptions of pain/anxiety, coping approaches, and resultant behaviours. The music therapist uses these outcomes in the moment within a reflexive process of re-assessing and re-focusing the intervention 'lens' in an on-going manner to positively alter outcomes. (Ghetti, 2012, p. 28)

The conceptual model is primarily situated from the therapist's perspective, as was the literature that was analysed to generate it. Family members who might be present to support the patient are part of the "contextual variables" that directly impact how a patient experiences a procedure. Staff may be included when a music therapist draws them into the musical experience, enabling them to be humanized and to gain the child's trust, which may be considered a way in which music therapy "modifies the context" in which the child and staff experience the procedure. In a recent extended discussion of how music therapy enables *integration* during procedural support, Loewy (2019) articulates how music therapy integrates the team with the child through music, a process that plays a critical role in engendering trust, and in turn, promoting resiliency. In Loewy's perspective, inclusion of family members must be considered carefully, as parents/caregivers may on some occasions be so overwhelmed by the situation that their capacity to effectively support the child is severely limited (2019).

The working model of music therapy is meant to be a transactional model, in that it depicts complex and non-linear interactions among therapist, patient, caregivers, music, procedure and context; and outcomes in the moment in turn impact the further evolution of the procedural support given. The patient's perception of the procedure is similarly impacted by these interrelationships, and not solely by one element alone. The model has informed the theoretical description of single studies evaluating music therapy as procedural support (e.g., Sanfi, 2012), and various music therapists have informally reported that it aligns with their practice, but to our knowledge, it has not yet been translated into a pragmatic tool that could be used in clinical practice. Our aim is to create a documentation tool grounded in the theoretical constructs inherent in the working model that: 1) furthers music therapists' understandings of the therapeutic processes occurring in music therapy as procedural support, and 2) helps communicate the processes and outcomes of music therapy as procedural support to the interdisciplinary staff so that they can better support patients' coping efforts.

Documentation tool for music therapy as procedural support

This documentation tool addresses key elements in the therapeutic process of music therapy as procedural support and places particular emphasis on clarifying how, why and when the music therapist adjusts her/his therapeutic "treatment lens" (Figure 3). From this information, the music therapist is able to summarize translatable patient outcomes, and synthesize this information into implications for interdisciplinary staff.

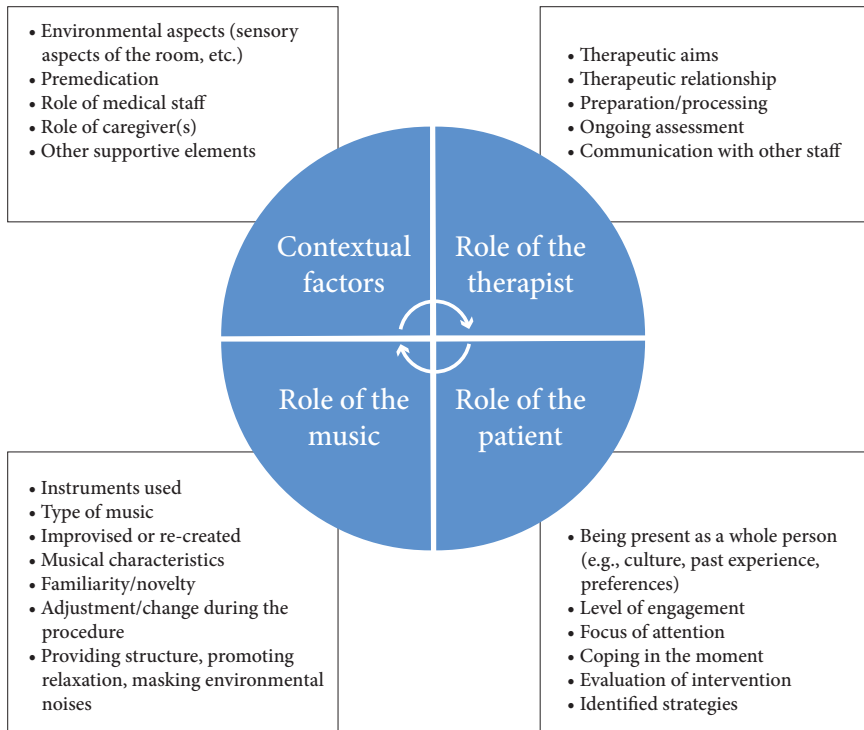


Figure 3. Adjustment of the therapeutic “treatment lens” during procedural support

The documentation tool consists of two parts: 1) a pre-procedural assessment portion, and 2) a per-session template to document the procedure itself. The pre-procedural assessment will be completed when the patient is first referred to music therapy, and the procedural component will be completed following each procedure that had significant impact on patient outcomes. In instances where a patient will be seen more than once, or will be seen in other contexts in addition to procedural support, a comprehensive music therapy assessment is indicated in addition to this pre-procedural variant (for examples of a comprehensive music psychotherapy assessment see: Loewy 1999, 2000; for other comprehensive music therapy assessments see: Douglass, 2006; Ghetti & Walker, 2008; Lindenfesler, 2013; Shaller Gerweck & Tan, 2010; for an example of a prioritization matrix see Ghetti, 2013). The procedural documentation tool can be used for single procedures, or for procedures that occur multiple times across a patient’s hospitalization. The templates are formatted in a way that make them easy to incorporate into a hospital’s electronic documentation system and can be adapted to incorporate culturally-specific terminology. The tool is being trialled in clinical use by three experienced music therapists in a paediatric hospital setting for children who must

undergo the same procedure multiple times. Still in an early stage of implementation, the tool enables the music therapists to more clearly articulate session outcomes, which enables better cooperation with other staff. The degree to which other staff are accessing the tool in the documentation system has yet to be determined.

Procedural support might sometimes be conceived of as occurring “in the heat of the moment” with the focus of getting the job done. Completing the tool while considering what occurred before, during and after procedure helps the therapist take a more conscious approach to documentation and may promote the use of more consistent and translatable language. The tool is structured around the various actors within the procedural support experience, namely, the patient, music therapist, family members, and other staff; and the music, procedure and context. It is recommended that music therapists complete a pre-procedural assessment of the patient and their resources and needs (Ghetti, 2013; Loewy, 2019). Table 1 provides a template for a pre-procedural assessment.

Pre-procedural assessment tool	Key points
Procedural demands	Define the procedural frame. When does the procedure start for the patient? What must the patient do and experience during the course of the procedure? What are the requirements from the medical staff, and what can the patient choose, if anything?
Brief patient background	Diagnosis, age, developmental level, communication skills, cultural frames, previous medical history and hospital experience, previous music experiences and preferences, previous experiences with music therapy
Family history	Assess family-related elements that could affect ability to support child during procedure. Parental stress level? Siblings? Other resources?
Coping assessment Identified stressors Identified resources Previous coping strategies Coping preferences for procedural support	Trauma assessment, as appropriate. Are there known factors that might stress the child? (e.g. fear of new things, fear of medical staff, fear of people talking over the child's head?). What type of coping strategies does the child use? How does the child use other people for support? What do we know of the child's attachment style? What has previously comforted the child? Who does the child trust?

Table 1. Pre-procedural assessment tool

Pre-procedural assessment facilitates better coordination between staff members for subsequent support of the patient and helps the music therapist build a treatment alliance with the patient and family prior to the procedure. The preparation and assessment process provide a mutual ground for involving team members and patient alike and defining clear roles and expectations for the procedure. The music therapist becomes familiar with how the procedure has been described to the patient, what choices the patient can make regarding the procedure, and the team becomes aware of the patient's preferences and coping strategies.

During a preparation and pre-procedural assessment session, the music therapist can begin to build rapport with the patient and family and collaborate to identify and try out various music-facilitated coping strategies. In collaboration with the therapist, the patient can plan how she or he would like to use music during the procedure, and in so doing, exercise choice and control in a way that promotes a sense of agency and facilitates healthy coping. For example, the child can determine how she will use a specific instrument, sound or phrase to indicate that she needs a short break during the procedure, and this information can be conveyed to the staff through the pre-procedural assessment documentation. The music therapist can serve as anchor point during the procedure, a person that the child can rely on to meet their needs. The music therapist will also note particular fears, stressors, and psychosocial factors that would otherwise cause the patient or staff distress if not addressed and suggests means for successfully eliminating or reducing such challenges. Since this assessment process provides a frame for subsequent procedural support, it is important that the music therapist practices therapeutic reflexivity.

After completing an assessment prior to the first session, the music therapist will use the session-based documentation tool (Table 2) after each occurrence of the procedure itself. For repeating procedures, the music therapist is encouraged to use the tool each time, to help further tailor and develop the intervention and update interdisciplinary staff of any changes in patient preferences or responses. Once a child copes consistently well with procedural support, and support can be carried out sufficiently by other members of the interdisciplinary staff, the music therapist may no longer be required for that patient and other patients may instead receive priority. The documentation tool for music therapy as procedural support helps structure reflection upon the various factors that inter-relate during a session of procedural support and includes implications for other interdisciplinary staff that can continue to support the child even in the absence of the music therapist.

Documentation tool for each session	
Contextual factors	Where did the procedure take place and what were important aspects of the environment? Which contextual factors were critical, and which were preferred, but not critical? Who was present and what effect did that have? Pre-procedural medication given (and effect)? MT already present (e.g., environmental MT to change the atmosphere of the room?). Equipment for the procedure prepared in advance?
Role of the therapist	<p>Pre-assessment completed? First time? Therapeutic aims (intentions) for the procedure? Took role as interdisciplinary team leader? Verbal and musical roles, for example: <i>arousal regulation</i> (e.g., Ghetti & Whitehead, 2015), <i>tension-release</i> (e.g., Loewy, Azoulay, Harris & Rondina, 2009; Mondanaro, 2013) including <i>tonal intervallic synthesis</i> (Loewy, 2011), <i>musical alternate engagement</i> (e.g., Prensner et al., 2001), validation of emotions and sensations (e.g., Turry, 1997), or clarifying aspects of the procedure (e.g., Edwards, 1999)? Support for parents, and inclusion in music therapy, as appropriate? Support for staff performing the procedure? How did the therapist adjust approaches over the course of the procedure?</p> <p>Post procedure: to what degree were <i>reconstitution and reorganization</i> necessary (Turry, 1997), and how were they promoted?</p>
Role of the music	Type of music therapy approaches used (if not already included in “role of the therapist”)? Type of music (e.g., genre, improvised vs. re-created, familiar vs novel) and instruments used? Musical characteristics? Nature of child’s engagement in the music and how this changed over the procedure.
Patient role	Level of engagement? Focus of attention? Role within the music? Body language? Eye contact? Signs of distress? Interaction with other staff? Interaction with supportive person? Choices made and preferences during procedure?
Patient and family outcomes	Which coping strategies were used? How did the patient and family perceive the procedure and MT approaches (What worked and why? What did not work and why)? What fears or fantasies were expressed? Patient preferences for future.
Interdisciplinary implications	What are the practical translatable outcomes? What does the patient need from other staff? What does the staff need from the music therapist to build a trusting environment? Which techniques can be used by other staff when MT is not present? Important contextual factors? Is a supplement to MT required (e.g., need for medication)? How did the staff respond to the presence of MT?

Table 2. Documentation tool for music therapy as procedural support

It should be noted that there are occasions when a child does not wish to engage in music therapy as procedural support. In such cases, an attempt should be made to understand the child's (or family's) resistance, and the choice not to have music therapy should be respected. The music therapist can work to connect the child and family to other sources of support and can remain available in case the child or family desires to engage at a later point. Similarly, a music therapist may encounter staff members who resist the presence of music therapy during procedures, for various reasons. When such resistance occurs, the music therapist can work to build rapport and alliances with these staff members and seek to understand why they feel their needs or the needs of the patient are not being met. A concerted effort to try to understand and meet the needs of staff can often help open possibilities for future collaboration.

In order to demonstrate how the music therapy as procedural support documentation tool can be used in practice, we will provide a case example, followed by corresponding pre-procedural assessment and session documentation that follows the templates given above. The following case is a typical example from clinical practice that has been modified slightly for the purpose of this article. Sensitive information has been anonymized and written consent was obtained from both parent and child.

An illustrative case example of music therapy as procedural support: *Lisa*

Lisa is a 12-year-old girl and is the youngest child of three siblings. Her family lives in a small town. Her mother is a teacher and her father is a carpenter. Lisa loves to read, listen to music and play soccer when she is not at school or playing with her friends. Lisa had no prior history of hospitalization or illness, until she was admitted to the hospital due to disturbances in sense of balance and reports of nausea during the past month. She had been feeling unwell for some time and found it difficult to be as active as she used to. Sometimes she would vomit after engaging in simple activities and her need to rest was markedly increased. She had to stay at home from school and did not feel like spending as much time with her friends as she normally would. After admission to the local hospital, an MRI scan confirmed a brain tumour that required resection. The family was then referred to the general hospital for further treatment and care. Comprehensive treatment of the malignant tumour included: chemotherapy in various forms and methods of administration, possible radiation and additional surgery, all depending upon how the tumour responded to treatment. After the initial surgery, Lisa found it hard to adjust to the demands of the hospital and of treatment. She underwent numerous procedures, required continuous monitoring of her neural activity, which impeded her independence, and experienced a high volume of staff involved in her care. She missed her friends, her home and her dog. She often felt overwhelmed with fear, and had difficulty regulating her own feelings

and articulating what she was specifically afraid of. It was during a moment of particularly acute distress that Lisa's nurse first paged the music therapist and asked for assistance.

When the music therapist entered the room, Lisa was sobbing and had a look of panic in her eyes. Her father was trying to comfort her by stroking her hair. The music therapist began by acknowledging Lisa's fear and offered Lisa a chance to use music to help her relax. Lisa nodded in assent, and the music therapist began playing her guitar quietly and leading Lisa in a brief relaxation exercise that focused on slowing down her breathing and alternatively contracting and relaxing various parts of her body. Once Lisa's breathing became slower and deeper, her body tension eased, and she was ready to engage verbally with the music therapist, they talked a bit about what she was afraid of, what she likes to do, and how she felt about the music. Lisa talked about her interests and her friends at home, with her father supplementing from time to time, and expressed how much she loves stories. The music therapist offered that they could explore a musical story together (via an adapted form of Guided Imagery and Music composed by music therapist and researcher Ilan Sanfi). Lisa closed her eyes and listened closely to the story, and soon fell fast asleep.

The music therapist came back to process the experience once Lisa had awoken. Lisa said that the music made her feel relaxed, and that the story helped her stay focused. She experienced vivid images facilitated by the music story and said, "it was almost like being in the forest." This first meeting served as both an actual supportive session and as an initial assessment, and it enabled building of rapport as well as identification of strategies for further support.

At the time of this first session, it was not yet known to what extent the resection of the tumour would affect Lisa. Considering Lisa's preferences and needs as expressed in the initial music therapy session along with dialogue with the interdisciplinary team, it was decided that Lisa might benefit from help to: 1) improve her ability to self-regulate during stressful experiences, and 2) promote resilience through regaining a sense of control and the ability to identify and use concrete coping strategies.

Due to Lisa's fascination with stories and her preferences for using music, the music therapist decided to continue using an adapted form of Guided Imagery and Music. Aims were to promote relaxation and to help Lisa focus on breathing, picturing a safe place in order to relax. Verbal processing after sessions opened up for self-expression. Lisa was able to use the music to regulate her stress levels, report vivid imagery and respond to input from the music therapist in her initial two sessions.

As part of chemotherapy treatment, Lisa needed to have medicine injected through a thin needle into a reservoir that is surgically inserted under the skin to provide access to the spinal canal, known as an Ommaya reservoir. The procedure itself is not very painful but may be perceived as uncomfortable and potentially anxiety provoking. The medical staff must position themselves very close to the patient's head while the patient remains completely still while the medicine is injected. Patients may be intimidated by these procedural demands, due to the perception of medical staff invading such a personal space, and due to fears and anticipation about what might happen next.

The interdisciplinary team, Lisa and her parents decided it might be a good idea to use music therapy as procedural support. Lisa's father admitted that he himself was not very comfortable in procedural situations due to his own heightened level of stress, and thus it was decided that in this procedure, Lisa's mum would accompany her. For the pre-procedural assessment, the music therapist talked with Lisa about what the procedure would be like from a sensory standpoint (the sights, sounds and sensations). The nurses and doctors had already informed Lisa about practicalities of the procedure. The music therapist used the structure of the pre-procedural assessment to get an idea of which elements of the procedure were frightening for Lisa, and to create a plan for how to best support her through it. Based on the previous two music therapy sessions, Lisa identified that she would like to use the relaxation techniques they practiced to create an image of her favourite beach where she could "just be safe and relaxed." She was not sure if she wanted anyone to be there with her in the imagery but wanted to leave it open to "just see what happens." Lisa talked about her fear of being held down and how she feels overwhelmed when there are many people standing over her. Lisa also expressed that it is important to her that she receives information that is accurate and consistent and that the procedure is as predictable as possible. In other situations within the hospital, Lisa benefits from a clear delineation of when she is finished with an important job. Through dialoguing with the music therapist, Lisa identified that she would like to be in her own room for the procedure with as few staff present as possible. It is standard practice for procedures to take place in the treatment room, however, Lisa clearly indicated that she had been so scared in the treatment room previously that she wanted the procedure to take place in her own room. She felt safer in her own bed and knowing that there was an established plan for her procedure. The music therapist discussed these preferences with the interdisciplinary team who would perform the procedure. To honour Lisa's choices and need for control, the team decided to try accommodating her wishes, and affirmed that they were pleased to have the music therapist provide procedural support.

The procedure:

Lisa and the music therapist chat together a bit before the procedure. Lisa chooses the ocean drum that was previously introduced by the music therapist, to create an image of a safe and calming beach where she can simply “be” while the procedure takes place.

The music therapist is present before the procedure starts and agrees with Lisa to start the relaxation induction while the nurse and the doctor are preparing for the procedure. Lisa says that she is “really nervous,” but follows the therapist’s instructions. The music therapist intensifies the cues for relaxation by reminding Lisa to focus on her breathing, or by prompting Lisa for details in the imagery when needed, such as when Lisa opens her eyes, starts to cry or expresses fear in other ways. The music therapist creates a slow, back-and-forth rhythmic “swoosh” with the ocean drum as a foundation for introducing the imagery. The music therapist cues Lisa to consider how she experiences the weather, the sun that warms her body from her fingertips to her toes, head etc., in order to promote progressive relaxation. Lisa engages in describing what she sees at her beach. At this point, the doctor is ready to pump the reservoir and Lisa starts to cry, asking for her mum to hold her hand. The music therapist gently cues Lisa to keep taking deep breaths and asks how the ocean is right now, to which Lisa replies, “The ocean is chaotic, and the waves are big!” Lisa also envisions two seagulls flying over her. The music therapist plays louder to reflect Lisa’s input. Lisa’s eyes are now open, and she continues to engage in the imagery while maintaining intense eye contact with the music therapist. The doctor is ready to place the needle into the catheter, where it must remain undisturbed for approximately 2–3 minutes to extract spinal fluid for analysis and to subsequently inject the chemotherapy. Lisa tells the music therapist that she is scared and wonders if it hurts. The music therapist reassures her and tells her that she might feel it (specific and accurate information), but that she is doing such a great job of helping things go smoothly and sitting still. Once Lisa’s current emotions have been fully validated, the therapist guides her back into the imagery. Lisa reports that the waves have quieted down a bit, which is also reflected in the music therapist’s play. Lisa describes how the water feels on her feet, and tells the music therapist that her favourite pet, the family dog, is also at the beach together with her. The doctor comments on Lisa’s imagery and says that it sounds like a lovely beach. The procedure is finished, and the doctor pushes the reservoir eight times to finish, then tells Lisa that the procedure is over and that it went very well. Lisa is surprised that the procedure is over, and says that even though it was scary, she feels proud that she could do it. As the music therapist is about to start playing one of Lisa’s favourite songs for closure, the doctor starts talking to Lisa’s mum and says that he will “just have a look at the reservoir.” Lisa starts to cry as the doctor moves in closer and the music therapist reminds the doctor that the team has previously made a deal with Lisa that once she is told the procedure is finished, she can relax and be done with procedural aspects.

The doctor laughs and moves away, gesturing that he will come back to talk to Lisa and her mum later that day. The music therapist stays after the other medical staff have left to finish the concluding songs, promote a sense of reconstitution and reorganization (Turry, 1997), and to assess feedback from both Lisa and mum's perspective. Together they agree on some basic rules that will help the next time Lisa has the procedure, and the music therapist also highlights that it was Lisa that did the real work here, and that she did it so well despite the fact that she was initially so afraid of the needle. The music therapist reminds Lisa of what she said after the procedure, mainly that she did not really feel the injection when she was relaxed and focused on something else. Lisa had found a way to cope with her fear. After concluding with Lisa and her mum, the music therapist briefly chats with the team to assess how they perceived the procedure and to discuss ways in which they could more actively engage in the music during future procedures, and then completes her documentation in the medical record.

Example of corresponding documentation

Given the rich case example above, we can now illustrate how the documentation templates might be used to describe music therapy as procedural support with Lisa. The following is an example of documentation that might be included in Lisa's electronic medical record.

Pre-procedural assessment: Lisa

Procedural demands: *Ommaya procedure involving intrathecal injection into scalp, Lisa needs to sit completely still during procedure. Must tolerate pressure pre and post pump (x 8) onto the reservoir. Skin numbing by EMLA 1 hour prior to procedure. Expected pain experience: minimal, however, psychological component of fear is highly possible due to nature of the procedure.*

Brief patient background: *12-year-old female, youngest of three children; loves reading, music and soccer. Age coherent, recently admitted to hospital with no prior history of hospitalization.*

Communication/appearance: *Withdrawn, high anxiety level, fear of needles and hospital staff dressed in "white."*

Previous hospital experience: *First time in hospital, met with the MT x 2 during current hospitalization (receptive interventions with focus on deactivation of stress, emotional support and identifying coping strategies).*

Caregiver / family history: *Supportive family with both parents actively involved in care. Father experiences elevated anxiety during procedures. Mother able to effectively support Lisa during procedures.*

Coping assessment: *No previous history of traumatic experiences that might impact current coping. When fearful, is able to refocus on preferred safe place when given cues and musical support by music therapist. Safe place is the beach, engages in vivid imagination and is able to articulate imagery. Loves family dog, many good friends at home, close relationship with both parents (although mum preferred for procedures due to father's level of anxiety).*

Stressors: *Becomes acutely distressed when actively held down during procedures, and when there are multiple staff people in the same room.*

Resources: *Able to express needs verbally and nonverbally; able to become highly absorbed in music and imagery experiences; consistent emotional support from parents, with calming and nurturing support from mother during procedures.*

Preferred coping strategies for procedural support: *Lisa desires adequate time for preparation & explanation prior to procedure and is an information-seeker. Benefits from calm environment with as few staff as possible. Prefers own room/lying in own hospital bed. Lisa desires support for self-regulation and alternatively engaging attention during procedures.*

In Lisa's case, completion of the pre-procedural assessment helped the music therapist identify Lisa's preferred coping strategies and resources, which in turn helped her form a plan for subsequent procedural support. It also enabled Lisa to bring in safe and familiar elements of her choice into a new and scary situation. The assessment helped the music therapist identify contextual elements of the procedure that Lisa could control according to her preferences; including location, number of people present, and the particular parent present. Furthermore, Lisa's preference for receiving clear information regarding the logistical and sensory aspects of the procedure in advance of the procedure itself, assured that she was adequately prepared for the sensations she would experience. The process of pre-procedural assessment also enabled Lisa and the music therapist to identify that a

modified version of Guided Imagery and Music incorporating imagery related to Lisa's safe space of the beach and including her beloved dog would likely serve as effective supports to alternatively engage her attention and promote self-regulation during the course of the procedure. Communicating Lisa's preferences to the medical team created a joint focus that enabled a predictable procedure to take place.

After Lisa completed the procedure, the music therapist documented outcomes related to the procedural support within Lisa's medical record. The following is an example of this template completed for Lisa's experience of the Ommaya reservoir procedure.

Session documentation tool: Lisa

Contextual factors: *As per her choice, Lisa is in her own room, lying down on her bed. EMLA cream has been administered by Lisa's mother, no use of other pre-medication. Established ground rules: only one doctor, one nurse, MT and caregiver present at the procedure; once the doctor declares the procedure is "finished," no further examination or handling should occur. All procedural materials will be ready before the procedure begins.*

Role of the therapist: *As Lisa and music therapist have agreed upon during pre-procedural assessment, MT introduces a brief music-assisted relaxation exercise, prior to engaging Lisa in an adapted form of jointly-created guided imagery and music as support to the procedure. Lisa signals doctor when she is ready for the procedure to commence then closes her eyes and engages deeply in imaging. MT intensifies verbal support and musical accompaniment on the ocean drum in accordance to changes in Lisa's imagery, and particularly when Lisa shows signs of fear. MT sings phrases like: "you are safe," "we are looking after you," "you are being very brave." MT cues Lisa to identify sensations in her body and to refocus on positive resources, when appropriate. Afterward, the MT verbally processes the procedure with Lisa and caregiver to evaluate their experiences and plan for future support.*

Role of the music: *Use of ocean drum to reinforce Lisa's preferred imagery of being on a favourite beach with pet. Continuous rhythm that cues deep inhalations and exhalations, conveys intention of creating a holding space, and is predictable and framing.*

Patient role: *Lisa engaged throughout procedure in instructing therapist to create desired ocean wave intensity using ocean drum. She contributed to adjusting imagery as her needs changed during the procedure.*

Patient and family outcomes: *Lisa states she benefits from refocusing strategies. When scared, music therapy helps guide her back to a calm and relaxed state. Maintaining eye contact helps her stay focused on the imagery and support. Lisa expresses feeling very proud and happy after completion of the procedure. She says it helps to “think of other things and picture herself relaxing on a beach.” Lisa’s mum supported Lisa’s engagement in guided imagery and music and stated that she feels comfortable enough to try to use safe space imagery with Lisa during procedures when the music therapist cannot be present.*

Interdisciplinary implications: *Lisa feels safer when the procedure takes place in her own room, with as few staff present as possible. Lisa benefits from preparation related to the sensory and logistical aspects of the procedure, information given during the procedure, predictability, and reassurance that connect her with her coping resources. Concrete strategies for support include: preparing equipment prior to procedure, maintaining continuity of staff, and providing reminders to take deep breaths. When staff state that Lisa is finished with the procedure, this should be respected as final in order to promote trust and predictability. Lisa requests music therapist to be present at procedures when possible and perceives her mother as a support during procedures.*

Use of a pre-procedural assessment and communication of Lisa’s preferences and coping strategies identified during that assessment to interdisciplinary staff helped assure that Lisa experienced elements of choice, control and mastery during the procedure itself. Although Lisa exhibited some anxiety during the procedure, she maintained resilience and felt safe enough to release her anxiety through tears, which enabled her to express what she needed during the procedure. She was subsequently able to refocus on her preferred safe space and coping resources and remained an active participant in both the procedure and the guided imagery and music experience.

Discussion

Reflecting upon use of the documentation tool for music therapy as procedural support

The biopsychosocial model, originally developed by George Engel (1977), offers a holistic and systems-based approach to understanding how multiple factors from the societal to the molecular interact to result in health and/or illness. A biopsychosocial consideration

of music therapy practice in medical settings acknowledges how biological, psychological, and social aspects are interrelated when addressing children's needs through music therapy (Dileo, 1997; Ullsten, Eriksson, Klassbo & Volgsten, 2018). These areas influence the patient's lived experience of a medical procedure and require a high level of knowledge, reflexivity and flexibility from the music therapist. A music therapist may need to use different therapeutic approaches and musical interventions within a single procedure, in order to adequately meet a child's needs (Ghetti, 2012). How the music therapist, child, family and staff work together to best meet the child's needs and assure a successful procedure evolves throughout the course of a single procedure and develops over time for repeated procedures.

Ommaya reservoir procedures provide a useful context for a discussion of the importance of procedural support documentation, since patients who require these procedures will experience them repeatedly. The usual treatment protocol involves approximately 4–7 punctures (1–2 per day over 3–4 days) every second week for up to a year. Standardized documentation of the therapeutic process and outcomes of music therapy as procedural support can help positively alter patient experiences during subsequent procedures. Paediatric patients and their families have already experienced severe stress, sometimes possibly even traumatic in nature, prior to commencing with Ommaya procedures. Thus, they enter into the experience of this medical procedure carrying the baggage of previous experiences and are potentially taxed in their coping resources. The procedure itself requires several professionals, the number of which can be particularly high at teaching hospitals and specialized hospitals like Rikshospitalet where medical staff come for training. For the family, this entails encountering a large number of different professionals, who do not always know the patient or the family's full story. By systematically identifying and documenting key elements of a child and family's coping strategies and preferences, the music therapist can contribute to better care of the patient during such procedures, despite the large number of professionals involved.

Elements that promote healthy coping including a sense of predictability, feelings of safety, and opportunities for choice and control, are important to assess and document, as well as factors that contribute to the development of the therapeutic relationship. Since a child's coping strategies and abilities may vary over the course of hospitalization, it is important that the music therapist documents such changes over time (Ghetti & Whitehead-Pleaux, 2015). Use of the documentation tool for music therapy as procedural support helps to systematically assess and track variation in coping strategies and preferences over time, which can improve the quality of support and ensure continuity of care across providers. Such documentation helps improve continuity of care when one music therapist is passing off care to another. Consistent documentation over time can provide valuable information

for professionals who are involved less frequently in care of the patient, such as psychologists, who need reliable sources of information to obtain a broader understanding of the patient and family.

In Lisa's example, the documentation tool enabled the music therapist to reflect more consciously over the different aspects that took place in the procedure. When writing directly about the role of the music within music therapy, it became clear that the ocean drum served to reinforce and enhance Lisa's preferred imagery. The music therapist also chose to document on the therapeutic role of the music in order to educate the team about music therapy and avoid misconceptions. Nursing and medical staff sometimes have the impression that all that is required to support the patient is to just play a certain instrument. Documenting the therapist's specific role highlights the therapeutic intention and how the therapist uses a reflexive process of continual assessment and adjustment of the therapeutic "treatment lens" to meet the child's changing needs. This documentation also reveals competencies that the therapist possesses, and reports in a practical and concrete manner the processes that are taking place with Lisa. By clarifying the therapeutic intention, the music therapist can elucidate why it is important that Lisa be left alone to focus solely on the music therapist when she is engaged in an imagery experience. When other members of the interdisciplinary team understand the therapeutic intention, they may be able to avoid making well-intentioned, but ill-advised comments that end up breaking the patient's concentration.

Implications for interdisciplinary collaboration and communication

When all team members have a conscious awareness of what is actually taking place during music therapy, the results benefit the patient as everyone is working from a shared understanding. The music therapist must communicate in concise and professional language, in a way that can be easily understood by medical staff. The documentation tool may be used to help the therapist develop such a practical language. By articulating various factors inherent in the tool, the music therapist can clarify which elements of procedural support require the specific skills of a music therapist, and which elements can be effectively implemented by other staff. The latter is documented within the "interdisciplinary implications" section of the tool and should be stated in language readily understood by all members of the interdisciplinary staff. In Lisa's case, the practical suggestions mentioned in this section were easy for other staff to implement (e.g., have equipment ready beforehand, procedure to take place in her own room). By respecting and consistently following Lisa's "ground rules," the staff gain Lisa's trust.

One may argue that identifying and following a patient's coping preferences in relation to a procedure falls within the professional domain of nurses or doctors, which is often the case. In North America, it is common for Child Life Specialists, as well as music therapists, to take a leading role in providing developmentally-appropriate preparation and procedural support. Some music therapists choose to pursue additional education and certification in Child Life, in order to learn more about how development impacts perceptions of illness and injury and how development, in turn, is impacted by illness and injury (Ghetti, 2011). Music therapists have a relatively long history of providing procedural support, supported by their own theoretical and research base, and are well-qualified to assess and address the biopsychosocial needs of children undergoing anxiety-provoking or painful procedures, and those of the families and staff who surround them (Ghetti, 2012). Music therapists are specifically trained in how to work nonverbally and verbally to help others process a broad range of emotional experiences. Music therapy assessment processes help determine how past or current traumas might impact current plans of care, and how current resources can be built upon. The various professions represented within the interdisciplinary team will vary by hospital, but all teams should strive to help each other while keeping the patient's best interests in mind. Music therapists often have the privileged position of being able to focus exclusively on helping patients, families and staff cope, and as such, serve as an important anchor within the interdisciplinary team for supporting children and their parents during medical procedures.

Incorporating documentation tools into standard practice may facilitate a practical and conscious approach to care. The act of completing such tools can enhance clinical reflection, and the content within the notes themselves can help bring awareness to the professional role of the music therapist within the interdisciplinary team. This documentation practice and the accompanying reflection inherent within it may heighten the holistic quality of care involved in procedural support since key elements of the tools are derived from salient concepts in the literature (e.g., Edwards, 2005; Loewy, 2000, 2019; Loewy et al., 1997; Turry, 1997; Whitehead-Pleaux, Baryza & Sheridan, 2006). Furthermore, documenting the processes and outcomes of procedural support is in alignment with expectations of professional practice (Waldon, 2016).

The aforementioned case of procedural support for Lisa provided an example of interdisciplinary collaboration and procedural support that worked well. When patients are given the opportunity to articulate their preferences related to procedural support, and these preferences are clearly communicated to the team, better quality and continuity of care are possible. When team members are familiar with working with each other, have good interdisciplinary communication practices, and have a shared understanding of the

therapeutic aim, they are more likely to provide patient-specific support in a coherent manner. In contrast, it is sometimes difficult to identify factors that are likely to support the patient's coping, and the team struggles to find ways to console a child and complete the procedure without unduly stressing the child. When procedural support does not lead to a child successfully tolerating a procedure, and when the procedure must be discontinued, one wonders what can be meaningfully documented.

Within this chaotic and challenging context, there often lay key elements upon which the music therapist can reflect in an effort to understand what went "wrong". The music therapist might have perspectives that vary from the perspectives of other team members, and documentation of such can help to further the team's thoughtful response to the challenging situation. Completing the documentation tool offers the music therapist a chance for structured reflection, with the various sections and questions serving as conceptual prompts that can promote deeper and more holistic reflection. The music therapist is prompted to think of aspects related to where, when, what, why, and how elements happened, and how the therapist adjusted (or failed to adjust) the therapeutic "treatment lens" (Figure 3). The therapist can clearly articulate the therapeutic intention during a documentation note, along with comments about what did or did not ultimately support the child, so that both the music therapist and team learn from the experience. Therapeutic aims should include provision of support to parents and framing the patient's fear. The latter may occur separately from the parents, as some children may not feel safe enough to fully express their fears while their parents are present. Music therapy can serve as an anchor and companion throughout the course of the procedure, most particularly when it proves difficult to reduce the patient's perceptions of fear or pain. It is important that the team understands the therapeutic aim and the corresponding approaches that were used, in order to counter the overly simplistic conclusion that "music therapy didn't work for this child." Thus, the documentation tool provides an opportunity for the music therapist to document the full therapeutic process. When procedures occur repeatedly over time for a particular patient, it is especially important for the team to become familiar with what the tool provides, so that they can find information relevant for future procedures. It must be acknowledged, however, that no amount or quality of procedural support may sufficiently ease distress and pain for some patients. In such cases, it is important that the staff evaluate their approaches, but also acknowledge that such situations will arise, despite their best coordinated efforts.

Limitations and future directions

As therapists who frequently move between verbal and nonverbal experiences, we are often challenged to set words to the complex phenomenon that is music therapy. It is

acknowledged that the exploration of the qualities of the music and the role of the music within procedural support is limited within the proposed documentation tool. The aim of the documentation tool is to provide a pragmatic means of enabling discipline-specific reflection while also promoting interdisciplinary understanding and communication. Though some music therapists have gone further to explore the particulars of the *music* within music therapy as procedural support (e.g., Loewy, 2019; Loewy et al. 1997; Turry, 1997; Ullsten, Eriksson, Klassbo & Volgsten, 2016), there is a need for further theoretical and empirical exploration of this essential element. There is also a need to understand how social and cultural values tied to Nordic contexts impact the manifestation of health care, and how these manifestations might impact the development of theory and practice related to music therapy as procedural support. For example, in countries where health care is considered a human right for children and adults alike, and not a privilege, user perspectives and preferences are given serious weight. In order to understand the significance of music therapy as procedural support, we must seek the perspectives of the child or adolescent themselves, as well as their families. Thus, asking children, adolescents and parents about their experiences during music therapy will provide essential understandings of the role of music therapy in this context.

We maintain that clinical documentation is an important part of music therapy practice within medical settings, and we encourage music therapists to test out and adapt the tool described herein. Written documentation can serve as a crucial bridge between professionals in a way that improves patient care (Edwards & Kennelly, 2016), however, “even the best-written information still cannot completely replace verbal communication and exchange of thoughts between professionals” (Leinebø & Aasgaard, 2017, p. 298). Thus, we also recognize that in-person verbal communication plays a significant role in facilitating interdisciplinary collaboration, and we are aware of the value of oral communication. Music therapists will be well served by updating the team verbally when patient preferences have recently changed, or when a new approach to support is warranted. Updates typically occur during daily rounds, but could also arise during less formal interludes, such as when a patient’s status changes or when procedures occur emergently. Furthermore, a music therapist may choose to make brief comments during the course of a procedure to help illustrate what is happening in the therapeutic process, so that all team members and family present can better understand the therapeutic aims and approaches.

The documentation tool for music therapy as procedural support was pilot tested at Rikshospitalet during its development, which helps assure that it is relevant and functional in practice. With continued use, and expansion to a variety of cultural settings, the tool will no doubt evolve and require adaptation. Our hope is that the templates included herein

will serve as a useful starting point for music therapists working in medical settings and will promote both reflection and interdisciplinary communication. Further evolution of the tool from a conceptual and practical standpoint is welcomed.

Conclusion

The professional practice of music therapy in paediatrics is expanding within Norwegian hospitals, a consequence of a growing recognition of the benefits of music therapy for the individual patient, the family unit and the hospital environment. As Norwegian hospitals increasingly adopt a biopsychosocial approach to care, music therapy can provide an essential model for how patients and their families can be met, understood and helped in a holistic manner. When music therapists specifically and clearly describe the processes underlying procedural support, including patient and family contributions and preferences, other health professionals can use such knowledge to help the child cope more effectively in other contexts. For example, music therapists can explain ways in which staff can adjust environmental factors or verbally prepare children according to the therapeutic outcomes from music therapy to better support the child and family. Some of these strategies may be appropriate to implement when the music therapist is not able to be present.

Given the ineffable nature of music itself, it is no surprise that it is difficult to describe what music therapy is, or to clearly articulate its processes and value. It is not surprising that other health professionals sometimes struggle to grasp the full and complex scope of what music therapy as procedural support represents. The proposed theory-supported documentation tool represents a modest and pragmatic step in translating theoretical processes into practical terms in a way that promotes understanding for the music therapist and interdisciplinary team, alike. Developing theory-supported documentation tools can contribute to the evolution of professional practice, by helping music therapists and interdisciplinary staff to become more aware of important therapeutic processes. By striking a balance between the professional languages, cultures and values of music therapists and the interdisciplinary staff, the tool may facilitate more meaningful communication between these professionals, which in turn may contribute to better biopsychosocial care of paediatric patients and their families. If the tool is found to be culturally relevant, it can be used by a wider body of music therapists, to navigate their clinical work and better communicate outcomes to co-workers, employers and patients.

In conceiving of music therapy as a discourse, Ansdell (2003) asks us to consider what our theoretical depictions of practice allow us to do. When situated within an interdisciplinary context that espouses a biopsychosocial perspective to understanding health, describing music therapy in a procedural support context using the guiding frames of the proposed tool enables us to enrich our own understandings of our practices as well as more fully share some of the wonders and challenges we encounter along the way with our valued interdisciplinary colleagues.

References

- Aasgaard, T. (2002). *Song creations by children with cancer: Process and meaning*. (Doctoral dissertation) Aalborg: Aalborg University.
- Aasgaard, T. (2004). A pied piper among white coats and infusion pumps: Community music therapy in a paediatric hospital setting. In M. Pavlicevic & G. Ansdell (Eds.), *Community music therapy* (pp. 147–164). London: Jessica Kingsley.
- Ansdell, G. (2003). The stories we tell: Some meta-theoretical reflections on music therapy. *Nordic Journal of Music Therapy*, 12(2), 152–159.
- Dileo, C. (1997). Reflections on medical music therapy: Biopsychosocial perspectives of the treatment process. In J. Loewy (Ed.), *Music therapy and paediatric pain* (pp. 125–144). Cherry Hill, NJ: Jeffrey Books.
- Douglass, E.T. (2006). The development of a music therapy assessment tool for hospitalized children. *Music Therapy Perspectives*, 24, 73–79.
- Due, F. B. & Ghetti, C. M. (2018). Implementation of music therapy at a Norwegian children's hospital: A focused ethnographic study. *Voices: A World Forum for Music Therapy*, 18, 1–21.
- Engel, G. (1980). The clinical application of the biopsychosocial model. *American Journal of Psychiatry*, 137(5), 535–544
- Edwards, J. (1999). Anxiety management in paediatric music therapy. In C. Dileo (Ed.), *Music therapy & medicine: Theoretical and clinical applications* (pp. 69–76). Silver Spring, MD: American Music Therapy Association.
- Edwards, J. (2005). A reflection on the music therapist's role in developing a program in a children's hospital. *Music Therapy Perspectives*, 23, 36–44.
- Edwards, J. & Kennelly, J. (2016). Music therapy for hospitalized children. In J. Edwards (Ed.), *The Oxford handbook of music therapy* (pp. 53–65). Oxford: Oxford University Press.

- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196 (4286), 129–136.
- Fratianne, R. B., Prensner, J. D., Huston, M. J., Super, D. M., Yowler, C. J. & Standley, J. M. (2001). The effect of music-based imagery and musical alternate engagement on the burn debridement process. *Journal of Burn Care & Rehabilitation*, 22(1), 47–53.
- Ghetti, C. M. (2011). Clinical practice of dual-certified music therapists/child life specialists: A phenomenological study. *Journal of Music Therapy*, 48(3), 317–345.
- Ghetti, C. M. (2012). Music therapy as procedural support for invasive medical procedures: Toward the development of music therapy theory. *Nordic Journal of Music Therapy*, 21(1), 3–35.
- Ghetti, C. M. (2013). Pediatric intensive care. In J. Bradt (Ed.), *Guidelines for music therapy practice in paediatric care* (pp. 152–204). Gilsum, NH: Barcelona.
- Ghetti, C. M. & Walker, J. (2008). Hematology, oncology, and bone marrow transplant. In D. Hanson-Abromeit & C. Colwell (Eds.), *Effective clinical practice in music therapy: Medical music therapy for pediatrics in hospital settings* (pp. 147–193). Silver Spring, MD: American Music Therapy Association.
- Ghetti, C. M. & Whitehead-Pleaux, A.M. (2015). Sounds of strength: Music therapy for hospitalized children at risk for traumatization. In C. A. Malchiodi (Ed.), *Creative interventions with traumatized children* (2nd ed.) (pp. 324–341). New York: The Guilford Press.
- Helsedirektoratet. (2018, 27 September). Rett til innsyn i pasientjournalen din. Retrieved from <https://helsenorge.no/rettigheter/pasientjournal>
- Leinebø, T. & Aasgaard, T. (2017). Building musical bridges in paediatric hospital departments. In J. B. A. Strange, H. Odell-Miller & E. Richards (Eds.), *Collaboration and assistance in music therapy practice: Roles, relationships, challenges* (pp. 285–303). London: Jessica Kingsley.
- Lindenfelser, K. (2013). Palliative and end-of-life care for children. In J. Bradt (Ed.), *Guidelines for music therapy practice in paediatric care* (pp. 324–355). Gilsum, NH: Barcelona.
- Loewy, J. V. (1999). The use of music psychotherapy in the treatment of paediatric pain. In C. Dileo (Ed.), *Music therapy and medicine: Theoretical and clinical applications* (pp. 189–206). Silver Spring, MD: American Music Therapy Association.
- Loewy, J. V. (2011). Tonal intervallic synthesis as integration in medical music therapy. In S. Baker & S. Uhlig (Eds.), *Voicework in music therapy: Research and practice* (pp. 252–268). Philadelphia, PA: Jessica Kingsley.
- Loewy, J. V. (2019). Efficacy of pain management: Integration versus distraction. *Music & Medicine*, 11(1), 55–63.

- Loewy, J. V., Azoulay, R., Harris, B. & Rondina, E. (2009). Clinical improvisation with winds: Enhancing breath in music therapy. In R. Azoulay & J. Loewy (Eds.), *Music, the breath and health: Advances in integrative music therapy* (pp. 87–102). New York: Satchnote.
- Loewy, J. V., MacGregor, B., Richards, K. & Rodriguez, J. (1997). Music therapy paediatric pain management: Assessing and attending to the sounds of hurt, fear and anxiety. In J. V. Loewy (Ed.), *Music therapy and paediatric pain* (pp. 45–56). Cherry Hill, NJ: Jeffrey Books.
- Mangersnes, J. (2012). “Kva er meg, og kva er systemet?": ei kvalitativ undersøking av musikkterapeutar sine erfaringar i høve til sin rolle og profesjonalitet i arbeid med born på sjukehus. [“What is me, and what is the system?": A qualitative exploration of music therapists' experiences in relation to their role and professionalism in work with children in hospital]. (Unpublished master's thesis) Grieg Academy, University of Bergen, Bergen, Norway.
- Mondanaro, J. F. (2013). Surgical and procedural support for children. In J. Bradt (Ed.), *Guidelines for music therapy practice in paediatric care* (pp. 205–251). Gilsum, NH: Barcelona
- Noer, M. L. (2017). Kan kråka komme? [May the crow come too?] In T. Næss and E. Ruud (Eds.), *Musikkterapi i praksis* (pp. 8–13). Oslo: Norges musikkhøgskole.
- Pasient- og brukerrettighetsloven. (1999). Lov om pasient- og brukerrettigheter (pasient- og brukerrettighetsloven) [Law on patient and user rights] (LOV-1999-07-02-63). Retrieved from https://lovdata.no/dokument/NL/lov/1999-07-02-63#KAPITTEL_6
- Prensner, J. D., Yowler, C. J., Smith, L. F., Steele, A. L. & Fratianne, R. B. (2001). Music therapy for assistance with pain and anxiety management in burn treatment. *Journal of Burn Care & Rehabilitation*, 22(1), 83–88.
- Reitz, R., Common, K., Fifield, P. & Stiasny, E. (2012). Collaboration in the presence of an electronic health record. *Families, Systems, & Health*, 30(1), 72–80.
- Sanfi, I. (2012). *Music therapy: as procedural support under peripheral intravenous access involving young children*. (Doctoral dissertation). Aalborg University, Aalborg, Denmark.
- Saxe, G., Vanderbilt, D. & Zuckerman, B. (2003). Traumatic stress in injured and ill children. *PTSD Research Quarterly*, 14(2), 1–3.
- Shaller Gerweck, J. & Tan, X. (2010). Intensive care unit. In D. Hanson-Abromeit & C. Colwell (Eds.), *Effective clinical practice in music therapy: Medical music therapy for adults in hospital settings* (pp. 97–160). Silver Spring, MD: American Music Therapy Association.
- Turphy, A. E. (1997). The use of clinical improvisation to alleviate procedural distress in young children. In J. V. Loewy (Ed.), *Music therapy and paediatric pain* (pp. 89–96). Cherry Hill, NJ: Jeffrey Books.

- Ullsten, A., Eriksson, M., Klassbo, M. & Volgsten, U. (2016). Live music therapy with lullaby singing as affective support during painful procedures: A case study with microanalysis. *Nordic Journal of Music Therapy*, 26(2), 142–166.
- Ullsten, A., Eriksson, M., Klassbo, M. & Volgsten, U. (2018). Singing, sharing, soothing - biopsychosocial rationales for parental infant-directed singing in neonatal pain management: A theoretical approach. *Music & Science*, 1, 1–13.
- Waldon, E. G. (2016). Clinical documentation in music therapy: Standards, guidelines, and laws. *Music Therapy Perspectives*, 34(1), 57–63.
- Whitehead-Pleaux, A. M., Baryza, M. J. & Sheridan, R.L. (2006). The effects of music therapy on paediatric patients' pain and anxiety during donor site dressing change. *Journal of Music Therapy*, 43(2), 136–153.
- Ærø, S. C. B. (2016). Organisering av norsk musikkterapi i pediatri - en kvalitativ intervjuundersøkelse [Organization of Norwegian music therapy in pediatrics]. (Unpublished master's thesis) Norges musikkhøgskole, Oslo, Norway.
- Ærø, S. C. B. & Aasgaard, T. (2011). Musikkterapeut på en sykehusavdeling for barn: helsefremmende arbeid for både pasient og miljø. [Music therapist on a children's hospital unit: Health promoting work for both patient and environment]. In K. Stensæth & L. O. Bonde (Eds.), *Musikk, helse, identitet* [Music, health, identity] (pp. 141–160). Oslo: Norges musikkhøgskole.
- Ærø, S. C. B. & Leinebø, T. L. (2017). Musikkterapi for barn i palliasjon - en støttespiller for både kropp og sjel, individ og miljø. [Music therapy for children in palliative care - supporting both body and mind, individual and environment]. *Omsorg*, 3, 43–47.

Tone Leinebø Steinhardt^a & Claire Mathern Ghetti^b

^aOslo University Hospital, Rikshospitalet; ^bThe Grieg Academy Music Therapy Research Centre, The Grieg Academy – Department of Music, University of Bergen

*Corresponding author:

Tone Leinebø Steinhardt

Oslo University Hospital, Rikshospitalet

e-mail: toneleinebo@gmail.com

Disclosure statement

The authors have no conflict of interest to declare.

Music therapy for children going through haematopoietic stem cell transplantation

Lena Ugglå & Lars Ole Bonde

Introduction

Paediatric haematopoietic stem cell transplantation (HSCT) is a well-known treatment for aggressive leukemias, advanced haematopoietic and metabolic diseases (Miano et al., 2007). Medical developments in HSCT procedures have led to increased use of HSCT, and overall survival has improved in the paediatric population (Remberger et al., 2011). During the initial three to six months the HSCT procedure is very intense, including a period of isolation for 4–6 weeks, mainly due to the risk of infection. The child is monitored frequently after the initial hospitalisation in order to early detect infections etc. but also graft-versus-host disease (GVHD) or relapse of the disease.

The treatment affects the whole body and has a major impact on the child's and the parents' psychological wellbeing as well as their health-related quality of life (HRQoL) (Packman, Weber, Wallace & Bugescu, 2010). The lowest ratings of the child's HRQoL are noted one and three months after the HSCT (Rodgers, Wills-Bagnato, Sloane & Hockenberry, 2015). It takes approximately one to three years to return to the same level of HRQoL as before HSCT (Tanzi, 2011; Tremolada, Bonichini, Pillon, Messina & Carli, 2009).

Going through HSCT can be life-threatening. In terms of psychological reactions, post-traumatic stress disorder (PTSD) and traumatic stress symptoms as well as neurocognitive dysfunctions have been reported in HSCT survivors (Buchbinder et al., 2018; Stuber, Nader, Yasuda, Pynoos & Cohen, 1991). Earlier research has also reported high levels of stress and depressive symptoms in families of children going through HSCT (Phipps, Dunavant, Lensing & Rai, 2005).

Why music and music therapy?

Music affects the whole brain and the neurochemical systems of reward, motivation and pleasure, and can reduce stress levels and strengthen social attachments (Chanda & Levitin, 2013). Music evokes and affects emotions. The use of music in emotional regulation is supported by behavioural and neural evidence due to music's function in early infant-parent bonding and its developmental fitness (Sena Moore & Hanson-Abromeit, 2015). Musical activations also have an effect on different biomarkers, e.g. the stress hormone cortisol and reducing increases in blood glucose. Familiar music, singing, creating and improvising are other factors that seem to have an impact on emotional regulation and reduce activity in the amygdala (Fancourt, Ockelford & Belai, 2014; Finn & Fancourt, 2018; Moore, 2013).

Music therapy is used in paediatric healthcare with the goal of helping children through serious experiences and supporting health (Bradt, 2012). Music therapy is a relational therapy, and one main objective is to increase the patient's experiences and intersubjective knowledge by being involved and relating through music (Trondalen, 2016).

Previous research reported increased well-being and decreased procedural pain after music interventions for children with cancer (Barrera, Rykov & Doyle, 2002; Nguyen, Nilsson, Hellstrom & Bengtson, 2010). Music therapy in the HSCT context for children showed reduced levels of anxiety and, in the young adult population, improved coping and social integration were reported (Robb et al., 2014; Robb & Ebberts, 2003).

Study design and music therapy protocol

From February 2013 to November 2017 a randomised study was conducted at the Karolinska University Hospital, Sweden. Thirty-eight patients from 2 months to 17 years of age were included in the study. Music therapy was performed twice a week for 4–6 weeks in the music therapy group. The patients were hospitalised until donor engraftment. After engraftment the children were monitored in an outpatient paediatric ward at the hospital. The children in the control group were offered music therapy after discharge in the outpatient ward, twice a week for 4–6 weeks.

The music therapy intervention included both expressive and receptive methods (MacDonald, Kreutz & Mitchell, 2012). The session took place in the child's hospital room, and the child was invited to play different musical instruments, sing and listen to music with the music therapist.

The parents and siblings could also participate. The music therapy intervention was designed to build a trusting relationship between the child and the music therapist. The session had the goal of being flexible and varied in order to provide a holding structure to benefit both children and parents so that they could stay emotionally regulated (Fosha, Siegel & Solomon, 2009).

The aims of our study were:

- To evaluate physiological endpoints such as heart rate, blood pressure and saturation as well as evaluation of pain and mood between treatment groups during HSCT. The music therapy group received music therapy twice a week, and the control group received supportive conventional treatment.
- To compare HRQoL questionnaires at admission, discharge and after 6 months between music therapy group and control group.
- To explore the subjective experiences and memories of interactions between children, parents and music therapist during music therapy interventions.

Results

We have published three articles based on our research project. In our first article, which included 21 patients, 0–16 years of age, we reported on the children's heart rates, blood pressure and saturation in connection with music therapy (Uggla et al., 2016). The children's physiological parameters in the morning were noted in both the music therapy group and the control group and were then compared with corresponding parameters that were recorded in the evening. The children's heart rates in the music therapy group were significantly lower ($p < 0.001$) in the evening 4–8 hours after the music therapy intervention in comparison to the control group.

In our second article, which included 29 patients, 0–17 years of age, we reported that the children's self-reported health-related quality of life (HRQoL) improved after the music therapy intervention. In the music therapy group, the physical functioning improved at the time of discharge (adjusted $p = 0.04$), and the control group showed improved results after the music therapy interventions in all domains. ($p = 0.015$) (Uggla, Bonde, Hammar, Wrangsjö & Gustafsson, 2018).

Our third article was a qualitative study using the collaborative interview format as a data collection method, examining the families' experiences and memories of the interaction in the music therapy session. One of the questions was: what was it like to experience music therapy? Six families were included, and child, parents and music therapist were interviewed at

the same time by an independent psychologist who also performed the analysis. The analysis emerged in three themes: experiences of competence and recognition of the self; experiences of interactive affect regulation as potential for change; experiences of the importance of the therapeutic relationship (Uggla, Mårtensson Blom, Bonde, Gustafsson & Wrangsjö, 2019).

Discussion

The aim of the doctoral study was to evaluate and explore music therapy in the particular HSCT context. Heightened heart rate was reported to be related to increased levels of distress, and elevated heart rate after an accident may predict symptoms of PTSD 6 months later for children and adolescents (De Young, Kenardy & Spence, 2007; Morris, Hellman, Abelson & Rao, 2016). Previous research has reported symptoms of stress in children, parents and siblings after HSCT. The significantly decreased heart rate levels in the evening in the music therapy group may indicate decreased levels of stress due to decreased activation in the amygdala through emotional regulation.

The increasing physical functioning reported by the children at discharge in the music therapy group and the overall increased HRQoL in the control group after music therapy at 6 months follow-up indicate the importance of the music therapy intervention. The musical elements – melody, rhythm, movement and dynamic shifts in intensity – have the potential to facilitate an intersubjective regulation experience. Shared affects and intentions in music therapy are cross-modal and do not need to be explained in words. Affect attunement through musical experiences in music therapy gives the participants an opportunity to interact and thereby influence the interplay. This could be seen as important to these children and parents, whose current life circumstances greatly reduce their opportunity to influence their situation and the challenging medical treatment.

Conclusions

Music therapy developed into a significant and helpful experience for the participants, an important factor in coping and managing the treatment period at the hospital. The combination of reduced heart rate values four to eight hours after the intervention in the music therapy group and the improved HRQoL reported by both groups suggests that music therapy can be an effective, complementary intervention during and after HSCT.

References

- Barrera, M. E., Rykov, M. H. & Doyle, S. L. (2002). The effects of interactive music therapy on hospitalized children with cancer: A pilot study. *Psychooncology*, *11*(5), 379–388. <https://doi.org/10.1002/pon.589>
- Bradt, J. (Ed.) (2012). *Guidelines for music therapy practice in pediatric care*. Dallas, TX: Barcelona.
- Buchbinder, D., Kelly, D. L., Duarte, R. F., Auletta, J. J., Bhatt, N., Byrne, M., . . . Shaw, B. E. (2018). Neurocognitive dysfunction in hematopoietic cell transplant recipients: Expert review from the late effects and Quality of Life Working Committee of the CIBMTR and complications and Quality of Life Working Party of the EBMT. *Bone Marrow Transplant*, *53*(5), 535–555. <https://doi.org/10.1038/s41409-017-0055-7>
- Chanda, M. L. & Levitin, D. J. (2013). The neurochemistry of music. *Trends in Cognitive Sciences*, *17*(4), 179–193. <https://doi.org/10.1016/j.tics.2013.02.007>
- De Young, A. C., Kenardy, J. A. & Spence, S. H. (2007). Elevated heart rate as a predictor of PTSD six months following accidental pediatric injury. *J Trauma Stress*, *20*(5), 751–756. <https://doi.org/10.1002/jts.20235>
- Fancourt, D., Ockelford, A. & Belai, A. (2014). The psychoneuroimmunological effects of music: A systematic review and a new model. *Brain Behav Immun*, *36*, 15–26. <https://doi.org/10.1016/j.bbi.2013.10.014>
- Finn, S. & Fancourt, D. (2018). The biological impact of listening to music in clinical and nonclinical settings: A systematic review. *Prog Brain Res*, *237*, 173–200. <https://doi.org/10.1016/bs.pbr.2018.03.007>
- Fosha, D., Siegel, D. J. & Solomon, M. F. (2009). *The healing power of emotion : Affective neuroscience, development, and clinical practice*. New York: Norton.
- MacDonald, R. A. R., Kreutz, G. & Mitchell, L. (2012). *Music, health, and wellbeing*. Oxford: Oxford University Press.
- Miano, M., Labopin, M., Hartmann, O., Angelucci, E., Cornish, J., Gluckman, E., . . . Marrow, T. (2007). Haematopoietic stem cell transplantation trends in children over the last three decades: a survey by the paediatric diseases working party of the European Group for Blood and Marrow Transplantation. *Bone Marrow Transplant*, *39*(2), 89–99. <https://doi.org/10.1038/sj.bmt.1705550>
- Moore, K. S. (2013). A systematic review on the neural effects of music on emotion regulation: Implications for music therapy practice. *J Music Ther*, *50*(3), 198–242. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/24568004>
- Morris, M. C., Hellman, N., Abelson, J. L. & Rao, U. (2016). Cortisol, heart rate, and blood pressure as early markers of PTSD risk: A systematic review and meta-analysis. *Clin Psychol Rev*, *49*, 79–91. <https://doi.org/10.1016/j.cpr.2016.09.001>

- Nguyen, T. N., Nilsson, S., Hellstrom, A. L. & Bengtson, A. (2010). Music therapy to reduce pain and anxiety in children with cancer undergoing lumbar puncture: A randomized clinical trial. *J Pediatr Oncol Nurs*, 27(3), 146–155. <https://doi.org/10.1177/1043454209355983>
- Packman, W., Weber, S., Wallace, J. & Bugescu, N. (2010). Psychological effects of hematopoietic SCT on pediatric patients, siblings and parents: A review. *Bone Marrow Transplant*, 45(7), 1134–1146. <https://doi.org/10.1038/bmt.2010.74>
- Phipps, S., Dunavant, M., Lensing, S. & Rai, S. N. (2005). Psychosocial predictors of distress in parents of children undergoing stem cell or bone marrow transplantation. *J Pediatr Psychol*, 30(2), 139–153. <https://doi.org/10.1093/jpepsy/jsi002>
- Remberger, M., Ackefors, M., Berglund, S., Blennow, O., Dahllöf, G., Dlugosz, A., . . . Ringden, O. (2011). Improved survival after allogeneic hematopoietic stem cell transplantation in recent years. A single-center study. *Biol Blood Marrow Transplant*, 17(11), 1688–1697. <https://doi.org/10.1016/j.bbmt.2011.05.001>
- Robb, S. L., Burns, D. S., Stegenga, K. A., Haut, P. R., Monahan, P. O., Meza, J., . . . Haase, J. E. (2014). Randomized clinical trial of therapeutic music video intervention for resilience outcomes in adolescents/young adults undergoing hematopoietic stem cell transplant: A report from the Children's Oncology Group. *Cancer*, 120(6), 909–917. <https://doi.org/10.1002/cncr.28355>
- Robb, S. L. & Ebberts, A. G. (2003). Songwriting and digital video production interventions for pediatric patients undergoing bone marrow transplantation, part II: An analysis of patient-generated songs and patient perceptions regarding intervention efficacy. *Journal of Pediatric Oncology Nursing*, 20(1), 16–25. <https://doi.org/10.1053/jpon.2003.4>
- Rodgers, C., Wills-Bagnato, P., Sloane, R. & Hockenberry, M. (2015). Health-related quality of life among children and adolescents during hematopoietic stem cell transplant recovery. *Journal of Pediatric Oncology Nursing*, 32(5), 329–336. <https://doi.org/10.1177/1043454214563413>
- Sena Moore, K. & Hanson-Abromeit, D. (2015). Theory-guided therapeutic function of music to facilitate emotion regulation development in preschool-aged children. *Frontiers in Human Neuroscience*, 9. <https://doi.org/10.3389/fnhum.2015.00572>
- Stuber, M. L., Nader, K., Yasuda, P., Pynoos, R. S. & Cohen, S. (1991). Stress responses after pediatric bone marrow transplantation: Preliminary results of a prospective longitudinal study. *J Am Acad Child Adolesc Psychiatry*, 30(6), 952–957. <https://doi.org/10.1097/00004583-199111000-00013>
- Tanzi, E. M. (2011). Health-related quality of life of hematopoietic stem cell transplant childhood survivors: State of the science. *J Pediatr Oncol Nurs*, 28(4), 191–202. <https://doi.org/10.1177/1043454211408100>

- Tremolada, M., Bonichini, S., Pillon, M., Messina, C., & Carli, M. (2009). Quality of life and psychosocial sequelae in children undergoing hematopoietic stem-cell transplantation: A review. *Pediatr Transplant*, *13*(8), 955–970.
<https://doi.org/10.1111/j.1399-3046.2009.01203.x>
- Trondalen, G. (2016). *Relational music therapy : an intersubjective perspective*. Dallas, TX: Barcelona.
- Uggla, L., Bonde, L. O., Hammar, U., Wrangsjö, B. & Gustafsson, B. (2018). Music therapy supported the health-related quality of life for children undergoing haematopoietic stem cell transplants. *Acta Paediatr*, *107*(11), 1986–1994.
<https://doi.org/10.1111/apa.14515>
- Uggla, L., Bonde, L. O., Svahn, B. M., Remberger, M., Wrangsjö, B. & Gustafsson, B. (2016). Music therapy can lower the heart rates of severely sick children. *Acta Paediatr*, *105*(10), 1225–1230. <https://doi.org/10.1111/apa.13452>
- Uggla, L., Mårtensson Blom, K., Bonde, L. O., Gustafsson, B. & Wrangsjö, B. (2019). An explorative study of qualities in interactive processes with children and their parents in music therapy during and after pediatric hematopoietic stem cell transplantation. *Medecines*, *6*(1), 28. Retrieved from <http://www.mdpi.com/2305-6320/6/1/28>

Lena Uggla^a & Lars Ole Bonde^b

^aKarolinska Institutet, Stockholm, Sweden, ^bindependent senior researcher (former Aalborg University, Denmark)

*Corresponding author

Lena Uggla

Karolinska Institutet

Stockholm

Sweden

tel. +46705298010

e-mail: lena.uggla@ki.se

Music and health promotion in Danish/ Nordic hospitals – who and how? An essay.

Lars Ole Bonde

Abstract

The purpose of this article is to provide an overview of health promotion through music activities and interventions in Danish/Nordic hospitals over the last twenty years, with particular emphasis on paediatrics. The article also discusses theoretical rationales and practical challenges related to these relatively new initiatives. The methodology is a mixture of heuristics and literature review. The author has been an active agent in this field – as a clinician, researcher, supervisor and teacher – and has taken part in the development of the theoretical concept of “health musicking”, which serves as a framework for many of the professionals (‘agents’) in the field. Findings include a presentation of the present evidence base for music interventions in Nordic hospitals and a systematic overview of agents in the field. There is a growing body of evidence from different types of research studies in the Nordic countries. However, the evidence base tailored to this specific field is still limited. Two different approaches or roads to the implementation of music therapy/music medicine in hospitals are identified and discussed, and practical implications are highlighted in a number of recommendations for professionals in the field.

Keywords: *health musicking, music therapy, music medicine, hospital, evidence*

Introduction

In this essay I look back on a process that I have followed and actively participated in for more than two decades: the use of music activities and music experiences in the healthcare system – primarily in Denmark but also in other Nordic countries. As a researcher, I have worked with music therapy in cancer rehabilitation (Bonde, 2004; Bonde, 2015), with music therapy in palliative and hospice care (Bode & Bonde, 2011; Bonde, 2012), with music therapy for patients in psychiatric treatment (Bonde, 2010; Bonde & Pedersen, 2013) and with the development of music medicine for different populations, including elderly people with dementia

(Krøier, Anderson-Ingstrup & Bonde, 2019). I have guided Danish and international PhD students with projects in many different clinical areas, for example women with gynaecological cancer (Wärja & Bonde, 2014) and children with cancer and their families (Sanfi & Bonde, 2014; Sørensen & Bonde, 2015). I have followed the paediatric *Music and Imagery in Child Oncology* study (MICO is described in detail later) for more than ten years. As a teacher of music therapy at Aalborg University, I have helped train music therapists who are currently employed in psychiatry, elderly care, hospices, the rehabilitation of patients with acquired brain injury, in work with children and young people with physical and mental health issues, etc. (Bonde, 2014). Yet I have never seen a music therapist employed in the Danish hospital system. Conversely, in Norway I have guided an ever-growing group of music therapists working in paediatric hospitals, and I have followed a pioneering Swedish project on the effects of music therapy for cancer-affected children and adolescents who receive stem cell treatment (Uggla et al., 2019; Uggla, Mårtenson Blom, Bonde, Gustafsson & Wrangsjö, 2018). I have contributed to the development of the theoretical concept of “health musicking”, which I will briefly introduce to provide a broader background. In recent years I have researched the wider field of music and public health, research which partly focuses on the use of music as a health-promoting factor in everyday life and partly discusses musical prevention efforts for selected – clinical as well as non-clinical – groups (Bonde & Theorell, 2018).

Method

The starting point for the present essay is a recently published report on the use of music in Danish hospitals (Jensen & Nielsen, 2019), which gives me an opportunity to reflect on the current situation in Denmark and the Nordic countries. The article focuses on a problem or dilemma that I have encountered many times over the years: despite good evidence in the form of meta-analysis such as Cochrane Reviews, music therapists – researchers as well as clinicians – are often met with scepticism by doctors, hospital administrators and politicians. I reject the simple explanation that the healthcare sector is currently under-financed and therefore that there is no room for new initiatives or professional groups. Instead I will try to point to other causes – and possible solutions. My method is a mixture of heuristics (I want to reflect on personal experiences over three decades), literature review (presentation of and comments on key literature in the field), which in the end leads to various suggestions and recommendations. First, I focus on the broad concept of *health musicking* and on research in music and public health. Then I zoom in on the specific topic of music in hospitals, especially paediatric hospitals, where my starting point is the new Danish study of this field.

Theory: Health musicking

The idea that music can be part of individual and public health promotion goes all the way back to ancient Greece. The Asclepion sanctuary in the old city-state of Epidaurus can be understood as the first integrative health centre in the world where music, dance and theatre were included in treatment and prevention (Bonde, 2014). Norwegian music therapy pioneer Even Ruud was the first from a Nordic country to launch an academic publication on the broader subject: *Music and Health* (Ruud, 1986). In 2006 his countryman Trygve Aasgaard published the anthology *Music and Health* (Aasgaard, 2006), and Ruud further developed the ideas, partly as a researcher at the Centre for Music and Health (today the Centre for Research in Music and Health, CREMAH) from 2008, partly as initiator of the *Music, Culture and Health* network (MUCH, 2011-13) and partly in a series of articles and book chapters on various aspects of the health potential of music experiences and activities (Ruud, 1998, 2001; Ruud & Stensæth, 2012). Following a pre-conference in connection with the *4th European Public Health Conference* in Copenhagen 2011, a Nordic Network for Research in Music and Public Health was established which in 2018 co-authored the first scientific anthology on the subject, *Music and Public Health* (Bonde & Theorell, 2018).

Our knowledge of how and why music has a health potential for most people is gradually consolidating (and) based on contributions from both the humanities and the social and natural sciences. Scientific research into the effect of music on the body, mind and spirit includes 1) neuroscientific studies of the brain's response to and processing of musical stimuli in musicians as well as non-musicians, 2) analysis of the "mechanisms" that are activated: when we sing, play or listen to music a number of neurochemical systems are set in motion, regulating a) the brain reward system, motivation and emotions, b) stress responses, c) immunity, and d) social attachment. These are effects that can be measured objectively, and results can be calculated using statistical methods. If humanists or social scientists ask informants (of many different types) what they are experiencing when listening to music, we get subjective accounts of how music is used to regulate mood, bodily states (alleviate stress or boost energy) and socialising. Finally there are the aesthetic and existential experiences which music can provide in rich measure (Gabrielsson, 2011; Bonde, Ruud, Skånland & Trondalen, 2013; Trondalen & Bonde, 2014). These experiences can be described phenomenologically and/or interpreted hermeneutically. Hallam (2015) maps what she calls "the power of music" in relation to other areas of life – the so-called transfer effect – through a comprehensive overview of studies on the effects of active musical engagement on e.g. learning, memory, creativity, attention, prosocial behaviour and personal development. The last chapter of Hallam's book is about music and health, and the author summarises numerous studies that document the impact of music activities throughout life,

including listening to music, on physical and mental well-being – not least through music's potential to alleviate anxiety, reduce stress and strengthen the immune system. Hallam underlines the importance of engagement in music early in life, since the pre-school years are formative in shaping a direction for the brain's development and the development of empathy and social engagement.

Norwegian music therapy researcher Brynjulf Stige (2002, 2012) was the first to develop the concept of *health musicking*. The concept itself incorporates a clear reference to the music researcher Christopher Small's concept of musicking (Small, 1998), which emphasises that music as a form of activity is more than an (aesthetic, social or commercial) object, just as he points out that participation can take on a multitude of different forms. Stige asserts that when musicking is combined with health, the user is offered several opportunities or tools that they can use in relation to their personal resources and interests. Stige refers to social psychologist Gibson's concept of affordance, while music sociologist De Nora (2000, 2007) has coined the supplementary concept of appropriation. In this view health is regarded as a bodily, creative and aesthetic action (performance) and attitude in a social and cultural context. Stige (2002; 2012, p. 186) proposes the following definition of health musicking: "... the appraisal and appropriation of the health affordances of the arena, agenda, agents, activities, and artefacts of a music practice".

In a special issue of *Arts in Action* (Bonde, 2011) I describe health musicking as any use of music activities and music experiences to regulate physical, emotional and relational states, typically for the purpose of promoting the experience of well-being. Many empirical music psychological studies have documented how humans use music in many different ways to regulate physical and mental well-being and improve quality of life (DeNora, 2000, 2007; Lilliestam, 2013; MacDonald, Kreutz & Mitchell, 2012; Bonde, Ruud, Skånland & Trondalen, 2013). The music and health field is comprehensive and ranges from laypeople's "self-therapeutic" use of music in everyday life to specially designed music activities and environments targeting groups with special needs (community music and community music therapy) to professionally facilitated interventions in music medicine and music therapy. Bonde (2011) describes the four main purposes of health musicking as:

1. Identity formation and development through music
2. The professional use of music and sound to help individuals
3. The development of communities and values through music
4. Creating and sharing musical environments.

A map of the field

In the model below (Figure 1) the four goals or possibilities of health musicking (or music-ing) are placed in a quadrant model, locating music medicine and some music therapy models in relation to each other.

In the article mentioned earlier (Bonde, 2011) I give several examples of musical experiences and research projects within each of the four quadrants. Here I will briefly describe the quadrants using *playlists* as an example – that is, the use of specially designed lists of (recorded or live) music that have been developed and adapted for various health purposes.

In the upper left quadrant trained music therapists help individuals – for example, people with acquired brain injury or dementia, and their relatives – to compile a personal playlist consisting of music that has meant something to that person throughout their life. Staff at the care centre/institution/hospital can then use the playlist for various purposes in treatment and daily life, for example, to create a calm atmosphere in a care situation or (vice versa) to provide stimulation or inspiration for dialogue or training. In music psychotherapy, working with the client's meaningful 'special music' can play a crucial role (Butterton, 2004, 2008; Fønsbo, 2013).

In the lower left quadrant the example can be musical autobiographies based on personal playlists (Bonde, 2013; Ruud, 1997, 2013). Music therapy students examine their personal musical life story by selecting important examples of music that have meant something special and thus contributed to the shaping of their musical identity. Based on these personal playlists, the student is interviewed (possibly using the special interview technique (and software program) RepGrid, based on Kelly's personal construct psychology) so that patterns and lines of development in the student's musical identity are identified. Afterwards the student shares some of his/her experiences with the group of fellow students, and a common awareness is raised of situations, personal choices and values that contribute to the development of musical identity. With a similar focus, one or two pieces of "signature music" are often used as a starting point for listening groups in psychiatric hospitals and for courses or workshops in music psychology or music therapy, where participants are asked to introduce themselves to each other through the selected music. Thus, in a very short space of time everyone gets a strong personal impression of each participant.

In the upper right quadrant we find the playlists with relaxing, imagery-stimulating music and specially composed music and imagery narratives used in the *Music and Imagery in Child Oncology* (MICO) study. MICO is a Scandinavian research project evaluating the impact

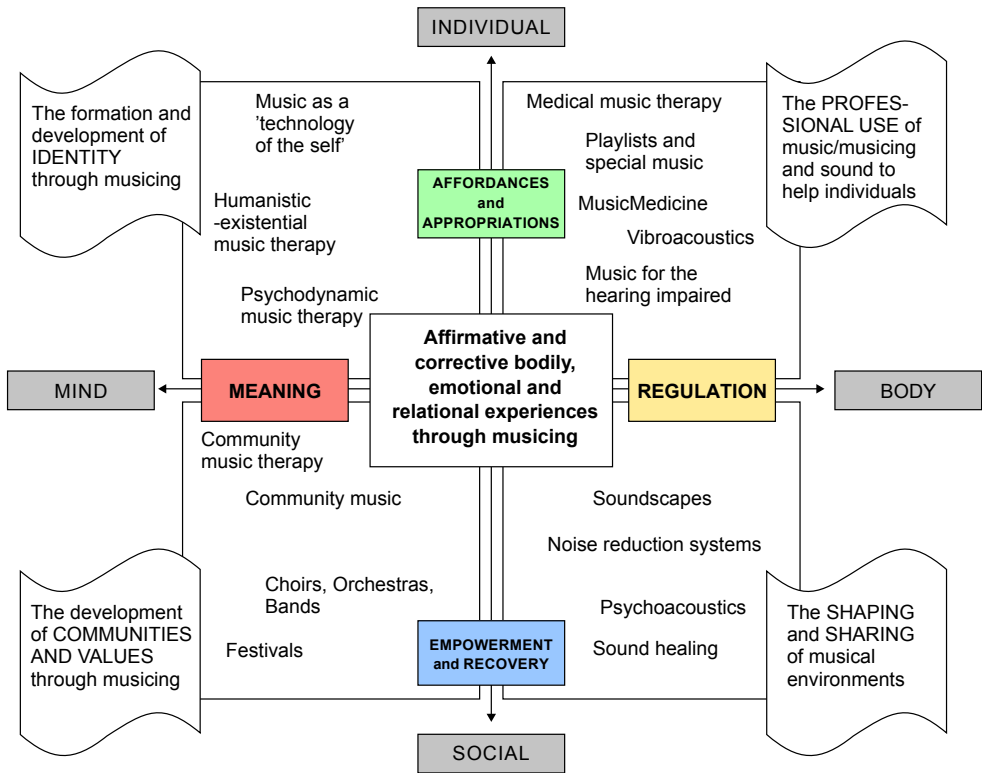


Figure 1. HEALTH MUSICING: A THEORETICAL MODEL. Inspired by G. Ansdell (2001) and Ken Wilber et al. (2013). Reference: Ekholm, O., Juel, K. & Bonde, L. O. (2015): *Music and public health: An empirical study of the use of music in the daily life of the adult Danish citizens and the health implications of musical participation*. *Arts & Health*, 8(2), 154–168.

of medical music therapy / music medicine on side effects of chemotherapy in children aged 7–17 with cancer. The playlists and the musical narratives have been developed and composed especially for this study, and they can be used in many ways, including parents reading the narratives to the music (www.micostudy.com). Another example is the *Music Star* application with its specially designed playlists. *Music Star* was developed by music therapists for psychiatric inpatients at Aalborg University Hospital, and it functions as an app on iPads or smartphones. It has an intuitive interface where each playlist is color-coded, from blue to red, indicating increasing intensity (Lund, Bertelsen & Bonde, 2016). All the music in the 12–16 playlists (of 30–60 minutes' duration) belongs to the “supportive”

music category in the taxonomy of music for therapeutic use (Wärja & Bonde, 2014), but no information about the style or genre of the music is given – only durations and titles of the tracks and the name of the playlist. Music medicine can also be played live, as pianist Margrethe Langer Bro PhD has documented in her study *Resonance; Music as adjuvant for cancer treatment* in which respectively live, recorded and no music was offered to 344 adult lymphoma patients in primary chemotherapy at six outpatient haematology departments in Denmark (Bro, 2019; Bro & Johansen, 2017). 143 patients accepted the offer, and of the 41 who listened to patient-selected live music, many experienced improved mood and reduced anxiety. In a nurse's words: "On the days when live music is played all participants benefit: patients, co-patients, relatives and staff. It creates a very relaxed atmosphere despite the seriousness of the situation" (Bro & Johansen, 2017, p. 270).

In the lower right quadrant we can place the special music concept *MusiCure*, which was originally developed by the composer Niels Eje as a specially designed sound environment for recovery rooms at Rigshospitalet's intensive care unit 4131 (Eje & Eje, 2019). One of the author's main points is that: "Music should not be dosed according to classic recipe principles as "tablets". The perspective must be that music has an impact on basic conditions such as anxiety, stress, etc. and should therefore be used when needed and when the opportunity is there" (Eje & Eje, 2019, p. 174). The newer commercial playlist concept *Musicmind* has been specially developed for care homes/centres where the nursing staff manage the many playlists – both in larger groups where the music creates a recognisable and affirmative environment and individually where the musical needs of the individual (with/without dementia) can be met. The concept consists of two separate list types: (1) a number of style and genre-specific playlists categorised according to a conscious regulation of the individual's arousal – low arousal for calm and anxiety, high arousal for activation and revitalisation, medium arousal for accompaniment of simple activities and interaction between individuals; (2) a number of thematic playlists featuring specific artists, styles or music from specific periods or for specific purposes, for example seasons, holidays etc. (www.musicmind.me).

Music and public health

In 2018, as mentioned earlier, I co-edited the first major internationally based book on music and public health (Bonde & Theorell, 2018). A number of Danish and Nordic (and also international) studies indicate that there is a significant positive health effect associated with an active, sustained commitment to music on an amateur basis, e.g. as a choral singer or a band musician (Bonde, Ekholm & Juel, 2018; Løkken et al., 2018; Theorell, Knudtsen, Horwitz & Wikström, 2016). Professional musicians, on the other hand, face

several health challenges which manifest themselves in the form of occupational physical pain and stress and – as compensation – significant overuse of alcohol and various substances. Nevertheless, and maybe paradoxically, professional musicians describe their overall health as being better than all the other groups. There are only a few longitudinal studies on the relationship between health and long-time leisure activities (e.g. music as a hobby), and they point out that the health effect is probably more due to active engagement as such and the associated social community interaction in general than the specific musical activity (Løkken et al., 2018; Weziak-Bialowolska, 2016). I will return to this question in the discussion section of this article.

Results: Music in Danish hospitals

Two articles on the possible health effects of music/art were recently published in the *Journal of the Danish Medical Association (Ugeskrift for læger)* (Jensen & Bonde, 2017; Eje & Eje, 2019) and, as mentioned above there is fairly extensive literature documenting these effects. One might therefore think that this knowledge is widespread in the Danish healthcare system. However, this is not the case.

A new Danish report (Jensen & Nielsen, 2019) has mapped the current use of music in Danish hospitals and hospices. The respondents were 315 senior nurses in 24 hospitals across all five regions, and in 75 per cent of the cases they reported that their department had at least one musical offering for their patients. However, a closer analysis of these offerings shows that this is no systematic effort at all, as the five most frequent options were:

1. Opportunity to listen to music on personal equipment (offered by 73%)
2. Opportunity to listen to music on hospital equipment (offered by 51%)
3. Other options (offered by 32%)
4. Instrument available in the department (offered by 23%)
5. Regular opportunities for individual music listening & background music (offered by 21%).

The three most common purposes of the music initiatives were: 1) distraction/entertainment (67 per cent), 2) relaxation & anxiety reduction (65 per cent), 3) stress reduction (55 per cent), and the most frequent initiator of the music activity was the patient him/herself (88 per cent), while in 71 per cent of the cases it was a nurse and in 33 per cent a relative who took the initiative. In May 2019 no music professionals were employed in the

Danish general hospital system, including paediatrics. This is in stark contrast to reports on the situation in the 21 Danish hospices (not including two newly established children's hospices), of which 13 (65 per cent) have employed a music therapist and two (10 per cent) a musician, which allows for a completely different range of music initiatives:

1. “Singing out” (“Udsyngning”; music to accompany the deceased when leaving hospice) (80%)
2. Option of listening to music in the patient's private room (75%)
3. Regular/occasional music events (75%)
4. Music therapy (70%)
5. Community singing (70%)

The hospital nurses' descriptions of music initiatives do not correspond with the Danes' specific experiences. In a memo report (from the *Think Tank Music and Health*, 2017) it appears that only 17 per cent of the 1,013 respondents stated that they had experienced music in hospital. In the same report 63 per cent agreed that “music should be incorporated and used more actively in the Danish healthcare system”. Only 5 per cent disagreed.

In a broader perspective the theme “arts in hospitals” has been the subject of much debate in recent years and was funded by a dedicated government initiative in 2016. Four major ‘culture on prescription’ projects have been offered to citizens on long-term sick leave in the municipalities of Aalborg, Silkeborg, Nyborg and Vordingborg. Knowledge of the effects of these projects on, for example, the participants' relationship with the labour market awaits the final reports, of which only one has been published so far (Jensen, 2019). This report indicates that participants experience improved quality of life and social engagement, and on this basis the municipality of Aalborg has decided to continue the programme without external funding. Key questions are what can the individual arts contribute, how can the activities be most appropriately mixed (also in relation to the participants' gender), and is the effort economically viable or reasonable.

A Nordic perspective on music in hospitals – with a special glance at paediatric wards

Since the early 1980s there have been some music therapy and music medicine projects at Nordic hospitals, especially in paediatrics (see the chapter by Ullsten, Gaden & Mangersnes in this anthology). Today there are established music therapy programmes on paediatric

wards in Sweden and Norway. In Sweden music therapist Lena Ugglå has defended her PhD thesis on music therapy in the treatment of children and adolescents who undergo haematopoietic stem cell transplantation (Ugglå et al., 2016; Ugglå, 2019; Ugglå, Mårtenson Blom, Bonde, Gustafsson & Wrangsjö, 2019)¹. In Finland one single music therapist is employed at a paediatric hospital, while music therapists are not yet employed in any Danish hospital. In Denmark researchers such as Karin Schou and I have worked on (externally funded) projects for cardiac and cancer patients (Bonde, 2008; Schou, 2008; Schou, Pedersen & Bonde, 2012). Music therapist postdoc Ilan Sanfi has been conducting externally funded research projects at Aarhus University Hospital for more than ten years, and he is head of the above-mentioned Nordic research project *Music and Imagery in Child Oncology* (MICO) that investigates the effect of specially designed music narratives and ‘guided music journeys’ for children and young people in treatment for life-threatening cancer diseases (Sanfi & Bonde, 2014, www.micostudy.com). The project evaluates the impact of music therapy on side effects of chemotherapy in children aged 7–17 with cancer, i.e. whether music therapy can reduce nausea, vomiting and other side effects. In addition the project focuses on the psychological significance of music therapy in terms of enhancing the participants’ inner resources, resilience and overall well-being in relation to their courses of treatment. The MICO research project is the first of its kind in the world and is currently running at five university hospitals in Denmark, Norway and Sweden (Aarhus, Copenhagen, Oslo, Tromsø and Lund). These projects, supported by private foundations, put music therapy, both clinical and research, on the Danish (and Nordic) hospital map, but so far it has not led to the appointment of music therapists in Danish hospitals. In all countries there is a small number of music-medical projects (Thorgaard, 2004; Lund, Bertelsen & Bonde, 2016; Eje & Eje, 2019; Ullsten, Gaden & Mangersnes, this volume).

I have personally followed the development of the music therapy programmes at the three major paediatric hospitals in Oslo, where six music therapists are currently on the staff. The development here has convinced me that music interventions can only be established and followed up systematically if the music therapists are formally employed in the hospital as members of the hospital staff. This enables them to develop and reflect upon interventions and measures in relation to the concrete clinical practice and specific treatment culture in the individual departments. On this basis, research naturally grows out of the interdisciplinary collaboration and the need for specific documentation. The same picture can be seen in Danish hospices, where music and music therapy have been an integral part of the institutional culture for more than 10 years.

¹ See the separate report on Ugglå’s project in this anthology.

Agents in music for health promotion

As can be seen above, many different professional agents are operating in the field when music is offered in a hospital ward or at other treatment and rehabilitation centres: professional musicians who play and sing, some for a fee and as part of municipal services, others as volunteers; amateur musicians – soloists, smaller groups and choirs – who act as volunteers; and music therapists who offer a wide range of music activities. There is a widespread, basic confusion when it comes to understanding the differences between music therapy and music medicine (Gold et al., 2011). In order to reduce the confusion and create more clarity in relation to the various professional approaches to ‘music in hospitals’, I have developed an overview (Bonde, 2019) which is presented here in an extended version (Table 1).

1. **Music therapy** is the specialised expertise in the use of musical experiences to treat both mental and somatic disorders. In the Nordic countries music therapy is practised in the healthcare system by university-trained music therapists (with a master degree), and the following tasks are typical: (1) treating patients with special needs one-to-one, (2) offering tailor-made interventions and activities for larger or smaller groups, (3) developing environmental therapeutic services, (4) advising and training staff in the use of music interventions and music medicine in the day-to-day running of the institution or hospital, (5) offering support services to the hospital/institution staff.
2. **Music medicine** is the use of music (recorded or live, often using specially designed sound systems) for the benefit of hospital patients, outpatients or citizens in specialised institutions, both in the treatment and rehabilitation phase and in palliative care. Many different agents are active in this field: composers develop special music for various purposes, such as music in ambulances. Professional musicians play for patients with an explicitly stated treatment goal, such as reducing anxiety or improving mood. Music medicine must always be administered in close consultation with doctors, nurses and trained music therapists.
3. **“Health musicians”** are most often professional musicians who use their advanced skills and commitment to create joy and improve quality of life for patients in hospitals and care centres through specially designed and personalised live performances. This is neither music therapy nor music medicine as it does not have an intended treatment component, yet it may have a therapeutic

effect. The field is mainly self-regulating, and activities are currently expanding in parallel to the activities of hospital clowns, another non-treatment-oriented offer, so far financed 100 per cent by private funding.

4. **Music as health promotion.** Specially organised music experiences – in line with other cultural experiences – are included in ‘culture on prescription’ projects, among other things. In this field we are talking about authentic art experiences – not as treatment offered by therapists, but developed by the arts institutions, based on the documented fact that arts experiences can have a health-promoting function. In Aalborg the Nordjysk Centre for Culture and Health (NOCKS) operates an interdisciplinary and cross-sectoral research and development unit that initiates and documents new projects in this subfield.
5. **Music as a diversion/entertainment** in hospitals and institutions. More technological solutions are currently being developed such as commercial playlists and apps specifically aimed at adult hospital patients or people with dementia. The area is interesting in a health promotion context if specially composed music is included and/or if the choice of music is based on professional expertise on e.g. music for regulating arousal.
6. **Music pedagogy / music education.** Paediatric wards in larger hospitals may employ a music teacher or educator. Their work is framed by the primary school curriculum’s objects clause and subject descriptions. But, of course, the situation and needs of the child or the young person in the hospital are obviously based on whether they are singing, playing or teaching music comprehension.¹

¹ See article by Taru-Anneli Koivisto and Sanna Kivijärvi in this anthology.

Table 1. Music in hospitals. Systematic overview of agents and interventions.

The overview is a specification of Stige’s previously mentioned definition of health musicking as it explains and exemplifies arenas (e.g. patient rooms or common areas), agendas (e.g. stress reduction or arousal regulation), agents (e.g. musicians, music educators and music therapists), activities (e.g. community singing or music listening) and artefacts (e.g. playlists, instruments or songbooks).

The current evidence base

It is a challenge to plan and conduct controlled studies of the effects of music therapy (and to a lesser degree of music medicine) in the treatment of various somatic (and psychiatric) disorders. It takes a long time to conduct studies that involve, for example, therapeutic processes over six to ten sessions (which is typically the smallest ‘dose’ needed to achieve an effect) when statistical power is endeavoured, because only a few participants can be recruited per week or month. Nevertheless, over the years a number of effect studies have been conducted and published internationally, and several Cochrane Reviews are available. Table 2 above shows the status in spring 2018 (Jacobsen, Pedersen & Bonde, 2019, p. 438). It presents a summary of Cochrane Reviews documenting the effects of music therapy and music medicine in various clinical areas.

Discussion and recommendations

Against this background one might expect that qualified personnel such as physicians, hospital administrators and decision-makers would respond positively and curiously to music intervention programmes and wish to employ music therapists to develop these in relation to the specific treatment culture in their hospital/ward. However, it has been my experience over the years that researchers and clinicians are often met with scepticism and that projects can only be completed when external funding is secured. The explanation can not only be that the health sector is under financial strain. For example, it is difficult to understand why many Danish physicians demand specific Danish effect studies before wanting to try out a treatment when there is international evidence of the intervention. After all, one of the biggest challenges in a small country like Denmark is that it takes a very long time to reach the sufficient number of participants in an effect study involving both experimental and control groups. One example is the above-mentioned MICO study: even though it is a multi-site study (involving five university hospitals in Denmark, Norway and Sweden and has been running for years), only 70 children and teenagers had been recruited by 18 October 2018 (www.micostudy.com). Another example is a pending Danish study comparing the effects of music therapy and music medicine for people with schizophrenia in a strict RCT design (Pedersen et al., 2019). After three years of recruitment there is still a way to go to obtain the planned number of participants, determined on the basis of a conservative calculation of statistical power. Logistically, it is also a great challenge to arrive in a hospital as a “guest” who must fit a sensitive intervention study into an already complex hospital setting. It is therefore comforting to know that many projects have actually

Clinical population Author (year)	Number of studies and participants	Music therapy (or music inter- vention) has beneficial effects on...
Acquired brain injury Magee et al. (2017)	29 studies n=775	Gait, the timing of upper extrem- ity function, communication outcomes and quality of life after stroke
Autism spectrum disorders Geretsegger et al. (2014)	10 studies n=165 (age: 2–9 years)	Social interaction, non-verbal and verbal communicative skills, initiating behaviour, social-emo- tional reciprocity, social adapta- tion, joy, parent/child relationship
Cancer Bradt, Dileo, Magill and Teague (2016)	53 studies n=3731	Anxiety, pain, fatigue, quality of life + small effect on heart rate, respiratory rate and blood pres- sure. (24 music therapy studies, 29 music medicine studies)
Dementia van der Steen et al. (2017)	17 studies n=630	Depressive symptoms (music-based therapeutic inter- ventions and music therapy)
Depression Aalbers et al. (2017)	9 studies n=411	Short-term beneficial effects on depressive symptoms, anxiety and functioning
Mechanically ventilated patients Bradt and Dileo (2014)	14 studies n=805	Anxiety, respiratory rate, systolic blood pressure plus possible ben- eficial impact on the consump- tion of sedatives and analgesics
Preoperative anxiety Bradt, Dileo and Shim (2013)	26 studies n=2051	Anxiety before surgery, heart rhythm and diastolic blood pressure
Schizophrenia Geretsegger et al. (2017)	18 studies n=1215	Global state, mental state (including negative and general symptoms), social functioning, quality of life

Table 2. Overview of Cochrane Review: Music therapy and music medicine with different clinical populations

been completed. The present anthology of research articles on music and music therapy in paediatric hospital wards in the Nordic region documents the clinical specialty that is currently the most advanced at implementing music initiatives.

Based on my personal experiences and research projects as well as a literature review focusing on the conditions in the Nordic countries, I have shown that the use of music and the inclusion of music therapy in the hospital system are mainly coincidental. Two paths have been followed in an attempt to change this: 1) music therapy (and music medicine) researchers have conducted externally funded research projects in hospital wards which, in the case of positive results backed by international evidence, should pave the way for the inclusion of music therapists on the staff; 2) music therapists have been employed in hospitals based on the management's desire to add new colours to the treatment palette; they build a practice respecting the existing culture, and then they start research projects based on a multi-disciplinary perspective. The first model, which Ilan Sanfi's and my own projects illustrate, has so far not proved a viable path. The second model has been more successful as illustrated by e.g. Aasgaard's and Ugglå's research and by the Norwegian music therapists at the Oslo hospitals: three of them are currently employed as PhD fellows with projects related to their paediatric expertise. In Denmark it is easier – paradoxically – to point out the success of music therapy at hospices: not one of these positions has been based on previous research projects, and only a few of them involve preliminary documentation studies of the music therapist's daily practice. In other words, the decisive connection between the visibility and the interdisciplinary exchange and the integration of music practices into the hospital culture and daily routines are crucial.

A different aspect is the question of the special possibilities and benefits of music as compared to other arts. As mentioned in the health musicking section, many studies indicate that there may be a positive effect of active music engagement on health behaviour and perceived quality of life, and the Cochrane reviews document the effect of the music interventions in a wide range of clinical areas. At the same time some of the longitudinal studies mentioned earlier show that the link between health and lasting, stable leisure activities may be more general – i.e. linked to cultivating an active interest together with other people – than specific, i.e. related to the musical activity. It is therefore a kind of 'Dodo Bird Verdict': all serious recreational community activities on an amateur basis have a genuine health potential. This seems quite logical to me, and I therefore do not argue that music activities and experiences have a 'better' or 'greater' health potential than other art or activity forms. Instead, the specific reasoning for music activities should have a different character, an ethical and a practical one.

A significant ethical argument especially related to paediatrics is that – according to the United Nations' *Convention on the Rights of the Child (article 31)* – all children, including children with disabilities and diseases, have a right to participate in cultural activities. In most cultures, including the Danish and Nordic ones, song, dance and music are culture and community-promoting, and music activities in the community are basically non-competitive.

Practical-social reasoning addresses the fact that it is relatively easy and not very resource-demanding to organise all kinds of music activities for smaller and larger groups – not least in kindergartens and schools, i.e. early in life, because this is the phase in life where good and health-promoting habits are acquired. Music activities – coloured by the participants' preferences, competences and experiences – can moreover be cultivated at all ages and stages, adapted to the participants' physical, mental and musical capacities, designed with purely musical or with non-musical goals. In the Nordic countries, for example, there is a highly developed and highly differentiated choral culture which engages children from nursery and kindergarten, later young people in the school system and adult amateur choirs of all styles, also including specially designed choirs for the elderly or people with special needs. These skills and the complementary knowledge of the health potential of singing, playing and dancing could be utilised much more than is the case today as 'music for health promotion', not least in rehabilitation projects.

It is my hope that I have provided some arguments that music therapists with their expertise in music therapy, music medicine and music for health promotion can provide hospitals with a range of treatment and environmental initiatives and measures that can improve conditions not just for patients but also for their relatives and for the staff.

References

- Aasgaard, T. (2002). *Song creations by children with cancer: Process and meaning* (PhD thesis). Aalborg University, Aalborg. <https://vbn.aau.dk/en/publications/song-creations-by-children-with-cancer-process-and-meaning-2>
- Aasgaard, T. (Ed.). (2006). *Musikk og helse*. Oslo: Cappelen.
- Bode, M. & Bonde, L. O. (2011). Din ven til det sidste: Musikterapi på hospice og i palliativ pleje. In M. H. Jacobsen & K. M. Dalgaard (Eds.), *Humanistisk Palliation*, (pp. 255–269). Copenhagen: Hans Reitzels Forlag.

- Bonde, L. O. (2004). *The Bonny Method of Guided Imagery and Music (BMGIM) with cancer survivors: A psychosocial study with focus on the influence of BMGIM on mood and quality of life* (PhD thesis). Aalborg University. Aalborg. <https://vbn.aau.dk/da/publications/the-bonny-method-of-guided-imagery-and-music-bmgim-with-cancer-su>
- Bonde, L. O. (2008). Forskning, der ikke blev til noget. *Dansk Musikterapi* 5(2), 23–28.
- Bonde, L. O. (2010). Music as support and challenge: Group music and imagery with psychiatric outpatients. In H. Schirmer (Ed.), *Jahrbuch Musiktherapie*, (Vol. 6, pp. 89–118). Berlin: Reichert.
- Bonde, L. O. (2011). Health music(k)ing – music therapy or music and health?: A model, empirical examples and personal reflections. *Music and Arts in Action*, 3(2 Special issue: Health promotion and wellness), 120–140. Retrieved from <http://musicandartsinaction.net/index.php/maia/article/view/healthmusicingmodel/58>
- Bonde, L. O. (2012). Forskning i musikterapi: Den palliative indsats. *Dansk Musikterapi*, 9(1), 13–20.
- Bonde, L. O. (2013). The musical identities of Danish music therapy students: A study based on musical autobiographies. In L. O. Bonde, E. Ruud, M. Skånland & G. Trondalen (Eds.), *Musical life stories: Narratives on health musicking*, (pp. 307–327). Oslo: Norwegian Academy of Music. <http://hdl.handle.net/11250/196813>
- Bonde, L. O. (Ed.) (2014). *Musikterapi: teori, uddannelse, praksis, forskning: En håndbog om musikterapi i Danmark*. Århus: Klim.
- Bonde, L. O. (2015). Using mixed methods in music therapy health care research: Reflections on the relationship between the research question, design and methods in the research project Receptive music therapy with female cancer patients in rehabilitation. *Voices: A World Forum for Music Therapy*, 15(2). <https://doi.org/10.15845/voices.v15i2.738>
- Bonde, L. O. (2019). 5 tilgange til sundhedsfremmende musikanvendelse. *Dansk Musikterapi* 16(1), 32–34.
- Bonde, L. O., Ekholm, O. & Juel, K. (2018). Associations between music and health-related outcomes in adult non-musicians, amateur musicians and professional musicians: Results from a nationwide Danish study. *Nordic Journal of Music Therapy* 27(4), 262–282. <https://doi.org/10.1080/08098131.2018.1439086>
- Bonde, L. O., Ruud E., Skånland, M. & Trondalen, G. (Eds.). (2013). *Musical life stories: Narratives on health musicking*. Oslo: Norwegian Academy of Music.
- Bonde, L. O. & Pedersen, I. N. (2013). Musiklytning og indre billeder: At styrke identitets- og selvværdsfølelsen gennem musiklytning & indre billeddannelse for ambulante psykiatriske patienter. *Musikterapi i Psykiatrien Online*, 8(1), 17–41. <https://doi.org/10.5278/ojs.mipo.v8i1.256>

- Bonde, L. O. & Theorell, T. (Eds.). (2018). *Music and public health: A Nordic perspective*. New York: Springer. <https://doi.org/10.1007/978-3-319-76240-1>
- Bro, M. L. (2019). *Resonance: Music as adjuvant for cancer treatment*. (PhD dissertation) Faculty of Health Sciences, University of Southern Denmark, Odense.
- Bro, M. L. & Johansen, C. (2017). Musik & kræft: En videnskabelig undersøgelse af levende musik under kemoterapi. In A. Jensen (Red.), *Kultur og sundhed – en antologi*, (pp. 257–273). Copenhagen: Turbine Akademisk.
- Butterton, M. (2004). *Music and meaning: Opening minds in the caring and healing professions*. Oxon: Radcliff Medical Press.
- Butterton, M. (2008). *Listening to music in psychotherapy*. Oxford: Radcliffe Publishing.
- Dammeyer, C. (2013). Guidet musik- og krops-lytning: En ny form for receptiv musikterapi inden for traditionen Guided Imagery and Music (GIM) – i psykodynamisk traumebehandling af patienter med PTSD i voksenpsykiatrien. *Musikterapi i Psykiatrien Online*, 8(1), 42–59. Retrieved from <https://doi.org/10.5278/ojs.mipo.v8i1.257>
- DeNora, T. (2000). *Music in everyday life*. Cambridge: Cambridge University Press.
- DeNora, T. (2007). Health and music in everyday life: A theory of practice. *Psyke & Logos*, 28(1), 271–287.
- Eje, N. & Eje, I. (2019). Musik som medicin mod stress: Original musik skabt til behandlingsformål. *Ugeskrift for Læger*, March, 167–174.
- Gabrielsson, A. (2011). *Strong experiences with music: Music is much more than just music*. Oxford: Oxford University Press.
- Gold, C., Erkkilä, J., Bonde, L. O., Trondalen, G., Maratos, A. & Crawford, M. J. (2011). Music therapy or music medicine? *Psychotherapy and Psychosomatics*, 80(5), 304. <https://doi.org/10.1159/000323166>
- Hallam, S. (2015). *The power of music: Research synthesis of the impact of actively making music on the intellectual, social and personal development of children and young people*. Institute of Education, University College London. Retrieved from <http://www.artshealthresources.org.uk/docs/the-power-of-music-research-synthesis-of-the-impact-of-actively-making-music-on-the-intellectual-social-and-personal-development-of-children-and-young-people/>
- Jacobsen, S. L., Pedersen, I. N. & Bonde, L. O. (Eds.). (2019). *A comprehensive guide to music therapy*. (2nd ed.). London: Jessica Kingsley.
- Jensen, A. (2019). *Kultur-Vitaminer: Kultur på recept i Aalborg Kommune*. Aalborg: Aalborg University. Retrieved from https://www.musikterapi.aau.dk/digitalAssets/449/449538_kulturvitaminer_rapport.pdf
- Jensen, A. & Bonde, L. O. (2017). Deltagelse i kunst- og kulturaktiviteter har positiv effekt på somatiske sygdomme. *Ugeskrift for Læger*, 180:V06170481, 2–5.

- Jensen, A. & Nielsen, J. B. (2019). *Brugen af musik i det danske sundhedsvæsen*. Rapport. Aalborg: Aalborg University. Retrieved from https://vbn.aau.dk/ws/portalfiles/portal/311065980/583605_storrappport_musikisundhedsv.pdf
- Krøier, J. K., Anderson-Ingstrup, J. & Bonde, L. O. (2019). De første skridt: Indledende undersøgelse af forskelle og ligheder mellem musikterapi og musikpædagogik i demensomsorgen. *Tidsskriftet Dansk Musikterapi*, 16(1), 3–13.
- Lilliestam, L. (2013). Music, the life trajectory and existential health. In L. O. Bonde, E. Ruud, M. Skånland & G. Trondalen (Eds.), *Musical life stories: Narratives on health musicking*, (pp. 6–24). Oslo: Norwegian Academy of Music. Retrieved from <https://nmh.brage.unit.no/nmh-xmlui/handle/11250/196378>
- Løkken, B. I., Rangul, V., Merom, D., Ekholm, O., Krokstad, S. & Sund, E. R. (2018). Are playing instruments, singing or creative theatre good for population health?: Associations with self-rated health and all-cause mortality in the HUNT3 Study (2006-08), Norway. In L. O. Bonde & T. Theorell (Eds.), *Music and Public Health: A Nordic perspective* (pp. 33–54). New York: Springer. https://doi.org/10.1007/978-3-319-76240-1_3
- Lund, H. N., Bertelsen, L. R. & Bonde, L. O. (2016). Sound and music interventions in psychiatry at Aalborg University. *SoundEffects*, 6(1). <https://doi.org/10.7146/se.v6i1.24912>
- MacDonald, R., Kreutz, G. & Mitchell, L. (2012). *Music, health, and wellbeing*. Oxford: Oxford University Press.
- Ruud, E. (1986). *Music and health*. Oslo: Norsk musikforlag.
- Ruud, E. (1997). *Musikk og identitet*. Oslo: Universitetsforlaget.
- Ruud, E. (1998). Musik, helse og livskvalitet. *Musik & Terapi*, 25(1), 2–35.
- Ruud, E. (2001). *Varme øyeblikk: Om musikk, helse og livskvalitet*. Oslo: Unipub.
- Ruud, E. (2013). *Musikk og identitet* (2nd ed.). Oslo: Universitetsforlaget.
- Ruud, E. & Stensæth, K. (2012). Interaktiv helseteknologi: Nye muligheter for musikkterapien? *Musikkterapi*, (2), 6–20.
- Sanfi, I. & Bonde, L. O. (2014). Musikterapi med børn med somatiske lidelser. In L. O. Bonde (Ed.) *Musikterapi: Teori, uddannelse, praksis, forskning* (pp. 332–338). Aarhus: KLIM.
- Schou, K. (2008). *Music therapy for post operative cardiac patients a randomized controlled trial evaluating guided relaxation with music and music listening on anxiety, pain, and mood*. (PhD thesis) Aalborg University, Aalborg. <https://vbn.aau.dk/en/publications/music-therapy-for-post-operative-cardiac-patients-a-randomized-co>

- Schou, K., Pedersen, I. N. & Bonde, L. O. (2012). Musiklytning til patienter i skærmning: Pilotundersøgelse på Musikterapiklinikken Aalborg Psykiatriske Sygehus. *Musikterapi i Psykiatrien*, (6), 56–67. Retrieved from <https://tidsskrift.dk/mip/article/view/7153>
- Small, C. (1998). *Musicking*. Hanover, NH: University Press of New England.
- Sørensen, M. B. & Bonde, L. O. (2015). Musikterapi til børn med kræft. *Dansk Musikterapi*, 12(2), 3–13.
- Stige, B. (2002). *Culture-centered music therapy*. Gilsum, NH: Barcelona.
- Stige, B. (2012). Health Musicking: A perspective on music and health as action and performance. In R. MacDonald, G. Kreutz & L. Mitchell (Eds.), *Music, health, and wellbeing* (pp. 183–195). Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199586974.003.0014>
- Theorell, T., Knudsen, M. S., Horwitz, E. B. & Wikström, B.-M. (2016). Culture and public health activities in Sweden and Norway. In S. Clift & P. Camic (Eds.), *Oxford textbook of creative arts, health, and wellbeing: International perspectives on practice, policy and research* (Vol. 6, pp. 171–177). Oxford: Oxford University Press. <https://doi.org/10.1093/med/9780199688074.003.0021>
- Thorgaard, P., Henriksen, B. B., Pedersbaek, G. & Thomsen, I. (2004). Specially selected music in the cardiac laboratory: An important tool for improvement of the wellbeing of patients. *European Journal of Cardiovascular Nursing* 3(1), 21–26. <https://doi.org/10.1016/j.ejcnurse.2003.10.001>
- Trondalen, G. & Bonde, L. O. (2014). Musik är mycket mer än bara musik: Interview with Alf Gabrielsson. *Danish Musicology Online*, 6. http://www.danishmusicologyonline.dk/arkiv/arkiv_dmo/dmo_06/dmo_06_artikel_01.pdf
- Tænketanken Musik og Sundhed. (2017). *Øget sundhed ved strategisk anvendelse af musik*. Copenhagen: Tænketanken musik og sundhed. <http://www.musiksundhed.dk/wp-content/uploads/2018/06/NOTAT-Undersøgelset af sundhedsvesenets brug af musik.pdf>
- Uggla, L. (2019). *Music therapy: An intervention effecting quality of life and health in children going through hematopoietic stem cell transplantation*. (Doctoral Dissertation) Karolinska Institutet, Stockholm.
- Uggla, L., Bonde, L. O., Svahn, B. M., Remberger, M., Wrangsjö, B. & Gustafsson, B. (2016). Music therapy can lower the heart rates of severely sick children. *Acta Paediatrica*, 105(10), 1225–1230. <https://doi.org/10.1111/apa.13452>
- Uggla, L., Mårtensson Blom, K., Bonde, L. O., Gustafsson, B. & Wrangsjö, B. (2019). An explorative study of qualities in interactive processes with children and their parents in music therapy during and after pediatric hematopoietic stem cell transplantation. *Medicines*, 6(1), 28. <https://doi.org/10.3390/medicines6010028>

- Ullsten, A., Gaden, T. S. & Mangersnes, J. (2020). Development of family-centered care informing Nordic neonatal music therapy. In L. O. Bonde & K. Johansson (Eds.), *Music in paediatric hospitals in the Nordic countries* (pp. 1–25). Oslo: Norwegian Academy of Music.
- Wärja, M. & Bonde, L. O. (2014). Music as co-therapist: Towards a taxonomy of music in therapeutic music and imagery work. *Music and Medicine* 6(2), 16–27. Retrieved from <https://mmd.iammonline.com/index.php/musmed/article/view/MMD-6-2-5>
- Weziak-Bialowolska, D. (2016). Attendance of cultural events and involvement with the arts: Impact evaluation on health and well-being from a Swiss household panel survey. *Public Health*, 139, 161–169. <https://doi.org/10.1016/j.puhe.2016.06.028>

Lars Ole Bonde

Independent senior researcher (former professor in music therapy, Aalborg University)

e-mail: larsolebonde@gmail.com

Biographical notes for authors

Interview with Trygve Aasgaard

Karete Stensæth is a professor of music therapy and Director of the Centre for Research in Music and Health (CREMAH) at the Norwegian Academy of Music. She has edited several books and published many articles. Her main work is the monograph *Responsiveness in music therapy improvisation. A perspective inspired by Bakhtin* from 2017.

Chapter 1 – Development of family-centred care informing Nordic neonatal music therapy

Alexandra Ullsten, MA, RMT-SAM, PhD (Örebro University), works as a music and art therapist in paediatrics, neurological rehabilitation, oncology and palliative care at the Central Hospital in Karlstad, Region Värmland, Sweden. Alexandra is a pioneer in Sweden in implementing music therapy for hospitalised infants at the NICU in Karlstad, starting in 2010, and one of the “grandparents” of Rhythm, Breath, Lullaby NICU Music Therapy (RBL). Her research interest is in family-centred neonatal music therapy and pain management. She is also a member of the international research networks Pain in Early Life (PEARL) and Pain in Child Health (PICH).

Tora Söderström Gaden, MA-MT, PhD candidate (Norwegian Research Centre NORCE, Grieg Academy Music Therapy Research Centre, University of Bergen), has completed First Sounds: Rhythm, Breath, Lullaby training at the Louis Armstrong Center for Music & Medicine in New York and is a certified Newborn Behavioural Observation trainee. Tora initiated the first project and implementation of neonatal music therapy at Akershus University Hospital in Norway. She is currently a PhD candidate for Longitudinal Study of music therapy’s effectiveness for premature infants and their caregivers (LongSTEP).

Julie Mangersnes, MA-MT, NICU Music Therapist (RBL), is currently working as a music therapist in paediatrics and neonatal intensive care unit at Oslo University Hospital, Rikshospitalet in Norway. Julie completed a clinical music therapy fellowship at the Louis Armstrong Center for Music & Medicine, Mount Sinai Beth Israel in New York City under the supervision of Dr Joanne Loewy in 2013–2014. Julie is a certified Newborn Behavioural Observation trainee. Her research experience so far is with oncology patients and with adolescents suffering from Chronic Fatigue Syndrome.

Chapter 2 – Pedagogical tact in music education in the paediatric ward

Taru-Anneli Koivisto is a music therapist and music educator with extensive working experience in health promotion, substance abuse prevention and many kinds of care and healthcare environments within the whole lifespan of people. Currently she is a doctoral researcher at the Sibelius Academy, University of the Arts Helsinki. Her doctoral dissertation explores music practitioners' interprofessional work in healthcare settings, especially in hospitals. In addition, her research interests include music therapy practices, hybrid working and learning environments as well as social justice issues.

Sanna Kivijärvi is a doctoral researcher at the Sibelius Academy, University of the Arts Helsinki. Her doctoral dissertation examines the Finnish music education system by analysing an innovation for equity, *Figurenotes (Kuvionuotit)*, from both pedagogical and educational policy perspectives. In addition to her doctoral research, she is researching the concert audiences of the Helsinki-based *Resonaari* Music Centre and embodiment in music education with diverse learners. Sanna Kivijärvi has published several peer-reviewed articles and book chapters. During the 2019–2020 academic year she worked as a Fulbright research fellow at Teachers College, Columbia University (New York City, USA).

Chapter 3 – How are multicultural considerations playing a role in music therapy practice?

Sarah Helander, MMT, holds bachelor's and master's degrees in music therapy from Aalborg University, Denmark. Following the project in Peru, Sarah has been working independently with international music therapy projects, especially in collaborations with international NGOs in refugee camps in Greece. She has presented at several international conferences including the IAMM Conference and the NMTC Conference.

Gustavo Gattino, PhD, is an accredited music therapist and member of the International Music Therapy Assessment Consortium (IMTAC). Gustavo has developed researches in music therapy in the areas of assessment, autism and teaching. He is an Assistant Professor at the Institute for Communication and Psychology at Aalborg University, Denmark.

Chapter 4 – Music therapy as procedural and treatment support in paediatric healthcare: a review of the literature from a Nordic perspective

Maren Mellingen has been a medical student at the University of Bergen since 2014, and she has augmented her learning related to meeting the needs of children in various healthcare settings

by participating in the introductory course in music therapy at the Grieg Academy, Bergen, in 2017. This inspired her desire to unite her complementary interests in medicine and music through interdisciplinary research in music therapy in her current studies and future career.

Chapter 5 – Resonance between theory and practice

Tone Leinebø Steinhardt, MA-MT, GIM I + II, BA Nursing. Tone is currently working with children and adolescents at Oslo University Hospital (OUS), Rikshospitalet. She is passionate about expanding the music therapy service within the hospital through the important balance between research and high quality clinical work. She is currently involved in standardising aspects of procedural work and is part of a project breaking new ground in offering music therapy in the home hospital setting as part of the music therapy service at OUS.

Claire Mathern Ghetti, PhD, LCAT, MT-BC, CCLS is Associate Professor of Music Therapy at the Grieg Academy of Music, University of Bergen, Norway, and senior researcher with the Grieg Academy Music Therapy Research Centre. Claire has extensive clinical experience with children and adults in intensive and long-term care medical settings. She is particularly interested in how music therapy promotes resources and contributes to the prevention of traumatisation in intensive medical contexts. Claire has conducted research and theoretical work in the area of music therapy as procedural support for invasive medical procedures and music therapy as emotional-approach coping. She is currently Principal Investigator of an international, multi-centre randomised controlled trial evaluating the impact of music therapy on parent-infant bonding for preterm infants and their caregivers. Claire holds a PhD in music therapy with a minor in health psychology from the University of Kansas.

Chapter 6 – Music therapy for children going through haematopoietic stem cell transplantation

Lena Uggle holds a PhD in medical science, with her thesis presented in 2019 at the Karolinska Institutet, Stockholm. She has worked as a music therapist with severely sick children at Karolinska University Hospital since 2008 and with children in palliative care at Lilla Erstagården, Stockholm. She is also a Fellow of Guided Imagery and Music.

Lars Ole Bonde, PhD, is an independent senior researcher with former affiliations to Aalborg University and CREMAH/Norwegian Academy of Music. He is a certified music therapist, clinical supervisor and primary trainer in Guided Imagery and Music. He has numerous publications on music therapy, music psychology and music and health to his name.

Chapter 7 – Music and health promotion in Danish/
Nordic hospitals – who and how? An essay.

Lars Ole Bonde, see chapter 6.

Biographical notes for editors

Lars Ole Bonde, see chapter 6.

Kjersti Johansson, PhD, is currently a postdoctoral fellow at the Centre for Research in Music and Health (CREMAH), Norwegian Academy of Music. She is a music therapist and has worked with children with disabilities.

Music can be a significant health resource for children and their families in paediatric hospitals. Music therapy, music medicine and other music approaches are developing as part of children's hospitals in the Nordic countries. Positions are established in some countries, and there is a growing interest in the field, both among politicians and health professionals. Still, the inclusion of music in paediatric hospitals is not a matter of course and the process of integrating music in Nordic hospitals could be said to be in an early phase.

This anthology is a contribution to the growing evidence base for music approaches in paediatrics – with a unique focus on Nordic perspectives. It is of value to both practitioners and researchers interested in how music can be integrated in paediatric hospitals. At the same time, it is an invitation to hospital managers and health politicians to use the potentials of music therapy, music medicine and other music approaches and the competencies of professionals in these fields in a steady improvement of paediatric health care. The anthology covers a range of topics and perspectives. The articles, written by authors from across the Nordic countries, give insights into both selected practice areas within the paediatric hospital setting, research, theory, and core concepts. Although Nordic contexts are highlighted, the insights are also highly relevant to the international community.

“This state-of-the-art music therapy anthology highlights the depth of theory and clinical practice taking place in pediatric hospitals. The insights so generously provided from a vast array of Nordic perspectives will certainly influence global music therapy research and practice.”

Joanne V. Loewy DA LCAT, MT-BC
Director, The Louis Armstrong Center
for Music & Medicine
Mount Sinai Beth Israel, NYC