

# Sunshine In My Heart:

## The impact of OPUS live music in children's hospitals in the UK



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## Summary

This report evaluates the impact of live music in hospitals in the United Kingdom, as provided by OPUS Music Community Interest Company.

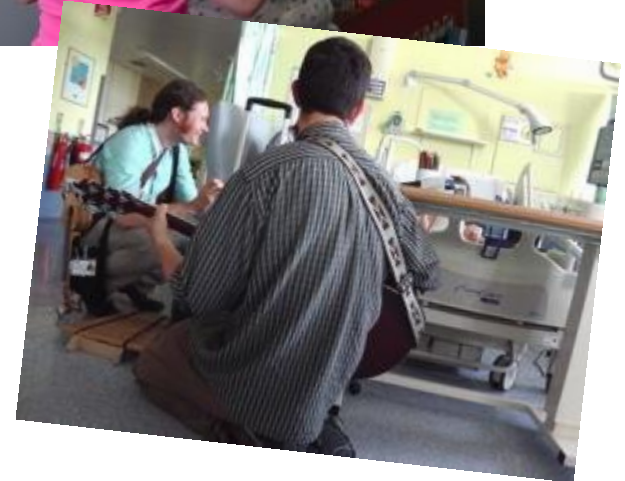
Surveys and semi-structured interviews showed positive responses of hospitalised children. Parents reported increased well-being for their children and also for themselves, and similar patterns were found among hospital staff. Interactions with the musicians such as the child playing the instruments were important as well as hearing the music. Positive benefits were found in this music evaluation study from the three perspectives: the children, families and staff.

The results suggest that 1) music can create a space for children in hospital to interact and ease their (and their parents') anxiety and stress, and that 2) such music activities can support healthcare staff in their working environment by providing entertainment and creating more uninterrupted working time.

“

*My child was crying, but stopped and  
fell asleep to their music*

”





OPUS Community Interest Company is a group of professional musician with a specialism in taking music into healthcare settings. OPUS was established in 2000 as a non profit-making organisation and they have a strong history of supporting music-making with children and young people. In 2012 they became a Community Interest Company, managed by its board of directors.



*Nick Cutts – Piano, Guitar, Bassoon, Voice*  
*Sarah Matthews – Violin, Viola, Percussion, Voice*  
*Richard Kensington – Percussion, Ukulele, Voice*  
*Oli Matthews – Saxophones, Clarinet, Melodeon, Cajon*

OPUS has been playing live music in hospitals in Derby and Sheffield since 2010, and in Nottingham, Leicester and at Kings Mill hospital in Mansfield since 2012, under charitable funding. OPUS focuses on bedside music, where they sometimes perform on their own, but often engage in active music making together with patients, carers and staff. They also provide training programmes for other musicians, with a view to develop a larger workforce of musicians specialised in the area of music delivery in healthcare settings.



Live music in hospitals in America and Europe has increased over the last 10 years, and it is possible to distinguish different types of music making activities in health care settings. Preti (2009), uses four different definitions of music in hospitals: 1) bedside music, 2) regular concerts, 3) special music events, 4) artists-in-residence programmes. Bedside music in particular is described by Preti as a regular, long-term intervention. Musicians “make rounds” and play in some of the rooms. The music events can be performances, but they are also often interactive music making where children and/or carers take part in the music making session (Preti 2009). This report evaluating the work of OPUS is focusing specifically on bedside music.

In general, music has been reported as beneficial in healthcare settings. Listening to music can have positive effects in particular areas of hospitals according to a report by Staricoff (ref). Those areas were neonatal care (significant improvement in clinical and behavioural states, reducing the length of stay in hospital), cancer care (reducing anxiety and depression), cardio-vascular units (reducing anxiety and blood pressure, heart rate and demand for myocardial oxygen), surgery (reducing stress (cortisol levels) and anxiety, helping to control vital signs, reducing requirements for sedatives during the post-operative recovery period, and staying 1 day less in hospital).

During medical procedures, music has been found to increase the perception of comfort, to reduce the levels of cortisol (a hormonal indicator of stress), and to significantly control blood pressure levels. Finally, music has also been associated with pain management reductions on physiological and psychological variables related to pain indicators.

### *What effects can music have on children in hospitals?*

How many children are in hospital in the UK, and what are the effects of hospitalisation in children? Can music help children in hospitals, and if so – how? In the next few paragraphs I will set out the wider context of children in hospital, before summarising some research into how music may help children in hospitals.

20% of children in the UK attend accident and emergency departments at some point in their lives. 700,000 children have at least one overnight stay, and 300,000 attend for day surgery (University of Salford 2012).

There is recent evidence that the number of hospital stays for children are on the rise in the UK (BBC news 2013\*), something which may have an increasingly negative impact on children given the effects of hospitalisation in children.

It has been suggested that perhaps as many as 60% of children are negatively affected when they are in hospitals (Roberts 2010), where some of the effects seen have been separation anxiety, fear of hospitals and doctors, nightmares and aggression towards authority. While many of these effects have been noted to disappear after 2 weeks, some children have shown signs of post-traumatic stress as well as a decrease in social and intellectual functioning, and even immunological incompetence (Kain et al 1999). Children in hospital are particularly vulnerable, not only because they are ill or because they are developing human beings, but also – importantly – because of their lack of control over what is happening to them in the hospital environment (Coyne & Livesley 2010). It is the lack of control that becomes particularly significant, as we shall see soon, when we talk about the positive effects of music on children in hospitals.

With regards to music in paediatric health settings, there are positive indications here too. Music can help to enhance cognitive abilities among children, facilitate verbal and nonverbal communication, and influence physiology. The emotional qualities of music can also reduce the effects of trauma and facilitate coping strategies for difficult environments (Naylor et al 2011).

Music can help children and their families to focus attention on something else external to the illness, and therefore function as a distraction and enhancement of relaxation (Preti & Welch 2004 & 2011; Preti & Schubert 2011). Music can help to verbalise experiences that helps children to cope better, and in this way act as a kind of “social support”. Music can also help to turn the hospital environment into something less threatening, as it creates a psychosocial space where interaction can take place without the fear and anxiety related to diagnosis and illness (Preti & Welch 2011).

Furthermore, staff have been found to state that listening to live music helped them to relax, feel happier and more positive (Moss, Nolan & O'Neill 2007), and thus music in hospitals can be understood as something that fosters social interaction between hospitalized children, their caregivers and the hospital staff, and in a wider sense nurture “a sense of individual, group and institutional well-being” (Preti & Welch 2011:7)



However, previous research also shows that performing in a hospital setting can be particularly demanding psychologically and emotionally for the musicians themselves – especially where the nature of the musicians' role requires them to improvise in active collaboration with the patient, and also as there are constant environmental changes, such as in the medical condition of their client/patient/audience (Preti & Welch 2012).

To summarise, many children spend some time in hospitals, and it looks as if it may be increasing. Children are often negatively affected by hospitalisation, and sometimes it can have long-term effects. Several studies and reports have shown that music in hospitals can have positive effects on both physical and psychological variables in patients in general and in children in particular. There is clear evidence that music for children in healthcare settings can be beneficial for the children, and also for parents and staff.

Still, this evaluation study sought to establish what the effects were of OPUS music in particular, in their specific setting. The aim of the study was to capture evidence of impact, for the purpose of training, reflection, demonstrations for funders and partners, and also for future projects.

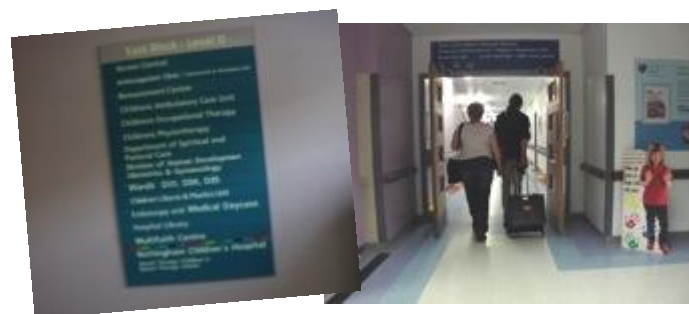
An evaluation study was carried out during the first half of 2013, in order to capture and assess evidence of the impact of OPUS music activities in children's hospitals in the East Midlands. A survey was conducted, and photos and video clips were also collected.

While OPUS played in 4 different hospitals in the East Midlands region (Nottingham, Leicester, Derby and Mansfield), two hospitals were selected as sample hospitals for evaluation purposes: Queen's Medical Centre Nottingham and Leicester Royal Infirmary. These two hospitals were selected because they were larger than the other two, which allowed for a wider selection of participants from different wards.

### *Queen's Medical Centre, Nottingham*

Queen's Medical Centre (QMC) is one of the largest hospitals in the UK, has around 1,700 hospital beds and is the home to Nottingham Children's Hospital. OPUS works closely with the Nottingham Children's Hospital School. Nottingham City Council funds the hospital school and they provide learning centred education to all school age children and young people admitted to wards at the hospital. The main points of contact at the hospital school were the Acting Head Teacher as well as some of the teachers and support staff.

At QMC, OPUS often played in the hospital schools in classrooms, but they also regularly visited wards specialising in cancer treatment, neurology, cystic fibrosis, gastroenterology, orthopaedics, ear nose and throat, cochlear implants, medical and surgical treatments, renal/urology, and dialysis. The teaching and support staff sometimes directed the musicians to certain patients that they felt could specifically benefit from musical interaction.



### *Leicester Royal Infirmary, Leicester*

Leicester Royal Infirmary is based in Leicester, has approximately 890 beds, and houses a Children's Hospital. In this hospital, OPUS work closely with the Play Team. The Play Team functions as a link between families, activities for children, and medical staff. They offer normalised play for children, they distract children during treatments and are involved in environment-related aspects and ensure development while the children are in hospital. The main point of contact at this hospital was the Play Coordinator and several Play Specialists.

OPUS mainly worked in wards at the Children's Hospital, which also included Children's Intensive Care Unit (CICU) and the High Dependency Unit.

One of the key aims of this evaluation was to provide an insight into the perceived effects of music in hospitals, for children, carers and staff. It was believed that not only the children were affected by the music, but also the carers and staff, and that it was therefore important to also collect data from them. Not only from the point of them being able to verify and confirm the effects among the children, but also it was thought that if the carers and/or staff were positively affected by the music, the children may see this and be affected themselves in a circular-type movement.

Quantitative and qualitative data was collected with consent on 9 occasions in Nottingham and Leicester during 2013 (March-July). A survey, interviews and observations assessed the impact on paediatric patients, their family and the hospital staff. Photos and video clips with signed parental consent were also captured.

### *Survey*

The survey collected qualitative and quantitative data and was deliberately designed as a one-page document, in order to make data collection easy and swift for healthcare staff and parents.

The survey was designed in three different versions: one for carers/parents, one for healthcare staff and one for older children (adolescents) (see appendix). Overall, the survey asked respondents to describe in their own words the impact of OPUS music (qualitative data), and it also asked respondents to rate to what extent they agreed that OPUS music activities improve well-being, and that there should be more of this activity available. The free text questions aimed to capture the respondents' thoughts and to collect rich exploratory data that emerged from the respondents themselves. The rating statements aimed to collect quantitative data that could be easily compared with previous studies.

The survey also collected small amounts of demographic data through forced choice questions (age, gender, age of the child (for carers/parents), job title (for healthcare staff)), and there were also opportunities to add additional comments.



### *Photos and videos*

On occasions, photos were taken and videos were recorded on the wards. It was deemed as important to also capture the work of OPUS through visual/audio techniques, and not only in survey/interview form. This was a way to triangulate the data, and obtain as much evidence of the activities as possible.

Ethical consent was always sought in written form, and only the photos and video clips for which consent was received were used. Sometimes, it was not possible to seek consent before a musical event took place, due to the spontaneous and flexible nature of the musicians' activities. In those cases, consent was always sought afterwards, and when consent was not given the records were deleted.

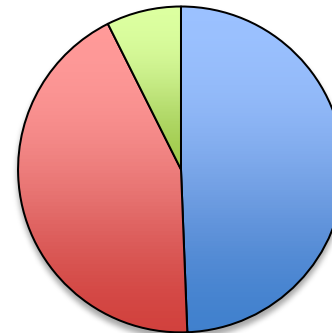


There were 81 survey respondents in total. Of these, there were 40 parents, 35 healthcare staff, and 6 patients.

The reason why there were so few patients, relatively, was twofold. Firstly, it was deemed appropriate to ask adolescent and not younger children to fill in the survey, and most of the children that OPUS interacted with were younger. Secondly, sometimes it was not deemed suitable to ask the patients to fill in surveys due to their illness. Therefore, a lot of the evidence of the impact among children comes from parents'/carers' accounts, healthcare staff's stories coupled with pictures and video clips. 66 were women, 15 were men, which confirms a traditional gender distribution in terms of parenting and nursing in the UK.



### Participants

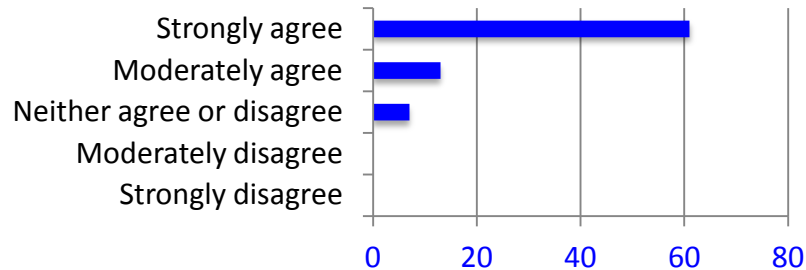


- Parents (40)
- Healthcare staff (35)
- Patients (6)



## The Evaluation Study: Results

Overall, parents and staff were very positive towards having OPUS Music in hospital, and thought there should be more available.



On a scale of 1-5 (1 = strongly disagree and 5 = strongly agree), average agreement with this statement was 4.69. 78% agreed strongly that there should be more of this activity available (80% of healthcare staff, 78% of the parents), and only one person disagreed with the statement.

*This should be in all hospitals*  
(Parent/carer, aged 26-35, woman)

*I find these activities very calming for worried, bored and agitated children.*  
*It should be a more frequent activity.*  
(Health Care Assistant, aged 26-35, woman)

A Senior Sister explained how she had been turned around in her opinion, going from being hesitant and sceptical to the idea, to becoming enthusiastic and supportive of the OPUS musicians after witnessing their work on her ward.

*I was very unsure when I first heard about the musicians but WOW they are absolutely fantastic! The noise level on the unit during and after the musicians have been is drastically reduced and remains so for many hours. The staff, parents and patients (if they are able) all have big smiles on their faces. The musicians are very sensitive to our environment and the needs of our patients and adjust their choice of music accordingly. I may be their biggest champion and cannot rate them highly enough. I have thoroughly enjoyed their visits and have observed heart rates + blood pressures drop to within normal limits. Parents' shoulders drop as they relax for the first time in days.*  
(Senior Sister, aged 36-45)

Relaxation and distraction were words that were frequently mentioned  
by both parents and staff (size of word increases with frequency)

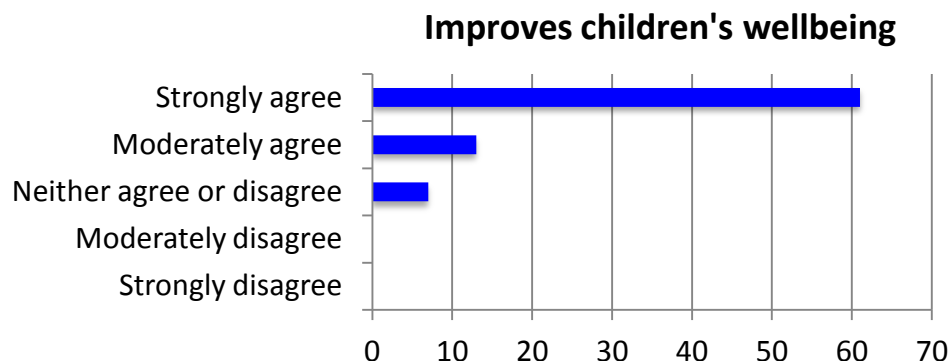


accompany atmosphere beneficial break  
**calming** cheers chilled concentration  
de-stress develop different **distraction**  
effect encourages engaging enjoy  
**enjoyment** entertaining experience  
focusing fun happy hearing help  
instruments interaction involved  
**join** joy lift mood motivating music nice observing  
opportunity participation peaceful playing  
positive refreshing **relaxing** singing skills  
**smile soothing** spirits therapeutic uplifting  
well-being

## The Evaluation Study: Results - Children's wellbeing

The majority of parents and staff felt that children's wellbeing was improved as a result of OPUS music activities

On a scale of 1-5 (1 = strongly disagree and 5 = strongly agree), the average was 4.68, indicating a high agreement with this statement. Looking at the result in terms of percentage, 75% agreed strongly that OPUS activities improve children's wellbeing (78% of the parents, 74% of the healthcare staff). No one disagreed with this statement.



“*Their musical input has been very positive for: 1) general entertainment and comfort, 2) distraction - from procedures/pain or discomfort, 3) increasing ability/concentration/interaction/ interest/ tolerance, 4) decreasing upset/ anxiety/environmental negative distractions (i.e. noise). It has been effective for patients ranging from newborn to young people, as well as adults working or visiting. (Senior Play Specialist, aged 36-46)*

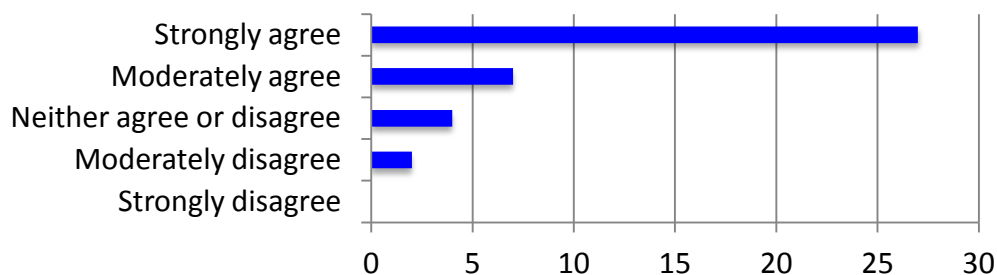
“*OPUS has been visiting for some months now, and we noticed the difference on the monitors more than anything. Following the brain injury, he doesn't tend to have any emotional output with his facial features or movements with his hands and arms due to the severity of things. So we find that he responds more in relaxing and we're seeing the drop in his heart rate. We went through a period of his heart rate being really high, around 160-170. OPUS came to see him in the Intensity Care Unit, and he just dropped into 120-130. He knows the difference between live music and recorded music on a CD, he can definitely tell. The difference is unbelievable. It really does settle him and soothe him. (Mother of a boy with hypoxic brain injury)*



## The Evaluation Study: Results - Parent's wellbeing

The majority of parents felt that their own wellbeing had been improved as a result of OPUS music activities

### Improves parents' wellbeing



On a scale of 1-5 (1 = strongly disagree, 5 = strongly agree), parents agreed on average 4.48 with this statement. Put in a different way, 68% of the parents agreed strongly that OPUS activities improve parents' wellbeing. This suggests that also the majority of parents and carers felt that OPUS music activities had a positive effect on them, and not only on their child. Only 2 parents (out of 40) disagreed with this statement.



“*Chilled me out (didn't think I was in hospital), reminds of "normal life".*  
(Parent/carers, aged 46-55, woman)

“*This is a fantastic activity, got my child involved and excited. She sang along and enjoyed it all the time. It was a great feeling to see my child come out of pain and stayed happy during the activity. I hope this will have a positive impact on her mood throughout the day.* (Parent/carers, aged 26-35, man)

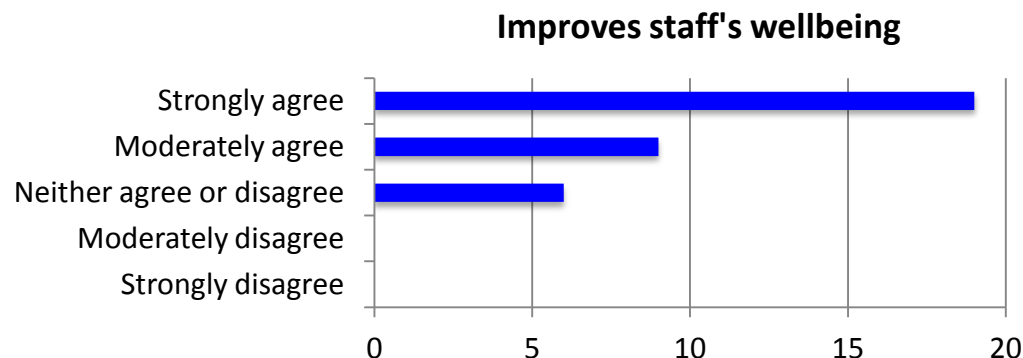


“*It's nice to see all the kids enjoy their music, they calm the whole ward down.* (Parent/carers, aged 26-35, woman)

## The Evaluation Study: Results – Staff’s wellbeing

The majority of parents and staff felt that children’s wellbeing was improved as a result of OPUS music activities

On a scale of 1-5 (1 = strongly disagree, 5 = strongly agree), healthcare staff agreed on average 4.36 with this statement. Just over half (51%) of the healthcare staff agreed strongly that OPUS activities improve staff’s wellbeing. No one disagreed with this statement.



A Senior Sister (aged 36-45) described the music activities as “a calming refreshing break from busy day to day working”. She further described how the music “calms, reduces noise level, relaxes staff”, and that “having more settled patients and parents eases workload”.

“

*We had a child in a side cubicle. She must have been 2-3 years old. She was just bawling her eyes out, crying constantly, you could hear her outside in the corridor and she sounded really distressed. We were trying to work out if she was having a tummy pain and listen to her heart, as you do with every child when you do a full examination. But it's impossible when someone cries, their stomach muscles tense up, and you can't listen to the chest and so on. Luckily it was a Tuesday morning and then we heard the music starting off. So I got the play nurse to go and grab the musicians and bring them into the room. The child looked at that and got completely transfixed and we could just slightly examine her while she was barely knowing that we were doing it. For us, that really helped. (Junior Doctor, aged 26-35, man)*

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## MUSIC ENJOYMENT BY PROXY

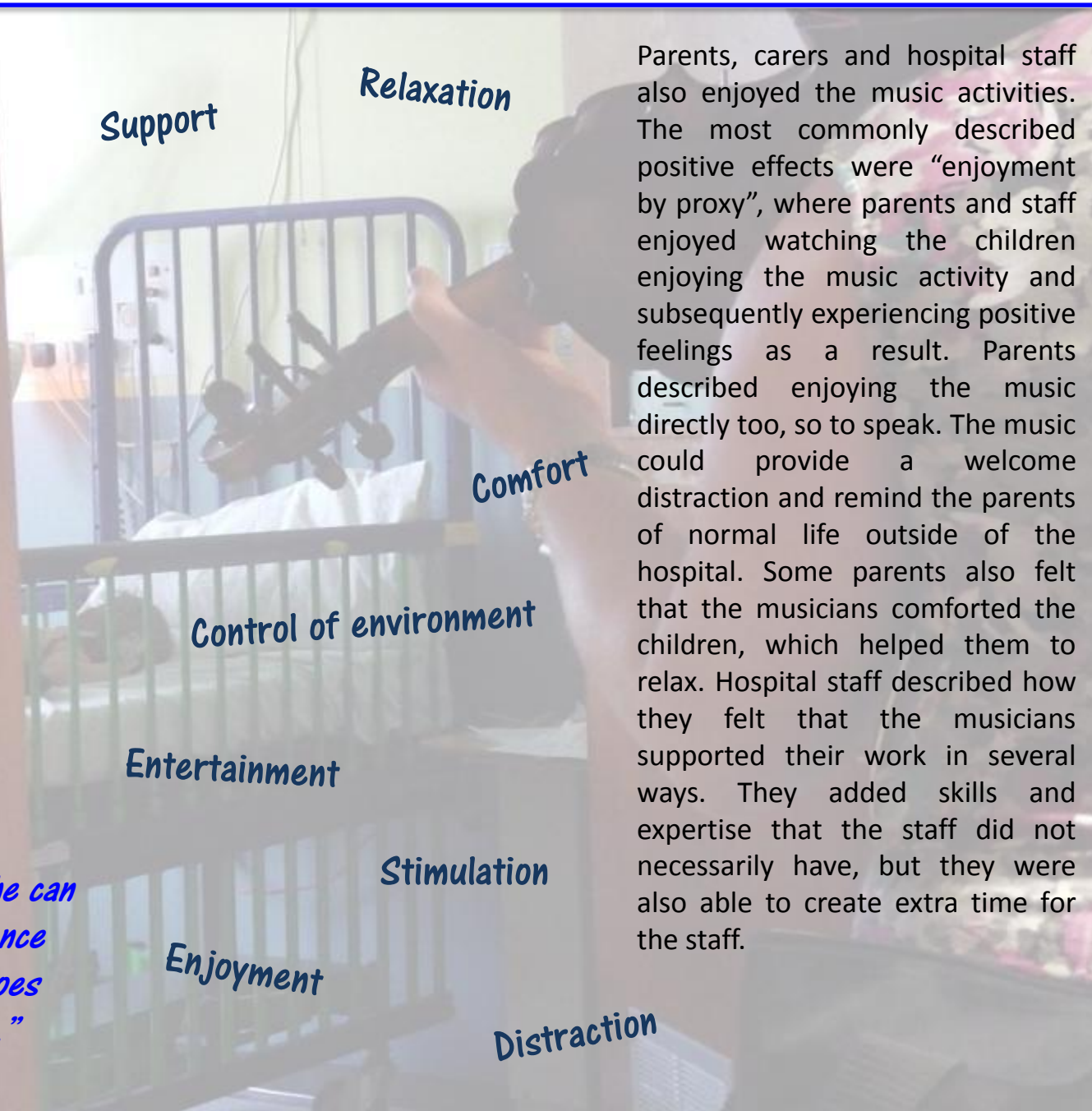
Parents/carers as well as healthcare staff enjoyed OPUS' music for their own sake, but even more common were reports of "music enjoyment by proxy". They thoroughly enjoyed seeing the children enjoying the music, smiling, getting involved with the music activities, interacting with the musicians and sometimes with others on the ward. The enjoyment by proxy brought a sense of relief to them, they felt as if the musicians really cared about the children, and they could take a step back and relax.





The results suggest that music helped to distract children from illness, enhanced their relaxation, provided stimulation, learning opportunities and gave them an opportunity to momentarily be in control of their environment. Given that a lack of control has been linked to negative effects of hospitalisation in children (Coyne & Livesley 2010), it is possible that this is one way in which music functions and can have positive effects on children's wellbeing.

*"He knows the difference between live music and recorded music on a CD, he can definitely tell. The difference is unbelievable. It really does settle him and soothe him."*  
(Parent/carer)



Parents, carers and hospital staff also enjoyed the music activities. The most commonly described positive effects were "enjoyment by proxy", where parents and staff enjoyed watching the children enjoying the music activity and subsequently experiencing positive feelings as a result. Parents described enjoying the music directly too, so to speak. The music could provide a welcome distraction and remind the parents of normal life outside of the hospital. Some parents also felt that the musicians comforted the children, which helped them to relax. Hospital staff described how they felt that the musicians supported their work in several ways. They added skills and expertise that the staff did not necessarily have, but they were also able to create extra time for the staff.

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'new opportunities in music'



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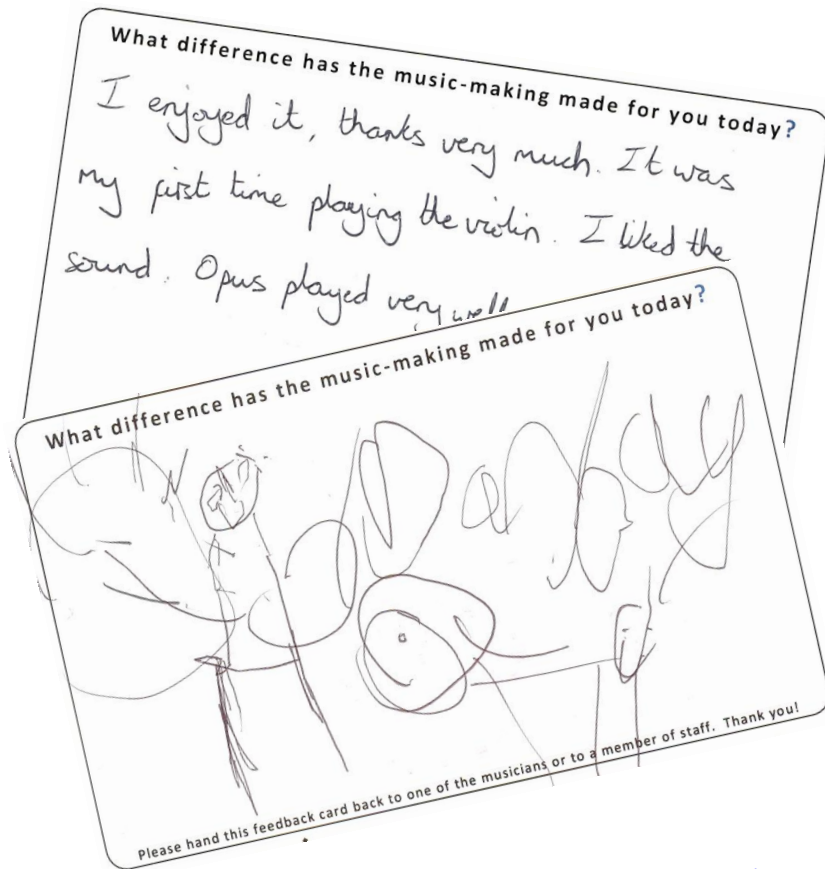
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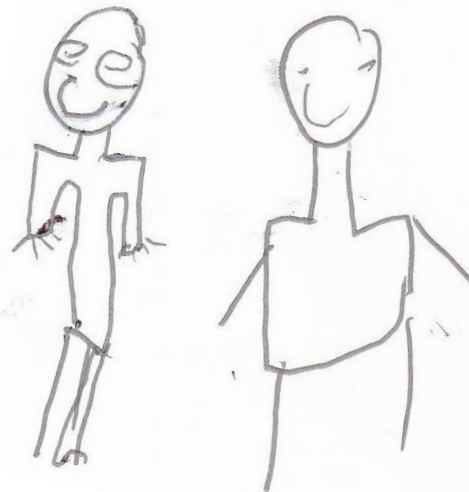


"My little boy has been in LRI [Lecicester Royal Infirmary] since birth and we have had the pleasure of hearing you play and sing a number of times in cicu [Children's Intensive Care Unit] and ward 12. I just want to say thank you. The first time I saw you in cicu is one of my most special early moments with my son. It was the first time he had heard music and you played him twinkle twinkle. He was so smiley that a day never goes by now where we don't sing or play songs to him and he loves it. I think we have a musician in the making! Thank you for bringing us joy during a difficult time xx"

"My son had been very distressed and had been weeping for about three hours when they arrived. The transformation was dramatic, they not only stopped him crying but made him cheerful. They were thoughtful and considerate and clearly took the time to include all of the children in the bay. My son cannot speak at the moment or make facial expressions but even though there were not the most obvious signs of a reaction they took the time to speak to him and sing to him.

It not only made a huge difference to him but also to my wife and I who were with him at the time. It was the first positive moment of our stay.

I would be grateful if you could pass on our thanks. In addition to the amazing staff you are fortunate to have, the programme is brilliant and whoever instigated it should be very proud. The effect on the morale not only of my son but all of the children was considerable. I hope it continues."



Band





**Dr Anneli Haake, Evaluation Consultant**

Nottingham, October 2013

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