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An Exploration into the Perception of Music Interventions in Hospitals amongst Healthcare Professionals

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Abstract

In order to raise awareness of how music can be used beneficially in hospitals, it is necessary to further understand the perception of music interventions amongst those working in this setting. A mixed methods approach was employed. Thirty-one healthcare professionals completed an online survey or interview asking how much live music existed in hospitals, their knowledge of music interventions, and expected effects. Attitudes towards introducing live music, where this would be appropriate, and willingness to learn more were also investigated. Four participants also took part in a follow up study. Live music was found to be uncommon, with no standardised internal system to enable it. Participants had little knowledge of research surrounding the use of music in medical settings. However, only 36% of this sample of healthcare professionals were willing to learn more.

Observing a music session had a significant effect on the perception of the efficacy of music. Having observed a live session, healthcare professionals thought it would have a long term benefit to patients. There was interest in increasing the amount of live music on the ward and integrating a music therapist into the healthcare team. Therefore, this study highlights the importance of increasing awareness of music interventions amongst healthcare professionals, through observing music sessions and presenting evidence of the benefits of these during training programmes and Continued Professional Development (CPD) in order to create a more positive perception of music within hospitals.

Keywords: *Hospitals, Music, Music Therapy, Attitudes, Healthcare Professionals*

Introduction

There is a growing body of empirical research outlining the psychological and physiological effects of live and recorded music interventions in hospitals, for examples see Barrera, Rykov, and Doyle (2002), Cepeda et al. (2006), and Kuhn (2002). However, there is no standardised procedure in the UK to encourage the use of music. This study explores healthcare professionals' perceptions of music interventions, asking how com-

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monplace different types of intervention are, and discovering awareness of their perceived effectiveness. Willingness to learn more and how to achieve this will also be addressed. It is necessary to establish the views of healthcare professionals as they can prevent or encourage the use of music on their wards. In this study, the term *music intervention* incorporates four approaches: music therapy; interactive music sessions led by a music practitioner; music performance, where the patient watches musicians play; and recorded music.

Literature Review

Hospitals aim to provide holistic, patient-centred care. Introducing music could help achieve this. However, few hospitals have the internal structures to support its use. Hole, Hirsch, Ball, and Meads (2015) found that "at present, music is not used routinely perioperatively" (p.1659). With the exception of the Hospital Broadcasting Association (2016), a volunteer-run internal radio station providing radio channels in 200 hospitals, the majority of music interventions are provided through external organisations such as Music in Hospitals and Live Music Now. The factors influencing the lack of music will be explored.

Professionals' uncertainty about the effectiveness of music interventions and how to fund and incorporate musicians into their practice hinders their use (NHS, 2015). Hole, Hirsch, Ball, and Meads (2015) conducted a meta-analysis including research into any form of music used in the perioperative period of any adult surgery. They found that the scepticism of healthcare professionals, which is largely based on ignorance, prevents the use of music despite sufficient research suggesting it should be made available in medical settings. The medical focus of healthcare professionals is highlighted by Gaynor (2002, p.5) as "we were rewarded … for being fast and efficient, for treating and releasing patients as quickly as possible," discouraging the exploration of other therapeutic methods. Aldridge (1996, p.59) stated that, "it is necessary to negotiate a common language between those of us involved in the creative arts therapies and those with whom we work in clinical practice."

Few studies explore healthcare professionals' attitudes towards music interventions; however, findings show that perceptions improve with increased awareness. In a psychiatric hospital, observing music therapy sessions positively correlated with the value staff attributed to these, although music therapy was still seen as less effective than the work of psychologists and social workers (Choi, 1997). Furthermore, Hillmer (2007) and Metzger (2004) found that witnessing music therapy positively impacted on nurses' opinions and interest in learning more, and those with greater exposure felt funding was more justifiable. Thorgaarda et al. (2005) found that staff reacted positively to a specialized music environment on a post-anaesthesia care unit. Therefore, exposure to interactive music interventions, in particular music therapy, is shown to have a positive effect on their perceived value amongst healthcare professionals.

Currently, lack of funding in the NHS is an obstacle for new interventions. Robertson, Wenzel, Thompson, and Charles (2017) found that the financial pressures in the NHS have a detrimental impact on the access to services and quality of patient care. However, encouraging the use of recorded music would have minimal costs and could be easily implemented through utilising the devices many patients already own (Cepeda, Carr, Lau & Alvarez, 2006). Research has also shown that the cost of introducing a music therapist is outweighed by the cost reductions in the patients' dependency on sedative drugs. In some cases this also shortens the length of hospital stay by eliminating the side effects common to some sedatives (Berbel, Moix, & Quintana, 2007; Lepage, Drolet, Girard, Grenier, & DeGagné, 2001; Loewy, Hallan, Friedman, & Martinez, 2005; Walworth, 2005).

This study was designed to explore healthcare professionals' perceptions of four forms of music intervention ranging from music therapy to listening to recorded music. This will not only contribute to finding effective ways to inform healthcare profession-

als of how music can be used in a hospital setting, but also show music practitioners how they can make the service they offer easily applicable to this environment.

Aims

1. To establish how common music interventions are in acute medical settings
2. To understand the awareness that the healthcare professionals have of the existing research and whether this alters their perception of music interventions
3. To comprehend medical professionals' willingness to learn more and how this could be delivered
4. To establish whether healthcare professionals' would welcome more live music and where live and recorded music would be more appropriate

Methods

Approach

This explorative study aims to further understand healthcare professionals' exposure to music interventions and the perception of their effectiveness. Whilst research highlights the role of music in healthcare, few studies examine the views of healthcare professionals. Through understanding the perspective of healthcare professionals and the factors that influence these, effective ways to inform professionals about music interventions can be established. This can be used to help make music a standardised provision in healthcare. A small follow-up study allowed the researcher to ask questions that arose from the results.

A mixed methods approach was employed allowing in-depth data to be obtained from a broad sample by collecting quantitative and qualitative data. A survey containing closed and open questions was presented as an online self-report or face-to-face structured interview. The follow-up interview was semi-structured allowing the participants to lead the direction of the conversation. The positivist model was used to analyse quantitative data, whilst thematic analysis of the qualitative information provided explanations for the statistical results. The triangulation of the data meant that questions were approached from different perspectives ensuring conclusions were supported by all the results.

Sample

Thirty-one participants took part in this study completing a face-to-face interview (six responses, 19%), an online survey (21 responses, 68%) or an online survey and follow-up interview (four responses, 13%). Participants were placed into four job categories: doctors (10 participants, 32%), nurses (eight participants, 26%), interdisciplinary staff, referred to as other in Figure 8 (eight participants, 26%, consisting of an occupational health doctor, clinical educator, volunteer, play leader, senior physiotherapist, dietician, and two social workers), and retired (five participants, 16%). The participants' worked on 16 different wards, with some working on more than one ward. A full list of the wards stated is included in the Appendix. For those still working in hospitals the mean length of time in their current job was 8.3 years (SD = 6.9) ranging from 0.3 –24 years. Twenty-five participants (81%) had worked in more than one hospital. Fifteen participants (48%) could play a musical instrument, eight of whom still played (53%). The mean length of time spent listening to music per week was 6 hours (SD = 5.5) ranging from 0–21 hours. Responses to the online survey were removed if they had not proceeded beyond the informed consent, totalling 25 responses. Of the 31 responses included in the statistical analysis there was an 81% survey completion rate.

Purposive sampling was used to ensure healthcare professionals from a variety of roles and settings were included. The hospital local to the researcher, York Teaching Hospital, circulated the study gaining responses from an acute medical setting with little live music occurring. To incorporate participants with a variety of exposure to

music interventions staff from a children's hospital in London with frequent music sessions also took part. The hospital where participants worked was not recorded as the influence of the workplace was not being examined in this research. The survey was forwarded to members of the local medical society accessing retired professionals. The length of time participants had been retired for was not recorded but the effects this could have had on the results is explored. A national music therapy charity also advertised the study. This sampling method gained 27 responses. A further four participants were reached through convenience sampling.

Method

A survey comprising five sections, opening with demographic questions, was created by the researcher, based on the literature. It questioned practitioners' experience of music in hospitals, their knowledge of music interventions and therapy, the predicted effectiveness of music sessions, and how they can be implemented in the future. Four methods of music intervention were outlined in this study: music therapy, interactive music sessions lead by music practitioners (who were not trained therapists), live music performances where the patients watch musicians playing, and listening to recorded music. The first two categories were combined in some questions to increase the relevance to the participants and make it easier for them to respond. Where this occurred it was clearly outlined to the participant at the start of the question. These were explained clearly to the participants throughout the study. The survey was presented as an online self-report, using the software Qualtrics, or as a structured interview using identical material. The follow-up interview was semi-structured consisting of five open questions, based on responses to each section of the previous survey.

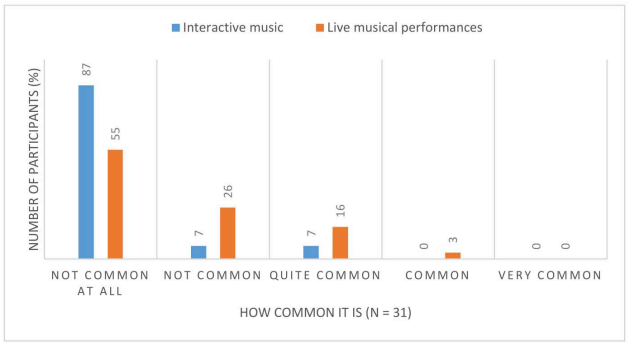
Procedure

A small pilot study was conducted interviewing one participant. This allowed the structure and clarity of the survey to be reviewed whilst giving the researcher an opportunity to conduct an interview. The participant was approached through convenience sampling and did not take part in the main study.

Ethical approval was attained for this study from the University of York before data collection took place. Data collection period was from October 2016 to January 2017. The online questionnaire, sent via email, took 10–15 minutes to complete. Both interviews lasted 20–30 minutes. Interviews from the first study were face-to-face in a convenient setting for the participant (e.g. office or coffee shop) and two participants were interviewed together as this was more convenient for them. Three of the four follow-up interviews were conducted over the phone, giving access to participants from a wider geographical area. Nine of the ten interviews were recorded on two devices and transcribed for analysis. Due to a technical fault one telephone interview was not fully recorded. Detailed notes taken during the interview were used for analysis.

Measurement and Data Analysis

As all participants were presented with the same material, data from the interviews and online questionnaire were analysed together, with the follow-up study analysed separately. IBM Statistical Package for the Social Sciences (SPSS) Statistics 23 was used to produce frequency and descriptive statistics of the quantitative data. A chi squared test was used to show the significance of relationships between variables. Those with a probability of randomness rating of $<.05$ were classed as significant. A non-parametric test was used as the data collected was ordinal or nominal. In addition, the sample size for some of the results varied as not all the participants completed the whole questionnaire. Therefore, finding the median, rather than the mean, provided the most accurate representation of the results. Microsoft Excel was used to generate graphs from these results. In Figures 15 and 16 categorical variables were transformed to metrical



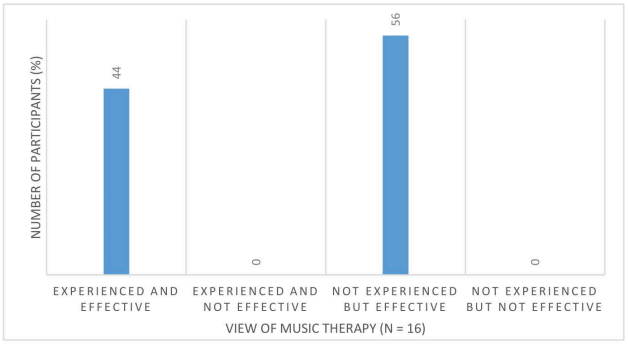


Figure 1-2.

Figure 1. How common interactive and live music interventions were on the ward. The relationship between these variables is not significant. *Figure 2.* Healthcare professionals' experience and the effect of this on their view of music therapy.

in order to create a clearer visualisation of the trend, i.e. nominal data was turned into ordinal data to better represent the results in a graphical format.

Analytic induction of the qualitative data was conducted with an iterative coding process. Responses were analysed repeatedly until the data was comprehensively categorised into themes. To ensure this, the constant comparative method was used producing multiple codes from one case and testing and revising these through analysis of further responses. Codes were clustered to form overarching themes. In-vivo coding, drawn directly from responses, was used. All opinions were treated as meaningful due to the sample size. Tabulations were used to show the prevalence of codes within and across responses and those with a high count were deemed more significant. Quotes are linked to the participant through an individual numerical code, for example P2. P1-6 took part in the interview and P7-10 took part in the follow-up interview. There are 35 labels as four participants took part in both the online survey and the follow-up interview.

Results

The results are presented in three sections: the prevalence and awareness healthcare professionals have of music interventions in hospitals, the effects that practitioners had observed and predicted music interventions to have, and how participants felt more music could be incorporated into standardised healthcare provision.

The Prevalence and Awareness of Music in Hospitals

Current Exposure and Knowledge of Music Therapy

Policies within the hospital could prevent music therapists from gaining access to the ward. The time pressures and limited resources make it increasingly difficult for music to be introduced. Results from the follow-up study revealed there was no procedure in place to obtain music therapy within the hospital, meaning staff or patients sourced it themselves. Going through other services such as occupational therapists and the patient advice and liaison service was also suggested.

In addition, 94% of professionals reported little or no knowledge of music therapy. Although level of knowledge did not significantly correlate with the overall lack of music in hospitals, the qualitative responses suggested "ignorance" prevented music therapy from being offered in the hospital (P7). The scientific focus of healthcare professionals was thought to discourage them from trying new interventions, necessitating the need to "normalise it" (P8). The perception of music therapy as less appropriate in acute physical settings and contrary to a scientific viewpoint could be why only 36% of participants were interested in learning more. However, some participants thought introducing music interventions was important to ensure holistic, patient-centred care.

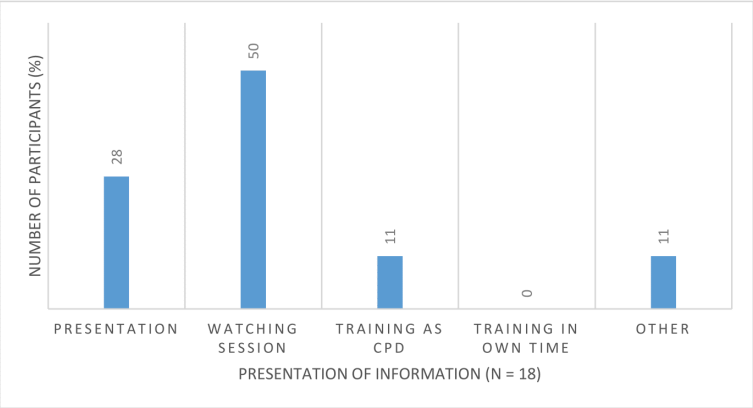


Figure 3.
How information about music interventions would most usefully be presented.

> Restricted in what we're allowed to officially recommend (P9)

> Complete lack of knowledge in the hospital setting (P7)

> Music is perceived as being a fairly … niche interest (P8)

> Truthfully we're just poisoning patients … Ultimately I think 90% of all illness we see can be boiled down to four things - bad food, bad exercise, bad rest and bad stress, and those are the only things. Problem is no one tackles those things, but we're very happy dishing out tablets to try and get people to keep going. (P2).

How to Increase Awareness of Music Interventions among Healthcare Professionals

Fifty percent of respondents thought "watching a session in progress" would most effectively increase awareness of how music interventions can be used more widely in an acute hospital setting (Fig. 3). This was supported in the follow-up study as observing a session as part of Continuing Professional Development (CPD) would be most likely to change healthcare professionals' opinions. In addition, 28% of professionals would choose a presentation defining the costs, aims, and objectives of music therapy.

Participants were positive towards having a seminar, outlining the ways music can be implemented, in training (63% *definitely* or *probably yes*). Informing students early in their careers would promote patient-centred care complementing the holistic healthcare hospitals aim to provide. In the follow-up study, training was thought the best time to increase awareness. However, bias towards medicines amongst healthcare professionals could prevent this being effective.

In addition, increasing patient awareness of the services available to them was thought to help music in all forms become more commonplace. Those in the follow-up study thought information on displays, flyers, and the staff newsletter would raise general awareness in the hospital. The patient-centred approach to healthcare increases the value of feedback and patient involvement in their care. Through increasing general awareness of music in hospitals patients could request it and eventually expect the service to be offered.

> when you see for yourself something working, that changes your opinion (P9)

> ensure holistic patient-centred care (P35)

> you're so focused on medicines and drug treatments and operations (P1)

> it's something we don't get exposed to and …you think that medicine is all about just medicine and what you give, but as you get older you start realising that actually medicine constitutes a very small part of care provision … we want to be healthcare providers, we are not at this point in time, we are disease modifiers. … As health care providers what

> we're doing is we see the cracks, we cover the cracks up, we're not changing the person … Problem is these days people are bored … boredom leads to being sedentary, leads to suicides, leads to stress. … what I've realised with the best care in the world at this point in time we don't get anyone better, and we don't really improve people's quality of lives, and empowering them, and giving them other things to focus on has to be a good thing (P2).

The Effects of Increased Awareness on Healthcare Professionals' Perceptions

Healthcare professionals who had more knowledge of music therapy were more likely to think it would have a long term effect (Fig. 4), and those who had observed a live music session were more likely to welcome more live music interventions (Fig. 6). In addition, those who had experienced music therapy were significantly more likely to have considered offering music therapy to a patient (Fig. 5). This is supported in the qualitative data as raising awareness allowed staff to form more accurate opinions. Awareness of music interventions, especially through observing a session, was believed by these participants to be an effective way to alter perceptions of music interventions in hospitals. For one participant, partaking in a music therapy session in a hospice setting influenced her positive opinion of the effectiveness of music therapy in a hospital. Another participant had been part of a project to establish art therapy for patients undergoing dialysis. Witnessing the effects of this on patients' view of their treatment and engagement with the process positively influenced their view of how music therapy could be used with patients suffering acute physical illnesses. However, awareness of music therapy in other settings, such as with children with disabilities, did mean that two participants did not think music therapy would be suitable in an acute medical environment. Figure 7 contradicts the other findings as those who had observed a music session were less likely to believe the effects were long term.

The role of research outlining how music therapy could be safely implemented was shown in the follow-up study. P9 stated that studies should not only prove the effectiveness of music therapy but also discover how music therapy has a positive effect on people. Current research was viewed with scepticism within the scientific hospital environment by these participants. This could be due to lack of awareness of the research conducted but also shows the need for more evidence. However, it was suggested that solely increasing awareness would not be enough as the whole outlook of healthcare professionals needs to be changed. Therefore, increased communication through collaboration is necessary, especially in research.

> Our exposure to it is related to … handicapped children … rather than in acute medical situations (P3)

> The ones who [music therapy is] most useful for aren't on the whole on the general wards (P4)

> I have experienced it and taken part with patients in a hospice setting … that was amazing (P6)

> We're fairly convinced that for those people who want to take part [in art therapy] it makes a real difference to the way they feel about their treatment … it does seem to offer them something much more than just filling in the time … it seems to really stimulate a much deeper involvement in that activity (P1)

> The two start points are so completely different … so it's about changing mind-sets not just increasing awareness (P9)

Healthcare Professionals' Perceptions of the Effectiveness of Music Interventions

Fifty-seven percent of participants thought live music interventions, including music therapy, would have a lasting effect with none disagreeing. One overarching theme

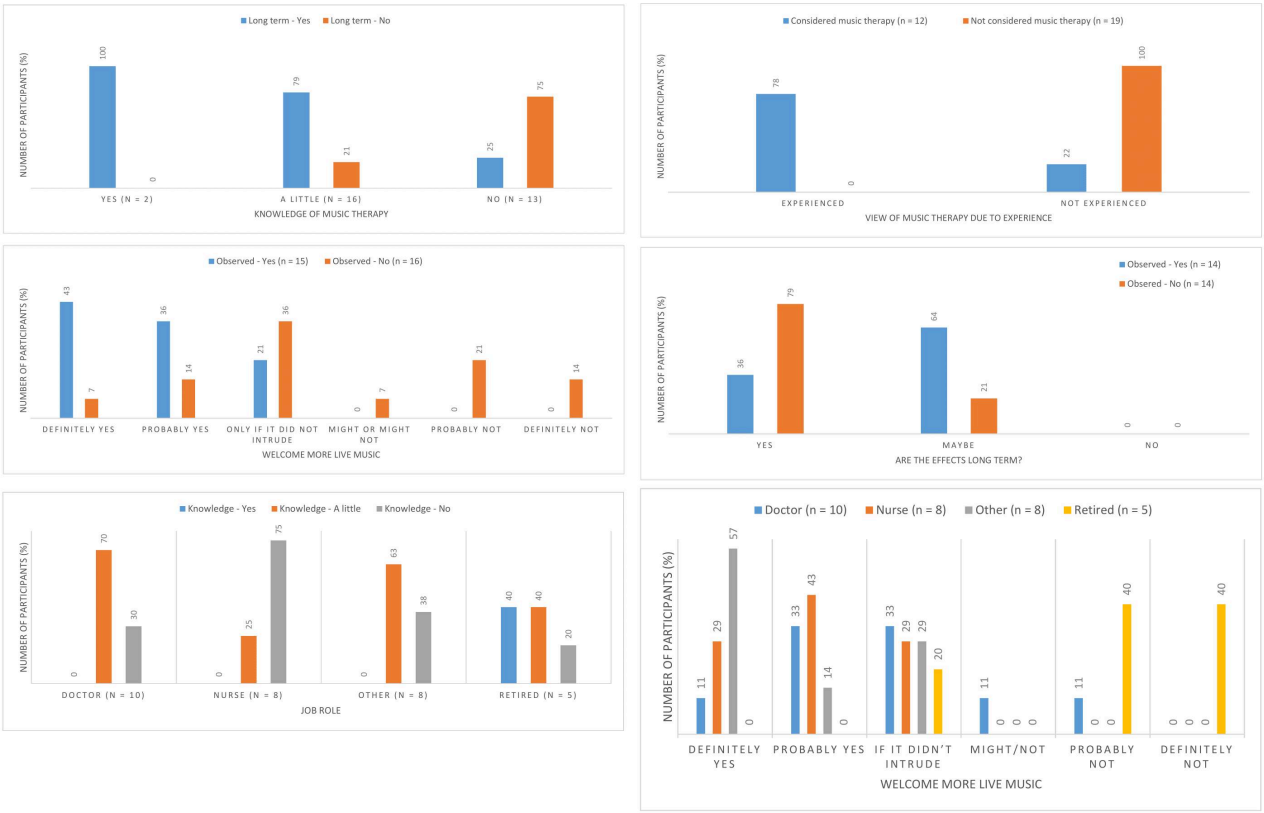


Figure 4-9.

Figure 4. The relationship between knowledge of music therapy and whether the effects of music interventions were thought to be long-term X^2 (2, N = 31) = 9.12, p <.05. *Figure 5.* Relationship between experience and view of music therapy and whether the participant had considered offering it to a patient X^2 (1, N = 31) = 9.68, p <.05. *Figure 6.* Relationship between welcoming more live music and observing an interventions X^2 (5, N = 31) = 11.36, p <.05. *Figure 7.* Relationship between observing a music intervention and whether the effects were thought to be long term X^2 (1, N = 28) = 5.25, p <.05. *Figure 8.* The relationship between job role and knowledge of music therapy. *Figure 9.* Relationship between job role and whether participants' would welcome more live music.

was the improvement of psychological well-being, which participants felt was important as illness often limits one's independence which can affect mental and physical health. Participants also stated that interactive music sessions would help release stress, create a calm atmosphere and allow patients to have their own voice, as well as providing structure and community with other patients. This would "build confidence in the patient which they have often lost throughout the course of their illness … making them feel 'human' again rather than 'a patient'" (P24).

Interactive music making was also thought to impact the patients' well-being, which would improve their treatment and speed up their recovery. Through allowing patients to be active and have a sense of control, they can feel a sense of achievement and self-worth. In addition, involving motor skills was thought to have a lasting benefit (P4). Therefore, interactive music interventions allow the patient to "[feel] empowered that they can take control of themselves … and anything that encourages active participation is a really good thing" (P2).

Sixty-three percent of participants thought interactive music interventions would *definitely* or *probably* affect recovery with none saying 'definitely not' (Fig. 11). Again the most significant theme was the improvement of psychological well-being as this would have an effect on recovery and well-being. Involvement in music making provides patients with the opportunity to express the emotional trauma accompanying illness and for some, preparing for death.

Forty percent of participants thought recorded music was *probably* as effective as live music, promoting mindfulness (P6) and relaxation (Fig. 12). There would also be

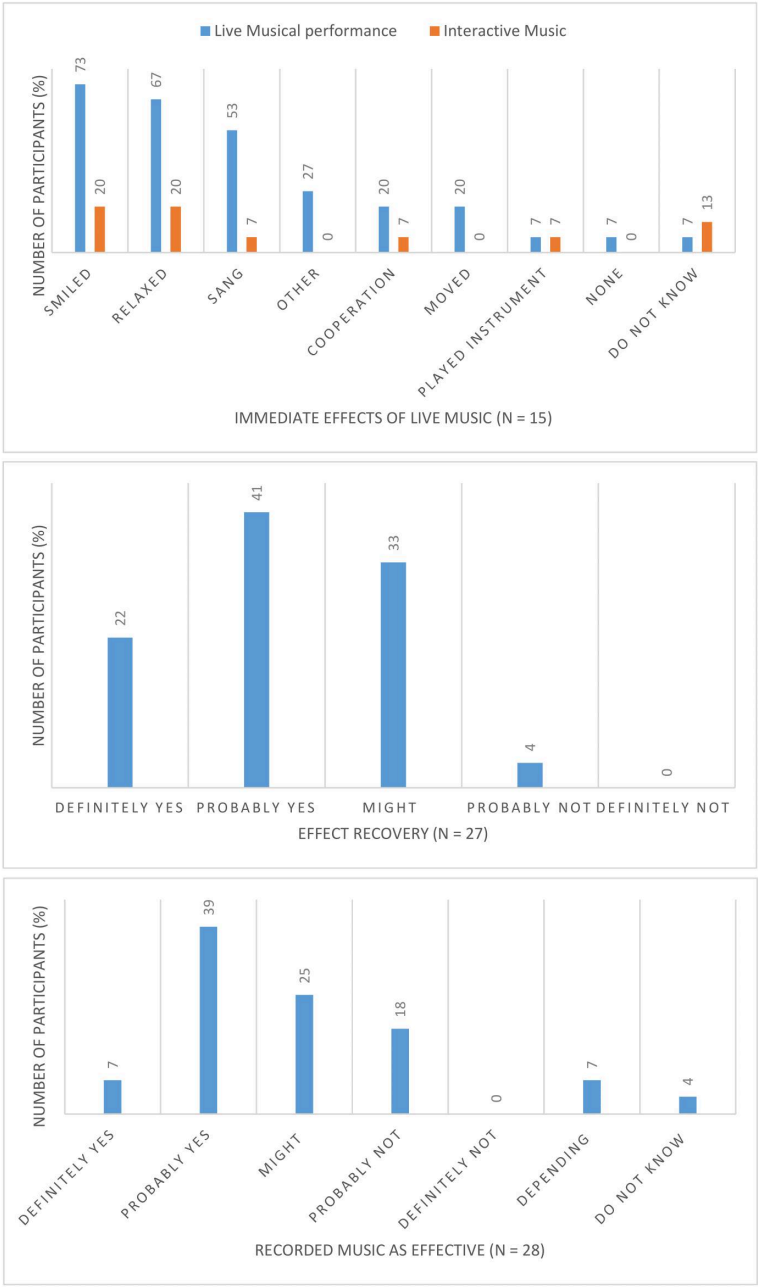


Figure 10-12.

Figure 10. Immediate effects of live interactive and performance interventions. *Figure 11.* Whether music sessions were thought to effect the patients' recovery. *Figure 12.* Whether recorded music would be as effective as interacting through live music.

a greater control of the standard of music and a wider range of choice. However, 18% of participants thought recorded music would *probably not* be as effective as live music due to the lower level of engagement (five responses). Therefore, the type of music intervention could depend on the aim of the session, as "if the purpose is for investing in new things and looking for mainly distraction then participative music may provide something more" (P31).

The qualitative data showed three ways recorded music is currently used in a hospital setting. The theme of patient control over the choice of the music, often utilising headphones, was prominent. This was thought to provide familiarity to the patient when in an unfamiliar setting and allow time for reflection. Some participants also referred to the use of recorded music played over speakers. Whilst some participants had had positive experiences of this intervention, others felt the range of tastes among pa-

tients was too varied. Two participants mentioned the role of hospital radios and the ability this has to give patients a voice.

A common theme across responses was the importance of maintaining the individual care hospitals aim to provide. It was thought that music would be more effective with certain illnesses and the aim of the session would depend on the patient and their mood at that time. Therefore, for some patients, recorded music might be more appropriate, with the choice of music giving a sense of control to the patient, whilst for others engaging creatively could be of more benefit. The needs of the individual must be considered and the appropriate intervention provided when introducing music.

> Provide opportunities to be expressive of emotion (P31)
>
> Look forward to the ensuing sessions and have something to share with other patients (P35)
>
> Experience a sense of well-being from music which could speed up their recovery and improve their mood, confidence and engagement with treatment (P19)
>
> The psychological state of a patient influences both recovery and well-being (P15)
>
> The time [the patients are] spending on treatment would be more fulfilling … giving them a greater sense of worth (P2)
>
> One of the most important parts is the mind-set of the patient, getting them into a happy mind-set, undoubtedly makes a huge difference. And also getting them actively involved in anything reduces the risks of depression … that comes along with being in a hospital for a long time the helplessness, and the passiveness … I'm sure that getting people to do things is such a good idea. And I think music is one of those … that is universal, just brings people together, they'd socialise more, they'd have more fun, rather than just waiting all day … boredom is horrible. And that's what people become in hospital, they become bored … and they become depressed and they spend all their time thinking about dying or about how they've been let down. Whereas actually if they're busy … in a nice way … that can be a life changing experience. (P2)
>
> One does not have to 'play' music to appreciate it (P15)
>
> It's the engagement in actually doing the work … that seems to be the important thing (P1)
>
> There's something about the creative process that I think would have a different impact from just listening (P1)
>
> There are a group of illnesses where it would have that effect [on recovery] for some people (P1)
>
> When I played music to patients on the ward many decades ago they would comment that it was relaxing listening to the music (P5)
>
> Hospital radios with earphones and things are great. You can sort of shut out the world … Wonderful and you've a voice (P6)

The Future of Music in Hospitals

Where would it be Practical to Introduce Live Music?

Seventy-nine percent of participants would welcome more live music on the ward (Fig. 13). This significantly correlated with having a music therapist on the team, suggesting those who wanted more live music thought music therapy was an appropriate intervention (Fig. 15, $X^2\ (25, N = 28) = 48.95, p < .05$). It was thought to be possible to introduce live music in a way that did not disturb the staff, but it was also important to respect the wishes of the patients. To respect patients' right to choose to take part, other locations were proposed that might better suit a music session including the day room, the physiotherapist's room, and the dining room. Also wards with a fast

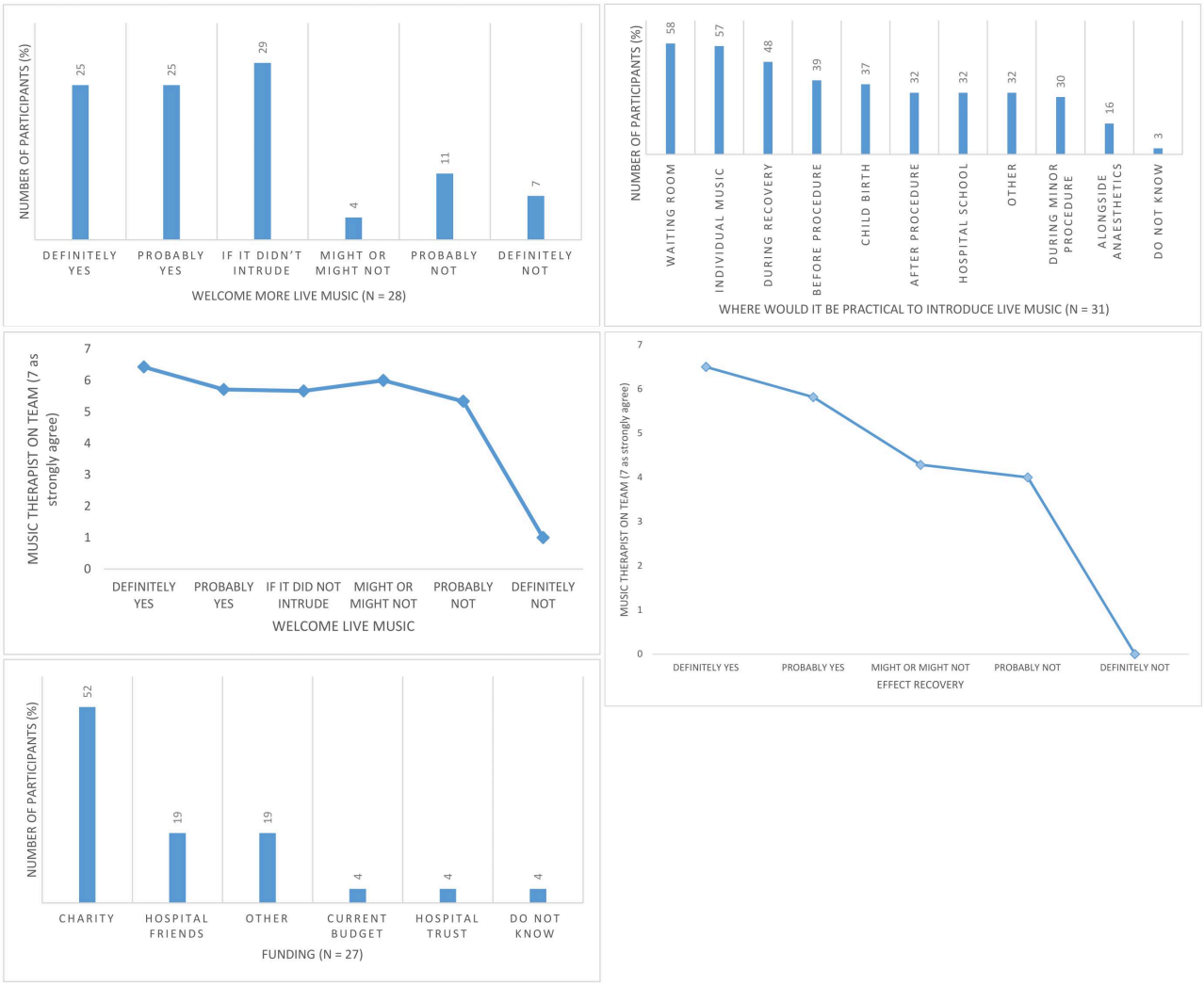


Figure 13-17.

Figure 13. Whether respondents would welcome more live music on the ward. *Figure 14.* Where it would be practical to introduce live music in the hospital.*Figure 15.* Relationship between agreeing to have a music therapist on the team and welcoming more live music. Having a music therapist on the team was transformed to a metrical variable through creating means, with 7 as strongly agree and 0 as strongly disagree, X^2 (25, N = 28) = 48.95, p <.05. *Figure 16.* Relationship between welcoming a music therapist on the team and whether music interventions effect the patient's recovery. Again having a music therapist on the team was transformed to a metrical variable through creating means, with 7 as strongly agree and 0 as strongly disagree X^2 (15, N = 27) = 29.16, p <.05. *Figure 17.* How participants felt a musician or music therapist should be funded.

turnover were thought less suitable for live interventions than wards with more long term patients, for example dementia and cancer wards.

Introducing live music in the *waiting room*, *individual outlets*, and *during recovery* were considered the most suitable (Fig. 14). Fifty-eight percent of participants thought live music in the waiting room was practical to relax the atmosphere and take pressure off the doctors, ultimately improving the care provided. The importance of providing a quiet area was highlighted as it might not suit all patients. Similarly, the hospital school was considered an appropriate area for live music because patients could leave if they wished. Thirty-two percent of participants suggested *other* situations for live music such as in palliative care, during dialysis, and on an ICU.

In the perioperative period, 48% of participants felt live music during recovery was appropriate. Live music was thought to be practical before or after a medical procedure. This is supported statistically, as only 16% of participants thought live music should be introduced *alongside local or general anaesthetics*. Recorded music for the patient individually, using headphones, was thought to be more suitable here, allowing

healthcare professionals to maintain their focus and ensure the safety of the patient. Furthermore, immediately after a procedure, recorded music for the individual patient was thought more appropriate due to the high level of infection control and the need for careful monitoring by staff. Therefore, responses were positive in relation to live music before a procedure and in recovery, but it was felt that recorded interventions utilising headphones were more suitable during and immediately after surgery.

> There are ways of delivering that doesn't at least get in the way of the staff (P1)

> Lots of people get very anxious and very frustrated whilst waiting (P1)

> We [doctors] hurry things up … and therefore we are really never given enough time [with] each patient (P2)

> Away from where the procedure's happening (P1)

How a Musician or Music Therapist could be incorporated in the Existing Hospital Structures

Seventy-nine percent of respondents were positive towards employing a music therapist. Those who were unsure wanted more information about what it would involve. There was a significant correlation between wanting to involve a music therapist and whether live music interventions would affect recovery (Fig. 16, X^2 (15, N = 27) = 29.16, p <.05). However, funding a music therapist was thought to be difficult as 52% of participants thought funding for a musician or music therapist should be through an external organisation due to the lack of money in the NHS as a whole. Only 4% of respondents thought it should come out of the hospital budget if evidence proved it to be valuable. However, the difficulty of proving effectiveness was also acknowledged.

Follow-up respondents suggested hospital structures could accommodate a musician. Being available on the nurses' care sheet, which offered services such as religious support, was proposed (one response). P7 stated there had been an increase in cross-silo communication, where staff discuss the patient's care together, and a music therapist could join this team. Another factor that would affect active participation with music was the individual ward and hospital as some would be more accommodating to alternative therapies. Therefore, there are existing structures which could incorporate a music therapist.

> I don't know how good the evidence base for providing it is compared to what else you spend your money on (P1)

> If you can prove its therapeutic benefit then it should come out of ordinary budget (P3)

> They're cutting basic things like beds so they wouldn't employ unfortunately (P5)

> Whether the wards have autonomy to implement different interventions (P10)

Discussion

This study supports research stating that "music is not used routinely" in acute medical settings (NHS, 2015). The most common form of live music described by the participants was live vocal performances such as carol singing. The lack of live music was thought to be due to the policies and procedures within the hospital and healthcare professionals' ignorance of the effectiveness of interactive music in acute medical settings.

Responses highlighted the lack of knowledge about music therapy in acute medical settings amongst healthcare professionals. Research has shown that this can prevent the use of music in medical settings (Hole et al., 2015). However, despite stating to have little or no knowledge of music therapy there did appear to be some understanding amongst participants that music therapists work on both a group and individual basis and aim to help both the psychological and physiological recovery of the patient.

All participants thought music therapy was effective regardless of their exposure and 39% of participants had considered offering music therapy to a patient. These findings suggest that whilst there is little knowledge of music therapy amongst hospital staff, its therapeutic value is acknowledged.

Increased knowledge and exposure to music therapy had a significant positive correlation with views of music therapy. This supports findings from previous studies (Choi, 1997; Hillmer, 2007; Metzger, 2004; Thorgaarda et al., 2005). Those with more knowledge of music therapy were significantly more likely to think the effects were long term.. In addition, there were significant positive correlations between those who had experienced music therapy and those who had considered offering it to a patient, and those who had observed live music interventions were more likely to welcome more live music. Awareness of music therapy in other settings also influenced healthcare professionals' perceptions. For two participants, knowledge of music therapy with children with disabilities limited their ability to see how it could be used in an acute medical setting, however, for another, experiencing music therapy in a hospice altered her perception of its therapeutic value. For one participant, witnessing art therapy positively influenced his perception of how music therapy could be implemented.Therefore, the results clearly indicate that increased knowledge and awareness of music therapy positively impacts healthcare professionals' perception. This suggests that educating hospital staff should become a focus of music facilitators when aiming to establish music in all forms as part of standardised healthcare.

Fifty percent of participants thought that watching a music therapy session in progress would be the most effective way to raise awareness. Findings were also positive about having a seminar during training outlining research showing the effectiveness of music therapy in healthcare settings, which is supported in the literature (Kaempf & Amodei, 1989). However, there was some scepticism about the effectiveness of this due to the pharmacological focus of medical students. This is shown as despite the lack of knowledge about music therapy amongst participants, 64% of respondents were unwilling or uncertain to learn more about music interventions. This could be a result of the time pressures medical professionals' face, but could also suggest there is a bias towards medicine-focused care, which could lead to patients being "seen as cases, rather than human beings" (Gaynor, 2002, p.5). This supports the finding that attitudes to care as well as awareness of alternative interventions need to change. However, lack of awareness of the research that has been conducted outlining the effectiveness of music therapy could also influence results. Research into music therapy was thought to be less scientific than studies looking at other therapeutic interventions. Making healthcare professionals aware of the research that has been conducted could change this perception.

In addition, the importance of raising patient awareness about the effectiveness of music interventions through flyers and displays was also thought to increase the presence of music in hospitals. The control of the individual over the care they receive is increasing with the focus on patient-centred care. Therefore, if patients are aware and request music therapy to be provided this could in turn expose more healthcare professionals to music therapy. This is supported by Hole, Hirsch, Ball, and Meads (2015, p.1670) who stated that "patients could be encouraged to listen to music through patient information leaflets and hospital guidelines."

Findings from this study indicate that healthcare professionals have minimal understanding of the research surrounding the use of music in hospitals. However, there was an intuitive sense of where different musical interventions could be implemented. There is a general appreciation of music's therapeutic value. This underlines the importance of better communication between healthcare professionals and music facilitators, which could encourage music to become a part of standardised healthcare.

Healthcare professionals were likely to welcome more live music including music therapy, supporting findings from previous studies (Choi, 1997). Despite the lack of interactive music interventions in hospitals it was widely thought amongst participants that interacting through music would aid the psychological well-being of the patient,

which would have a long term effect on both their physical and mental health, speeding up their recovery. Qualitative themes that were identified included the capacity of music therapy to release stress and express emotions through giving patients a voice; provide control, structure, and community; and create movement and a sense of achievement and self-worth. These findings are supported in other research showing that music therapy improved the mood and lowered the anxiety of patients (Barrera, Rykov, & Doyle, 2002; Burns, 2001; Cassileth, Vickers, & Magill, 2003; Ferrer, 2007) and reduced pain levels (Ghetti, 2011; Madson & Silverman, 2010; Malone, 1996). In addition, studies exploring the effectiveness of music therapy found that these were not limited to the patient but that the families and healthcare professionals found emotional support and the overall medical procedure became less stressful (Barrera, Rykov, & Doyle, 2002; Madson & Silverman, 2010; Malone, 1996).

Whilst the benefits of interactive interventions were acknowledged, the healthcare professionals did not always feel live music interventions were appropriate. Forty percent of participants felt that recorded music would probably be as effective as interactive interventions as it promotes mindfulness and relaxation. It also gives the patient more control over the type of music and the quality of the performance. However, 18% of respondents felt it would probably not be as effective, due to the lower level of engagement. This difference could be explained as responses suggested that different interventions would suit different patients, illnesses, and stages of treatment. It was generally felt that during the perioperative period, recorded music would be more suitable practically and provide a sense of familiarity to the patient. This is supported empirically as findings into the effects of recorded music show lowered anxiety levels of the patient (Biley, 2000; Chang & Chen, 2005; Chlan, 1998), the families (Browning, 2000), and improved the healthcare professionals' satisfaction (Cruise, Chung, Yogendran, & Little, 1997). Research has also shown the effectiveness of music listening at lowering patient pain perception (Cepeda, Carr, Lau, & Alvarez, 2006; Shertzer & Keck, 2001).

Music therapy and interactive interventions were considered more appropriate for patients with long term illnesses or illnesses associated with greater emotional stress. Again, through collaborating with healthcare professionals it would be possible for music therapists and practitioners to offer music interventions that best supported the needs of the individual patients. This is also supported in the literature as interactive music therapy was found to have greater anxiety reducing effects and patients displayed more coping behaviours (Bailey, 1983; Robb et al., 2008).

The difference between a music session led by a trained music therapist and a session led by other practitioners could be inferred from the results. Those who had observed live music interventions, in most cases not delivered by a music therapist, were less likely to think that the benefits would be lasting. This suggests that whilst ongoing therapeutic interventions led by a therapist were thought to have a long term effect on the well-being of the patient, one-off live performances, as observed by a larger proportion of participants, were not thought to have a lasting effect on the health of the patients. This could also account for the preference towards recorded music that some participants showed due to the lack of control over the quality of the music. If the session was delivered by a certified music therapist the quality of the overall experience would have greater guarantee.

There was a significant correlation between wanting a music therapist on the team and whether believing that music interventions effect recovery. However, results showed that healthcare professionals felt a music therapist should be funded externally possibly suggesting they do not view it as an essential part of care. This supports research outlining the detrimental effects the financial pressures on the NHS are having on the services offered to patients and the quality of their care (Robertson, Wenzel, Thompson, & Charles, 2017). However, some thought that, if its effectiveness is demonstrated, it should be part of the NHS budget. This supports research which shows that as music intervention became more prevalent there was a correlating increase in the level of justified funding (Hillmer, 2007). This is an example of how educating

healthcare professionals on how music therapy can be implemented and the research into the cost benefits could alter perceptions. Research looking into the cost effectiveness of music interventions indicates that both music listening and music therapy, in addition to the positive psychological effects, either reduce or eliminate the reliance of patients on sedatives, thereby lowering the cost and the risks of side effects along with the added anxiety this can cause (Berbel, Moix, & Quintana, 2007; Lepage, Drolet, Girard, Grenier & DeGagné, 2001; Walworth, 2005). In one study, the experiment led to the introduction of music therapy permanently in the hospital, showing the benefits of the music therapy not only helped the patient and family but also improved the working environment for the staff (Loewy, Hallan, Friedman, & Martinez, 2005). However, there is contradicting research as Walworth, Rumana, Nguyen and Jarred (2008) found that whilst music therapy had a significant positive effect on quality of life indicators, there was no significant difference in the length of hospital stay or the amount of medication administered, which would therefore have no economic effect.

Although hospital policies do not currently easily accommodate musicians and music therapists, existing structures were outlined that could incorporate these roles. This included being offered on the nurses' care sheet and as part of cross-silo communication teams. In addition, areas such as the day room and physiotherapy room were suggested as suitable places for music sessions to occur. These suggestions highlight the need for increased communication between musicians and healthcare professionals in order to be able to offer services with the least intrusion to the hospital routine. This supports Aldridge's (1996, p.59) statement that "it is necessary to negotiate a common language between those of us involved in the creative arts therapies and those with whom we work in clinical practice."

Evaluation and Implications for Future Research

Establishing generalisability can be difficult in qualitative research, especially in a small study where limited data can be analysed. To allow for a larger sample a mixed methods approach was used creating quantitative data alongside open questions. Utilising online surveys as well as interviews increased the sample size as it required less time and effort from the participant. In addition, the majority of the participants were currently working in one of two hospitals – York Teaching Hospital and Great Ormond Street Hospital. As York Teaching Hospital is a general acute hospital whilst Great Ormond Street specialises in paediatric healthcare, the participants were working with a variety of clients. Participants were also working in various roles and on differing wards which will increase the generalisability of the results to hospitals with differing medical specialities and patient types. The main hospitals included also provide variety as any music provision in York Teaching Hospital was provided through voluntary organisations while Great Ormond Street has funded music therapy. As these hospitals are situated in different geographical locations in the UK, and all of the participants had also worked in other hospitals around the UK, the results can be generalised to hospitals in the UK. However, the data is not representative of the music provision in hospitals outside of the UK.

Another issue is sample bias, due to the busy schedule of the target population only those with a prior interest in music or alternative intervention are likely to respond. Whilst this cannot be avoided, the use of purposive sampling ensured a range of job roles, hospitals and levels of experience were included, making the results as representative as possible. Therefore, the results cannot be generalised due to the small sample, the resources available, and possibly biased interest of the participants. However, purposive sampling and a mixed methods approach made the study more representative.

Structured interviews improved reliability with all participants receiving the same stimuli read from a script which limited interviewer bias. The inclusion of fixed choice answers also increased reliability removing the influence of the researcher in the analysis. Standardised statistical analysis of the quantitative data made the results replicable. Low inference descriptors, such as recording and transcribing interviews reduced

the effect of the researcher (Silverman, 2014). The research process and analysis of the qualitative data has been clearly outlined in the methods, allowing for external scrutiny (Silverman, 2014). In addition, quotes were frequently used in the results ensuring that the respondents' opinions were accurately relayed. In the semi-structured follow-up interview, prompts were used to restrict the interviewer so new topics were only introduced by the interviewee. However, inter-rater reliability was not tested, and therefore researcher bias could have influenced the results.

The main factors undermining the validity of explorative research are the influence of the researcher's views and the veracity of the respondent's account. At the time of data collection, the researcher was an undergraduate music student at the University of York. The researcher's personal belief that music, in particular music therapy, can have great positive benefits in healthcare could have influenced their interpretation of the data. The triangulation of the research, incorporating different forms of data, increased validity as it is "necessary to uncover information and perspective, increase corroboration of the data, and render less biased and more accurate conclusions" (Reams & Twale, 2008 p.133). Analytic induction of qualitative data reduced the influence of the researcher, as hypotheses were thoroughly tested throughout all responses. It was ensured that there was a comprehensive analysis of data and tabulations were created to show the frequency of answers (Silverman, 2014). This increased the validity of the conclusions and allowed the reader to judge them for themselves.

It was accepted that cultural influences would affect the responses, and so results could only be true to the answers given. Having lived in both London and York, the researcher had a similar cultural background to the participants in the study. On the other hand, the researcher has had very little medical training and has little experience working in the hospital setting. Structured and semi-structured interviews were used to minimise the influence of the interviewer which reduces social desirability bias. These methods were used to ensure that the results were as true to what the healthcare professionals thought as possible.

This study raises many questions, due to its explorative nature, and future research holds exciting prospects for the introduction of more music in hospitals. As the culture, gender, and age of the participants was not recorded in this study, it would be interesting in future research to explore whether these factors influence healthcare professionals' attitudes to music in healthcare settings. Ways in which musicians and healthcare professionals can collaborate effectively need to be defined. The effects of this on the awareness of healthcare professionals and how this alters perceptions should be monitored whilst also outlining practical applications for musicians. A future study could also look further into which disciplines could use recorded music effectively and which could benefit from using musicians. The effectiveness of the different interventions should be explored and the longevity of these effects. In addition, it would be valuable to research differences between hospitals as well as the attitudes of people in different jobs.

Conclusion

Results from this study highlight the absence of live music in hospitals and healthcare professionals' lack of awareness of these interventions in acute medical settings. However, findings show a significant correlation between increased knowledge through observing music sessions led by trained practitioners and improved attitudes towards music interventions. Therefore, including seminars outlining research surrounding the use of music in hospitals and demonstrating its' benefits music in healthcare professionals' training and CPD could alter their opinions. In addition, this study shows how increased communication could also aid musicians as recorded music was proposed to be more appropriate in the perioperative period and the location was thought important to give patients control over participation. Therefore, this study highlights the importance of establishing a relationship between healthcare professionals and music

practitioners in order to provide interventions that complement the care that hospitals aim to provide.

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