

Music for patients in intensive care and recovery wards at Odense University Hospital

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Music therapy during the recovery process after major surgical procedures

Over the last three years there has been a particular focus on the sound environment at two intensive care wards at Odense University Hospital. This article discusses, based on the results from a qualitative study, how the existing sound environment has been changed using music.

“Evocative”. *“Like being in a forest”*. *“Lovely, nice and relaxing”*. These were some of the answers patients gave when they were asked what it was like to wake up to music after major surgery.

The patients interviewed participated in a study which had the following aims:

- to investigate the value of music as a therapeutic tool for patients recovering after major surgical procedures.
- to provide music in the wards as a therapy option for post-operative intensive care patients.
- to train staff to be able to select music for therapeutic application based on empirical and experience-based knowledge.

The qualitative study aimed to examine patients’ experiences of listening to music during post-operative recovery, and whether patients experienced less discomfort from the existing sound environment when they had the opportunity to listen to music. It was also important to work out which music was best suited as a therapeutic tool and whether it was possible to leave patients in peace while they listened to music.

The significance of the sound environment for post-operative intensive care patients

The existing sound environment in a post-operative ward is made up of sounds from technical monitoring and treatment equipment, from other patients, and from visitors and staff. The sound environment has been created based on an increased need for technology, habits and daily routines, and patients’ physiological needs.

But how do patients perceive the existing sound environment and how does it affect them?

Some will react with anger and aversion, while others become frightened, anxious, worried and insecure. The psychological and emotional reaction to noise is irritation – a feeling of discomfort caused by unwanted stimulus, which can cause stress and anxiety. For patients who have a reduced capacity to adapt to stressful situations, the effects of noise can have significance for the development of intensive psychosis (1).

Joyce Griffin, Director of Clinical Nurse Research, Navel Hospital, Portsmouth, refers in her article to Florence Nightingale, who pointed out in 1860 that noise can be harmful to patients (2). Over 140 years later, no action has been taken in response to this observation. Nursing staff are responsible for helping patients through the early post-operative process without suffering psychological or physical harm.

Background noise and meaningful noise in intensive care wards

In intensive care wards, noise can be divided into background noise and meaningful noise. Background noise is sounds that are constant or occur regularly and sounds which have no direct significance for a particular patient. Background noise can be sounds from respirators, suction, pumps, alarms and the sound of voices. Meaningful noise is sounds which have a significance or function in relation to a particular patient, again, for example, suction and the sound of voices. In other words, what is background noise for one patient can be meaningful noise for another patient (3).

One option for changing the existing sound environment in an intensive care ward is to design a sound environment made up of music and natural sounds. This would allow the sound environment to be meaningful, and give patients an opportunity to have influence over the sounds they are surrounded by. In an intensive care environment, activities take place day and night, and poor planning, prioritisation and lack of consideration can lead to patients being constantly disturbed – preventing them from getting peace and quiet and rest.

By allowing music to serve as a therapeutic tool on an equal footing with other treatments, the goal is to legitimise leaving patients in peace while music is playing.

Design and method

The study was carried out at two post-operative recovery wards at Odense University Hospital. A project group was formed, consisting of two nurses from each ward. In order to have a comparable patient group, the project group chose to involve:

15 patients who had had operations for lung or vascular conditions.

15 patients who had had surgery for abdominal conditions.

Patients were chosen consecutively based on the following inclusion criteria:

Age 15-75.

The patients were to undergo elective surgery and were expected to need intensive monitoring during post-operative recovery for at least eight hours.

The patients accepted the opportunity to listen to music post-operatively.

The day before patients were to undergo surgery, they were contacted by a project nurse. After being briefed both orally and in writing about the study, patients were asked if they wished to participate.

The project group selected the music on the basis of recommendations from music therapist, Ilse Kjær, and based on a working partnership with composer, Niels Eje. The group also drew on the book by Norwegian doctor, Audun Myskja: "Den musiske medicin" as theoretical background knowledge in order to be able to select the right music (5). In this study, priority was given to ensuring that the selected music represented different music genres (classical, jazz, etc.), in addition to the specially-composed music (MusiCure), which has been developed since 1998 by the Musica Humana project group for use in hospitals.

The music selection therefore consisted of Niels Eje's two specially-produced CD's, "Forest Journey – Recovery" and "Ocean Voyage – Recovery", both containing selections from the MusiCure material, and music by Niels Lan Doky, Looreena McKenitt, Niels W. Gade, as well as a selection of well-known classical pieces.

The working partnership with Niels Eje was established after a study visit to the recovery ward at Ålborg Hospital North, where the staff introduced the project group to a music project that was currently in progress. This was the project for which Niels Eje had designed music specifically for use with recovering patients. This was a completely new idea in the medical world, and we were therefore excited by the possibility of including Niels Eje's music in the project and permanently involving the project group from Odense in the Musica Humana organisation (5).

Specially-designed music and sound environment

Niels Eje's music has been composed and produced with the aim of alleviating anxiety and having a soothing effect. The underlying rhythm is based on a pulse rate of 60 and a respiration frequency of 15, corresponding to a body in a calm state. In order to create an atmospheric combination of experience and calm, the music programme is combined from three components:

- Newly-composed music
- Edited natural and sound atmospheres
- Unique symbiosis between music and natural sounds

These three components are balanced in relation to each other with the special quality that the rhythm represented in body functions such as pulse rate and respiration frequency is intended to have a stimulating effect and hence evoke feelings in the patient. The music is newly-composed and evocative where it blends with the great expanses of natural sound. This helps the listener to create their own images. The aim for the music is that it should be pleasant for anyone to listen to, regardless of gender, age and musical background.

Waking up to music

When patients are placed in the recovery ward, as soon as they are awake and able to answer coherently, they are given the option to listen to the selected music. The volume was set according to the wishes of the patient and the goal was for the patient to listen to music equivalent to one CD without being disturbed. This was to be followed by a break. The aim was for patients to hear music two times each shift, except at night. During the project, three investigation instruments were used:

1. Forms for recording the time intervals music was listened to, disturbances to music listening and the reason for these. The potential for leaving the patient in peace while listening to music, and the reason for any disturbances.
2. Questionnaires filled out by the nursing staff in the recovery ward prior to discharge to the ward of origin. These were used to record patients' ages, gender, choice of music and their answers to questions.
3. A semi-structured interview guide used by the project nurses in the general ward, 2-3 days after the operation.

The questionnaire and the interview guide contained questions about the patient's experience of listening to music during recovery, whether the patient was disturbed by the sounds in the ward, and whether the music was the right choice. During the interview, patients were also asked whether they would have preferred other music, whether the length of time they listened to music was appropriate, and whether they could imagine a routine place for music during recovery.

Triangulation has been used as the method for processing the data since the study contains both quantitative data, such as the period of time for which music was listened to and the number of disturbances associated with this, as well as qualitative data regarding the patients' subjective experience of listening to music during the recovery process.

Results

Out of 40 patients that were asked, 36 wanted to participate in the study. There were 36 % women and 64 % men, with an average age of 60 years (range 37-77). The study showed that patients predominantly had positive experiences from listening to music during the recovery process. In the cases where the experience was negative for the patients, these were sometimes associated with dramatic experiences in the recovery ward. In order to get the most out of the music, patients indicated that the volume level must be appropriate and that it is important that each patient can control when and how long the music is played for.

One goal of the study was to leave patients in peace while they listened to the music. This was not possible. Examples of disturbances were briefings from the surgeon, taking of blood samples and x-rays. These disturbances are seen as important things for the patient, and not unpleasant disturbances to their music listening sessions.

It was found that the value of music in evoking images and relaxing the listener has greater significance for the patients than its capacity to block out external noise. Patients expressed feelings of relaxation, calm, and of being distracted after listening to the music. Patients described the music itself as being evocative, natural sounds – like being in a forest or travelling. A few of the patients did not like the music or the sounds. Others could not remember having listened to music.

On the basis of the patients' accounts of positive experiences, it can be concluded that in general the music was correctly chosen. The personal significance of music to people is apparent in the fact that a few patients would have preferred other music, for example, music they were familiar with from home. However, these patients have not trialled this music during a recovery process, where the body may react differently.

All patients except for two would recommend music and natural sounds (MusiCure) be an available option in recovery wards.

In order to implement music as a natural part of patient care in wards it is necessary to have music systems and selected music available in all patient wards. It is also necessary for staff to be familiar with theories about music therapy and its practical application.

Quality criteria and further information about this and other studies in the Musica Humana project group can be requested from info@musicahumana.com.

LITTERATURE

1. Baker, Carol F
Annoyance to ICU noise. A model of patient discomfort
Critical care Nursing Quarterly
August 1993 16 (2) 83 – 90
2. Griffin, Joyce
The impact of noise on critically ill people
Holistic Nursing Practice
July 1992, 6 (2) 53 – 56
3. Adam, Sheila m. fl.,
Intensiv sygepleje viden og praksis.
Nyt Nordisk Forlag
Arnold Busck 2000
4. Myaskja, Audun. Den musiske medicin. Oslo: Grøndahl Dreyers Forlag AS; 1999: Kap. 6+7
5. Musica Humana 2001 www.musicahumana.dk/beskrivelse
6. Kvale, Steinar. Interview: en introduktion til det kvalitative forskningsinterview. København: Hans Reitzel; 2000.
7. Kjærgaard J, Mainz J, Jørgensen T, Willaing I. Kvalitetsudvikling i sundhedsvæsenet. København: Munksgaard; 2001: 216-233.