

A preliminary study of desirable sound environments in hospital wards

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ABSTRACT

This study explored the desirable sound environment in hospital wards. We surveyed 111 chief nurses in hospital wards in Japan regarding the problems concerning sounds in the hospital wards for the staff and patients, the attempts taken to improve sound environment, and the desirable sound environment in hospital wards. Survey results revealed that the staff was annoyed by voices of the patients talking on a mobile phone and the noises such as snoring from the patients, voices of other staff, and noises from the transportation of medical equipment. Respondents felt that the patients were also annoyed by voices of other patients, voices of the staff, the noises such as snoring from other patients, the noises from a TV or a radio, and alarm sounds. With respect to the attempts taken to improve the sound environment, respondents indicated that the staff has paid close attention to voices of their own, used background music or radio, and changed the room among patients. As a desirable sound environment in hospital wards, it was silent and comfortable. These results suggest that staff's attention to sounds may be useful in improving the sound environment in hospital wards.

Keywords: Noises, Hospital Wards, Sound Environment

1. INTRODUCTION

Understanding the problems in the design of hospital wards is essential for improving their sound environment [1, 2, 3, 4]. One way in which medical professionals have attempted this is reducing noises in hospital wards [1, 5, 6, 7]. One of the more useful approaches for reducing noises in hospital wards is using background music, and this approach is effective in masking noises. However patients' health conditions, adequateness of music to scenes (time and space), and preferences of music among patients are assumed to affect effectiveness of background music.

Also, what kind of sound environment in a hospital ward was appropriate was not clear. Research indicated many kinds of noises in hospital ward, sound levels, and attempts for reducing noises so far. In this study, we explored not only problems concerning sounds in the hospital wards for the staff and patients, and attempts taken to improve sound environment, but what kind of sound environment in hospital wards was desirable.

2. METHOD

2.1 Respondents

Respondents were chief nurses in hospitals in Nagano Prefecture in Japan.

2.2 Questionnaire

We made a questionnaire consisted the following: the problems concerning sounds in the hospital wards for the staff and patients, the attempts taken to improve sound environment, and the desirable sound environment in hospital wards.

2.3 Procedure

We asked the director in 132 hospitals in Japan for cooperating the survey. After the directors consented to the survey, we sent a questionnaire to 200 chief nurses in 43 hospitals, and asked to

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filling out the questionnaire and to send back it to us.

3. RESULTS AND DISCUSSION

111 chief nurses sent back a questionnaire. Many of them were in hospital wards of internal medicine, recuperation or psychiatry which were below 60 beds.

3.1 The problems concerning sounds in the hospital wards for the staff

Results revealed that the staff was annoyed by voices of the patients talking on a mobile phone and the noises such as snoring from the patients (41.44%) firstly. Respondents also answered voices of other staff (26.13%) and noises from the transportation of medical equipment, a bed, a wagon, or a meal service cart (20.72%).

3.2 The problems concerning sounds in the hospital wards for the patients

Respondents supposed that the patients were annoyed by voices of other patients (56.76%) firstly. They also answered that voices of the staff (39.64%), the noises such as snoring from other patients (19.82%), the noises from a TV or a radio (19.82%), and alarm sounds (18.92%) annoyed the patients.

3.3 The attempts taken to improve sound environment

Respondents indicated that the staff has paid close attention to voices of their own (39.64%). They have used background music or radio (18.92%), and changed the room among patients (18.02%).

3.4 The desirable sound environment in hospital wards

As a desirable sound environment in hospital wards, respondents answered that it was a silent and comfortable (27.93%).

4. CONCLUSIONS

Many of the problems concerning sounds in a hospital ward occurred from the location of the rooms for patients and the nurses' station, the decrepit construction of a hospital, and the conditions of the patients. Among some of the problems, there were the sounds which the staff needed to hear.

Therefore, we supposed that it was difficult to improve many of the problems concerning sounds in hospital wards by the staff only. However, it was supposed that the staff could improve the problems such as voices of the staff by paying close attention to them. Moreover, because there were a few hospital wards which were not many of the problems concerning sounds, we need to investigate the characteristics of such hospital wards.

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