Nursing home residents’ psychological barriers to sleeping well: a qualitative study

Wolfram J Herrmann1,2,* and Uwe Flick3

1Multimorbidity in Old Age, Charité-Universitätsmedizin Berlin, Luisenstrasse 13, 10117 Berlin. 2Institute of General Practice and Family Medicine, Otto von Guericke University of Magdeburg, Leipziger Strasse 44, 39120 Magdeburg, Germany and 3Alice Salomon Hochschule University of Applied Sciences Berlin, Alice-Salomon-Platz 5, 12627 Berlin, Germany.

*Correspondence to Wolfram J Herrmann, Institute of General Practice and Family Medicine, Otto von Guericke University of Magdeburg, Leipziger Strasse 44, 39120 Magdeburg, Germany; E-mail: wolfram.herrmann@med.ovgu.de

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Background. Sleep disorders are a relevant problem in the nursing home and difficult to treat for the residents’ GPs. No intervention has yet addressed psychological factors contributing to nursing home residents’ sleep disorders.

Objective. To explore what nursing home residents perceive as psychological barriers to sleeping well.

Methods. A qualitative research design. We conducted episodic interviews with 30 nursing home residents. Data were analysed by thematic coding. We constructed a typology of residents regarding their perceived barriers to sleeping well.

Results. The interviewed residents perceived traumatic memories, family problems, worries about their situation and future, disturbing events during the day, appointments the next day, anxiety and dreams and nightmares as psychological barriers to sleeping well. The residents could be allocated into three types: residents of Type I identified only non-psychological barriers, residents of Type II worried mainly about their current situation and residents of Type III suffered from traumatic memories and were easily disturbed by any type of psychological distress.

Conclusions. Our results show the high importance of psychological factors for sleep disorders of the elderly. Future research should address nursing home residents’ psychological barriers to sleeping well and the presented typology should be operationalized and tested quantitatively.

Keywords. Mental health, nursing homes, patients’ perspective, primary care, qualitative research/study, sleep disorders.

Introduction

Sleep disorders are a relevant problem in the nursing home, both for residents and health care professionals.1,2 The prevalence of insomnia and sleep disorders in nursing home residents varies between 6.4% and 69% according to different studies1,3–6 and nursing home residents’ sleep is often fragmented.7–9 For the residents’ GPs, it is difficult to deal with the residents’ sleeping problems because the therapeutic options are limited due to multimorbidity and polypharmacy of the residents.

Nursing home residents are a population with a high prevalence of psychological and psychiatric disorders, e.g. depression.10,11 Psychological and psychiatric disorders are in return highly associated with sleep problems in the general population as well as in older adults.12–14 For this reason, one would expect psychological problems to play a major role in nursing home residents’ sleep disorders and to be a main target of interventions aiming at nursing home residents’ sleep.

However, to our knowledge, no intervention regarding nursing home residents’ sleep has addressed psychological problems yet. Interventions addressed other factors, such as bright light,15 physical activity,16 social activity17 and combinations of these.18–20 So far it has been unknown, if psychological factors have an impact on the sleep of nursing home residents according to their own reports.

Hence, the goal of this study was to explore what nursing home residents perceive as psychological barriers to sleeping well.

Methods

This study was a qualitative interview study with 30 nursing home residents and data analysis was done by thematic coding. This study was part of a larger research project exploring nursing home residents’ concepts of good sleep and sleep disorders.21,22
Thirty nursing home residents from five nursing homes from different providers in Berlin participated in the study. In Germany, nursing homes are long-term care facilities for residents who need a high level of care. The sample size of 30 was chosen a priori to represent male and female residents adequately in the sample. After interviewing 30 interviewees, the transcripts and codings of the interviews were checked for evidence data saturation by the research team. The residents had to be at least 64 years old and oriented to person and place. The sample criteria were deduced from findings of important gender differences in sleep and the importance of the self-perception of sleep. The first criterion was the gender of the residents and the second criterion was if the residents perceived their own sleep as good or bad. Together with the head nurses or unit head nurses as gatekeepers, we tried to sample the interviewees representing equally the four possible combinations of these two dimensions. In several interviews, the dichotomous criterion—if the residents perceived their own sleep as good or bad—was not consistent. We hence did not consider this dichotomous criterion in the interpretation of the data.

WJH conducted episodic interviews with these 30 nursing home residents. The episodic interview contains story-telling prompts and concrete and abstract questions. It therefore has narrative and argumentative theoretical elements and aims at exploring semantic and episodic knowledge. Hence, we asked the interviewees during the interview repeatedly to narrate situations they had experienced and we also asked concrete and abstract questions such as ‘What does good sleep mean to you?’ An interview guideline was designed covering the topics: ‘good sleep’, ‘bad sleep’ and ‘interventions for better sleep’. The interview guideline was not to be followed strictly but was a guide for the interviewer. All interviews were recorded and transcribed verbatim afterwards. All interviewees’ medical diagnoses and medications from their nursing records were also recorded to complement the interviews.

The analysis of the data was done by thematic coding. Flick has developed thematic coding based on theoretical coding in the framework of Grounded Theory but emphasizing cases and case analyses. By thematic coding, codes developed out of the data are allocated to text segments. A thematic structure is developed out of these codes. The individual cases are analysed and compared. First, we chose three interviews because they were long, rich and diverse. We coded these three interviews line by line and developed a thematic structure out of these codes. Then, we applied this thematic structure to all interviews and refined it step by step. All interviews were coded by the use of this thematic structure. In addition, we wrote a case description for every interviewee based on data from the interview and nursing record. For this article, we analysed in detail all interview segments coded within the categories ‘negative influences on sleep’. We organized all stated negative psychological influences into categories. In a second step, we analysed which interviewee stated which barriers and developed a typology of residents according to these allocations. The interview transcripts, the development of the thematic structure and coding of exemplary data were discussed in sessions with researchers who were not directly involved in the project to enhance reflectivity.

All quotations in this article were translated into English by the first author. In the parentheses after each quote, the pseudonymous interviewee numbers, gender and age of the interviewees, and line numbers of the transcript are stated. ‘I’ refers to the interviewer; ‘R’ refers to the interviewee resident. The study was approved by the ethics committee of Charité-Universitätsmedizin Berlin. All participants gave informed consent before taking part in this study.

Results

Sample and material
The sample consists of 20 women and 10 men and the interviewed women were in mean older than the interviewed men. The age of the interviewees ranged from 64 to 100 years. The interviewees had in mean 8.3 (SD = 3.4) documented diagnoses and received in mean 7.8 (SD = 3.2) different medications. The material consists of 30 interviews with an overall length of 19.5 hours.

Psychological reasons for sleep disorders
We found seven categories of perceived psychological reasons for sleep disturbances (see Table 1):

1. Memories from traumatic events in the personal history were still an important trigger for rumination in the residents’ everyday life. Many nursing home residents experienced traumatic events during World War II and afterwards or experienced individual traumatic events in their life such as the suicide of a family member.

2. And then [sleepless at night] I think about these experiences I had. We were from Pomerania. We were living there. And then we arrived in [a town in Schleswig-Holstein, Northern Germany], we

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were registered. And because my husband had been living here, we were exchanged, those who wanted to come here, and those who wanted to stay. (Resident 08, Female aged 92, ll.61–64)

Some residents were concerned about problems in their family. Commonly stated problems were financial disputes or suffering from neglect by relatives.

Yes, not long ago, I had a dispute with my son. Then, when I wake up at night, I ruminate about it. Then I cannot fall asleep again. (Resident 25, Female aged 91, ll.23–25)

Nearly half of the interviewed nursing home residents reported worrying about their own situation in general and about their future. The end of life situation in the nursing home was often a reason for ruminations as well as feelings of loneliness and senselessness.

Yes, I can fall asleep badly, that’s true. One thinks about these things, that one is so alone. That is the sad thing. (Resident 05, Female aged 100, ll.135–136)

However, also daily events or experiences disturbed several nursing home residents' sleep. These events might be disputes with staff or other residents as well as exciting books or films.

Well, as I said, it is better; no thriller, nothing exciting before, nothing exciting to read, nothing exciting to watch, nothing exciting to listen to. (Resident 15, Female aged 85, ll.544–545)

Another source of ruminations was appointments the next day. The interviewed nursing home residents especially mentioned appointments with their family physician:

When you are waiting for it [the appointment with the physician]. That’s something I also don’t like. Now, Sir, you have to get up and go to the physician, he begins at 9 o’clock. Then I cannot sleep well. (Resident 09, Male aged 79, ll.35–37)

A less common stated reason for sleep disorders was anxiety, e.g. one resident reported that she did not want to switch off the light at night because of her anxiety since she had experienced a resuscitation. Another source of sleep disturbances were dreams and nightmares.

I: Did you sometimes sleep bad?
R: Well, sometimes one has stupid dreams. Either from my memories. Or when something happened during the day and it still bothers you. (Resident 27, Male aged 66, ll.201–204)

There were different perceived psychological barriers to sleeping well; however, most of these barriers were a trigger or a matter for rumination.

A typology of nursing home residents regarding their perception of psychological reasons for sleep disorders
We constructed three types of nursing home residents regarding what they perceived as psychological barriers to sleeping well (see Table 2). Three residents could not be assigned clearly to one of these three types.

Only non-psychological reasons (Type I). The 10 residents belonging to Type I perceived currently only body-related barriers to sleeping well, such as pain, and external reasons for sleep disturbances, such as noise, or did not perceive any barriers to sleeping well at all. Seven residents of this type did not perceive any psychological barriers to sleeping well. Three residents reported psychological barriers, which had once affected their sleep but not currently. For example, one resident reported that going out and dancing once disturbed his sleep because he was so excited afterwards.

Worries about current situation (Type II). Nursing home residents belonging to this type worried about their actual situation and their future. They often felt lonely, displaced and did not feel well living in the nursing home. Eight of the interviewed nursing home residents belonged to this group.

Ruminating about traumatic memories and more (Type III). Residents belonging to Type III stated many different psychological barriers. All residents belonging to this type reported being disturbed by memories from traumatic events in the past, e.g. World War II. They stated they were easily affected by disturbing situations from their everyday life such as exciting events during the day. They also often brooded about their situation. Nine of the interviewed residents could be allocated to this type.

Discussion

Summary of main findings
This study explored what nursing home residents perceive as psychological barriers to sleeping well and a typology of nursing home residents regarding these factors was presented. Nursing home residents perceived mainly traumatic memories, family problems, worries about the current situation and appointments the next day as psychological barriers to sleeping well. Residents of Type I perceived only non-psychological barriers. Residents of Type II worried mainly about their current situation. Residents of Type III suffered
Nursing home residents' psychological barriers to sleeping well

Table 2  Which psychological barriers the interviewed nursing home residents perceived

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from traumatic memories and perceived several additional psychological stressors.

Strength and limitations of the study
Severely cognitively impaired residents were not able to take part in the study because it was an interview study. Participant observation was not an alternative because it does not give insights into subjective cognitive concepts. Observation of highly cognitively impaired participants who cannot give informed consent is also ethically difficult. However, it is important to research the perspective of vulnerable patients such as nursing home residents, even if it is not possible to include the whole population in the study. Accordingly, a strength of our study was the ability to explore the nursing home residents’ perspective and thus to take their perspective into account in general practice and general practice research.

The goal of a 1:1 distribution of women and men in the sample could not be reached due to a lack of male residents able to take part in the study. The distribution 2:1, however, fits the nursing home population that has a majority of women. The help of head nurses in getting access to interviewees is a possible source of bias. In the interviews, positions critical of nurses were however represented.

Traumatic memories of events of World War II and afterwards are somehow specific to older Germans. World War II did, however, traumatised people in many different countries, as a result, we expect war memories to be prevalent also in nursing home residents in other countries than Germany. Furthermore, the residents also reported other traumatic situations, such as the suicide of a close family member, that are not country specific.

Comparison with existing literature
The nursing home residents’ perspective on sleep disorders has not yet been researched. However, in a qualitative study, Davis et al. interviewed female residents in assisted living about their evaluation of their own sleep, but they did not explore what the residents perceive as barriers to sleeping well. In a quantitative study, Gentili et al. researched reasons for nursing home residents’ sleep disorders but they did not include psychological factors in their assessment.
St George et al. found in less care-dependent residents of self-care retirement villages and assisted care hostels a significant negative association of psychological problems with sleep quality. This corresponds to findings in community-dwelling elderly. Our study was the first to prove the relevance of psychological problems to sleep from the nursing home residents’ point of view, a highly dependent population with a high somatic morbidity.

**Interpretation of the results**

Our results show the psychological impact on sleep from the nursing home residents’ perspective: two-thirds of the interviewed residents reported that their sleep was actually negatively influenced by psychological factors. This emphasises the need to target psychological needs when treating nursing home residents with sleeping problems.

Our typology indicates possible underlying psychological disorders: residents belonging to Type II worry about their situation. It is known that adjustment disorders and depression are also associated with sleep disorders. Thus, Type II may indicate an underlying adjustment disorder or depression.

Residents belonging to Type III reported traumatic memories and a generally increased irritability. This can be interpreted as a lower threshold to psychological disturbances due to traumatic events in the past. Thus, Type III reminds us of post-traumatic stress disorder. Post-traumatic stress disorder is highly associated with sleep disorders. Rosen et al. showed even 45 years after the holocaust that there are significant differences in sleep between holocaust survivors and controls. In a representative sample of Germans aged 60 years and older, the prevalence of partial and full post-traumatic stress disorders was 7.2%. In the results of Glaesmer et al., sleep disorders and nightmares were among the most stated consequences of traumatic events. Munro et al. reported that GPs often lack knowledge to diagnose post-traumatic stress disorder adequately.

**Implications for future research or general practice**

Our typology lays the foundation for future diagnostic and treatment of nursing home residents with sleep disorders. In future research, however, the typology should be operationalized and the diagnostic value of our typology should be tested. Nonetheless, our results highlight the importance of psychological barriers for the sleep of nursing home residents; consequently, our results should encourage GPs to take into account the psychological reasons for sleep disturbances of nursing home residents.

**Acknowledgements**

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**Declaration**

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**Ethical approval:** The study was approved by the ethics committee of Charité-Universitätsmedizin Berlin on 8 December 2008.

**Conflict of interest:** none.

**References**

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Implications for future research or general practice

Nursing home residents’ psychological barriers to sleeping well

23 Redline S, Kirchner HL, Quan SF et al. The effects of age, sex, ethnicity, and sleep-disordered breathing on sleep architecture. Arch Intern Med 2004; 164: 406–18.