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The patient's perception of a delirium: A qualitative research in a Belgian intensive care unit

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Summary
Objectives: This research aims to describe the intensive care patients' perception of a delirium.
Research methodology: A hermeneutic qualitative research was designed using semi-structured interviews. Adult patients admitted between December 2011 and April 2012 to the intensive care unit of a Belgian public hospital, scoring positive for delirium at least once, were eligible for this study. At least 48 hours after the last positive score for delirium, the patients could be interviewed. Data saturation was achieved after 30 patients.
Results: Several patients spontaneously indicated the recollection of the delirium, whereas others needed a few questions or needed the specificity of the syndrome to be pointed out. The analysis of the qualitative data resulted in four major themes: (1) contact and communication, (2) feelings, (3) sleep and time and (4) implication of the delirious episode.
Conclusion: Interviewees recollected a vivid delirium with unrealistic scenes. The study delivered a first understanding of patients' perceptions during a delirium. This qualitative research tried to image the patients' perceptions providing nurses, physicians, other health-care workers as well as patients and their family with a better insight into the syndrome. Targeted interventions may be developed to relieve the burden of the syndrome.

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Implications for Clinical Practice

- The study provides a better insight into patients' perceptions during delirium.
- Contact and communication were disrupted due to deficient self-expression.
- Patients reported anger, fear, guilt and shame possibly interfering with nursing care.

Introduction

Delirium is an acute syndrome caused by an underlying physical process commonly presenting in the intensive care unit (ICU). The syndrome, caused by a disturbance of the cognitive processes in the brain, is associated with a reduced ability to focus attention, disorganised thinking or a changed level in consciousness (Maldonado, 2008). Multiple reports, differing in population and study methods, show a fifth to more than three-quarters of intensive care patients scoring positively for delirium (Ely et al., 2001; Van Rompaey et al., 2009a). The syndrome's fluctuating nature appears in a hyperactive, hypoactive or mixed clinical image. The pathophysiology is based on different neurochemical processes induced by a physical cause. Furthermore, multiple predisposing and precipitating factors evoke the abnormal processes in the human brain. A variety of factors have been studied without highlighting a single factor as the main cause (Inouye, 2006; Van Rompaey et al., 2009a). Interest in standardised screening tools for delirium in the ICU has been increasing. The Confusion Assessment Method for the Intensive Care Unit, the Neelon and Champagne Confusion Assessment Scale and the Intensive Care Delirium Screening Checklist are validated in different languages to be used in the intensive care setting (Bergeron et al., 2001; Ely et al., 2001; Matarese et al., 2012; van Eijk et al., 2009; Van Rompaey et al., 2008).

Several bad outcomes of patients after a delirious episode have been studied in the ICU or several months after discharge. Morbidity and mortality were observed to be worse (Jackson et al., 2003; van den Boogaard et al., 2010; Van Rompaey et al., 2009b). Likewise, a longer stay in the ICU and the hospital, a deterioration in cognitive processes, a higher cost of treatment and a lower quality of life have been linked to the delirious process (Jackson et al., 2003; Leslie et al., 2005; McCusker et al., 2001; McCusker et al., 2002; Thomason et al., 2005).

Although delirium has been studied thoroughly, the patients' perception of an ICU delirium seems underrevealed. O'Malley et al. (2008) reported fear, loneliness and anxiety to be most prominent in patients' perception during and after a delirious episode. Fifteen patients, who had been delirious after hip surgery, perceived a sudden change of reality evoking fear, anger and panic. The delirium was experienced as dreaming while awake. A review of qualitative research by Bélanger and Ducharme (2011) studying multiple settings included publications from 1997 until 2009. The authors described three major themes: (1) incomprehension and feelings of discomfort, (2) the need to keep one's distance and to protect oneself and (3) interventions that diminish suffering. In this review, two intensive care studies based on data from 1995 were included. At that time, a well-validated tool for delirium was not available, so the inclusion and selection of patients remain unclear. Furthermore, Samuelson (2011) and Hofhuis et al. (2008) described the experiences and the memories of critically ill patients without specifically studying delirium.

Research objectives

Apart from the studies with data from 1995 (Granberg-Axèll et al., 2001; Laitinen, 1996), recently few intensive care patients seem to have been interviewed on their perceptions during a delirium. Since these studies, delirium research has boomed, resulting in a better diagnosis of the syndrome. In addition, in the last decade, the ICU turned in a rapidly changing and evolving environment, changing the patients' profile of this ward. Therefore, and to develop an in-depth understanding of patients' perceptions of delirium to set up targeted and qualitative interventions, this research aims to describe the intensive care patients' perception of a delirium.

Methods

A hermeneutic qualitative research was designed using semi-structured interviews. Using the hermeneutic circle, the researchers' prior knowledge and experience are inherent to the interpretation of the findings. During the process, the prior knowledge is subject to changes leading to a deeper understanding of the studied phenomenon. In our research team, prior knowledge on delirium existed. Moreover, hermeneutic approaches are suitable to clarify incomplete, confusing or conflicting data, thus being a beneficial approach in delirium research. The design was based on Crist and Tanner's (2003) interpretative hermeneutic framework. The first phase was formed by a limited review of the literature revealing the patients' most important feelings while experiencing a delirious episode (Granberg-Axèll et al., 2001; O'Malley et al., 2008; Price, 2004; Sörensen Duppils and Wikblad, 2007). The second phase involved an interview based on the descriptions from this review. Furthermore, concurring problems and experiences were listed. The interviews were started in December 2011 until data saturation was achieved in April 2012. This resulted in the third phase, wherein the findings were represented in themes.

Setting and participants

The study was performed on intensive wards of a general public hospital in Antwerp, Belgium. Purposive sampling was used to select participants from either a surgical or an

internal medicine intensive care ward (each with 12 beds). Every patient with the absence of delirium on admission and scoring positive for delirium at least once during the stay in the unit was eligible for this study. Screening for delirium was standardly performed by the nurses using the Neelon and Champagne Confusion Scale (Van Rompaey et al., 2008). Further inclusion criteria were English or Dutch speaking, adult, a minimum Glasgow Coma Scale of 13 at the time of the interview and a stay of at least 24 hours in the ICU.

During the study, all patients in the ICUs were screened for eligibility by the unit's staff. At least 48 hours after the last positive score for delirium, patients meeting all the criteria were assigned to a trained independent research nurse for the interview. Without setting a maximum limit, the patients were to be interviewed as soon as possible to secure the most recent and relevant memories. Therefore, patients could be interviewed in the ICU or after being transferred to the nursing ward. The research nurse interviewed all patients bedside.

Data collection

A set of demographic data was collected describing the included population (gender, age, reason of admittance and social situation). In addition, data concerning the delirious episode were registered (start and length). All demographic data and assessments for delirium were observed during standard nursing care in the ICU.

The qualitative research data were obtained during interviews by one research nurse, who was not a member of the ICU staff. The interviews surveyed the patients' perception of the delirium. From the limited literature review, topics evolved, which were used in the interviews. The interviews were based on three phases of the delirious period: the start, the course and the end of the delirium. In each of these stages, the interviewer focused on the feelings, the communication with the environment and the awareness of changes in perception. At the end, patients were asked how the delirious episode ended. The topics used to explore the different phases in depth were fear, sleep disruption, hallucinations and communication. To maintain the flexible nature of the interpretative hermeneutic framework, the researcher focused on the answers of the respondent, using the answer given to formulate deeper and more detailed questions.

Data analysis

All interviews were recorded and transcribed. Two independent researchers analysed the data using NVIVO 8 (QSR International software). After reading the text multiple times and thus obtaining a perspective in each individual story, the researchers focused on ideas, feelings and perceptions. The data were discussed until agreement was reached and combined into one set of results. Consequently, themes and subthemes were derived from the texts. In reading and understating the data, the association between the meaning of the answers and the context was analysed. The research question was answered using a hermeneutic spiral based on the text, followed by the interpretation of the researchers, the association with the patient's world and reflection and revision of the text (Bradshaw, 2013).

The results of the interviews are presented in a table. The illustrations of the literally translated statements are presented in tables or in italic text between quotes.

To describe the included population, a limited set of descriptive and demographic data is presented.

The rigour and trustworthiness of the study was determined throughout a number of actions (Rolfe, 2006): First, the research team consulted an expert on qualitative research in our department to supervise this study. Second, two independent researchers analysed the data. These members of the research team reviewed all the data, applying independently the codes from the finalised themes. Then, the research team met and discussed discrepancies to negotiate consensus. Trustworthiness has been further enhanced by transferability, a form of external validity, especially in the discussion section, whereas the findings of the study were related to other research findings. All actions were based on the published literature (Bradley et al., 2007).

Ethical considerations

The study was approved by the management of the hospital and the ICU and the ethical committee of the hospital. All included patients signed an informed consent after obtaining information concerning the study.

The research team protected the vulnerable patients in this study throughout a number of actions. The unit's staff managed the selection and follow-up of the patients. Patients without capacity to give informed consent were not included in the study. The research nurse was a registered nurse, with the ability to monitor for psychological distress. Although the interviewer was trained to be careful and not to force the patients to respond to any questions, all participants were observed closely during and after the interview for possible traumatic reactions: every interview was debriefed with the delirium expert from the units. Standard post-interview intervention was close monitoring of the patient by the nursing staff, in cooperation with the delirium expert, after the interview. Although no specific post-interview interventions were needed, at all times, a specialist psychiatric consultant was available on the units.

Neither the interviewer or the other researchers were a member of the ICU staff. All patient data were analysed confidentially and are presented anonymously.

Results

Data saturation was achieved after interviewing 30 patients. The first interviews were taken after 48 hours, the longest delirium-free period before an interview being 96 hours. Table 1 presents the demographic and patient characteristics.

Recollection of the delirious period

Most of the interviewees remembered being delirious, and they were able to vividly describe perceptions and feelings.

Table 1 Patient and demographic characteristics of the interviewees.

$n = 30$		% (or indicated otherwise)
Age	Mean (range) in years	65.2 (18—88)
Gender	Female	43.3
	Male	56.7
Matrimonial status	Married	36.7
	Single	23.3
	Divorced	13.3
	Widow(er)	26.7
Social situation	Living single	33.3
	Living with partner	36.7
	Living with relatives	16.7
	Other	13.3
Intensive care unit	Surgical	70.0
	General medicine	30.0
Education	Basic education	16.7
	High school	70.0
	Bachelor or equal	10.0
	Master or equal	3.3
Profession	Student	3.3
	Labourer	16.7
	White-collar worker	3.3
	Unemployed	13.3
	Retired	63.3
	Other	0.1
Length of delirium	Mean (range) in hours ($n = 25$)	72.6 (8—288)
Onset of delirium	Mean (range) in days ($n = 27$)	7.1 (1—19)
Time to interview	Mean (range) in hours	57.9 (48—96)

Some patients recalling the period experienced this as bizarre, but they were not able to describe exactly what happened. Few patients indicated they had no recollection at all (Table 2). Among these patients, however, several were able to answer questions about the perception of the syndrome. One person was cooperative with the interview, and he was specific in his recollections, but he denied firmly that he had been confused or delirious: ''(R5) . . .confused, confused, I was never confused. They say so, but what do they know about it?'' Another patient stated that he had never been delirious but indicated being happy that everything was back to normal: ''(R4) if these problems would have been persistent, then. . .well. . .it would have become more difficult.'' Other patients did not like to talk about the delirious period or behaved more in an unresponsive way. This was contrary to the majority of respondents who were glad and felt relieved to be able to talk about the syndrome and the corresponding experiences.

Table 2 Recollection of the start, the course and the end of the delirious period.

		$N = 30$	%
Recollection of the delirious episode	Spontaneously	16	53.3
	After questions	8	26.7
	No recollection	6	20.0
Recollection of the beginning	Sudden	7	23.3
	Gradual	8	26.7
	No recollection	15	50.0
Recollection of the end	Sudden	3	10.0
	Gradual	14	46.7
	No recollection	13	43.3

Half of the patients had a recollection of the beginning of the delirious period. Some patients remembering the onset indicated this as sudden and others as gradual. Among the patients with a recollection of the delirium, the end was indicated mostly as a gradual return to reality (Table 2).

The interviewees described vivid lifelike situations, experiencing unrealistic scenes induced by hallucination or misinterpretations of the current situations. Being very vivid, these experiences often evoked fear and disorientation, especially in time and place. Besides the hallucinations, auditory and visual signals from the intensive care environment were misinterpreted. Table 3 shows examples of the hallucinations as described by the patients.

Qualitative data analysis

The analysis of the qualitative data resulted in four major themes: (1) contact and communication, (2) feelings, (3) sleep and time and (4) implication of the delirious episode. Each of these themes will be elucidated. Table 4 presents the descriptions of the different themes.

Contact and communication

During the delirious period, patients indicated that contact with others was difficult. Both oral and written

Table 3 Quotes from patients regarding the recollection of the delirious experience.

1. (R8) . . .mostly the images. The craziest thing is, and as it appears now, this is not possible and cannot be true, the ambulance dropped me in *village XX*, where I often pass with the train. I was at a farm, and. . . I clearly see the landscape. . . The farmer's wife obliged me to pray outdoors, naked, together with the small child of the family.
2. (R11) I was dreaming about a lady with wings. Although, it was a beautiful lady, fair-haired. She wanted to take me to another world. . . There were all kind of creatures. . .
3. (R2) There was a soccer team. Inside my head.
4. (R3) You are thinking all kind of weird stuff. I said, okay here I go and then there was a hole in the ground, a sink. I very often encountered that hole, but I always managed to climb out of it.
5. (R20) I cursed! Because everything was too slow! Especially the food at night and in the morning. . .
6. (R22) I can still see me sitting in a car. With that little girl, the daughter of a cousin. . . that I drove off with her and that I entered somewhere with her not knowing where I was. And yes I called, I called. . . and somewhere somebody was responding. Then I called my daughters. . .
7. (R12) A certain moment I thought being in South Africa. Together with a large group of people, it was an experiment we already did ten years ago. There was supervision of a physician, the experiment was in the same place. Moreover, the manager of the hospital was present.
8. (R13) There were a lot of faces. All faces from earlier years, people living around me, neighbours and people from work. At that time, I was still working. All those people were present.
9. (R14) I did not know where I was.
10. (R19) During the dreams, I was in other places. In America, because I lived there.
11. (R26) I was several times in situations that. . . oriental situations. . . Arabic, Asian. Always outdoors and not very luxurious. What I found unpleasant was the commercial passing by. Always the same and it kept on showing up. It was 'made in China. . . made in China. . .'
12. (R30) There was a wedding party going on in the room next to mine.

communication was limited resulting in a deficient self-expression. The communication with the nurses, however, was considered as normal and nonthreatening by the patients. Moreover, when the staff approached the patient calmly, with understanding and empathy, the patients were reassured. The nurse—patient interaction seemed normal. The nurses were never a threat, but they proved to be helpful in taking control of the situation. Even patients with major difficulties in communication, often left without verbal expression, indicated they had good contact with the nurse. The respondents attributed this to the calm and understanding manner in which nurses behaved. Although mostly positive experiences, the contact with the staff was also reported as being difficult or occasionally bad. When interaction was linked to hallucinations, frustration was reported.

The visit from relatives was not mentioned in all interviews. Although not all patients remembered having visitors or not being delirious, contact with relatives was reported as pleasant. Patients described relief when they recognised significant relatives. The visit was described as unpleasant when the patients were aware of not being able to communicate with the visitors. The quotes in Table 5 illustrate the perception of the communication by the patients.

Feelings

Among the spontaneously reported feelings (Table 6), fear was one of the strongest. Moreover, more patients alluded to it without referring to the term itself. Although the feeling was very vivid, the origin of fear was seldom defined. The events surrounding the patient, the frightening visual perceptions and contact with deceased relatives were indicated. Difficulty in locating situations and understanding the goings-on or the fears provoked by hallucinations were the main reasons. In addition, the inability to stop the action and to wake up or return to normal life, and not being able to ''(R11) travel to the real world'' was frightening.

Frustration and anger were very prominent. These feelings were mostly evoked by the hallucination or the subsequent interaction with the nursing staff. One patient was angry because (R8) *she had to pray naked with a strange child*, another because (R30) *a wedding party in the next room* troubled her. Attempting to alert the staff for the disturbance of the party, she became angry with the nurse denying the situation. Other patients became frustrated and angry not knowing where they were. Being oriented by the nurses to the ICU, several patients did not understand and wanted to go home. Consequently, they reported being very restless at that time.

After the delirious period, shame and guilt were prominently present in patients recollecting shouting and awkward or aggressive behaviour. Patients felt embarrassed when they became abusive towards nursing staff or visitors. These feelings, however, were more present and stronger towards the latter. Interviewees indicated that nurses probably were more used to delirious patients and considered dealing with them as a part of their normal job. Respondents indicated remorse for shouting, being aggressive or boisterous and pulling catheters. All patients indicated shame for being awkward and not cooperative.

A striking feeling was the joy at the end of the delirious period. Obviously, returning to normal and leaving fear, tiredness and hallucination behind relieved the burden of the situation. The reasons ''why'' were twofold: on the one hand, because it was the end of the confusional status ''(R19) my mind was clear again,'' and on the other because the realistic experiences did not seem to be true and ''(R26) life turned back to normal.'' Although indicating the end

Table 4 Matrix of the four qualitative themes and items as indicated by the respondents.

Contact and communication
Difficulties in self-expression
Contact with the nursing staff
- Normal contact
- Difficult contact
- Bad contact

Contact with visitors
- Pleasant
- Unpleasant

Feelings
Anger
Fear
Frustration
Guilt
Incomprehension
Joy after delirium
Joy during delirium
Loneliness
Neglected
Restless
Shame
Tired

Sleep and time
Disrupted time perception/shift of day and night
Disrupted sleep pattern Fear to fall asleep

Implication of the delirious period
Delirious episode concluded
- Yes
- No
- Doubtful

Never again
Indifferent
Influence on further life
Cause
- Searching for a cause
- Cause indicated

Table 5 Quotes from interviewees regarding the topic communication.

1. (R1) I had a lot of visit from people taking care of me. They were irritated since I was such a bad egg. But I have to tell they were always correct, they were not annoying, they approached me with a gentle touch.
2. (R5) When something crossed my mind, I called for the nurse and asked for an explanation. . ..
3. (R7) I could and wanted to ask something to the nurse. . . but I had no idea how to start a conversation.
4. (R15) I was angry at the nurses because they did not do what I wanted. The nurses were brutal, they completely did not understand me.
5. (R29) They treated me as a child.

Table 6 Quotes from interviewees regarding their feelings during the delirium.

Fear:
- (R18) I was scared, really scared. . .
- (R23) I was afraid, I could not breath
- (R6) Afraid, yes. . .afraid and you do not understand why, you start to think how long I had to stay imprisoned.

Frustration and anger:
- (R8) I was angry. . . You blame someone you do not know. They told me to pray naked! Naked!
- (R25) I told her not to act as she was stupid. I noticed it all happened and she did not. I told her to buy new glasses.
- (R26) I was upset with myself because I could not catch what was happening
- (R16) I was very frustrated since I wanted to be normal again.
- (R30) I exploded, and then those machines started making a lot of noise. . .

Shame and guilt:
- (R2) I cursed, but they understood. They are used to it. Some of the nurses even forgave me.
- (R17) I am very embarrassed regarding to the people who cared for me. I was such a bad egg. I really feel guilty.
- (R22) It was stronger than me. I am ashamed.
- (R27) My wife did not had to experience this.
- (R20) I would like to apologise to my visitors for acting so bizarre.

as joyful, few patients indicated a feeling of happiness during the delirious period. In these cases, the presented hallucinations were more pleasant.

More feelings were indicated by the interviewees (Table 4). Loneliness, restlessness, incomprehension and tiredness were reported. Some patients denied or neglected the delirious period during the interview. One of them refused to answer any specific question on the hallucinations or experiences, but the patient cooperated willingly on all general topics. Another patient answered these questions but tried to hide all abnormal experiences. When the interviewer managed to be more specific, the interviewee blocked the conversation and changed the subject of the conversation. A third patient knew something happened but was not able to recollect or to describe the experiences.

Sleep and time

Several patients reported spontaneously that they noticed that the normal day—night circle was disrupted (Table 4). The perception of time in particular was disturbed heavily. Some patients managed to distinguish day and night, but they observed the normal procedures of the day as ''(R28) mixed up.'' For some patients, this resulted in a changed or disturbed sleep pattern. Other patients indicated different reasons for a bad sleep in the ICU. First, the intensive care surrounding and care made it harder to fall asleep. Moreover, several patients feared falling asleep and never waking up again (Table 7).

Implication of the delirious episode

Although most patients indicated that the delirious period concluded, several of them pointed at remaining pressure.

Table 7 Quotes from interviewees regarding time and sleep.

Time:
- (R28) Actually you do not know when its day or night, in your dream you can make any time of it. When you want to call it day, then it is daytime...
- (R9) I was confused, sometimes I woke up in the morning and looked at my clock. Since it was seven o'clock, I presumed it was morning and wanted to get out of bed. But, I did not understand, it had to be light. Then I did not knew anymore if it was day or night...
- (R29) I asked for the day and the time. But when you looked outside it did not match. In the morning they said sleep well, and in the evening they said good morning or something alike.

Sleep:
- (R10) You know you are sleeping but yet you are not. Even the moments you think you are sleeping, you know it might be possible to be dreaming again.
- (R11) Actually, I did not sleep much, it was just too much...
- (R12) I was afraid, I held on to everything I could grab for not falling asleep. Then, I tore loose everything.
- (R3) I could not risk falling asleep, I thought I would never wake up.

Others were unable to conclude the delirious episode, as the experiences had been too intense (Table 4). More patients, however, remained indifferent. One described the delirium as the least troublesome of her experiences in the intensive care ward. Another patient related his confusion to his age and the concurrent illness. The feeling of fear during the delirium was the main reason why patients indicated not being willing to experience this syndrome again. Only two interviewees reported a strong influence on their attitude towards life. The first patient indicated being less stressed as before her illness and worried less about simple things in life. A second patient told he ''(R13) became another man.'' Moreover, he changed his view on other people, did not laugh as much as before, and was more melancholic.

Two people were aware of the factor causing the delirium. A first patient alluded to the anaesthetics during surgery, and the second to the prescribed medication. Only one other patient indicated being keen on the exact cause of the delirium.

Discussion

This study aimed to explore the patients' perceptions of a delirium in the ICU. Almost all patients were cooperative resulting in an open mind-set during the interview. Patients felt relieved talking about the delirium. Some of them expressed awkward feelings while recollecting. This may indicate the need for more attention and follow-up to conclude the experiences. No post-interview interventions were needed.

Little research is published on what delirious patients feel and perceive and how they deal with a delirious period. The literature on delirious patients in general differs on some items with our findings. Sörensen Duppils and Wikblad (2007) reported an abrupt start and end of the delirious period. In our research, patients reported the end as more gradually returning to normal. The start was mentioned being gradual or sudden. Further, the same authors described a strong feeling of panic. The interviewees in the present study did not report this feeling. Laitinen (1996) and Fagerberg and Jönhagen (2002) described patients trying to find a logical explanation for the straining situation and awkward behaviour. Most of the patients in our research were not interested in the cause of the delirium. In the study by McCurren and Cronin (2003), a conspiracy from the hospital staff was often suspected by the patients. Fagerberg and Jönhagen (2002) reported the staff to be threatening to the patients. The patients also fostered a suspicion against other patients, relatives and nurses. Again, our patients did not report these feelings. Moreover, contact with the nurses was reported as normal and nonthreatening.

Although not being in the interview guide at first as a topic, sleep disruption and perception of time emerged from the iteration process in the hermeneutic circle. Considering the importance of reports by interviewees, sleep and time were added as a theme. Although sleep is disturbed in all ICU patients, as studied in delirium research, sleep and sleep perception might play a key role in delirium development (Weinhouse et al., 2009).

The interview focused on perceptions after a delirious episode. Delirium, however, is only a part of the ICU experience of the patient. The intensive care environment produces harmful situations influencing patients' perceptions and feelings. For example, the use of restraints, although not mentioned by our patients, was necessitated for confused patients in 8.2% of the restrained days in the study by Minnick et al. (2007). Yet, Menzel (1998) reported fear and anger with intubated patients being unable to speak. In addition, strong emotional feelings, for example, fear, anger and vulnerability, persisted 3 and 12 months after leaving the ICU in other research (Löf et al., 2008). The severe disease, the stay in the ICU and the treatment are also factors affecting the psychological condition of the patient. The combination of delirium with restraints, isolation, severe disease or mechanical ventilation was left unexplored. Nevertheless, our research was the first to focus on patients shortly after a delirious period. Further research might elaborate on the specificity or the similarity of the perceptions related to the syndrome and other factors from the ICU environment and treatment.

Understanding the actions of a delirious patient and consequently reacting professionally as a nurse is not obvious. Nurses knowing how delirious patients perceive the syndrome are better equipped to deal with the situation (Price, 2004; Sörensen Duppils and Wikblad, 2007). When a patient returns to reality, nurses should be able to understand and answer the patient's question. Moreover, delirious patients create a burden on the nursing workload and impact staff members' perceived stress (Hallberg, 1999). As Hofhuis et al. (2008) indicated, placing the patient in a central position is essential, concurrent with holistic nursing care. This qualitative research tried to image the patients' perceptions providing nurses, physicians, other health-care workers as well as patients and their family with a better insight into the syndrome. Consequently, tailored interventions may be developed.

Generalisability and credibility are biased inherent to the study design. Although all patients were selected in one hospital, the findings seem to have a generalisable character relating to the available literature. To improve the credibility of this study, experts in qualitative research and experts in delirium cooperated. Some fields or feelings, however, may have been left unexplored. All interviews were performed by one interviewer; there was no observation or intervention from a third person, nor was any staff member present. The recording and transcription of the interview made it possible for the coauthors to explore and discuss the results until agreement. The strength of this study was the open-minded interview with a large number of patients, thus minimising the risk of bias of results caused by social desirable answers. In addition, interviewing the ICU patients shortly after the delirium enabled a fresh recall of the perceptions. In comparison, the patients in the ICU study by Laitinen (1996) included patients 4—9 days after surgery, not indicating a confusion-free time span. Patients indicated they were able to relate everything on their mind concerning the topic. Therefore, data saturation was reached, and feelings and experiences were reported in a structured way.

Conclusion

This study explored the patients' perception of a delirium in the ICU. Perceptions were categorised in four themes: contact and communication, feelings, sleep and time, and implication of the delirious period. Contact and communication were disrupted due to a deficient self-expression. The perception of time was disturbed heavily, resulting in an abnormal sleep pattern. The most important feelings were anger, fear, guilt and shame. The start of the period was less remembered, and the recovery was gradual. Patients reported relief when the delirium had ended.

This study delivered an additional understanding of patients' perceptions during a delirium in the ICU, giving nurses, physicians, other health-care workers as well as patients and their family a better insight into the syndrome. Moreover, this study opened up opportunities for further studies to explore the derived themes, in order to develop an in-depth understanding of patients' perceptions of delirium to set up targeted and qualitative interventions.

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Conflict of interest

The authors have no conflict of interest to declare.

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