


Attention-seeking actions by patients on mechanical ventilation in intensive care units: A phenomenological-hermeneutical study

Marte-Marie Wallander Karlsen¹  | Kristin Heggdal¹ | Arnstein Finset² |
Lena Güntenberg Heyn¹

¹Lovisenberg Diaconal University College, Oslo, Norway

²Faculty of Medicine, Institute of Basic Medical Sciences, University of Oslo, Oslo, Norway

Correspondence

Marte-Marie Wallander Karlsen, Lovisenberg Diaconal University College, Lovisenberggata 15b, Oslo 0456, Norway.
Email: marte-marie.karlsen@ldh.no

Funding information

Lovisenberg Diaconal University College has financed first author in this study, as a PhD student.

Abstract

Aims and objectives: The aim of this study was to explore the interaction between mechanically ventilated patients and healthcare personnel in intensive care units (ICUs), with a special emphasis on patients' initiative to communicate.

Background: Patients on mechanical ventilation in ICUs tend to be less sedated today compared to standard care in the past. Their experiences of being voiceless may cause emotional distress, and for many patients, communication is difficult. Healthcare personnel are reported to be the main initiators of the communication exchanges that occur.

Design: An observational study with a phenomenological-hermeneutical approach.

Methods: Video recording was used to collect data on the naturally occurring communication and interaction. Ten conscious and alert patients from two Norwegian ICUs were recruited. Two relatives and a total of sixty healthcare personnel participated. Content analysis was conducted, with focus on both the manifest and latent content meaning.

Results: We found a total of 66 situations in which patients attempted to attract the attention of others on their own initiative in order to express themselves. Attention-seeking actions, defined as the act of seeking attention and understanding without a voice, became an essential theme. Four patterns of interaction were identified: immediately responded to, delayed response or understanding, intensified attempts or giving up. Patients had a variety of reasons for seeking attention, which were classified into four domains: psychological expressions, physical expressions, social expressions and medical treatment.

Conclusions: Patients' attention-seeking actions varied in content, form and the types of responses they elicited. The patients had to fight to first gain joint attention and then joint understanding. This was both energy-draining and time-consuming.

Relevance to clinical practice: Healthcare personnel need to spend more time for communication purposes, giving attention and being more alert to bodily or symbolic gestures to understand the patient's needs.

KEYWORDS

artificial respiration, communication, hermeneutics, intensive care, mechanical ventilation, patient experience, phenomenological-hermeneutic, video recording

1 | INTRODUCTION

In recent decades, there has been a paradigmatic shift in the treatment of patients in intensive care units (ICUs) in the sense that patients are less sedated and more conscious even when they are on mechanical ventilation. The reason for this is that reduced amounts of sedation have been proven beneficial both for survival, to reduce the days on mechanical ventilation and the length of stay in the ICU (Egerod, 2009). To have more conscious patients also improves the possibilities for early mobilisation (Balas et al., 2013), interaction with relatives (Davidson, Jones, & Bienvenu, 2012) and patient participation (Happ, Swigart, Tate, Hoffman, & Arnold, 2007) despite critical illness.

The communication barrier caused by the tracheal tube, however, leads to numerous negative emotions on the part of the patient, such as frustration, anxiety and anger (Happ et al., 2011; Holm & Dreyer, 2017; Khalaila et al., 2011). Both patients and healthcare personnel report severe problems with communication, and patients rate the impact of the communication barriers as more troublesome than healthcare personnel rate it (Magnus & Turkington, 2006; Wojnicki-Johansson, 2001).

2 | BACKGROUND

The communication barriers such as the tracheal tube and possible temporary loss of motoric and cognitive capacity during critical illness may affect the patient both during and after a stay in an ICU (Egerod et al., 2015), thereby reducing patient participation (Happ et al., 2007), satisfaction with care (Guttormson, Bremer, & Jones, 2015) and the ability to maintain normal contact with relatives (Davidson et al., 2012). Previous studies report that intensive care patients (ICU patients) use a variety of communication forms (Happ et al., 2011; Karlsson, Forsberg, & Bergbom, 2012; Nilsen, Sereika, & Happ, 2013).

Joint attention can be described as the basis for all communication, as a message can only be conveyed if the person attempting to express it is able to attract the attention of the communication partner (Caruana, McArthur, Woolgar, & Brock, 2017; Moore, 2014). A variety of factors, such as the illness, delirium, medication or other environmental factors in the ICU, may affect the ability of ICU patients to obtain attention, understand situations and respond coherently. Few studies have specifically focused on describing the content, initiation and patterns of interaction among this group of patients (Happ, Tuite, Dobbin, DiVirgilio-Thomas, & Kitutu, 2004; Happ et al., 2011). The main initiator of the communication is reported to be healthcare personnel, and only about 15% is based on the patients' initiative (Happ et al., 2011; Nilsen et al., 2013). Previous studies also reveal that patients have trouble initially gaining the attention of the healthcare personnel to convey their needs (Engström, Nyström, Sundelin, & Rattray, 2013; Laerkner, Egerod, Olesen, & Hansen, 2017; Mobasheri et al., 2016). The patients' efforts to achieve attention as well as what they communicate about will inform us regarding what meaning they make of their intensive

What does this paper contribute to the wider global clinical community?

- Patients' own initiative to communicate during mechanical ventilation may be characterised as attention-seeking actions, which include a variety of nonverbal techniques. The patterns identified as immediately responded to, delayed response or understanding, intensified and giving up describe the way the interaction may unfold.
- The act of seeking attention and understanding without a voice can be described as a constant fight: first, to obtain joint attention and then to achieve joint understanding with the healthcare personnel.
- Attention-seeking actions are related to the patient's physical, psychological and social needs as well as to questions regarding medical treatment.

care stay as it occurs. Describing these situations can provide useful knowledge both for clinical practice and for educational purposes. The aim of this study was thus to explore the interaction between mechanically ventilated patients and healthcare personnel in ICUs, with a special emphasis on patients' initiation of communication.

3 | DESIGN AND METHODS

The main research question that guided the study was as follows: What characterises the communication and interaction between conscious and alert mechanically ventilated patients and healthcare personnel? The underpinning questions were as follows:

- How do mechanically ventilated patients try to express themselves in the interaction with healthcare personnel?
- What is the content of the communication?

The study was an observational study conducted with a phenomenological-hermeneutic approach, as the aim was to capture the unique human experience to gain a deeper understanding of the participants' communication and interaction in this setting (Heidegger, 1996; Van Manen, 2014). We wanted to describe and interpret how the phenomenon of attention seeking occurred in the intensive care context. Video recordings were used to collect observational data while field notes were used to complement the data set. The observations are part of a larger study where interviews were also conducted with both patients and healthcare personnel.

3.1 | Setting and participants

The study was conducted in two ICUs at a university hospital in Norway in which a total of 850–900 ICU patients are admitted annually. The units had 10 and 11 beds, respectively, and all the

patients had single rooms. One or two nurses were always present in the patients' rooms because a 1:1 nurse–patient ratio is regarded as standard intensive care in Norway. Over 80% of the nursing staff had postgraduate intensive care nursing education. The anaesthesiologists ran the department, in close cooperation with the physicians in the specialised departments, who held treatment responsibility.

Conscious and alert patients on mechanical ventilation were purposively recruited between April 2016 and May 2017. The inclusion criteria were patients over the age of 18, mechanically ventilated for at least 48 hr, and with a Richmond Agitation and Sedation Scale (Sessler et al., 2002) score of 0–2. They had to be without diagnosed delirium for the last 24 hr, and they were screened with The Confusion Assessment Method for the ICU (CAM-ICU) (Ely et al., 2001). Patients who did not speak Norwegian or had severely impacted visual, hearing or cognitive capabilities or were in end-of-life care were excluded.

A trained nurse first explained the aim of the study to eligible patients and then asked whether they were interested in receiving information from the researcher. If they consented to participate after receiving additional information, video recordings were planned for the following day and relatives were informed. The researcher responsible for collecting the data disclosed her professional background as an intensive care nurse to the patients. Patients were informed numerous times that participation was voluntary and that the video recordings could be stopped at any moment without any consequences. They provided their written consent and received additional written information after they were weaned off mechanical ventilation and in a more stable phase of their illness.

Healthcare personnel were recruited and informed based on the same principle of voluntary participation, and both nurses, physicians, physiotherapists and radiographers were included. It was uncertain how many personnel would care for the patients on the day of the video recordings. They were therefore either approached by a trained nurse the day prior, or the researcher informed and asked them to participate directly on the same day the video recordings occurred. Healthcare personnel received written information and signed a written consent form. Relatives visited during two of the video recordings. They were informed the day before the video recording, with both verbal and written information, and signed a written consent form.

Fourteen patients were invited, and 10 volunteered and were included in the study (seven and three from the respective ICUs). Three of the invited patients declined before meeting the researcher, and one patient was too exhausted to be video-recorded on the scheduled day. No healthcare personnel declined during the video recordings. It is unknown how many healthcare personnel declined participation before the onset of video recording but one physician indicated that he would return after the video recordings had stopped and was not included. The researcher responsible for collecting the data was a ICU nurse with insider knowledge of the study site. It was important that participating colleagues had the opportunity to refuse without worrying about the relationship with the researcher afterwards. The study nurse or charge nurse

therefore managed the recruitment of the nurses, based on how they planned the nursing care for the day. The researcher then gave additional information and obtained written consent once they had accepted to participate.

Table 1 offers an overview of the participating patients and healthcare personnel. The patients were five females and five males, with a mean age of 53.6 years (range 36–72). A variety of diagnoses were represented in the sample, including liver failure, respiratory failure, infections, cancer and complications after organ transplantation. The median length of stay on mechanical ventilation before video recordings was 20 days (range 4–68). The mean severity of illness score (SAPSII) was 42.0 (*SD* 13.1), the mean nine equivalents of nursing manpower (NEMS) score was 37.0 (*SD* 6.0), and the median nursing activities score (NAS) was 144 (IQR 123.0–150.7). None of the patients were restrained physically. A total of 60 healthcare personnel were involved in the care of the patients. The interactions varied from a few minutes to being present all the time, as the main responsible nurse usually was. All nurses except two had a postgraduate education in intensive care nursing and had worked more than two years in the ICU.

3.2 | Data collection

Video was chosen as the method for data collection because it allows for repeated access to the subtle details of natural interaction and communication, which are unavailable with other methods (Heath, Hindmarsh, & Luff, 2010). Two surveillance cameras and two sound recording devices were installed in the room of the patient in the morning and left to run continuously for three to four hours. The plan was to gather data from interaction when nurses, physicians, physiotherapists or radiographers visited, which normally occurs during this time of the day. One camera was an overview camera trying to capture the whole room; the other camera was focused on the bed and the patients' facial expressions. The researcher responsible for collecting data was placed outside the patient's room, dressed in a hospital gown to ease into the environment, but did not directly participate in patient care. It was intended to intervene as little as possible during the actual video recordings, but to be present in case the video recordings were to be paused or stopped at any moment. Context-specific information was written down in field notes before, during and after the video recordings. Demographic data were collected from each patient. Pilot recordings were conducted with two patients. These patients were not included in the study, as the pilot revealed a need to use new equipment to obtain better sound quality and to improve data management.

3.3 | Data analysis

Analysis was data-driven and inductive. Although the main topics of interest were communication and interaction, the researcher was open and curious to what happened in the field. The hermeneutic circle serves to attain a deeper understanding of the written and visual material, moving back and forth between parts of the data

TABLE 1 Overview of the sample

Patient number	Age	Days on mechanical ventilation	Analgesics or sedatives administered during the video recordings Bolus: B Continuous Infusion: CI	Total time of video recordings (hours: minutes: seconds)	Healthcare personnel present during the video recordings
Patient 1	43	21	Fentanyl (CI) Dexmedetomidine (CI ^a)	03:05:19	3 nurses 1 physiotherapist 1 anaesthesiologist 2 physicians responsible ward ^c
Patient 2	36	47	Dexmedetomidine (CI)	03:47:41	3 nurses 1 physiotherapist 1 anaesthesiologist
Patient 3	71	15	Dexmedetomidine (CI) Propofol (B) Ketobemidone hydrochloride (B)	03:20:24	3 nurses 1 physiotherapist 2 anaesthesiologists 1 physician responsible ward
Patient 4	65	8	Dexmedetomidine (CI)	03:16:10	3 nurses 1 physiotherapist 1 anaesthesiologist 1 physician responsible ward 2 radiographers
Patient 5	43	19	Dexmedetomidine (CI) Fentanyl (CI)	02:55:56	3 nurses 1 physiotherapist
Patient 6	48	4	Dexmedetomidine (CI) Fentanyl (CI)	02:46:39	3 nurses 1 physiotherapist 1 physician responsible ward 2 radiographers
Patient 7	53	68	Morphine sulphate (B)	03:32:27	3 nurses 1 physiotherapist 1 physician responsible ward 1 anaesthesiologist
Patient 8	72	30		03:00:34	3 nurses 1 physiotherapist 1 anaesthesiologist
Patient 9	60	25	Ketobemidone hydrochloride (B)	03:31:03	3 nurses 1 physiotherapist 1 physician responsible ward 2 anaesthesiologists
Patient 10	45	16		01:07:00 ^b	2 nurses 1 anaesthesiologist 1 physician responsible ward
Total				30:23:13	29 nurses 9 physiotherapists 9 physicians responsible ward 9 anaesthesiologists 4 radiographers

^aContinuous infusion of dexmedetomidine for the first 20 min of the recording. ^bPatient left room because of a radiographic intervention a little over one hour after the recordings started. ^cThe anaesthesiologists ran the department, in close cooperation with the physicians in the specialised departments, who held treatment responsibility.

and the data as a whole (Creswell & Poth, 2017). Content analysis was applied to identify manifest and latent meanings (Graneheim, Lindgren, & Lundman, 2017; Graneheim & Lundman, 2004). The two videos captured from each patient were the meaning unit for the analysis. At first, the videos were watched several times and transcribed descriptively for both verbal and nonverbal actions and what occurred in the environment, in an Excel sheet. Nonverbal actions,

such as eye gaze, movements of the body, noises, facial grimaces and lip movements, were noted. During this process, preliminary codes were made. See Table 2 for an example of a transcript.

From the initial codes, central categories were extracted, reflected upon and discussed more in depth in the research group. Attention-seeking actions became a prominent topic during the analysis. All the situations in which patients attempted to seek attention

TABLE 2 Example of a transcript of the video recordings

Time	Patient (nonverbal)	Nurse (verbal) ^a	What happens in the room ^b	Preliminary codes
02:14:33	Patient moves in bed and taps the bedside, looking at nurse Patients coughs some Patient looks at the nurse, grimaces, taps the bedside Patient shakes his head and lifts his hand Patient nods his head Patient nods his head, bends forward and looks at nurse Patient closes his eyes	<i>To me, it just looks like you are sick of it all right now.</i> <i>No... is it still difficult to breathe?</i> <i>Headache yeah, it takes some time before analgesics work. It can take up to ten minutes.</i> <i>You want a cold cloth in your forehead? No...</i>	Alarm goes on the ventilator (Nurses are speaking together) Nurse moves towards the patient, lays her hand on the patients' hand and looks at him Nurse flushes the central venous line, leans towards the patient Nurse goes over to the other side of the bed, adjusts settings on the ventilator	Attention-seeking action
02:15:31		<i>Now I have given you some more air so you get more support from the machine.</i>		

^aEveryone present in the room got their own column in the Excel sheet where what they said was transcribed. The patients' expressions were described mostly with nonverbal behaviour. If a patient used a speech valve during the video recordings, their verbal interaction was also transcribed. ^bTwo columns were made with the heading "what happens in the room." This made it possible to describe the actions that went on, when multiple healthcare personnel or relatives were present.

were thus identified, extracted and transcribed as situational descriptions after watching the videos several times, to establish detailed and thick descriptions and to try to understand what the patient wanted to express. The response they got from healthcare personnel was included in the descriptions. By comparing all the attention-seeking actions to explore what the patients expressed, we also examined the content in depth. This was further categorised in the most prevalent overarching domains. The text was reviewed and read numerous times, situations compared against each other, and reflected upon to illuminate differences and commonalities across the patients in the communication and interaction process. Theory about communication and interaction has been used as a tool for discussion (Järvinen & Mik-Meyer, 2005; VanLear & Canary, 2016; Watzlawick, Bavelas, Jackson, & O'Hanlon, 2011). The last step of the analysis included an overall critical analysis, watching the videos again to review the understanding of the themes and the patterns that were identified.

The researcher responsible for collecting and transcribing, coding and presenting preliminary analysis of the data is an intensive care nurse, with extensive experience in one of the ICUs in the study. The three other researchers participated in creating the research design, watching segments of the videos, reading and providing independent feedback on the transcripts and situational descriptions and participated in the analytical phase during regular meetings. There was little disagreement in the analyses, but the researchers contributed with different interpretations of the data and discussed each other's analysis. Agreement was achieved on all main topics and analytical ideas. The principles of transferability, confirmability,

credibility and dependability guided the study (Lincoln & Guba, 1985). The information power of the material was extensive, as the video recordings, with their broad representation of communicative episodes, provided rich material to draw upon (Malterud, Siersma, & Guassora, 2016). The analytical thoughts were not discussed with the participants with the direct purpose to confirm or discourage of the findings, although some of them viewed segments of the videos afterwards.

3.4 | Ethical considerations

The study was approved by the South-Eastern Regional Committees for Medical and Health Research Ethics in Oslo, Norway (2015/2012), and was carried out in accordance with the Code of Ethics of the Helsinki Declaration (World Medical Association, 2013). Videos were digitally stored on a server for research data, in accordance with the University Hospital's regulations. Participation was voluntary but seen as a process that was continuously negotiated. The patients' consent while on mechanical ventilation was obtained either with the trained nurse or with other intensive care nurses present to observe the patient's response to the information and to serve as discussion partners when in doubt. The researcher collecting the data also asked questions about the cognitive function of the patient (CAM-ICU, use of sedatives and the nurses' opinions) to make sure the patient would understand the information about the study. The information was given multiple times over several days, and the researcher emphasised sensitivity in the encounters. The video recordings could be experienced as an extra burden or

stressful, so it was important to ensure that the patients were motivated and did not experience any pressure or stress during the recordings. The relatives were informed the day before the video recordings to try to ensure a consent would not be against the patients' will because they had better knowledge about the patients and their preferences. When the video recordings were made, all participants were aware they could request the cameras to be turned off at any time. The nurses were asked to be especially sensitive towards a desire from the patients to turn off the recorder because the patients were considered vulnerable. The patients were told to alert the nurses if they wanted to stop the recordings. The researcher also entered the room at least once during the recordings to ask if everything was okay. The nurses occasionally asked the patients whether video recording was acceptable if they were unsure, especially during sensitive procedures. One of the patients chose to stop the video recording during a procedure and then start it again later. As the researcher who collected data revisited the patients afterwards, she ensured that the patients understood what the study entailed. The patients were asked again if they consented, as participation was not taken for granted and they might feel differently about it afterwards. All patients remembered the researcher at that point of time, which led us to believe they also knew what they consented to while on mechanical ventilation. Patients are severely ill when admitted to ICUs, and mortality is relatively high. Two of the patients included in the study died before signing the written consent form; the relatives then consented on the behalf of the patients to allow the use of the video recordings for research purposes. The ethical committee approved this approach. The relationship with the healthcare personnel was carefully negotiated through reflection and open dialogue both before, during and after the video recordings. Personal details that might disclose the participants' identities were removed in the presentation of the findings.

4 | RESULTS

In total, more than 30 hr of video recordings from 10 patients were collected. The patients had various forms of communication barriers. One of the 10 patients was orally intubated, while the others were tracheostomised. Three of the patients used speech cannula and one used a Trach-Vent for the purpose of weaning off mechanical ventilation during the video recordings. Five of the patients had communication aids such as an alphabet board, emotion board or a stiff board, with paper and pen to write on. Three of the patients had reduced ability to form words with their lips. Four of the patients had visibly reduced strength in either their hands or legs, or a combination of both.

The patients' rooms were quite small, filled with extensive amounts of technological equipment. All of the patients had several continuous infusions, mechanical ventilation, central venous lines, urinary catheters, arterial pressure monitoring, electrocardiography monitoring and saturation probes. Some of them had additional equipment including continuous dialysis, chest or surgical drains, aorta balloon pumps, Swan Ganz catheters, or mobilisation

equipment for physiotherapy (e.g., chairs or steps). Personal photographs or gifts from relatives were also present in some of the rooms.

The attempts of patients to attract the attention of others were a major issue due to their limited ability to utter words audibly. This appeared across the observations and was interpreted as attention-seeking actions. In total, 66 situations were extracted from the data set in which the patients tried to seek attention. Four distinct patterns of how the attention-seeking actions evolved were identified: immediately responded to, delayed response or understanding, intensified, or giving up. The ways in which the patients expressed themselves and the content of the attention-seeking actions were intertwined, and the content could not be separated from how it was expressed, responded to or the context. The existential threat of being critically ill was an important background issue that influenced patients' expressions. The content of the attention-seeking actions will be elaborated before the thematic description of the patterns of the attention-seeking actions is provided.

4.1 | The content of the attention-seeking actions

The content of the patients' expressions was classified into four domains: psychological expressions, physical expressions, social expressions and expressions related to the medical treatment. However, the underlying meaning seemed to be hidden and was dependent on the context. For example, the question "*what is happening to me?*" could relate to activities such as mobilisation, bed bathing or nursing procedures, but it could also have a more existential connotation, expressing the patient's experience of uncertainty and desire to talk about the future development of his or her condition. Another example of such context-related interpretation was when patients expressed that they were tired, which could mean a physical tiredness after a heavy mobilisation round, psychological or existential tiredness because they were fighting for their lives, or tiredness due to the intensive treatment or sleep deprivation. Table 3 displays the categories of the content of the patients' expressions.

4.2 | The act of seeking attention and understanding without a voice

Attention-seeking actions were described as four patterns according to how they evolved: immediately responded to, with delayed response or understanding, intensified attempts and giving up. One situation could include several of the patterns, for example, one patient might be immediately responded to by the healthcare personnel, but the attempt to communicate was eventually given up. The patterns will now be presented, and situational descriptions will serve to exemplify and provide more details. In general, it seemed like the patients had a pattern of one or two techniques they used frequently. Hand movements (either waving, pointing or tapping the bedside) and eye gazes were common; attempts to form words with the lips were also observed frequently. Another commonality that could be observed was that the patients often tried to communicate

TABLE 3 The content of the expressions of the patients during mechanical ventilation

Categories of the expressed content	Expressions with content related to psychological domain	Expressions with content related to physical domain	Expressions with content related to social domain	Expressions with content related to the medical treatment
Subcategories	Lack of control, confirmation and hope for the future, desire for human closeness, Intranquillity, anxiety, fear, frustration and comfort	Bodily pain, dyspnoea, suctioning, nausea, dizziness, stomach ache, tiredness, too warm or too cold, replacement in bed, thirst, elimination, headache, thirst and unpleasant sensory experiences	Longing for family, appreciation of healthcare personnel, apologetic statements, humour, specific social activities, desires to undergo/not undergo procedures such as Trach-Vent/mobilisation/shaving and interest in what is happening outside of the room	Questions about medication, the physical appearance, what has happened, when the physicians will visit, what measures are to be taken in the treatment, when they will be discharged, suctioning, weaning off ventilator and ventilator tubes falling off
Nonverbal utterances	Holds out hand Grabs the healthcare worker's hand Looking around in the room Moving around in the bed frequently Breathing heavily Waving or shaking arms	Grimaces Movements in bed Touching the tracheal tube or stomach Coughing Looking at the vomit bowl, trying to reach it with a hand Making eye movements, trying to spin around the eyes Forming circles next to the face or body Shrugging shoulders Opening mouth Tongue clicking	Looks at the watch on the wall Turns head towards the radio Shakes head and grimaces face Looks towards window Waving with arms Smiling Knocking on the bedside in various ways Raises eyebrows and curls lips	Points to sutures on the stomach Looks at the medication Shaking/nodding head Pointing to the endotracheal tube Looking at specific technical equipment or invasive equipment Grimaces when treatment is mentioned or raises eyebrows Putting up a symbolic stop signal with a hand
Examples of statements (forming words with lips or in written)	"I do not understand what happens or is going to happen" "I cannot take this anymore" "I have no control" "I am tired" "A little resigned and sick of it all"	"It is warm" "I need to go to the toilet" "It hurts" "It is too smooth under me" "Tired" "Tired of not getting enough air" "A little to strong mouth water"	"When will they be here?" "My wife" "He made me do it" "You are nice" "The other nurse is strict" "Sorry that I ask and bother you" "Glasses"	"What is going to happen with (my sutures, my antibiotics, fungus infection, other treatment?)" "When is the medical visit?" "I am feeling exhausted of the breathlessness" "To the other ward Monday?"

looking not at the communicative partner but rather down. This was interpreted as a struggle in delivering the message and encountering the communicative partners' expressions at the same time. Communication boards or stiff writing boards with paper and pen were used 14 times by four of the patients. However, only two patients managed to use them appropriately; four times the patients refused to use them when offered. The writing attempts were unsuccessful two times in terms of achieving understanding because the patient could not write or manage to point at the pictures on the communication board. Table 4 offers an overview of the numbers and distribution of attention-seeking actions among conscious mechanically ventilated patients.

4.3 | Attention-seeking actions immediately responded to

In 53 of the 66 situations, the patients' attempts to establish contact were quickly observed and responded to by the healthcare

personnel. Patients mostly used lips, hands or legs, eye gazes, facial grimaces or symbolic gestures to initiate the first contact. The response from healthcare personnel did not necessarily mean that they understood the patient's expressions, but the patients succeeded in establishing a joint awareness that they wanted to express something. The healthcare personnel's response was typically to ask what they wanted and then to respond to what they thought the patient expressed, seeking the patient's confirmation as to whether they were right. The symbolic gestures in the interaction seemed to facilitate the understanding of the attention-seeking actions. Examples of symbolic gestures were touching the tracheostomy (which mostly signified trouble with breathing or mucus), waving the hand (which could mean come over to me), a thumb up (everything is good), tilting the hand from one side to the other or shrugging shoulders (everything is not okay but manageable) and pointing at an object. Eye gazes and tilting of the head towards the radio or clock were examples of nonverbal communicative acts directing the attention of the healthcare personnel towards an object of interest.

TABLE 4 Distribution of attention-seeking actions among the patients and the use of communication aids

Patient Number	Attention-seeking actions	Attention-seeking actions where understanding is not achieved	Use of communication boards such as an alphabet board or emotion board, or pen and paper
Patient 1	11	5	
Patient 2	3		
Patient 3	20	5	2
Patient 4	9	1	4
Patient 5	8	1	7
Patient 6	0		
Patient 7	1		
Patient 8	1		
Patient 9	10	3	1
Patient 10	3		
Total	66	15	14

One patient had very good motor abilities and wrote several messages on paper before he showed them to the healthcare personnel. He clung to the communication board most of the time, holding it in the bed with his hand, and he asked for it repeatedly when it was removed from the bed (i.e., during procedures).

The use of sound was also observed as an efficient method for gaining attention in various situations. This could be either by tongue clicking, banging or tapping on bedsides or even breathing heavily, resulting in alarms from the ventilator. This pattern is exemplified by the following interaction between Alicia and nurse Irene:

Alicia lies in her bed on her right side facing the window with her eyes closed. Suddenly, she moves her hand slowly up in the air, opens her eyes, and looks around a little before she makes a barely audible clicking sound with her tongue. Irene, who is busy preparing some medications, immediately turns around and walks towards her with the medication in her hand. As she leans towards Alicia, she says 'what?' with a calm but questioning tone in her voice. Alicia has already started to move her lips, trying to form words before Irene comes closer, but her eyes are only half open. 'Warm?' Irene asks, looking at her. Alicia opens her eyes completely and forms words with her mouth again, looking at her. Irene says, 'Yes... Then I will check the temperature, you have not had fever. Infection parameters are on their way down, and we have started the antibiotics now.'

4.4 | Attention-seeking actions with delayed response or understanding

Healthcare personnel did not always recognise the patients' signals immediately. In 22 of the 66 situations identified, there was a delay in the response to the patients' communication attempts. Mostly this was due to the lack of visual attention or because the

healthcare personnel were busy performing other tasks. A typical response if the healthcare personnel were busy could be to acknowledge the attempt but ask the patient to wait until they were carried out. This could, for example, be during mobilisation or when having to attend to an alarm in the technical equipment.

If the healthcare personnel were busy, some of the patients waited until they had the chance to attract their attention before expressing themselves. They could also try to get attention once the healthcare personnel were close to the bed by grabbing their hands, gazing at them or waving. This was interpreted as a tactical choice to minimise the energy used to obtain attention. Others stopped the healthcare personnel's actions by expressing themselves in the middle of a procedure.

Delays also occurred when the healthcare personnel struggled to understand what was expressed. As a pattern, it could be observed that when the patients' expressions were not understood, the "verbal" interaction was intensified; that is, the patient attempted to form full sentences with the lips, and the healthcare personnel asked the patient to repeat over and over again what they said. The interaction could change into a questioning pattern, where the healthcare personnel often used different approaches or words to find the exact meaning that the patient was attempting to convey. Fiona's interaction with nurses Lydia and Anthony illustrates a typical delayed response to an attempt to obtain attention:

Fiona raises her right arm as nurse Lydia stands next to the bed looking at the infusion pumps. When Fiona fails to get Lydia's attention, she looks at nurse Anthony as he approaches the bed. He rapidly engages in a dialogue with Lydia, asking her to control some medications. Fiona lifts her left arm, gazing at Anthony, then she lays her hand down on her stomach. Anthony and Lydia walk away from the bed still talking about the medication. Fiona gazes a little around the room, moving a little restlessly in bed. She holds her hand up in the air and waves as she looks toward Lydia and Anthony. She then gazes up to the

vomit bag, which is placed on the right side of her pillow, swallowing deeply. She stops waving and waits for some seconds before she eventually waves again. She starts to make circles with her hand, forming words with her mouth, and Lydia approaches her saying 'Hmm?' Fiona points one hand toward her chest and the other toward the vomit bag. 'Nauseous?' Lydia asks, and Fiona forms words with her mouth. 'Okay,' Lydia responds, 'We'll get you further up in the bed in a moment and give you antiemetics.'

4.5 | Attention-seeking actions with intensified attempts

We found that the patients intensified their attention-seeking actions if there was a lack of response from healthcare personnel (in 10 of the 66 situations). The patients increased their activity with, among other efforts, movements and facial expressions. Discomfort became more apparent or intensified physiological reactions occurred, such as a higher respiratory rate, due to their efforts. Sometimes, the alarms also went off on the technical equipment. The patients used what they had available in their immediate presence to obtain attention, such as shaking the bed side with their hands or waving a communication board. The way the intensification expressed itself depended upon the patients' physical capabilities as well as on how urgently they needed help. For one patient, moving her head could be interpreted as an intensification, while for another the intensification took the form of kicking in the bed and attempting to move his body up from the bed in an agitated manner. The intensified attempts required a great deal of energy. The patients showed bodily signs that could be interpreted as emotional resignation, frustration, irritation or exhaustion after having attempted unsuccessfully to achieve attention. They urged the healthcare personnel to help them with, for example, suctioning of mucus, if they felt that they could not breathe. An intensified attempt could therefore be a result of a delayed response from healthcare personnel, or it could occur without prior attempts to achieve attention. George was a patient with many intensified attention-seeking attempts:

Nurse Sarah and Anna stand by the computer talking to each other. George moves his right hand up and turns his head around and stretches his legs a little with his eyes half open before his hand falls down on the pillow. He lies still for moment before he lifts his arms again. This time they are shaking, and the right arm is placed on the bed side. He starts to move his hand back and forth, making noises with the bed side while looking at Sarah and Anna. He stops for a short moment, and then he shakes the bed side again. He starts to knock on top of the bed side, the bed side makes a different and higher noise than before. 'Can

you check what he wants?' Sarah asks Anna. Anna rapidly approaches George, who raises his arm next to his face, pointing upwards. He also forms the words 'higher up' with his lips. Anna says 'higher up' and moves the top of the bed higher so he is in a more seated position. 'Is that enough?' she asks. George nods slightly with his head.

4.6 | Attention-seeking actions when giving up

Due to the patients' limited ability to communicate or healthcare personnel's lack of understanding, the patients sometimes gave up on their attention-seeking attempts. In total, 15 of the 66 situations were unsuccessful in terms of achieving joint understanding, or the patient gave up the attempt even before it was noticed. In the situations where understanding was troublesome, some of the patients intentionally made additional efforts to communicate their messages. For example, they formed their lips more clearly, tried new ways to communicate on their second or third attempts, or used their hands more actively. This was interpreted as a deliberate fight to be understood. There was a thin line between giving up and being understood, and a very fragile moment occurred when there was a lack of understanding between the patients and the healthcare personnel. The patients tried their best, and so giving up was not an easy task. Turning their heads away from the person who communicated with them, avoiding eye contact or dismissing them with a hand wave were observed as a pattern of withdrawal. Suffering was a consequence of not being understood.

When healthcare personnel tried to explore what the patients were attempting to express, sometimes as many as 11 different guesses were presented to the patient. In some of the situations, after several failed attempts and when they were about to give up, understanding was achieved. There were situations where the healthcare personnel gave up trying to understand. Sometimes the nurse would say, "I don't understand you" and made no further attempts to communicate; other times, they gave up after several attempts. This was mostly addressed as "we have to try this again later because we don't understand each other," or they asked other healthcare personnel if they could help them to understand what the patient was attempting to express. They could also direct the conversation to another topic. Dina was one of the patients who sometimes gave up her attempts to be understood.

Nurse Cristian walks up to Dina's bed to check a nutritional pump. Dina looks at him. He gazes down at her, and she holds her hands out as she forms words with her mouth. 'What are you saying now?' Cristian asks, and Dina forms words with her mouth again. 'I see you are tired today,' Cristian continues, 'but we have plans for the day. The physiotherapist is here... I understand you are tired.' Dina forms words with her mouth, looking at him, 'Hmm?' Cristian responds, leaning a bit closer and placing his hand on

her shoulder. ‘Can you write today or...?’ Dina shakes her head, shrugs her shoulders, and looks out into the air.

5 | DISCUSSION

Through the analysis, the attention-seeking actions of patients on mechanical ventilation in ICUs were contextualised and described in depth to provide further understanding of the patients’ efforts to seek joint attention and understanding without a voice. To the best of our knowledge, this is the first study to systematically analyse the patients’ initiation of communication in this setting, and it is one of few reported studies using video recordings in ICUs to study interaction and communication (Happ et al., 2011, 2014; Karlsson, Lindahl, & Bergbom, 2012; Meriläinen, Kyngäs, & Ala-Kokko, 2013). The main finding is the way the interaction evolved in the attention-seeking patterns described; the immediately responded to, the ones with delayed response or understanding, the intensified attempts and the attempts that eventually were given up.

5.1 | Establishment of joint attention and joint understanding between patients and healthcare personnel

To date, attention-seeking actions have mainly been described as eye gazes in populations other than intensive care patients, although other techniques have also been mentioned, such as the use of sound (Caruana et al., 2017; Langton, Watt, & Bruce, 2000). Deliberate techniques have been found in intensive care patients on mechanical ventilation, such as creating an alarm by taking off the saturation probe (Engström et al., 2013). As the patients cannot always achieve eye contact with the healthcare personnel, audible signals might be an important and efficient technique for this patient population. This was observed in our study, as the patients utilised tongue clicking, kicking with the legs on the mattress and knocking on the bed side with their hands. An implication of these findings is that intensive care patients should have some kind of sound-activating device close to them to allow them to quickly gain the healthcare personnel’s attention without expending excess energy. For patients who lack the strength to push a button, other efficient tools should be developed.

We found that the communication pattern and attempts to achieve attention evolved quite differently than a communication pattern in which the two participants have more equal possibilities to communicate. The healthcare personnel first had to respond to the attempt and then understand what the patients wanted before eventually expressing their understanding verbally for confirmation. Normally, these processes of joint attention and understanding occur almost simultaneously (Langton et al., 2000). The patients or healthcare personnel gave up in their attempts to achieve understanding in 15 of the 66 situations. This is an indicator that unsuccessful

attempts at communication occur relatively often for patients on mechanical ventilation. Based on the data from the current study, this issue would be worth exploring in greater depth. In their study, Happ et al. (2011) rated 71.8% of the 747 observed communication exchanges between nurses and patients as successful, but they found a slight decrease in success (63.6% vs. 74.9%) when the patients initiated the exchanges. Our study found that successful achievement of understanding occurred in 51 of the 66 situations, but in 22 of those situations, there was a delayed understanding, meaning that the patients struggled to convey their needs. In the attempts that were given up, we do not know what the patients wanted to express. There were some patients with more unsuccessful attempts than others, which is also worth mentioning.

Previous literature has listed patients’ frustration, anger, fear or existential concerns as important consequences of the communication barriers related to mechanical ventilation, making them feel as if they are not part of the same world as the healthcare personnel (Egerod et al., 2015). This study provides further understanding of how negative emotions arise in situations when patients strive to be understood. It is important that healthcare personnel be aware of this issue, as it could affect the outcome of the dialogues and even lead to patients giving up their attempts to communicate. A patient’s life world is situated, embodied, temporal, spatial and relational. Meaning is created here and now between the participants who are present in the situation (Heidegger, 1996). For ICU patients, meaningful encounters during the course of their stay is essential, as they may inspire hope, resources and motivation to endure this critical time when their lives are at stake (Baumgarten & Poulsen, 2015; Laerkner et al., 2017). Thus, creating meaningful encounters with the patients should be a goal of healthcare personnel in the ICU. A core premise for achieving such encounters is enhancing the patients’ ability to communicate and responding to their attempts to express themselves. Patient participation can improve decision-making in treatment, decrease medical errors and function as a means to improve patient safety (Longtin et al., 2010). In our study, we observed that patients expressed a need for tracheal suctioning due to mucus or signalled that the ventilator tubes had fallen off before the healthcare personnel had become aware of the problem.

5.2 | Consequences of the findings for education and clinical practice

A previous ethnographic study of Laerkner et al. (2017) asked whether initiatives to communicate were not responded to due to inattentive healthcare personnel. An alternative interpretation might be that the healthcare personnel do not perceive the patients’ physical movements as an initiative for communication but rather as restlessness or agitation, which is not uncommon in ICU patients. There is also a danger that the initiatives “drown” in the complex and technical environment amid the extensive amount of procedures. Even cues and hints from verbally speaking patients can be hard to identify (Finset, Heyn, & Ruland, 2013). The subtle signs that patients make while on mechanical ventilation require constant awareness on

the part of the healthcare personnel. The evolvement of a type of “guessing-game” dialogue has been described in a previous study (Holm & Dreyer, 2017), but it seems somewhat unproductive and time-consuming for both the patients and the healthcare personnel. Augmentative and alternative communication aids could enhance the patients’ possibilities for communication (Carruthers, Astin, & Munro, 2017; Mobasheri et al., 2016; Ten Hoorn, Elbers, Girbes, & Tuinman, 2016). However, healthcare personnel must respond to the patients’ attempts to obtain joint attention for meaningful communication, even with aids.

It might be a coincidence that we found patients who refused or did not manage to use their communication aids. When they unsuccessfully attempted to use communication aids and finally gave up, apparent frustration was visible in both their body language and face, and withdrawal was not uncommon. Unsuccessful attempts to use such tools have not been thoroughly described in the literature. We observed that the unsuccessful attempts with aids were mainly due to the patients’ lack of motor skills in their arms or to a lack of energy to even point or write. The question, therefore, is if the patients could have a range of aids to choose from, which would be most appropriate for them in their situation? The healthcare personnel should motivate the patients and ensure successful attempts, choosing the appropriate communication aids based on the patients’ motoric and cognitive abilities. The healthcare personnel also had varying degrees of knowledge about the patients, and we saw many examples where the healthcare personnel related the patients’ expressions to previous situations and experiences with them, which eventually led to mutual understanding. The link between continuity of care and enhanced understanding of the patients could therefore be of interest in future investigations, as this is thought to improve the care and facilitate the interaction in ICUs (Laerkner, Egerod, & Hansen, 2015; Slatore et al., 2012). Knowledge about the different ways the patterns in attention-seeking actions may evolve, can help clinicians identify when the interaction is intensified, or the patient is about to give up their attempts. These patterns are important to recognise, because unsuccessful attempts to communicate may be prevented by redirecting the patient to communicate in a different manner. The way the patient tries to initiate contact may also indicate his/her emotional state. It was a clear difference in the situations observed where the patients tried to express how they felt emotionally compared to asking for water or repositioning; which seemed easier for the healthcare personnel to understand. If the healthcare personnel can grasp the patients’ emotions, they can also acknowledge and address, alleviating the patients’ feelings of loneliness, frustration and anxiety which has previously been described as consequences of the lack of understanding while on mechanical ventilation (Flinterud & Andershed, 2015; Holm & Dreyer, 2017).

Slatore et al. (2012) reported that most of the communication with ICU patients occurs within a biopsychosocial domain, with a focus on treatment. Holm and Dreyer (2017) claimed that the communication needs may also depend on whether the patients are in a more acute or stabile phase of their ICU stays. In this study, the patients had complex questions about the actual treatments and

their relation to their illness as well as about the outcome of their stays. These examples demonstrate information needs in addition to a possible desire for patient involvement and a feeling of control. Our study further revealed patients’ existential worries about what would happen to them. The findings indicate a need for the patients to be socially adaptable in an environment where they are completely dependent upon the help of others. The apologetic statements and the gratitude expressed by several of the patients suggest that the patients may view themselves as bothering the healthcare personnel with a lot of needs, and they may be afraid to be seen as overly demanding or ungrateful. This could lead to patients holding back and expressing only their most pressing needs. Language is power, and the patient’s lack of verbal language creates an asymmetrical precondition for communication and treatment (Watzlawick et al., 2011). Descriptions of methods of initiating communication should be addressed both in education and in clinical settings for healthcare personnel caring for patients in ICUs. Patient-centred care in an ICU context challenge the current competence, because it requires both advanced communication skills and knowledge about how patients experience being conscious and alert during mechanical ventilation, unable to express themselves. It also requires a constant attention from the healthcare personnel to the subtle signs the patients make to express themselves.

Other premises for good communication are sufficient number of healthcare personnel and adequate time resources to attend to the patients’ needs (Laerkner et al., 2015). ICUs are generally constructed for emergencies and unexpected acute care, but they must also be adapted as a humanistic and therapeutic environment of care that stretches over time. Even with good intentions, we observed situations in which the patients had to fight to achieve attention. Staffing in ICUs differs internationally, as does the availability of single rooms and the use of physical restraints and sedation (Egerod, Albarran, Ring, & Blackwood, 2013; Happ et al., 2004), which eventually impacts the patients’ ability to communicate and interact. As all the patients were in single occupancy rooms, it would be interesting to replicate a similar study within an open ICU unit with more than one patient in the room. There might be procedures and several dialogues occurring simultaneously, which may impact both the patients’ and the healthcare personnel’ interaction, experiences and focus on communication.

In a study where nurses were asked to describe their behaviour towards patient participation, the nurses reported that they were more responsive to the patients’ needs if they felt such involvement did not hinder them in their daily work (Arnetz & Zhdanova, 2015). Some of the attempts that were delayed in this study could be interpreted to have occurred because of friction between the tasks the nurses had to perform and their ability to respond to the patients’ needs. If this friction occurs over time and with many patients, this may cause stress and resignation for the healthcare personnel, as they try to balance their practical tasks while communicating with the patient. This could eventually result in reduced attention to the patients’ subtle signals when they are attempting to convey their needs.

5.3 | Strengths and limitations

This study was conducted in a Norwegian ICU. The patients had considerably longer stays on mechanical ventilation and a slightly higher severity of illness score than the average patient in this context (Buanes, 2016). This may have affected the patients' communication abilities, patterns, and needs. It would be useful to conduct a similar study on patients with shorter stays in the ICU, to compare the attention-seeking actions. Data were not collected on the amount of sedation or analgesia previously received, but many of the patients had not been reported as possible candidates for the study prior to inclusion. This may suggest that they did not fit the criteria, being either too sedated or having a positive delirium score. The information power in the data is a strength; a wide range of communication episodes was analysed, with the additional ability to return to the situations through the videos to achieve rich descriptions (Malterud et al., 2016). The number of attention-seeking actions ranged from 0–20 across the patients, making some of the patients more prominent in the data set that was analysed. This depended on a number of factors; for example, some of the patients were connected to speech cannula for periods of the video recordings, and could express themselves. It is not uncommon in qualitative studies that some participants provide richer data than others. Each video recording lasted for hours, to allow the participants to adapt to the cameras, although camera interference was observed from both patients and healthcare personnel on occasion. The pilot helped us find suitable angles to minimise the loss of visual and audible data to enhance validity (Heath et al., 2010). The nurses, however, had control of the lighting, and they often dimmed the lights when the patients needed to rest. Thus, some of the videos have periods with poorer lighting than others, reducing the ability to observe subtle signs, such as forming words with lips and facial expressions. The fact that only one of the patients was orally intubated is worth to mention, as they might communicate in a different manner because the oral tube is more irritating than a tracheostomy and makes it impossible to form words clearly with the lips and close the mouth properly. The patient who was orally intubated made no attempts to seek attention. He received a considerable amount of analgesics to tolerate the tube and sometimes fell asleep making him less active than some of the other patients during the period of the video recordings.

The problematic issues that could occur as the result of being a researcher with an insider perspective and potential cultural blindness were reflected upon during the whole process (Bonner & Tolhurst, 2002; Gair, 2012). The preunderstandings and the role as a novel researcher were acknowledged, and the analysis and discussion of the findings, the reading of the transcripts, and the viewing of the video segments were therefore performed along with more experienced coresearchers. The insider perspective may have impacted the findings, especially the distance/closeness with the participants were reflected upon in each step of the research process. Data challenging preunderstandings or biases, such as deviant cases, were also discussed in the regular meetings. The co-researchers were a strength of this study due to their extensive competence in the

fields of communication and qualitative analysis. They were unfamiliar with the ICU context, which allowed openness towards the data.

6 | CONCLUSIONS

The patients' attention-seeking actions varied in form, content and in the way in which they were responded to. The patterns in the attention-seeking actions identified as immediately responded too, those with delayed response or understanding, the intensified attempts or the attempts who were given up evolved depending on the interaction between the patients and the healthcare personnel. It is important for healthcare personnel to recognise and acknowledge the patients struggles to communicate and attention-seeking actions, especially because one of the most prominent characteristics of the communication was how much energy the patients had to use to obtain an initial contact and then achieve understanding. The content of the attention-seeking actions also revealed a more latent quality overall related to the existential threat of being critically ill. This is noteworthy, as it will influence all interactions with the patients and increase the importance that they be understood and attained to. The findings could be used as part of the educational curriculum for professionals working with ICU patients on mechanical ventilation.

7 | RELEVANCE TO CLINICAL PRACTICE

Patient-centred care in an ICU context challenge the current competence, as it requires advanced communication skills in addition to knowledge about how patients experience being conscious and alert during mechanical ventilation, and are unable to express themselves. Also, it requires a constant attention from healthcare personnel to the subtle signs these patients make to express themselves. Our findings are thus relevant in continuous education and quality improvement for ICUs, for nurses as well as for other healthcare personnel working in these settings.

ACKNOWLEDGEMENTS

We thank the patients, relatives and healthcare personnel who participated in this study. We also thank the Divisions of Emergencies and Critical Care, Oslo University Hospital, for permission to perform the study in their ICUs, and support during the data collection period. A final thanks to Teaching Learning Video laboratory at the Faculty of Educational Sciences, University of Oslo, for the use of the equipment for recording video and numerous advices.

CONFLICT OF INTEREST

The authors whose names are listed as authors certify that they have no affiliations with or involvement in any organisation or entity with any financial interest, or nonfinancial interest in the subject matter or materials discussed in this manuscript.

CONTRIBUTIONS

MMWK, KH, AF and LGH has all contributed in the creation of study design, analysis and manuscript preparation. MMWK has been responsible for data collection.

ORCID

Marte-Marie Wallander Karlsten  <http://orcid.org/0000-0002-0492-8821>

REFERENCES

- Arnetz, J. E., & Zhdanova, L. (2015). Patient involvement climate: Views and behaviours among registered nurses in myocardial infarction care. *Journal of Clinical Nursing*, 24(3–4), 475–485. <https://doi.org/10.1111/jocn.12629>
- Balas, M. C., Burke, W. J., Gannon, D., Cohen, M. Z., Colburn, L., Bevil, C., ... Vasilevskis, E. E. (2013). Implementing the awakening and breathing coordination, delirium monitoring/management, and early exercise/mobility bundle into everyday care: Opportunities, challenges, and lessons learned for implementing the ICU Pain, Agitation, and Delirium Guidelines. *Critical Care Medicine*, 41(9 Suppl 1), S116–S127. <https://doi.org/10.1097/CCM.0b013e3182a17064>
- Baumgarten, M., & Poulsen, I. (2015). Patients' experiences of being mechanically ventilated in an ICU: A qualitative metasynthesis. *Scandinavian Journal of Caring Sciences*, 29(2), 205–214. 210p. <https://doi.org/10.1111/scs.12177>
- Bonner, A., & Tolhurst, G. (2002). Insider-outsider perspectives of participant observation. *Nurse Researcher*, 9(4), 7–19. <https://doi.org/10.7748/nr2002.07.9.4.7.c6194>
- Buanes, E. A. (2016, 22.09.2016). *Årsrapport Norsk Intensivregister 2016*. Retrieved from <https://www.kvalitetsregistre.no/registers/norsk-intensivregister>
- Carruthers, H., Astin, F., & Munro, W. (2017). Which alternative communication methods are effective for voiceless patients in Intensive Care Units? A systematic review. *Intensive and Critical Care Nursing*, 42(10), 88–96. <https://doi.org/10.1016/j.iccn.2017.03.003>
- Caruana, N., McArthur, G., Woolgar, A., & Brock, J. (2017). Simulating social interactions for the experimental investigation of joint attention. *Neuroscience and Biobehavioral Reviews*, 74, 115–125. <https://doi.org/10.1016/j.neubiorev.2016.12.022>
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage publications.
- Davidson, J. E., Jones, C., & Bienvenu, O. J. (2012). Family response to critical illness: Postintensive care syndrome–family. *Critical Care Medicine*, 40(2), 618–624. <https://doi.org/10.1097/CCM.0b013e318236ebf9>
- Egerod, I. (2009). Cultural changes in ICU sedation management. *Qualitative Health Research*, 19(5), 687–696. <https://doi.org/10.1177/1049732309334014>
- Egerod, I., Albarran, J. W., Ring, M., & Blackwood, B. (2013). Sedation practice in Nordic and non-Nordic ICUs: A European survey. *Nursing in Critical Care*, 18(4), 166–175. <https://doi.org/10.1111/nicc.12003>
- Egerod, I., Bergbom, I., Lindahl, B., Henricson, M., Granberg-Axell, A., & Storli, S. L. (2015). The patient experience of intensive care: A meta-synthesis of Nordic studies. *International Journal of Nursing Studies*, 52(8), 1354–1361. <https://doi.org/10.1016/j.ijnurstu.2015.04.017>
- Ely, E. W., Inouye, S. K., Bernard, G. R., Gordon, S., Francis, J., May, L., ... Dittus, R. (2001). Delirium in mechanically ventilated patients: Validity and reliability of the confusion assessment method for the intensive care unit (CAM-ICU). *JAMA*, 286(21), 2703–2710. <https://doi.org/10.1001/jama.286.21.2703>
- Engström, Å., Nyström, N., Sundelin, G., & Rattray, J. (2013). People's experiences of being mechanically ventilated in an ICU: A qualitative study. *Intensive & Critical Care Nursing*, 29(2), 88–95. <https://doi.org/10.1016/j.iccn.2012.07.003>
- Finset, A., Heyn, L., & Ruland, C. (2013). Patterns in clinicians' responses to patient emotion in cancer care. *Patient Education and Counseling*, 93(1), 80–85. <https://doi.org/10.1016/j.pec.2013.04.023>
- Flinterud, S. I., & Andershed, B. (2015). Transitions in the communication experiences of tracheostomised patients in intensive care: A qualitative descriptive study. *Journal of Clinical Nursing*, 24(15–16), 2295–2304. <https://doi.org/10.1111/jocn.12826>
- Gair, S. (2012). Feeling their stories: Contemplating empathy, insider/outsider positionings, and enriching qualitative research. *Qualitative Health Research*, 22(1), 134–143. <https://doi.org/10.1177/1049732311420580>
- Graneheim, U. H., Lindgren, B.-M., & Lundman, B. (2017). Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Education Today*, 56, 29–34. <https://doi.org/10.1016/j.nedt.2017.06.002>
- Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, 24(2), 105–112. <https://doi.org/10.1016/j.nedt.2003.10.001>
- Guttormson, J. L., Bremer, K. L., & Jones, R. M. (2015). “Not being able to talk was horrid”: A descriptive, correlational study of communication during mechanical ventilation. *Intensive and Critical Care Nursing*, 31(3), 179–186. <https://doi.org/10.1016/j.iccn.2014.10.007>
- Happ, M. B., Garrett, K. L., Tate, J. A., DiVirgilio, D., Houze, M. P., Demirci, J. R., ... Sereika, S. M. (2014). Effect of a multi-level intervention on nurse–patient communication in the intensive care unit: Results of the SPEACS trial. *Heart and Lung*, 43(2), 89–98. <https://doi.org/10.1016/j.hrtng.2013.11.010>
- Happ, M. B., Garrett, K., Thomas, D. D., Tate, J., George, E., Houze, M., ... Sereika, S. (2011). Nurse-patient communication interactions in the intensive care unit. *American Journal of Critical Care*, 20(2), 28–40. <https://doi.org/10.4037/ajcc2011433>
- Happ, M. B., Swigart, V. A., Tate, J. A., Hoffman, L. A., & Arnold, R. M. (2007). Patient involvement in health-related decisions during prolonged critical illness. *Research in Nursing and Health*, 30(4), 361–372. <https://doi.org/10.1002/nur.20197>
- Happ, M. B., Tuite, P., Dobbin, K., DiVirgilio-Thomas, D., & Kitutu, J. (2004). Communication ability, method, and content among non-speaking nonsurviving patients treated with mechanical ventilation in the ICU. *American Journal of Critical Care*, 13(3), 210–218.
- Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research*. London, UK: Sage Publications.
- Heidegger, M. (1996). *Being and time: A translation of Sein und Zeit*. New York, NY: SUNY Press.
- Holm, A., & Dreyer, P. (2017). Nurse-patient communication within the context of non-sedated mechanical ventilation: A hermeneutic-phenomenological study. *Nursing in Critical Care*, 23(2), 88–94. <https://doi.org/10.1111/nicc.12297>
- Järvinen, M., & Mik-Meyer, N. (2005). *Kvalitative metoder i et interaktionistisk perspektiv: Interview, observationer og dokumenter*. København, Denmark: Reitzel.
- Karlsson, V., Forsberg, A., & Bergbom, I. (2012). Communication when patients are conscious during respirator treatment—A hermeneutic observation study. *Intensive & Critical Care Nursing*, 28(4), 197–207. <https://doi.org/10.1016/j.iccn.2011.12.007>
- Karlsson, V., Lindahl, B., & Bergbom, I. (2012). Patients' statements and experiences concerning receiving mechanical ventilation: A prospective video-recorded study. *Nursing Inquiry*, 19(3), 247–258. <https://doi.org/10.1111/j.1440-1800.2011.00576.x>

- Khalaila, R., Zbidat, W., Anwar, K., Bayya, A., Linton, D. M., & Sviri, S. (2011). Communication difficulties and psychoemotional distress in patients receiving mechanical ventilation. *American Journal of Critical Care, 20*(6), 470–479. <https://doi.org/10.4037/ajcc2011989>
- Laerkner, E., Egerod, I., & Hansen, H. P. (2015). Nurses' experiences of caring for critically ill, non-sedated, mechanically ventilated patients in the Intensive Care Unit: A qualitative study. *Intensive & Critical Care Nursing, 31*(4), 196–204. <https://doi.org/10.1016/j.iccn.2015.01.005>
- Laerkner, E., Egerod, I., Olesen, F., & Hansen, H. P. (2017). A sense of agency: An ethnographic exploration of being awake during mechanical ventilation in the intensive care unit. *International Journal of Nursing Studies, 75*, 1–9. <https://doi.org/10.1016/j.ijnurstu.2017.06.016>
- Langton, S. R., Watt, R. J., & Bruce, V. (2000). Do the eyes have it? Cues to the direction of social attention. *Trends in Cognitive Sciences, 4*(2), 50–59. [https://doi.org/10.1016/S1364-6613\(99\)01436-9](https://doi.org/10.1016/S1364-6613(99)01436-9)
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Beverly Hills, CA: Sage.
- Longtin, Y., Sax, H., Leape, L. L., Sheridan, S. E., Donaldson, L., & Pittet, D. (2010). Patient participation: Current knowledge and applicability to patient safety. *Mayo Clinic Proceedings, 85*(1), 53–62. <https://doi.org/10.4065/mcp.2009.0248>
- Magnus, V. S., & Turkington, L. (2006). Communication interaction in ICU—patient and staff experiences and perceptions. *Intensive and Critical Care Nursing, 22*(3), 167–180. <https://doi.org/10.1016/j.iccn.2005.09.009>
- Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative interview studies: Guided by information power. *Qualitative Health Research, 26*(13), 1753–1760. <https://doi.org/10.1177/1049732315617444>
- Meriläinen, M., Kyngäs, H., & Ala-Kokko, T. (2013). Patients' interactions in an intensive care unit and their memories of intensive care: A mixed method study. *Intensive and Critical Care Nursing, 29*(2), 78–87. <https://doi.org/10.1016/j.iccn.2012.05.003>
- Mobasheri, M. H., King, D., Judge, S., Arshad, F., Larsen, M., Safar-fashandi, Z., ... Darzi, A. (2016). Communication aid requirements of intensive care unit patients with transient speech loss. *Augmentative and Alternative Communication, 32*(4), 261–271. <https://doi.org/10.1080/07434618.2016.1235610>
- Moore, C. (2014). *Joint attention: Its origins and role in development*. London, UK: Psychology Press.
- Nilsen, M. L., Sereika, S., & Happ, M. B. (2013). Nurse and patient characteristics associated with duration of nurse talk during patient encounters in ICU. *Heart and Lung, 42*(1), 5–12. <https://doi.org/10.1016/j.hrtlng.2012.10.003>
- Sessler, C. N., Gosnell, M. S., Grap, M. J., Brophy, G. M., O'Neal, P. V., Keane, K. A., ... Elswick, R. K. (2002). The Richmond Agitation-Sedation Scale: Validity and reliability in adult intensive care unit patients. *American Journal of Respiratory and Critical Care Medicine, 166*(10), 1338–1344. <https://doi.org/10.1164/rccm.2107138>
- Slatore, C. G., Hansen, L., Ganzini, L., Press, N., Osborne, M. L., Chesnutt, M. S., & Mularski, R. A. (2012). Communication by nurses in the intensive care unit: Qualitative analysis of domains of patient-centered care. *American Journal of Critical Care, 21*(6), 410–418. <https://doi.org/10.4037/ajcc2012124>
- Ten Hoorn, S., Elbers, P. W., Girbes, A. R., & Tuinman, P. R. (2016). Communicating with conscious and mechanically ventilated critically ill patients: A systematic review. *Critical Care (London, England), 20*(333), 1–14. <https://doi.org/10.1186/s13054-016-1483-2>
- Van Manen, M. (2014). *Phenomenology of practice: Meaning-giving methods in phenomenological research and writing*. Walnut Creek, CA: Left Coast Press.
- VanLear, C. A., & Canary, D. J. (2016). *Researching interactive communication behavior: A sourcebook of methods and measures*. Thousand Oaks, CA: SAGE Publications.
- Watzlawick, P., Bavelas, J. B., Jackson, D. D., & O'Hanlon, B. (2011). *Pragmatics of human communication: A study of interactional patterns, pathologies and paradoxes*. New York, NY: WW Norton & Company.
- Wojnicki-Johansson, G. (2001). Communication between nurse and patient during ventilator treatment: Patient reports and RN evaluations. *Intensive & Critical Care Nursing, 17*(1), 29–39. <https://doi.org/10.1054.iccn.2000.1547>
- World Medical Association. (2013). *WMA Declaration of Helsinki – Ethical principles for medical research involving human subjects*. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>

How to cite this article: Wallander Karlsen M-M, Heggdal K, Finset A, Heyn LG. Attention-seeking actions by patients on mechanical ventilation in intensive care units: A phenomenological-hermeneutical study. *J Clin Nurs.* 2019;28:66–79. <https://doi.org/10.1111/jocn.14633>