FISEVIER

Contents lists available at ScienceDirect

Intensive & Critical Care Nursing

journal homepage: www.sciencedirect.com/journal/intensive-and-critical-care-nursing



Research Article



The diverse invitations to participate in early rehabilitation – A qualitative study of nurse-patient interactions in the intensive care unit

Karina Knutsen*, Rita Solbakken, Britt Normann

Faculty of Nursing and Health Science, Nord University, Mailbox 1490, 8049 Bodoe, Norway

ARTICLE INFO

Keywords: Critical care Intensive care units Nurses Patient participation Qualitative research Rehabilitation

ABSTRACT

Objectives: To gain insight into the interaction between nurses and patients in early rehabilitation and the role of patient participation in this context.

Research design and setting: A qualitative study with a phenomenological-hermeneutic approach was conducted in two units/hospitals from January 2022 to January 2023, utilizing observations and video recordings of eight nurse/patient dyads combined with post observation interviews with the nurses. The study was analysed by systematic text condensation and video analysis, informed by interaction theory.

Findings: Two contrasting categories emerged: 1) Absent invitations: the nurse performed procedures without involving the patient; in other situations, the nurse informed the patient without requesting participation. Simultaneously, spontaneous patient movements were not acknowledged by the nurse. The nurses explained that this practice occurred due to time pressure, oversights, a lack of belief regarding patients' capacities, the unit's culture and little training. 2) Invitations that strengthened participation: the nurse verbally requested activity that often resulted in an inadequate response, or bodily extended invitations that sometimes led to joint active movement. Patients were the most active participants when nurses combined verbal prompts, eye contact, physical handling, and dialogue. In the interviews, the nurses emphasized giving patients enough time to participate and repeatedly encouraged participation because the patient's condition and capacity constantly fluctuated.

Conclusion: Interactions that combine verbal and bodily invitations appear crucial for patient participation in early rehabilitation in the intensive care unit, emphasizing the importance of integrated tailored bodily communication. The nurses' lack of insight into and attention to the patient's bodily potential for active movement combined with a paternalistic approach to the patient's situation may hinder patients' active participation.

Implications for clinical practice: Integrated forms of interaction that explore patients' capacity and potential for participation should be employed in line with verbal communication. Developing competence in early rehabilitation should be emphasized in critical care nurses' education and training.

Introduction

Critically ill patients are surviving at a higher rate due to advances in medical treatment, and the focus on preventing complicated and persistent morbidity following such illnesses has increased (Herridge & Azoulay, 2023). These complications, often termed postintensive care syndrome (PICS), involve physical, cognitive, and mental impairments during and after an intensive care unit (ICU) stay, including ICU-acquired weakness (ICUAW) (Inoue et al., 2019). Multidisciplinary early rehabilitation, where critical care nurses undertake an essential

role (The Norwegian Association of Critical Care Nurses, 2017), has proven effective in minimising these complications and promoting recovery (Hickmann et al., 2016; Rose, 2011). The evidence-based ABC-DEF bundle aims to provide an optimal outcome for the patient by facilitating awake, engaged, and mobile patients supported by family and ICU team. Early mobility and exercises are parts of this bundle (Ely, 2017; Herridge & Azoulay, 2023), and effectively reduce the occurrence of ICUAW and delirium, improving functional mobility and decreasing the length of high-cost ICU (Nydahl et al., 2023; Tipping et al., 2017; Zang et al., 2020). The actions of ICU nurses in early rehabilitation are

E-mail addresses: Karina.knutsen@nord.no (K. Knutsen), Rita.solbakken@nord.no (R. Solbakken), Britt.normann@nord.no (B. Normann).

^{*} Corresponding author.

underinvestigated.

Early rehabilitation includes a range of activities: in-bed mobility, transfer training, ambulation, and movements performed independently or assisted by a nurse or therapist. Participation in functional tasks, such as eating, bathing, and dressing is another important aspect of early rehabilitation (Doiron, Hoffmann, & Beller, 2018). The timing for starting early rehabilitation is individual, either during or after mechanical ventilation (Doiron, Hoffmann, & Beller, 2018), depending on level of sedation or presence of delirium (Sosnowski et al., 2015). The nurse is present at the bedside 24/7, taking the overall responsibility for maintaining the patient's mobilisation (Laerkner et al., 2019). The role, thus, allows for the practice of evidence-based rehabilitation integrated into routine care (Sosnowski et al., 2015), before regular mobilisation programs are initiated (Dang, 2013). However, active participation is an important prerequisite for recovery (Levin & Demers, 2021), and this can be challenging to achieve when interacting with critically ill patients.

Interactions between nurses and patients during mobilisation when the patient is awake but ventilated and unable to speak are challenging (Bunzel, Weber-Hansen, & Schantz Laursen, 2020; Laerkner et al., 2019). Additionally, Wallander Karlsen et al. (2019) found that the existential threat of being critically ill influenced all interactions between nurses and patients. However, patient participation in rehabilitation activities, including that of alert, calm and verbal patients, has not been investigated. From the ICU nurses' perspective, the challenges for participation are the patient's health status, the organization of the ICU, their attitudes towards caring (Falk, Schandl, & Frank, 2019), and their ability to include patients in appropriate tasks (Schandl, Falk, & Frank, 2017). Patients' descriptions indicate that reduced capacity due to illness, their willingness to participate and the paternalistic health care model hinder participation (Falk, Schandl, & Frank, 2019). However, real-life nurse-patient interactions have not been studied with a focus on professional actions and how they impact patient participation in early rehabilitation.

Participation is a dynamic and complex concept encompassing both decisions and actions (Slettmyr, Frank, & Falk, 2022). It can be seen as an intersection between what a patient can do, what they want to do, what they have the opportunity to do and what they are not prevented from doing (Mallinson & Hammel, 2010). Slettmyr, Frank and Falk (2022) found that, from the patient's perspective, participation also depends on the relationship between the patient and their health care professionals. Soleimani, Rafii and Seyedfatemi (2010) defined four levels of participation: adhering, involvement, sharing and true participation; however, they did not thematise the role of the body.

To integrate the body's role, which we consider essential in patients with severe bodily dysfunctions, we turn to interaction theory (IT) (Gallagher, 2020) because this position emphasizes the body as the centre of experience and expression (embodied) in the cocreation of participation and meaning (Merleau-Ponty, 2013). Interaction can be explained as a coupling between two autonomous embodied agents that are mutually affected and where autonomy is not destroyed but can be augmented or reduced (Gallagher, 2020). Furthermore, IT builds on three sets of processes that can contribute to a deeper understanding of nurses' actions in clinical practice. 1) Primary intersubjectivity: we perceive others' actions and respond to them. 2) Secondary intersubjectivity: the context is added, and we share situations and achieve joint attention and action towards a task. 3) Communicative and narrative competencies: intersubjective embodied interactions are enhanced by motives and reasons, providing a more nuanced social understanding (Gallagher, 2020). These concepts appear suitable for illuminating new aspects of nurse-patient interactions and patient participation in the ICU context.

Methods

Objectives

The overall research question that guided the study was as follows: What characterizes the interaction between nurses and patients during early rehabilitation in the intensive care unit?

The underpinning questions were as follows:

- How does the interaction impact patient participation?
- What are critical care nurses' reflections regarding their actions?

Design

We chose a qualitative design with a phenomenological-hermeneutic approach, which is adequate to derive new knowledge from assessing human actions, interactions, and reflections (Creswell & Poth, 2018). Guided by the research questions, we chose a combination of nonparticipating observations supported by video recordings of nurse/patient dyads in clinical practice, followed by in-depth interviews with the involved nurses. These are adequate methods because 1) observation provides access to real-life clinical practice, actions generate meaning and provide insights into tacit professional knowledge that may be difficult to articulate, and videos are repeatable and viewable for all authors. 2) Interviews provide access to the nurses' thoughts regarding their experiences and rationale for action.

Participants and setting

This study was conducted in two intensive care units in Norwegian hospitals: one university hospital and one local hospital. The inclusion criteria, listed in Table 1, aimed to include patients with the potential to participate in early rehabilitation and nurses with adequate experience.

Eligible patients at the selected ICUs were identified by local contact persons (LCPs), critical care nurses, who performed purposive sampling. When patients were assessed as alert and calm, RASS \sim 0, the LCP informed the patient about the project and invited them to participate. After obtaining consent, the first author (KK) scheduled the data collection time. Before starting, the first author provided complementary information to the patient about the project and her background and obtained final consent. Some patients signed the consent documentation themselves, while others asked their next of kin, child, or parent to sign on their behalf. Additionally, some participants verbally consented by video, an approach approved by the institution responsible for data collection. Every participant was awake and assessed to have RASS $-1 \sim +1$ at the time of giving consent and during data collection. They had the ability to communicate verbally when consenting and intermittently throughout the day, due to different weaning programs. After the patient's informed consent was obtained, the LCP, in cooperation with the nurse administrator, asked eligible nurses to participate

 Table 1

 Inclusion and exclusion criteria for all participants.

	Patients	Nurses
Inclusion criteria	Adult patients (\geq 18 years) LOS > 2 days Qualified to register in NICR RASS + 1 \sim -1 CFS < 4	≥ 2 years of work experience in an ICU post specialisation Knew the patient from an earlier shift
Exclusion criteria	Terminal patients Delirium*	

LOS: Length of stay. NICR: National Intensive Care Registry. RASS: Richmond Agitation and Sedation Scale. CFS: Clinical Frailty Scale. *Clinically evaluated by local contact persons (LCPs).

and obtained their informed consent. Consent from third persons captured on video was obtained when necessary; first, by verbal consent when they entered the room, and subsequently, with written consent documentation when possible.

The number of patients screened and invited by local contacts was not recorded; however, all participants who consented at the time of the first request participated further.

Data collection

Data collection was performed from January 2022 to January 2023, with eight data collections, each conducted throughout one shift (8 h).

A GoPro HERO10© camera was discreetly placed on a trolley table in the back of the room, allowing the camera to be moved sideways and for the angle to be changed when necessary. Two Rode GO2© wireless microphones were placed on available shelves on each side of the patient to provide sufficient sound. The first author (X1) was placed together with the camera and did not participate; she answered when spoken to but avoided all initiation of conversation and gaze contact.

As the first author was an experienced critical care nurse, situations for exposure or vulnerability for the patients were quickly identified and thus were not recorded, or the camera was covered instantly. Moving the camera on the trolley closer to the nurse and patient was tried; however, this approach was not used as it turned their attention towards the camera, interfering with the natural situation. When the family visited, no recordings were performed, and the observer left the room to provide privacy.

The nurse's interactions with the patient were video recorded in care situations, during meals/drinking, during bed mobility exercises, and when the patients were moved in or out of their beds. Field notes were taken during the observation and rewritten after the observation. A preliminary review of the videos was completed immediately after data collection to catalogue the different videos (Heath, Hindmarsh, & Luff, 2010) and select some possible recall videos and questions for the interviews.

Interviews with nurses were performed after observations ranging from the same or next day (6 nurses) to three weeks later (2 nurses). There were several obstacles to scheduling the interviews; the nurses had different shifts (morning, evening, or night), days off, vacations, were sick, or had to care for sick children. The interviews were conducted in meeting rooms at the different ICUs while the nurses were at work (7 nurses), or digitally (1 nurse), due to geographical challenges. All interviews were audio-recorded digitally and transcribed verbatim, resulting in a total of 65 A4 pages. All video, audio, and text files were assigned a numerical code at review and transcription to facilitate further identification, thus ensuring the participants' anonymity.

A theme-based interview guide featuring open-ended questions allowed rich and detailed data to emerge. One example of a theme was the nurse's assessments and reflections regarding the patient's ability to participate in different activities in and out of their bed. Furthermore, one or two videos from the observation were shown to the nurse for the purpose of 1) asking for a description of what happened in the video and 2) gaining reflections about their clinical practice. This is referred to as video-stimulated recall interviews (Nguyen et al., 2013). No repeat interviews were performed.

Saturation was continuously discussed in the author team, and as the videos displayed rich material, inclusion ended with eight patients. Demographic data was collected from both patients and nurses at the end of data collection.

Data analysis

All data were imported into NVivo software by QSR International, version 12, where they were systematized and transcribed; video recordings were transcribed descriptively, and interviews were transcribed verbatim. Furthermore, data were analysed using systematic text

condensation (STC), a thorough four-step process of decontextualization and recontextualization inspired by phenomenology (Malterud, 2012) in combination with a three-step method for video analysis by Heath, Hindmarsh and Luff (2010). The observations and video recordings took precedence in the analysis, and the process is visualised in Table 2, including the author's contribution and the outcome after each phase. Table 3 shows an example of one of the categories.

Ethical approvals

The study followed the principles of the Declaration of Helsinki. The study was assessed by the Regional Committee on Health Research Ethics, and approval was deemed unnecessary according to national legislation. The study was assessed and approved by SIKT (National Agency for Shared Services in Education and Research), and the data privacy officers and department heads of each participating hospital.

Findings

Characteristics of the eight patients and the video material are shown in Table 4, and the characteristics of the nurses and interview material are shown in Table 5.

The results revealed two main categories with corresponding subcategories, as presented in Table 6. Each category contained a well-balanced distribution of coded videos supplemented by interviews, and the categories were consistently present across all nurse-patient dyads, although to varying degrees. We identified the term "invitations" as descriptive of our observed clinical practice. Quotations are marked "V" for video and "T" for interviews.

Absent invitations to participate

Multiple situations indicated that the nurses did not put forward any invitations to participate, such as turning sideways, pulling the patient up in the bed and changing positions. The nurse, or nurses, performed the procedure without involving the patient in any way. The procedures were often performed without words, or the nurses talked with each other about practical topics, such as equipment or non-work-related issues. The patients were occasionally included in the conversation; however, the theme of the conversations and the procedure taking place were not related. In care situations with two nurses present, we often observed both nurses handling the patients' extremities simultaneously, i.e., when washing the patient, they each washed one arm and one leg. We observed that spontaneous movement in the arms or legs of the patient occurred during such procedures. However, these movements were not recognized by the nurses. One example was:

Lillian is 65 years old and has been 15 days in the ICU due to surgical complications. She is awake and alert and lies in bed. Emma, the nurse, washes Lillian's face while they talk about what Lillian has been through the last weeks. At the same time, Lillian crosses her feet and moves her left hand to scratch her nose (V-ID4).

In other situations, verbal information transmission from the nurse to the patient was embedded in all procedures related to rehabilitation activities, some being morning routines, care routines (including oral) and bed mobility exercises. The nurses described what they were going to do, for example, "I'm going to lift your foot to remove the pillow (V-ID6), I'm going to lower your head so that we can pull you up in bed (V-ID8), and I'm going to wash your face now (V-ID3)". They also gave explanations for why they were performing these tasks: "You don't have the strength yet to turn to the side (V-ID5), you need help to wash your face but soon you will be able to do it yourself (V-ID3)." When giving the information, many nurses were focused on the patient, aiming for eye contact. Even though spontaneous movement of the arms and legs was observed, the patient was not asked to physically participate in any way. However, we observed participation in the conversation, as in the situation described below:

Table 2Visualisation of analysis with author contribution and outcome.

Phase	1	2	3	4		5	6	7
	A preliminary review of videos Cataloguing: number, brief description, length	Substantive review of video data: find further instances of events, enable comparison and discover aspects of interactional organization.	Analytical repeated search of the data corpus. Identification of similar phenomenon or action	Read all interviews to get an oget an oget an oget an oget an dentified relations between video codes and interviews	Continued analytical search and interpretation of videos in established codes. Revision of codes.	Transcribed the content of each code descriptively and produced an analytical text. Identified a situation that illustrated the content of each code.	Returned to interviews. Step 2: Identified meaning units for each video code. Step 3: Produced a condensate, a short artificial summary in firstperson format. Step 4: Produced an analytical text, identified quote	Combined analytical text for videos and interviews. Discussions including all authors resulted in the final names of the categories that described the content.
1βaβsed on	Heath et.al	Heath et.al	Heath et.al	Malterud	Heath et.al	Malterud	Malterud	Malterud
Author contribution	1	1-2-3	1	1		1-2	1	1-2-3
Outcome	Prepared for interviews	Developed codes	Identified and coded meaning units	Preliminary relations between video codes and interview material established	Identified categories and subcategories. Analytical text with the described situation for each category.		Analytical text r and quote for each category	Presentation of findings

Table 3 Analysis of the category "Absent invitations to participate".

Phase	1	2	3	4		5	6	7
	Preliminary theme: no invitations	2 Code: No invitations to participation	Found multiple situations of the same phenomenon	4 Nurses giving rationale for not asking for participation, i.e., lack of time, patients condition, lack of resources	Revision: Code: "No invitation Code: "Potential situ the nurse" – include Code: "dialogue"- in Developed two subc No invitations Transcribed descriptively and produced analytical text. Identified situation: Patient Lillian and nurse Emma.	s" – no change lations not perceived by d cluded	Snippet of the analytical text: In the interviews the nurses recognized that they did not always request participation from the patients, one reason being that they tend to forget it or that they do not believe that the patients are capable of participating. Another reason was that they perceived that the patients were tired and that it would be best to take overand let them rest. Lack of guidelines and little knowledge regarding what early rehabilitation consisted of was also reasons mentioned.	Final category and subcategories after discussions in the author group: Absent invitations to participation Subcategories: -No invitations -Verbal information

 Table 4

 Characteristics of patients and video material.

Patient	Age	Total days in the ICU	Days on the ventilator	Day of video recording	RASS	Number of videos	Total length
1	73	27	24	25	0	12	1 h 6 min
2	75	21	16	17	0/-1	18	1 h 15 min
3	73	9	0	6	0	11	53 min
4	65	19	15	15	0/+1	12	1 h 5 min
5	22	21	17	20	0	12	1 h 16 min
6	61	18	12	13	0	16	1 h 47 min
7	69	56	47	48	0	13	1 h 18 min
8	77	42	39	40	0	14	1 h 22 min
	Mean: 64 years	Mean:	Mean:	Mean: Day 23		Total:	Total:
		26 days	21 days			108 videos	9 h 59 min

Table 5Characteristics of nurses and interview material.

Female	7
Male	1
Age (years)	Range 30–66
	Mean 47
Experience post specialisation (years)	Range 2–25
	Mean 13.5
Interview time (minutes)	Range 25-55
	Mean 46

Table 6Categories and subcategories.

Category	Subcategories
Absent invitations to participate	No invitations Verbal information
Invitations with the potential to strengthen participation	Verbal invitations Bodily invitations
	Combined invitations

It is evening and the patient, Thomas, with a neurological disease and no strength in extremities, is back in bed after sitting up in a chair for hours. Mia, the nurse, has prepared for a quick wash and starts washing Thomas' face. "First I will do your forehead, she says and then continues to wash his whole face. She moves on to his right arm: "I'll lift your arm." This continues throughout the whole upper body, while the two of them talk about the procedure, but also about how the day has been, and plans for the next day, all while having a light tone and an occasional laughter (V-ID5).

In the interviews, the nurses recognized that they did not always request participation from the patients because they tended to forget or did not believe that the patients were capable of participating. Another reason was that they perceived that the patients were tired and that taking over and letting them rest would be best. Other reasons mentioned were a lack of guidelines and little knowledge regarding what early rehabilitation comprised. Some nurses also agreed that they did not always take the time to let the patients try to participate. This could be due to a lack of resources; if they only had help from a colleague for five minutes, time management was important. However, other nurses stated that time was not necessarily a limiting factor; instead, it represented the culture of critical care nurses to be effective and get things done quickly in case an emergency should arise, as this nurse described:

Well, the patients that have enough motor skills to terminate their own arterial lines and feeding tubes are probably strong enough to wash their own hands... and their face too, not necessarily because they get clean, but because it is better than just lying there. But we rush it, we wash, and we... all this turning in bed that... we do not take the time to tell them what to do so that it feels better for them, we rather push and pull, all just to get it done (I-ID6).

Invitations with the potential to strengthen participation

The observations showed that the nurses used verbal invitations with no physical support or touch in similar situations, for example when performing oral care. "Open your mouth (V-ID7)," "Lift your tongue (V-ID1)" and "Drink from the swab (V-ID3)" were some of the instructions given, and most of the patients observed seemed to be familiar with this procedure, and cooperated. The patients could be asked to turn from a side position to the back or to push off with the feet when transferred upwards in bed; however, the results were often unsuccessful. A verbal approach was often used when appealing to the patient to cough in the context of suction of the tracheal tube or because mucus was heard in the back of the throat. In many of these situations, the result was inadequate, such as in the following example:

Linda is standing by the side of the bed, one arm hanging down and one arm resting on a stand with medical equipment. "Can you cough really hard, so that you get rid of the stuff lying in the back of your throat?" she asks the patient, Ben. He tries to cough but it is very weak. At the same time, he tries to say something, but it is hard to understand. "Well, the thing is that it is hard for me sometimes, to understand what you are saying with all that mucus in your throat... and now I did not understand what you said...." Linda says (V-ID2).

There were several observations of nurses extending bodily invitations to patients trying to sit up or change position. The nurses then supported the movement with a hand placed on the patient's back or wherever needed on the patient's body. In oral care, the nurse did not explain or provide information about the procedure but used the toothbrush or swab to gently touch the lips, and the patient followed the movements and cooperated. Many physical invitations were given in situations that seemed familiar to the patient, such as during procedures that had been performed regularly through their stay in the ICU, i.e., when using the patient lifter or placing pillows, a carefully placed hand under the shoulder or neck to initiate the movement caused the patient to join the movement. One example was:

It is in the middle of morning routine and John, the nurse, is washing George's left leg with a washcloth. He places his hand beyond the knee, making a small movement upwards, while he looks at the patient. At first there is no response from George, but John continues to move the knee upwards and comments cheerfully as George begins to participate in the movement. John then makes five repetitions of bending and extending the leg, while he verbally recognizes George's participation in the movement, that he can feel his muscles working (V-ID7).

A combination of verbal and bodily invitations to participate was seen in videos of all included patients and was a prominent type of invitation in the interactions. Moreover, these invitations created active participation from the patient in many situations. A frequently observed situation was when the patient was in bed, during care routines, or when preparing for transfer training. When rolling the patient sideways in the bed, the nurse asked the patient to bend their knee and lay their arm over their chest while the nurse simultaneously placed a hand on the arm or leg, initiating the movement. The same invitation was used when facilitating the patients' position in their bed or chair, i.e., with the placement of pillows behind the head or neck, between the knees, or under the arms. The invitation was seen in care situations such as described in the following:

Anne has been in the ICU for 7 days due to Covid-19 and respiratory failure. Maria, the nurse, has prepared everything for the morning routine, turns toward Anne with the washcloth in her hand and asks: "Is it very hard to lift your arm?" Anne looks at her, and carefully and with significant effort she lifts a stiff and shaky arm towards Maria, who picks it up and takes it in her hand. Anne replies "No," but her face is showing signs of exhaustion. "Here is the washcloth, would you like to wash your face a bit," Maria says while gently placing the washcloth in Anne's hand. A few seconds pass. "So, shall I wash my face myself?" Anne asks, while she simultaneously moves the washcloth towards her face. She then washes the lower part of her face carefully while her face shows signs of considerable effort (V-ID3).

The presence of two or more nurses around the patient was sometimes seen to complicate patient participation. The presence of multiple nurses caused an unbalanced interaction where the nurse responsible for the patient that day was usually in charge of the conversation and interaction with the patient, while the other nurses present could be handling the patient, i.e., moving their legs or arms without any communication directed towards the patient.

The interview data supported some of the findings in the observations, as a few nurses described how they consciously used physical touch to initiate a movement and how they guided movement during the morning routine when the patient washed their face or hands. Most nurses acknowledged the importance of patient participation in early rehabilitation to enable them to return to everyday life. They described how some patients demonstrated a will to participate, while others did not and had to be pushed by them to participate. However, the nurses experienced that many patients could not participate at all in the beginning and that it was important to give these patients time and the opportunity to try first, then give the necessary support or help. This action had to be repeated because the next time the patient was given the opportunity, something might have improved, allowing the patient to participate more. One nurse gave the following example:

All small movements is practice for them, when you have been on bed rest for so long the muscles and everything needs to be awakened so you must help them with that. So, my role is really just to be conscious and tell them; now you must lift your hand, now you have to try and wash your face, participate when you are rolling in bed, right? So, guide with my words and do not take over the movement, but let them try themselves (I-ID7).

Discussion

The main findings highlighted that the absence of invitations from nurses resulted in passive patient behaviour, whereas multifaceted and embodied invitations increased patient participation, as illustrated in Fig. 1. The interviews revealed sparse awareness among the nurses regarding the diversity of invitations and offered several explanations for their actions.

The fact that the nurses performed their tasks automatically, with or without verbal explanations, can be understood as an example of routine interactions, habits, normative factors, or roles (Gallagher, 2020). One of the reasons for this practice was that the nurses tried to finish all tasks quickly because something unexpected could happen, and they had to be available and prepared for this possibility. The reported beliefs among the nurses that the patients were unable to participate in any way can be considered a paternalistic approach that may impede participation, which has been documented previously (Falk, Schandl, & Frank, 2019; Malfait, 2022; Slettmyr, Frank, & Falk, 2022). This clinical practice indicates that patients' autonomy (Gallagher, 2020) appears compromised, reduced or even destroyed due to their passiveness, thus hindering one of the basic elements of patient participation (Sivertsen et al., 2022). Moreover, the described interactions can be associated with viewing the body as an object or a thing. Consequently, such approaches seem to underutilize the potential for participation that lies in interacting with the body as expressing and experiencing (Merleau-Ponty, 2013). This practice can be recognized as the lowest level of patient participation, where the patients follow the nurses' instructions (Soleimani, Rafii, & Seyedfatemi, 2010). According to IT, this failure of attention towards what the patient as a body expresses can be

interpreted as a breach of primary intersubjectivity (Gallagher, 2020), the basic level of interaction. We argue in favour of the possibility that these situations are not interactions but merely a sequence of actions from the nurse directed at the patient, a one-way communication.

The reported multiple situations where the patients spontaneously moved their arms or legs, which the nurses did not recognize, were open to questioning regarding *where* the nurses' attention was directed. That nurses may interpret the patients' possibilities for actions in terms of their professional goals and intentions in contextualized situations, rather than based on the patients' muscular performance (Gallagher, 2020), is a possible explanation for the missing attention towards details such as the movement of an arm. However, in a communicative context, such as the ICU, many resources beyond the vocalized word, i.e., gestures, facial expression, attention, and body movements, are displayed (Gallagher, 2020), and it is a paradox that the awake and alert patients in this study are not given the opportunity to participate.

Turning to invitations that strengthened participation, the verbal invitations were moderately successful, an example of the nurse using a cognitive approach towards the patient (Normann, Fikke, & Øberg, 2015). These invitations assumed that the patients had the physical ability to follow the instructions; however, the major bodily dysfunctions we observed prevented them from participating, creating a mismatch, exemplified by the nurse asking the patient to cough when he was unable to do so. In contrast, the bodily invitations provided an opportunity to interact and coconstruct activity with the critically ill person. The importance of bodily guidance was highlighted a decade ago by Egerod, Almer and Thomsen (2009) and supported by recent research by Lehmkuhl et al. (2023), who found that using physical prompts before mobilization promotes participation. Optimizing and facilitating movements are well-known practices in other professional approaches (Normann, 2020). Differing from verbal invitations, bodily invitations and physical handling address bodily dysfunctions and reduce the mismatch, which we believe is why they are more successful. We also observed that when the nurse acknowledged the patient's effort, he continued to perform the movement. This highlights the importance of the emotional aspect: bodily invitations may promote the feeling of "I can" and that acknowledgment enhances the patients' narratives and reflections on their own movement possibilities (Arntzen et al., 2021).

Lastly, the combination of verbal and bodily invitations utilized multiple forms of interaction; gaze, words, and hands-on interaction. This can be described as using a combined cognitive and prereflexive approach (Normann, Fikke, & Øberg, 2015). This approach appeared to be favourable for patient participation and ensured a higher level of autonomy for the patient. Turning to IT, we can understand this as secondary intersubjectivity between embodied selves (Gallagher, 2020), where the nurse and patient share attention and action regarding the task at hand, i.e., turning sideways in bed. As the body is the center of our experience, meaning may be cocreated out of the interaction, and it

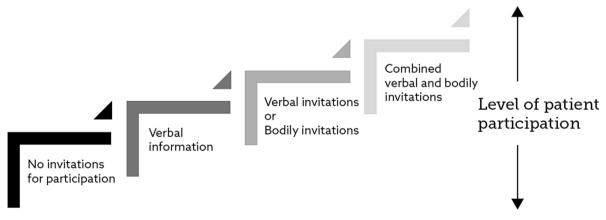


Fig. 1. Illustration of invitations to participate.

can be defined as true participation (Soleimani, Rafii, & Seyedfatemi, 2010), in which participants use their capabilities to cooperate. Secondary intersubjectivity is accompanied by communicative and narrative competencies (Gallagher, 2020) which were featured in the successful situations. The nurses applied reasoning to their requests for participation and we observed how they built relationships with the patients, which is a prerequisite for participation, according to Slettmyr, Frank and Falk (2022). The nurses' importance in enabling patient participation is recognized (Tobiano et al., 2015); however, our study highlights the nurses' crucial role in professional interactions in early rehabilitation when forwarding tailored invitations to the patients.

Limitations

The sample size may be considered small; however, by combining observations and interviews, we maximized the data quality. We consider collecting data towards the later stages of the ICU stay as a strength as it aligns with our intention to involve patients capable of participation. However, this approach may also be considered as a limitation, as we lack information about the initial phases of early rehabilitation. The combination of qualitative methods and analysis is innovative, and we have strived to describe the research process thoroughly. IT, as a theoretical framework, highlighted the enactive and embodied character of professional interaction. The first author's background as a nurse can be a challenge for reflexivity; yet, it also appeared necessary to interpret and be present in the clinical practice observed. The use of video recordings enabled all authors, with different professional perspectives and preunderstandings, to interpret and discuss the situations repeatedly, which we believe has strengthened the reflexivity of this study. The findings may be transferable to other countries and cultures; however, the implementation may be challenged by differences in culture, education, and practice.

Conclusion

Our research indicated that interactions incorporating verbal and bodily invitations to move and participate were crucial for promoting true patient participation in early rehabilitation within the ICU. The wide range of professional interactions we witnessed highlights the need to broaden the concept of communication. While nurses demonstrated considerable verbal communication skills, we believe it is essential to integrate tailored bodily communication with critically ill patients who experience severe bodily dysfunctions, since these patients primarily experience and perceive through their bodies.

Furthermore, our investigation revealed a lack of insight into and attention to the patients' bodily potential for active movement. This finding suggests an educational and training gap, which the nurses themselves also acknowledged. Additionally, we identified examples of a paternalistic approach towards patients, potentially hindering their ability to actively participate in early rehabilitation.

CRediT authorship contribution statement

Karina Knutsen: Conceptualization, Investigation, Project administration, Visualization, Writing – original draft, Writing – review & editing. **Rita Solbakken:** Supervision, Visualization, Writing – review & editing. **Britt Normann:** Conceptualization, Supervision, Visualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We would like to thank all participants, patients and nurses, for contributing to this study.

Role of the funding source

First author are financed by Nord University, as a PhD student.

Appendix A. Supplementary data

Supplementary data to this article can be found online at $\frac{\text{https:}}{\text{doi.}}$ org/10.1016/j.iccn.2023.103556.

References

- Arntzen, E.C., Øberg, G.K., Gallagher, S., Normann, B., 2021. Group-based, individualized exercises can provide perceived bodily changes and strengthen aspects of self in individuals with MS: a qualitative interview study. Physiother. Theory Pract. 37 (10), 1080–1095. https://doi.org/10.1080/09533985.2019.1683023
- Bunzel, A.M.G., Weber-Hansen, N., Schantz Laursen, B., 2020. To stay in touch intensive care patients' interactions with nurses during mobilisation. Scand. J. Caring Sci. 34 (4), 948–955. https://doi.org/10.1111/scs.12802.
- Creswell, J.W., Poth, C.N., 2018. Qualitative Inquiry & Research Design: Choosing Among Five Approaches, (4th ed.). Sage.
- Dang, S.L., 2013. ABCDEs of ICU: Early mobility. Crit. Care Nurs. Q. 36 (2), 163–168. https://doi.org/10.1097/CNQ.0b013e318283cf45.
- Doiron, K.A., Hoffmann, T.C., Beller, E.M., 2018. Early intervention (mobilization or active exercise) for critically ill adults in the intensive care unit. Cochrane Database Syst. Rev. 2018 (12) https://doi.org/10.1002/14651858.cd010754.pub2.
- Egerod, I., Almer, G.M., Thomsen, R.R., 2009. A descriptive study of basic stimulation in Danish ICUs in 2006. Scand. J. Caring Sci. 23 (4), 697–704. https://doi.org/ 10.1111/j.1471-6712.2008.00664.x.
- Ely, E.W., 2017. The ABCDEF Bundle. Crit. Care Med. 45 (2), 321–330. https://doi.org/ 10.1097/ccm.0000000000002175.
- Falk, A.C., Schandl, A., Frank, C., 2019. Barriers in achieving patient participation in the critical care unit. Intensive Crit. Care Nurs. 51, 15–19. https://doi.org/10.1016/j. iccn. 2018.11.008
- Gallagher, S. (Ed.), 2020. Action and InterAction. Oxford University Press.
 Hardin, C.C., Herridge, M.S., Azoulay, É., 2023. Outcomes after Critical Illness. N. Engl.
 J. Med. 388 (10), 913–924.
- Heath, C., Hindmarsh, J., Luff, P., 2010. Video in Qualitative Research: Analysing Social Interaction in Everyday Life. Sage.
- Hickmann, C. E., Castanares-Zapatero, D., Bialais, E., Dugernier, J., Tordeur, A., Colmant, L., Wittebole, X., Tirone, G., Roeseler, J., & Laterre, P.-F. (2016). Teamwork enables high level of early mobilization in critically ill patients. Ann. Intensive Care, 6(1), 80-80. 10.1186/s13613-016-0184-y.
- Inoue, S., Hatakeyama, J., Kondo, Y., Hifumi, T., Sakuramoto, H., Kawasaki, T., Taito, S., Nakamura, K., Unoki, T., Kawai, Y., Kenmotsu, Y., Saito, M., Yamakawa, K., Nishida, O., 2019. Post-intensive care syndrome: its pathophysiology, prevention, and future directions. Acute Medicine & Surgery 6 (3), 233–246. https://doi.org/10.1002/ams2.415.
- Laerkner, E., Egerod, I., Olesen, F., Toft, P., Hansen, H.P., 2019. Negotiated mobilisation: An ethnographic exploration of nurse–patient interactions in an intensive care unit. J. Clin. Nurs. 28 (11–12), 2329–2339. https://doi.org/10.1111/jocn.14828.
- Lehmkuhl, L., Dreyer, P., Laerkner, E., Tanghus Olsen, H., Jespersen, E., Juel Rothmann, M., 2023. Getting the body back on track – Understanding the phenomenon of mobilisation when conscious and mechanically ventilated patients are mobilised in the intensive care unit. Intensive Crit. Care Nurs. 78, 103450 https://doi.org/10.1016/j.iccn.2023.103450.
- Levin, M.F., Demers, M., 2021. Motor learning in neurological rehabilitation. Disabil. Rehabil. 43 (24), 3445–3453. https://doi.org/10.1080/09638288.2020.1752317.
- Malfait, S., 2022. The first step to embrace patient participation in the intensive care unit is to drop the paternalistic thinking. Intensive Crit. Care Nurs. 71, 103242. https://doi.org/10.1016/j.iccn.2022.103242.
- Mallinson, T.P., Hammel, J.P., 2010. Measurement of Participation: Intersecting Person, Task, and Environment. Arch. Phys. Med. Rehabil. 91 (9), S29–S33. https://doi.org/ 10.1016/j.apmr.2010.04.027.
- Malterud, K., 2012. Systematic text condensation: a strategy for qualitative analysis. Scand. J. Public Health 40 (8), 795–805. https://doi.org/10.1177/ 1403494812465030.
- Merleau-Ponty, M., 2013. Phenomenology of Perception. Florence: Taylor and Francis. 10.4324/9780203994610.
- Nguyen, N.T., McFadden, A., Tangen, D., Beutel, D., 2013. Video-Stimulated Recall Interviews in Qualitative Research. Australian Association for Research in Education.
- Normann, B., 2020. Facilitation of movement: New perspectives provide expanded insights to guide clinical practice. Physiother. Theory Pract. 36 (7), 769–778. https://doi.org/10.1080/09593985.2018.1493165.

- Normann, B., Fikke, H.K., Øberg, G.K., 2015. Somatosensory impairments and upper limb function following stroke: Extending the framework guiding neurological physiotherapy. Eur. J. Physiotherapy 17 (2), 81–88. https://doi.org/10.3109/ 21679169.2015.1031175.
- Nydahl, P., Jeitziner, M.-M., Vater, V., Sivarajah, S., Howroyd, F., McWilliams, D., Osterbrink, J., 2023. Early mobilisation for prevention and treatment of delirium in critically ill patients: Systematic review and meta-analysis. Intensive Crit. Care Nurs. 74, 103334 https://doi.org/10.1016/j.iccn.2022.103334.
- Rose, L., 2011. Interprofessional collaboration in the ICU: how to define?*. Nurs. Crit. Care 16 (1), 5–10. https://doi.org/10.1111/j.1478-5153.2010.00398.x.
- Schandl, A., Falk, A.-C., Frank, C., 2017. Patient participation in the intensive care unit. Intensive Crit. Care Nurs. 42, 105–109. https://doi.org/10.1016/j.iccn.2017.04.006.
- Sivertsen, M., De Jaegher, H., Alstadhaug, K.B., Arntzen, E.C., Normann, B., 2022. The precarity of patient participation - a qualitative interview study of experiences from the acute stroke and rehabilitation journey. Physiother. Theory Pract. 1–16 https:// doi.org/10.1080/09593985.2022.2140319.
- Slettmyr, A., Frank, C., Falk, A.-C., 2022. The core of patient-participation in the Intensive Care Unit: The patient's views. Intensive Crit. Care Nurs. 68, 103119. https://doi.org/10.1016/j.iccn.2021.103119.
- Soleimani, M., Rafii, F., Seyedfatemi, N., 2010. Participation of patients with chronic illness in nursing care: An Iranian perspective: Patient participation in nursing care.

- Nurs. Health Sci. 12 (3), 345–351. https://doi.org/10.1111/j.1442-2018.2010.00536.x.
- Sosnowski, K., Lin, F., Mitchell, M.L., White, H., 2015. Early rehabilitation in the intensive care unit: an integrative literature review. Aust. Crit. Care 28 (4), 216–225. https://doi.org/10.1016/j.aucc.2015.05.002.
- The Norwegian Association of Critical Care Nurses. (2017). The role and scope of practice of the critical care nurse. https://www.nsf.no/sites/default/files/inline-images/hia7uzxLKqvTpU1hhfYZBV8XUiP7Dmn1UAKfxbVWsVS9HKrdDY.pdf.
- Tipping, C.J., Harrold, M., Holland, A., Romero, L., Nisbet, T., Hodgson, C.L., 2017. The effects of active mobilisation and rehabilitation in ICU on mortality and function: a systematic review. Intensive Care Med. 43 (2), 171–183. https://doi.org/10.1007/ s00134-016-4612-0.
- Tobiano, G., Marshall, A., Bucknall, T., Chaboyer, W., 2015. Patient participation in nursing care on medical wards: An integrative review. Int. J. Nurs. Stud. 52 (6), 1107–1120. https://doi.org/10.1016/j.ijnurstu.2015.02.010.
- Wallander Karlsen, M.M., Heggdal, K., Finset, A., Heyn, L.G., 2019. Attention-seeking actions by patients on mechanical ventilation in intensive care units: A phenomenological-hermeneutical study. J. Clin. Nurs. 28 (1–2), 66–79. https://doi. org/10.1111/jocn.14633.
- Zang, K., Chen, B., Wang, M., Chen, D., Hui, L., Guo, S., Ji, T., Shang, F., 2020. The effect of early mobilization in critically ill patients: a meta-analysis. Nurs. Crit. Care 25 (6), 360–367. https://doi.org/10.1111/nicc.12455.