

SYSTEMATIC REVIEW

A scoping review of older patients' health-related quality of life, recovery and well-being after intensive care

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Abstract

Aims: In the present study, we aimed to determine how Health-Related Quality of Life (HRQoL), recovery (function and capacity in daily life) and well-being are followed up and characterised in persons ≥ 65 years of age who were being cared for in an intensive care unit (ICU).

Design: A scoping review.

Methods: CINAHL, MEDLINE (Ovid) and PsycINFO databases were searched in October 2021. 20 studies met the inclusion criteria. The scoping review followed the principles outlined by Arksey and O'Malley, and the Preferred Reporting Items for Systematic Review and Meta-analyses (PRISMA) checklist and Joanna Briggs Institute (JBI) framework were used.

Results: Results are presented under five subheadings: Study characteristics, Type of studies, Methods for follow-up, health-related quality of life, and Recovery. Time seems to be an important factor regarding HRQoL among older patients being cared for in an ICU, with most elderly survivors perceiving their HRQoL as acceptable after 1 year. Nevertheless, several studies showed patients' willingness to be readmitted to the ICU if necessary, indicating that life is worth fighting for.

Patient or Public Contribution: Due to the design of the study, this study involves no patient or public contribution.

KEYWORDS

elderly, health-related quality of life, intensive care, intensive care unit, nurses, nursing, older, recovery, scoping review, well-being

1 | INTRODUCTION

The current scoping review focused on how health-related quality of life Health-Related Quality of Life (HRQoL), recovery (function and capacity in daily life) and well-being are experienced from the perspective of people ≥ 65 years of age being cared for in an intensive care unit (ICU). This is an important area as there is a rapidly growing population of older patients treated in the ICU (Flaatten et al., 2017; Inoue et al., 2019), and the prevalence of physical and cognitive impairments in older ICU survivors

is quite high (Wang et al., 2018). However, there is a lack of research about how life is experienced by persons ≥ 65 years after receiving care in an ICU.

Intensive care refers to the care of patients who have experienced a failure in the body's most basic functions, such as breathing, circulation and consciousness (Swedish Intensive Care Register, 2020). ICU units are created and equipped to provide the maximum opportunity for survival, with a high concentration of medical-technical equipment and constantly present staff (Swedish Intensive Care

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Register, 2020). Early research underscores that being cared for in an ICU often evokes feelings of being exposed and vulnerable (Danielis et al., 2020; Egerod et al., 2015). The experience has been described as affecting the understanding of oneself, one's family and the ability to resume and face everyday life (Vester et al., 2021).

However, there is a lack of research about how aspects such as HRQoL, recovery and well-being are followed up in persons ≥ 65 years after being cared for in an ICU. More research is necessary in this area for understanding valuable support and interventions in post-ICU care for older persons.

2 | BACKGROUND

The number of older persons is growing rapidly; over the next three decades, the number worldwide is predicted to more than double (United Nations, 2020). In Sweden in 2019, about 20% of the population were over the age of 65. In 2028, those 80 years and older are estimated to be 255,000 more than the current total, an increase of 50% (Statistics Sweden (SCB), 2020). Worldwide, the number of older patients in ICU will increase due to this ageing population (Inoue et al., 2019; Occhiali et al., 2021; van Heerden et al., 2020). The median age of patients admitted to the ICU is above 65 years in many countries, which now shifts the direction of concern to ICU patients above 75–80 years (Flaatten et al., 2017).

Patients' ≥ 80 years old admitted to the ICU have a one-year mortality rate of around 60% (Andersen et al., 2015; de Lange et al., 2019). Age has been shown to be an important factor affecting outcomes for older patients in ICU. However, associated factors also seem to be important for outcomes (Flaatten et al., 2017). Associated factors include gender, diagnosis and the simultaneous presence of two or more diseases or medical conditions in a patient (van Heerden et al., 2020). There appears to be a consensus that there needs to be a broader perspective on ICU care, where age is one component in communion with other aspects connected to ageing, such as frailty, self-sufficiency and QoL prior to hospitalisation (Occhiali et al., 2021).

Ageing predisposes individuals to diseases and acute medical events. Bodily, mental and existential changes due to ageing predispose the individual's vulnerability and can increase the risk of capacity losses. This process leads to limited independence—and eventually death. (Guidet et al., 2018; Rockwood et al., 2005). Characteristic vulnerability leading to difficulties in overcoming acute stress is defined as a 'frailty syndrome'. Fried et al. (2001) defined frailty as "a clinical syndrome in which three or more of the following criteria were present: unintentional weight loss (10 lbs in past year), self-reported exhaustion, weakness (grip strength), slow walking speed, and low physical activity" (p. 146). Rockwood et al. (2005) developed the Clinical Frailty Scale (CFS) in 2008. It is a 7-point scale, ranking patients in nine groups, from 'very fit' to 'terminally ill'. According to the CFS scale, the mortality rate increases with a higher score on the scale. Frailty has been shown to be common among critically ill adults aged 50 and above. An early frailty diagnosis may improve prognostication when a vulnerable

population that benefits from follow-up intervention is identified (Bagshaw et al., 2014). Critical illness affects patients' long-term outcomes. During ICU care, several impairments can occur, with long-term effects in all aspects of the patient's life. These are referred to as post-intensive care syndrome (PICS) (Azoulay et al., 2017; Inoue et al., 2019). PICS may appear as physical and cognitive weakness and can also affect patients' mental health (The Society of Critical Care Medicine, 2013). Difficulties in making oneself understood can occur, and the ability to resume everyday activities can be affected (Vester et al., 2021). PICS is a significant phenomenon in older ICU survivors for several reasons. Over 70% of older adults cared for in the ICU develop delirium, which is a major risk factor for developing PICS. Cognitive and functional impairment before time in an ICU increases the risk of experiencing cognitive and functional decline afterwards (Wang et al., 2018).

HRQoL is a widely used scale for measuring health and how a person's life is influenced by health issues (Davis et al., 2006). The concept of HRQoL relates to the individual experience of health and how health is affected by illness and treatment (Davis et al., 2006). HRQoL describes health in wide-ranging terms, such as functioning and well-being (Karimi & Brazier, 2016).

Recent research in the area indicates that HRQoL is ranked poorly for ICU survivors immediately after being discharged from the ICU (Jeitziner, Zwakhalen, et al., 2015) however, after some time, life seems to return to a more normal state, and HRQoL is often scored higher (Andersen et al., 2015; Heyland et al., 2016; Oeyen et al., 2017).

Well-being can be described as 'being able to', which integrates biological health with existential vitality, resulting in a daily life with power and strength to perform one's life projects (Dahlberg et al., 2008), with and a sense of coming to terms with what has been given (Todres & Galvin, 2010). Research in this area (Halvorsen et al., 2022) has pointed at barriers to well-being while receiving care in an ICU setting, including physical barriers such as pain, thirst and dysphagia, and emotional barriers such as delusional memories, fear of death and a loss of control.

Another concept derived from caring science is recovery, which can be experienced as a subjective feeling of health and well-being, closely connected to recuperating health, despite a medical diagnosis (Eriksson, 2018). Variations in health are endless. Recovery is understood as an ongoing process, not a state, where health is a time-relative movement in which well-being can vary from minute to minute (Bergbom et al., 2021; Eriksson, 2018). ICU survivors have commented that a sense of recovery was not felt until they reached home, as the hospital was not seen as a place enabling recovery (Karlsson et al., 2016). Recovery was connected with relationships and being part of a social context (Ringdal et al., 2021).

In many parts of the world, intensive care contributes to prolonging life for critically ill older persons. Advanced medical technology and treatment provide possibilities for care despite age (Inoue et al., 2019), but research underscores challenges to acceptable HRQoL after receiving care in an ICU setting (Malmgren et al., 2021) and more research are needed in this area.

3 | REVIEW

3.1 | Aim and research questions

In the present study, we aimed to determine how HRQoL, recovery (function and capacity in daily life) and well-being are followed up and characterised in persons ≥ 65 years of age who were being cared for in an ICU.

The study was guided by the following research question:

In what way has previous existing literature described HRQoL, recovery (function and capacity in daily life) and well-being from the perspective of persons ≥ 65 years of age after being cared for in an ICU?

3.2 | Design

A scoping review was carried out to further deepen the understanding of research describing HRQoL, recovery, and well-being in persons ≥ 65 years of age being cared for in an ICU. This scoping review was conducted with the support of the five steps described by Arksey and O'Malley (2005). The steps include describing a research question, searching for appropriate studies, selecting relevant studies, outlining relevant aspects of the data and, in a proper way, writing the results. The last stage involves condensing and describing a relevant result in relation to the study aim. Arksey and O'Malley (2005) process is highlighted by the Joanna Briggs Institute as an efficient way to perform a scoping review (Aromataris, 2020).

In order to display the search process and report the findings, the Preferred Reporting Items for Systematic Review and Meta-analyses (PRISMA) (Page et al., 2021) checklist and Joanna Briggs Institute (JBI) framework were used (Peters et al., 2020).

3.3 | Search methods

A university librarian supported the development of the search protocol (Table 1).

Three databases (CINAHL, PUBMED, PsychINFO) were searched in October 2021 for studies published in peer-reviewed English language journals from 2010 to 2021. Following Arksey and O'Malley (2005) recommendations, considerations must be made about the extent of the review in terms of time span and language. To conduct a sound, reflective analysis, studies published no longer than 10 years ago and published in English were included. The searches were modified to Medical Subject Terms (MeSH terms) in PubMed, CINAHL Subject Headings in CINAHL and free text search in PsychINFO, in order to target the most appropriate research items possible. Boolean Operators 'AND' and 'OR' were used to combine the search terms and truncations in

order to reach the most possible term variations. A manual search was ultimately performed, but no new articles were found.

3.4 | Search outcomes

Figure 1 (PRISMA flow diagram) describes the initial identification of 1340 articles. After removing duplicates ($n=238$), 1102 articles were screened for title and abstract. In this phase, 1022 were excluded; the main criteria for exclusion in this phase were articles not specifically targeting older patients, articles with only a medical perspective or focused on specific diagnoses or lacking a perspective of the time after ICU care; 80 articles remained and were assessed for eligibility in full text. Of those, 60 were excluded for various reasons, such as involving very specific interventions that were not related to recovery or well-being and articles in which the age of the patients was unspecified, resulting in 20 articles which were included. The final sample of 20 papers included 19 articles using the quantitative method, one article using qualitative studies and zero articles using mixed methods.

3.5 | Criteria for considering studies for the review

Articles were considered for inclusion if they addressed HRQoL, recovery or well-being of persons aged ≥ 65 years who had been cared for in an ICU. The following questions guided the decision: (1) Was the primary focus older persons ≥ 65 years of age who had been cared for in an ICU and (2) Did the research focus on HRQoL, recovery and well-being after the period of being discharged from the ICU? No specified limit for the time of follow-up was set. Articles were excluded if any of the following applied: (1) the study involved participants of an unspecified age; (2) it included only biological and physiological aspects of follow-up after ICU; (3) involved specific interventions or medical procedures during the ICU; (4) it consisted only of study protocols, feasibility studies or conference abstracts; and (5) it was a literature review or specific intervention study. Studies that met the inclusion criteria based on title and abstract reviews were read independently in full by all three authors.

3.6 | Quality appraisal

In scoping reviews, there are usually no requirements for quality appraisal. However, we chose to conduct a critical appraisal of study strengths and weaknesses using the checklist developed by Caldwell et al. (2011) for qualitative and quantitative studies. Caldwell et al. devised a checklist suitable for different designs, and the quality appraisal is included in Table 2. All three authors were engaged in the process of evaluating each study's strengths and weaknesses according to this checklist.

TABLE 1 Search strategy.

PubMed	
Search 1 Elderly	("aged"[Mesh] OR elderly[tiab] OR "very old"[tiab])
Search 2 Survivors	("Survivors"[Mesh:NoExp] OR survivors[tiab] OR survivorship[tiab] OR "post discharge"[tiab] OR "after discharge"[tiab] OR "following discharge"[tiab])
Search 3 Intensive care	("Critical Care"[Mesh:NoExp] OR "critical care"[tiab] OR "Intensive Care Units"[Mesh:NoExp] OR "intensive care"[tiab] OR ICU[tiab])
Search 4 "Outcomes"	("Quality of Life"[Mesh] OR "quality of life"[tiab] OR "life quality"[tiab] OR wellbeing[tiab] OR "life experience"[tiab] OR "lived experience"[tiab] OR "patient experience"[tiab] OR "Adaptation, Psychological"[Mesh] OR "psychology"[Subheading] OR "Patient Satisfaction"[Mesh] OR "Personal Satisfaction"[Mesh] OR psychosocial[tiab] OR emotional[tiab] OR satisfaction[tiab] OR coping[tiab] OR existential[tiab] OR recovery[tiab])
Search 5	1 AND 2 AND 3 AND 4
	631 titles
CINAHL via Ebsco	
Search 1 Elderly	((MH aged+) OR (TI elderly OR AB elderly) OR (TI "very old" OR AB "very old"))
Search 2 Survivors	((MH Survivors) OR (MH Survivorship) OR (TI survivors OR AB survivors) OR (TI survivorship OR AB survivorship) OR (TI "post discharge" OR AB "post discharge") OR (TI "after discharge" OR AB "after discharge") OR (TI "following discharge" OR AB "following discharge"))
Search 3 Intensive care	((MH "Critical Care") OR (TI "critical care" OR AB "critical care") OR (MH "Intensive Care Units") OR (TI "intensive care" OR AB "intensive care") OR (TI ICU OR AB ICU))
Search 4 "Outcomes"	((MH "Quality of Life"+) OR (TI "quality of life" OR AB "quality of life") OR (TI "life quality" OR AB "life quality") OR (TI wellbeing OR AB wellbeing) OR (MH "life experiences") OR (TI "life experience" OR AB "life experience") OR (TI "lived experience" OR AB "lived experience") OR (TI "patient experience" OR AB "patient experience") OR (MH "Adaptation, Psychological"+) OR (MH "Patient Satisfaction"+) OR (MH "Personal Satisfaction"+) OR (TI psychosocial OR AB psychosocial) OR (TI emotional OR AB emotional) OR (TI satisfaction OR AB satisfaction) OR (MH coping) OR (TI coping OR AB coping) OR (TI existential OR AB existential) OR (MH recovery) OR (TI recovery OR AB recovery))
Search 5	1 AND 2 AND 3 AND 4
	237 titles
PsycInfo via ProQuest	
Search 1 elderly	(aged OR elderly OR elder OR "very old" OR older OR geriatric)
Search 2 Survivors	(Surviv* OR discharge)
Search 3 Intensive care	("Critical Care" OR "Intensive Care" OR ICU)
Search 4 "Outcomes"	(experience OR satisfaction OR "life quality" OR "quality of life" OR psychosocial OR emotional OR coping OR existential OR recovery)
Search 5	1 AND 2 AND 3 AND 4
	473 titles

3.7 | Ethical considerations

The study did not require Research Ethics Committee approval, due to its design and methodology, and because it did not involve human participants.

3.8 | Data abstraction and synthesis

As suggested by Arksey and O'Malley (2005), the results are presented in two parts. First, basic data relating to study characteristics were mapped. In the second phase, the data were organised thematically to be able to answer the study aim. Relevant data were

extracted from the included articles and then grouped into themes. In Table 3, themes derived from each article are presented along with relevant scales and indexes.

4 | RESULTS

The 20 included studies (Table 2) were published over a 10-year period from 2011 to 2021. Nineteen were quantitative, and one was qualitative. The results open with a description of the study characteristics. The second section highlights HRQoL, recovery (function and capacity in daily life) and well-being. Both qualitative and quantitative studies are presented.

4.1 | Study characteristics

The included 20 studies were conducted in diverse ICU settings subdivided into two cardiac thoracic ICUs (Deschka et al., 2013; Govers et al., 2014), five mixed medical and surgical ICUs (Hofhuis et al., 2011; Jeitziner, Hamers, et al., 2015; Jeitziner, Zwakhalen, et al., 2015; Tripathy et al., 2014; Villa et al., 2016), three general ICUs (Pintado et al., 2016; Ringdal et al., 2021; Schröder et al., 2011), one surgical ICU (Tabah et al., 2010), four medical ICUs (Pollack et al., 2017; Sacanella et al., 2011; Somme et al., 2010; Zeggwagh et al., 2020), three studies including multiple ICU units with different specialisations (Ferrante et al., 2016; Khouli et al., 2011; Oeyen et al., 2017) and two non-specified ICU units (Downer et al., 2021; Karlsson et al., 2016).

The 20 studies were conducted in 11 countries: Belgium ($n=1$), Denmark ($n=1$), France ($n=2$), Germany ($n=1$), Morocco ($n=1$), India ($n=1$), the Netherlands ($n=2$), Spain ($n=3$), Sweden ($n=2$), Switzerland ($n=2$) and the US ($n=4$).

All participants are described in Table 2. Mortality at 12 months after discharge was estimated in 10 of the included articles at approximately 50% (Oeyen et al., 2017; Pintado et al., 2016; Sacanella

et al., 2011; Deschka et al., 2013; Schröder et al., 2011; Somme et al., 2010; Tabah et al., 2010; Tripathy et al., 2014; Villa et al., 2016; Zeggwagh et al., 2020).

4.2 | Type of studies

The 20 studies included were categorised according to JBI Levels of Evidence (Joanna Briggs Institute, 2014). Most of the studies were observational, analytic designs (e.g. prospective and retrospective cohort studies, longitudinal studies). One experimental study design was identified, which was a randomised controlled trial, and finally a study using qualitative content analysis with descriptive and explorative designs was included (Table 2).

4.3 | Methods for follow-up of elderly people cared for at an ICU

Various approaches to follow-up elderly people after being cared for at an ICU were identified. The results are therefore presented as a

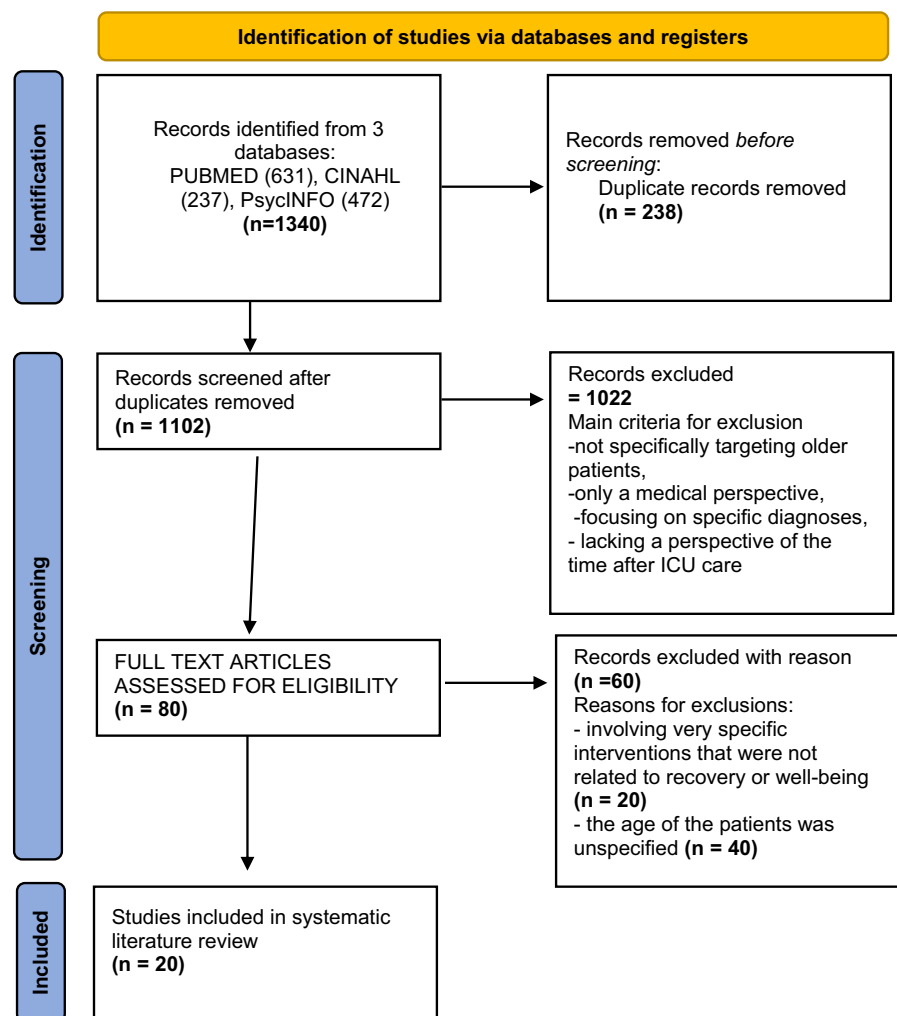


FIGURE 1 Preferred reporting items for systematic reviews and meta-analyses (PRISMA) flowchart.

TABLE 2 Characteristics of included studies.

Author (year), country)	Study aims	Study design, data collection methods, measuring points (MPs)	Population characteristics (sample size, age, ICU stay)
1 Deschka et al. (2013), Germany	To evaluate mortality, functional outcomes, QoL and generated costs of octogenarians suffering from prolonged ICU treatment after cardiac surgery	Observational- analytic design SF-12 Barthel Index MP: Contacted by telephone 1 year after surgery	Sample size: N = 109 Group A, n = 86 (<80 years, $M = 69.0$) Group B, n = 23 (≥ 80 years, $M = 84.1$) ICU stay ≥ 5 days
2 Downer et al. (2021) USA	To describe the recovery of ADLs during an SNF stay and the association with 1-year mortality after SNF discharge among Medicare beneficiaries treated in ICU for sepsis	Observational- analytic design -Change in ADL function MPs: Between the first and last MDS assessments during the Part-A covered SNF stay 1-year mortality after SNF discharge	Sample size: N = 59,383 Survived ICU care for sepsis Average age = 81 years
3 Ferrante et al. (2016) USA	To evaluate the incidence and time to recovery of pre-morbid function within 6 months of a critical illness and to identify independent predictors of functional recovery among older ICU survivors	Observational-analytic design Mini-Mental State CES-D Fried Frailty Index Modified Self-Efficacy Scale Assessment of functional status MPs: Assessment at baseline and at 18 months intervals for 180 months Telephone interviews monthly for 1 year	Sample size: N = 186 Aged ≥ 70 Median ICU stay 2 days After 6 months: 114 (52.3%) alive with functional recovery 69 (31.7%) alive with increased disability
4 Govers et al. (2014) the Netherlands	To explore which variables were independently associated with functional decline 12 months after cardiothoracic surgery followed by ICU admission	Observational- analytic design Katz Index score MP: Hospital admission 3 and 12 months after hospital discharge	Sample size: N = 356 Aged ≥ 65 ICU care after cardiothoracic surgery
5 Hofhuis et al. (2011) the Netherlands	To describe the impact of ICU stay on long-term HRQoL following the recovery of HRQoL in surviving octogenarians immediately after discharge from the ICU and, secondly, compared the HRQoL of the octogenarians with that of patients aged <80 years and with an age matched general population	Observational - analytic design SF-36 MPs: -Before ICU admission -After ICU and hospital discharge at three and months following ICU discharge	Sample size: N = 129 Aged ≥ 80 , $M = 83$ years and Sample size: N = 620, Aged ≤ 80 $M = 68$ years ICU stay ≥ 48 h
6 Jeitziner, Hamers, et al. (2015) Switzerland	To investigate whether an ICU stay is associated with persistent pain, anxiety and agitation in critically ill older patients	Observational- analytic design NRS CAM-ICU RASS ICU Memory Tool MPs: -During ICU 1 week, 6 and 12 months after hospital discharge	Sample size: N = 145 (ICU group) Aged ≥ 65 ICU care ≥ 48 h Aged-matched community-based comparison group, N = 146
7 Jeitziner, Hamers, et al. (2015) Switzerland	To identify changes in HRQoL in older patients 1 year following an ICU stay, and to identify those patient - and ICU-related factors associated with the long-term changes	-Observational- analytic design SF-36 MPs: 1 week after ICU stay (retrospective baseline), 6 and 12 months	Sample size: N = 145 (ICU group) Aged ≥ 65 ICU care ≥ 48 h Aged-matched community-based comparison group, N = 146

Study setting	Synopsis and key findings relating to well-being and recovery	Summary of critical appraisal (according to Caldwell)
Single centre Thoracic ICU	Functional capacity was high and did not differ significantly among groups. -QoL did not differ significantly among groups and was comparable with age-adjusted general population	Good
Data from a national sample of Medicare beneficiaries discharged to an SNF after an ICU stay Unspecified ICU	Older adults treated in an ICU with sepsis can improve in ADL function during an SNF stay. This is associated with lower 1-year mortality and better health outcomes	Good
ICU survivors including general, specialty, coronary care units, but excluding psychiatric intermediate critical care	Among older adults who survived an ICU admission with increased disability, pre-ICU hearing and vision impairment were strongly associated with poor functional recovery within 6 months. Higher BMI and functional self-efficacy were associated with recovery	Good
Single centre Cardiac ICU	The outcomes are good considering the survival rates. There is an overall decline in daily functioning 1 year after surgery. Studies on geriatric rehabilitation before and after surgery are needed to see whether the trajectory of this functional decline could be influenced	Good
Single centre General ICU	In the octogenarians, mean SF-36 scores 6 months after ICU discharge were comparable to baseline in all dimensions. -Most dimensions of the SF-36 were not significantly lower in surviving octogenarians at 6 months after ICU discharge compared with the normal population	Good
Single centre Medical, surgical ICUs	Critically ill older patients did not report increased pain, anxiety and agitation 1 year following an ICU stay. Directly following ICU discharge, the patients did experience pain and anxiety, which required the attention of healthcare providers	Good
Single centre Medical, surgical ICUs	-Older patients treated in an ICU have a lower HRQoL over 1 year as compared with a comparison group. These differences were present before the ICU stay. -Older patients have a good HRQoL 1 year after an ICU stay Unpleasant experiences during the ICU stay were associated with lower mental health scores	Good

(Continues)

TABLE 2 (Continued)

Author (year), country)	Study aims	Study design, data collection methods, measuring points (MPs)	Population characteristics (sample size, age, ICU stay)
8 Karlsson et al. (2016) Sweden	To explore and describe older patients' experiences of recovery and need of care within 2 months following discharge from hospital after being cared for in an ICU	-Observational-descriptive design -Qualitative content analysis MP: -Telephone interviews 2 months after ICU discharge	Sample size: N = 15 Aged ≥65 Mean age = 71 Women = 7 Men = 8
9 Khouli et al. (2011) USA	To determine predictors of survival after hospital discharge and to describe the impact of ICU admission on HRQoL at 6 months after hospital discharge in older adults admitted to ICUs	Observational- analytic design CDC-HRQoL instrument MPs: At admission 6 months after hospital discharge	Sample size N = 484 Admission: N = 367 (75.8%) alive 6 months N = 318 (65.7%) alive ≥65 years ICU care >24h
10 Oeyen et al. (2017) Belgium	To investigate long-term outcomes, post-hospital trajectories and QoL in patients ≥80 years admitted to the ICU of a tertiary care hospital	-Observational- analytic design EQ-5D SF-36 MPs: Before admission 3 months, 1 year and 7 years after ICU discharge	Sample size: N = 131 All consecutive patients ≥80 years admitted to the ICU 3 months n = 86, 1 year n = 74, 7 years n = 21 after ICU discharge
11 Pintado et al. (2016) Spain	To evaluate mortality and functional status at 1 year of follow-up in patients >75 years of age who survived ICU admission of over 14 days	-Observational-analytic design Barthel Index RCPD (measured basal mental state) MPs: Telephone interviews at 3, 6 and 12 months	Sample size N = 176 Group 1 n = 154 ICU stay 1-14 days Group 2 n = 22 ICU stay >14 days Group 1 alive after 1 year, n = 87 Group 2 alive after 1 year, n = 7 Patients over 75 years of age admitted to the ICU
12 Pollack et al. (2017) USA	To assess symptoms in older ICU survivors and determine whether post-ICU frailty identifies those with the greatest palliative care needs	Observational - analytic design -Mini-Cog -Fried Frailty Index -Katz Index -ESAS -BFI -PHQ 9 -ISI MPs: -Before hospital discharge 1 month and 3 months after discharge	Sample size: N = 125 Patients aged ≥65 received ICU care
13 Ringdal et al. (2021) Sweden	The aim was to investigate older patient recovery up to 2 years following discharge from an ICU	Observational - analytic design RAIN instrument HAD MPs: At least twice at 2, 6, 12 and 24 months after ICU	Sample size: N = 82 Patients aged ≥65 received ICU care

Study setting	Synopsis and key findings relating to well-being and recovery	Summary of critical appraisal (according to Caldwell)
Single centre General ICU	Six themes: Discharge – a matter of physicians' and nurses' decisions' -Wanted to go home Feeling well and feeling better, but. Recovered or not, that is the question In need of help from others In need of care	Good
Two centres with Medical, surgical, and cardiac ICUs	The oldest ICU survivors had a decline in QoL 6 months after ICU stay, Important independent predictors of decreased survival at 6 months after hospital discharge included increased severity of illness at ICU admission, comorbid chronic pulmonary disease and physical health 30 days before hospitalisation	Good
Single centre Medical, surgical, burn unit ICUs	Most critically ill long-term elderly survivors lived at home, perceived their QoL as acceptable, and wanted to be readmitted to the ICU if necessary. In older patients, age alone is a poor indicator of the possible value to be gained from an ICU admission	Good
Single centre Medical, surgical ICUs	Patients >75 years with prolonged admission to the ICU suffer high mortality both in the ICU and in hospital -The survivors of prolonged admission to the ICU show a high survival rate after 1 year though functional status is poorer than before admission to the ICU	Good
Single centre Medical ICU	Fatigue was the most prevalent Symptom and may have interfered with recovery. -Post-ICU frailty may be a useful trigger for palliative care consultation and a treatment target	Good
Single centre General ICU	Recovery after the ICU was relatively stable and good for older patients. The greatest recovery improvement was in existential ruminations from 2 to 24 months. A patient that could look forward and those with supportive relatives had the highest scores	Good

(Continues)

TABLE 2 (Continued)

Author (year), country)	Study aims	Study design, data collection methods, measuring points (MPs)	Population characteristics (sample size, age, ICU stay)
14 Sacanella et al. (2011) Spain	To evaluate functional status and QoL of elderly patients 12 months after discharge from a medical ICU	-Observational-analytic design EQ-5D Lawton Index Barthel Index CGA CAM MPs: -Baseline -ICU and ward stay -at 3, 6 and 12 months after hospital discharge	Sample size: N = 230–160 discharged alive from hospital 48 died after discharge 112 (49%) were alive 1 year later ≥65 years enrolled 24–48 h after ICU admission
15 Schrøder et al. (2011) Denmark	To study the long-term outcome measured by mortality and HRQoL in elderly patients following intensive care	Observational-analytic design SF-36 Domicile type Level of home-based public social service Willingness to receive intensive care again MP: -12-month follow-up	Sample size: N = 91 Aged ≥75 years at ICU admission 12-month follow-up of elderly survivors, n = 36 All patients aged ≥75 years at ICU admission
16 Somme et al. (2010) France	To evaluate changes in the functional autonomy of elderly patients after a stay in a medical ICU and the impact of post-ICU management in geriatric ward	Experimental design -Barthel Index IADL MPs: Before ICU After ICU discharge At hospital discharge 6 months after discharge	Sample size: N = 45 Randomised to geriatric ward n = 24 and standard care n = 21 ICU survivors ≥75 years transferred from an ICU
17 Tabah et al. (2010) France	To describe self-sufficiency and QoL 1 year after ICU discharge of patients aged ≥80 years	Observational-analytic design Self-sufficiency QoL MPs: At ICU admission 12 months after ICU discharge	Sample size: N = 106 enrolled Mean age 84 (range, 80–92) n = 23 patients were evaluated after 1 year All patients aged ≥80 included at ICU admission
18 Tripathy et al. (2014) India	To study the mortality and outcome of critically ill elderly patients in a developing country with a focus on nutritional and socioeconomic status	Observational-analytic design Katz ADL MUST ICDSC SEC -Socioeconomic category MPs: -Telephone contact day 28, and 3, 6, and 12 months after hospital discharge -Katz ADL was administered at 12 months	Sample size N = 109 2 groups: Group I (65–74 years of age, n = 65) Group II (≥75 years of age, n = 44) Patients aged ≥65 received ICU care
19 Villa et al. (2016) Spain	To evaluate functional status and QoL in elderly ICU survivors at 1-year follow-up	Observational-analytic design Barthel Index SF-36 MPs: -At hospital discharge and 3, 6 and 12 months after discharge (compared with that of the Spanish population of same age)	Sample size: N = 176 At discharge, n = 110 At 1 year, n = 94 ICU survivors aged ≥75

Study setting	Synopsis and key findings relating to well-being and recovery	Summary of critical appraisal (according to Caldwell)
Single centre Medical ICU	The functional autonomy, cognitive status and QoL were apparently good in the survivors 74% would accept readmission to the ICU if necessary.	Good
Single centre General ICU	Elderly ICU patients had high long-term mortality. Survivors had impaired physical function. The majority ICU survivor had returned to their home and would be willing to undergo ICU care again	Good
Single centre Medical ICU	Autonomy was usually recovered rapidly depending on previous autonomy. 41% had recovered previous autonomy after 6 months. These results underline the rapid loss of autonomy after a stay in a medical ICU, early specific intervention seems to be important	Good
Single centre General ICU	80% older ICU survivors were self-sufficient for ADLs 1 year after ICU discharge. They were satisfied with their level of self-sufficiency and QoL	Good
Single centre Mixed medical, surgical ICUs	Malnutrition and delirium were risk factors for long-term mortality. Survivors had a good functional outcome	Good
Single centre Medical, surgical ICUs	3 months after ICU discharge, there was a significant improvement in FS. Baseline FS was not recovered at 1-year follow-up. Poor functional recovery were associated with low baseline Barthel Index and ICU stay >4 days. 76.8% were living in their own homes after 1-year. HRQoL was then similar to the Spanish population	Good

(Continues)

TABLE 2 (Continued)

Author (year), country)	Study aims	Study design, data collection methods, measuring points (MPs)	Population characteristics (sample size, age, ICU stay)
20 Zeggwagh et al. (2020) Morocco	To evaluate changes in HRQoL before ICU admission and after ICU discharge in elderly patients and to determine predictors of this HRQoL	Observational-Analytic Design SF-36 MPs: 1 month prior to ICU admission At admission and 3 months after ICU discharge	Sample size N = 118 ICU survivors aged ≥65 In ICU ≥48 h

Note: QoL, Measured via WHOQOL-BREF (World Health Organization-BREF) and WHOQOL-OLD (World Health Organization-OLD) questionnaires. Abbreviations: ADLs, Activities of Daily Living; BFI, Brief Fatigue Inventory; BMI, Body Mass Index; CAM, Confusion Assessment Method Score; CAM-ICU, The Confusion Assessment Method for the ICU; CDC-HRQoL instrument, Centers for Disease Control HRQoL instrument; CES-D, Center for Epidemiological Studies Depression scale; CGA, Comprehensive Geriatric Assessment; EQ-5D, EuroQoL-5D; ESAS, Edmonton Symptom Assessment Scale; FS, Functional Status; HAD, Hospital Anxiety and Depression Scale; IADL, Intensive Care Delirium Screening Checklist; ICDSC, Intensive Care Delirium Screening Checklist; ICU, Intensive Care Unit; ISI, Insomnia Severity Index; MDS, Minimum Data Set; MUST, Malnutrition Universal Screening Tool score; NRS, Numeric Rating Scale; PHQ 9, Patient Health Questionnaire-9; QoL, Quality of Life; RAIN instrument, Recovery After Intensive Care; RASS, Richmond Agitation-Sedation Scale; RCPD, Red Cross Psychiatric Disability Scale; SEC, Socioeconomic classification (of main supporting family-member); Self-sufficiency, Measured via Katz Index of ADL; SF-12, Short form (SF)12 Questionnaire; SF-36, The Medical Outcomes Study 36-item; SF-36, The Short Form Health Survey 36; SNF, Skilled Nursing Facility.

description of how HRQoL, recovery (function and capacity in daily life) and well-being have been described in the included studies.

4.3.1 | HRQoL and well-being

HRQoL was assessed in 13 studies with different scales, which are summarised in Table 4.

The follow-up period ranged from 3 months to 7 years; the most common were assessments at 3, 6 and 12 months. Follow-up was done in person, by phone or letter. The response rate was reported to be high in relation to available participants; however, due to high mortality and decreased health situation, the availability for follow-up on the last follow-up decreased considerably compared with inclusion at baseline. In one study, the assessment of the HRQoL score had to be abandoned due to a low response rate (Tripathy et al., 2014). In addition to studies assessing HRQoL, one study used Recovery After Intensive Care (RAIN) as an assessment tool (Ringdal et al., 2021), and one study used a qualitative approach (Karlsson et al., 2016).

4.3.2 | Recovery (function and capacity in daily life)

In this study, recovery was recaptured as function and capacity in daily life, illustrated by measurement techniques such as the Barthel Index (Mahoney & Barthel, 1965), Lawton Index (Lawton & Brody, 1969) and Katz Index of activities of daily living (ADLs) (Törnquist et al., 1990). The older patients' functional status/functional capacity after ICU treatment was measured via the Barthel Index (Deschka et al., 2013; Pintado et al., 2016; Sacanella et al., 2011; Somme et al., 2010; Villa et al., 2016), Lawton Indexes (Sacanella et al., 2011), Katz Index score (Govers et al., 2014) and interviews from one qualitative study (Karlsson et al., 2016). Recovery was also measured via diverse ways to measure cognitive function,

self-sufficiency, frailty and domicile form after ICU and hospital discharge.

The barthel scale

The Barthel Index (BI) measures performance in ADLs (Mahoney & Barthel, 1965). Variables describing ADLs and mobility are scored, and a high number reflects greater ability to function independently following hospital discharge. The scores are summed in a scale indicating to what degree the person is independent in several aspects of life such as feeding, bathing and showering. Each performance is measured in terms of the time taken to conduct them. In addition, the assistance needed was observed and valued (Mahoney & Barthel, 1965). In some studies (Deschka et al., 2013; Pintado et al., 2016), the ability to perform functional tasks before being admitted to the ICU was asked for, and the Barthel Index was retrospectively measured.

Somme et al. (2010) used the Barthel Index in a randomised controlled study. The authors evaluated a how a specific geriatric support compared to a standard treatment influenced patients over 75 years of age who had been admitted to the ICU. The Barthel Index was used to evaluate changes in functional autonomy.

Lawton index

The patient's functional status after ICU treatment was also measured via the Lawton Instrumental Activities of Daily Living Scale (IADL) (Sacanella et al., 2011), an instrument that assesses independent living skills (Lawton & Brody, 1969). The Lawton IADL scale includes eight domains; these include the skills considered to be more complex than the basic ADL as measured by the Katz Index of ADLs, for example, ability to use the telephone and take responsibility for one's own medications and housekeeping.

Katz index score

Physical functioning was also measured using the modified Katz Index score for ADLs (Govers et al., 2014; Tripathy et al., 2014).

Study setting	Synopsis and key findings relating to well-being and recovery	Summary of critical appraisal (according to Caldwell)
Single centre Medical ICU	A decrease in the physical and psychological aspects of HRQoL 3 months after ICU discharge in the elder patients was shown	Good

The Katz ADL Index is a measure of personal ADLs based on six activities: food intake, bathing, dressing and undressing, toileting, continence and transfer. The Katz ADL Index comprises a 15-item scale in which increased dependency is ranked higher and indicates less independence in daily life. The Katz Index focuses on a person's ability to be independent in relation to ADLs (Törnquist et al., 1990).

Downer et al. (2021) have described the recovery of ADLs among older adults who have survived sepsis and stayed in a skilled nursing facility (SNF) post-ICU in another way. Data from two assessments were used, and a total score for seven ADLs was calculated. These were, for example, dressing, personal hygiene and mobility.

Cognitive function

Cognitive status/impairment was measured in eight studies with different tools. Each tool was intended to target dementia and/or psychiatric health in a different way. Cognitive function was screened with the Mini-Cog (Pollack et al., 2017) and the basal mental state with the Red Cross Psychic Disability scale (Pintado et al., 2016), the Informant Questionnaire on Cognitive Decline short form (Govers et al., 2014), Mini-Mental State examination score (Ferrante et al., 2016), Informant Questionnaire on Cognitive Decline in the Elderly or the Mini-Mental Status Evaluation (Sacanella et al., 2011), and Hospital Anxiety and Depression Scale (HADS) (Ringdal et al., 2021). One qualitative study (Karlsson et al., 2016) described how the patients felt tired, weak and downhearted after returning home. Pain and anxiety were measured using numeric rating scales (NRSs) that ranged from 0 = *no pain or anxiety* to 10 = *worst possible pain or anxiety* (Jeitziner, Hamers, et al., 2015).

Self-sufficiency

The concept of self-sufficiency has been used in several studies, but in slightly different ways. Tabah et al. (2010) assessed self-sufficiency using the Katz Index of ADLs, where each activity was

scored from complete dependence (zero) to complete independence (six). Ferrante et al. (2016) measured functional self-efficacy as confidence in performing various activities, using the Modified Self-Efficacy Scale (Tinetti et al., 1994). The study participants were asked how confident/sure they were in, for example, performing daily activities such as dressing and being mobile. Ten different activities were asked about and scored from one to four, where zero was not at all and four was completely. There was also a monthly assessment of functional status. In the study, the participants were asked about several issues relating to handling their daily lives independently. For example, questions were posted about mobility, handling medications and personal hygiene. If there were a need for personal assistance, this was marked as an incapacity indicating lack of independence. Ferrante et al. (2016) found that factors associated with a decrease in recovery, such as hearing and vision impairment, weight loss, and frailty, affected the likelihood of recovery. Hearing impairment decreased the likelihood of recovery by 62%, and vision impairment by 41%.

In the only qualitative study in the dataset (Karlsson et al., 2016), the physical function was described as a balance between feeling all right and feeling tiredness or exhaustion. The tiredness was described as no strength, bodily weakness and feelings of downheartedness, which limited relations to other people, and the likelihood of mobility. Fatigue was present and difficult to get rid of for some individuals; however, in other cases, individuals could feel strength returning to them, although it could take a long time to do so.

Frailty

Frailty was measured using the Fried Frailty Index, defined as a score of 3 or greater (Ferrante et al., 2016; Pollack et al., 2017). Factors such as frailty, hearing and vision impairment, and weight loss were likely to make the person feel unhealthy and limit recovery. Frailty was the strongest predictor of poor recovery at 1 year (Ferrante et al., 2016). Pollack et al. (2017) reported that

TABLE 3 Themes derived from the articles along with relevant scales and indexes.

References	HRQoL and well-being	Recovery	The Barthel index	Lawton index	Katz index score	Self-sufficiency	Domicile type after ICU	Cognitive function	Frailty
Deschka et al. (2013)	×	×	×						
Downer et al. (2021)					×				
Ferrante et al. (2016)						×		×	×
Govers et al. (2014)		×			×			×	
Hofhuis et al. (2011)	×								
Jeitziner, Hamers, et al. (2015)								×	
Jeitziner, Hamers, et al. (2015)	×								
Karlsson et al. (2016)	×	×				×		×	
Khouli et al. (2011)	×								
Oeyen et al. (2017)	×								
Pintado et al. (2016)		×	×				×	×	
Pollack et al. (2017)								×	×
Ringdal et al. (2021)	×							×	
Sacanella et al. (2011)	×	×	×	×				×	
Schrøder et al. (2011)	×						×		
Somme et al. (2010)		×	×						
Tabah et al. (2010)	×					×			
Tripathy et al. (2014)	×				×				
Villa et al. (2016)	×	×	×				×		
Zeggwagh et al. (2020)	×								

Abbreviation: HRQoL, Health-Related Quality of Life.

frail participants had significantly higher levels of fatigue, drowsiness and anxiety, and poorer overall well-being than non-frail participants.

Domicile type after ICU

Returning to one's own home is also used as a measure of recovery (that requires physical function and capacity in daily life/recovery). Schrøder et al. (2011) found that 89% of elderly ICU survivors had returned to live in their home. Pintado et al. (2016) found a difference in the ability to return home after being treated in the ICU. For those with prolonged admission, 75% had stayed in their own private home before they were admitted to the ICU. After staying in the ICU, only 38% could return home, but after 1 year, 50% were living at home. For those surviving a shorter stay in the ICU, 68% returned home, which increased to 76% after 1 year.

Villa et al. (2016) found that 66% were discharged from hospital to their own home, 24% to a relative's home, 9% to a nursing home and 1% to a chronic care centre. Of those who survived the ICU, 80% lived at home before hospital admission.

5 | DISCUSSION

Time seems to be an important factor regarding HRQoL among older patients being cared for in an ICU. Mortality is high, estimated

at 50% after 12 months in half of the included studies. Among those who survive ICU, HRQoL seemed to be affected up to 1 year, but after 1 year, it appeared that most elderly survivors perceived their HRQoL as acceptable (Deschka et al., 2013; Jeitziner, Zwakhalen, et al., 2015; Oeyen et al., 2017; Tabah et al., 2010; Villa et al., 2016). We found various studies measuring HRQoL, which described both challenges faced by the patients and what could constitute health in the post-ICU phase. But as the results indicate, those studies are hard to compare as they used different tools for measurement and were conducted in different settings and at different times after discharge from the hospital. All studies addressed concerns about ethical dimensions related to the patients' health, age and vulnerability. The concerns were related to the older persons ability to participate in questionnaires and/or interviews. We found no studies about the concept of well-being as 'being able to', integrating biological health with existential vitality (Dahlberg, 2011), which could have expanded our knowledge of what it is to live a life after severe illness.

Several studies have shown that study participants wanted to be readmitted to the ICU if necessary (Oeyen et al., 2017; Pintado et al., 2016; Schrøder et al., 2011). Schrøder et al. (2011) showed that 89% would be willing to receive ICU care again. Pintado et al. (2016) found no differences according to the duration of admission to ICU regarding willingness to receive ICU care again. Patients in both groups (100% of the patients with prolonged

TABLE 4 Studies assessing HRQoL.

Reference	HRQoL assessment instrument and design	Method of HRQoL assessment	Included at start of the study/available for participation (at last follow up)	Follow-up period
Deschka et al. (2013)	SF-12 Group A age <80 (n=86) Group B age ≥80 (n=23) Observational – analytic design	Telephone interview	109/57	1 year after surgery
Hofhuis et al. (2011)	SF-36 Group A age ≥80 (n=129) Group B age <80 (n=620) Observational – analytic design	Personal interview or by telephone	129/49 >80 years 620/352 <80 years (control group)	-Before ICU admission -After ICU and hospital discharge, at three and months following ICU discharge
Jeitziener, Hamers, et al. (2015)	SF-36 ICU group >65 years (n=145) Community-based age-matched comparison group (n=146) Observational – analytic design	Personal interview, by telephone or by mail	145/124 ICU group 146/135 Comparison group	-1 week after ICU stay (retrospective baseline), six and 12 months
Karlsson et al. (2016)	Observational descriptive design Qualitative content analysis Patients >65 years (N=15)	Telephone interview	15	2 months after ICU discharge
Khouli et al. (2011)	CDC-HRQoL Patients >65 years (N=484) Observational – analytic design	Personal interview, by telephone or mail	484/318	At admission 6 months after hospital discharge
Oeyen et al. (2017)	EQ-5D SF-36 Patients ≥80 years (N=131) Observational – analytic design	By mail	1 year follow-up 131/74 7 year follow-up 131/21	-Before admission -3 months, 1 year and 7 years after ICU discharge
Ringsdal et al. (2021)	RAIN-instrument The RAIN instrument was developed to measure and evaluate patients' recovery following intensive care. The instrument has 20 items on a 5-point Likert scale. Patients >65 years (N=340) Observational – analytic design	By letter	340/82	-At least twice at 2, 6, 12 and 24 months after ICU

(Continues)

TABLE 4 (Continued)

Reference	HRQoL assessment instrument and design	Method of HRQoL assessment	Included at start of the study/available for participation (at last follow up)	Follow-up period
Sacanella et al. (2011)	EQ-5D Prospectively studied 112/230 patients ≥65 years surviving at least 12 months after ICU discharge. Observational – analytic design	In person	230/112	-Baseline -ICU and ward stay -at 3, 6 and 12 months after hospital discharge
Schrøder et al. (2011)	Short form SF-36 Patients aged ≥75 years (n = 91) Age matched control (n = 229) Observational – analytic design	By telephone or mail/letter	91/36	-12-month follow-up
Tabah et al. (2010)	WHO-QoL OLD and WHO-QoL BREF Prospective observational study patients ≥80 (N = 106) Observational – analytic design	By telephone	106/23	-At ICU admission -12 months after ICU discharge
Tripathy et al., 2014	Modified perceived QoL score Observational – analytic design			QoL index was abandoned
Villa et al., 2016	SF-36 Spanish version prospective observational study, patients ≥75 (N = 176) Observational – analytic design	By telephone	176/94	-At hospital discharge and 3, 6 and 12 months after discharge (compared with that of the Spanish population of same age)
Zeggwagh et al., 2020	SF 36 Arabic version Prospective study patients ≥65 (N = 118) Observational – analytic design	In person, or by telephone	118/53	-1 month prior to ICU admission -At admission and 3 months after ICU discharge

Note: WHO-QoL BREF, Measured via WHOQOL-BREF (World Health Organization-BREF) and WHOQOL-OLD (World Health Organization-OLD) questionnaires.

Abbreviations: CDC-HRQoL, Centers for Disease Control HRQoL-instrument; EQ-5D, EuroQoL-5D; RAIN-instrument, Recovery After Intensive Care; SF 36, The Medical Outcomes Study 36-item; SF-12, Short form (SF) 12 Questionnaire; SF-36, The Short Form Health Survey 36.

admission, and 76.1% with short stays) explained that they were willing to be cared for in an ICU again if necessary. The willingness to be readmitted to the ICU could indicate that life is worth fighting for and that despite severe illness, life has become bearable again. Turning to more general descriptions of well-being in older age, studies indicate that for healthy persons in older age, the fear of becoming dependent can limit life's possibilities, and it can be a not self-chosen project to live a healthy life in order to maintain health as long as possible (Palmér et al., 2019). Physical restraints can be accepted as long as autonomy and independence are retained (Brown et al., 2020). It might be that death is not the ultimate fear; instead, it is the fear of becoming dependent that is the most frightening (Palmér et al., 2019).

Through this scoping review, we have identified an urgent need for in-depth studies on how life is experienced from the perspective of older persons who have been cared for in an ICU. To be discharged from the hospital to return home is a multifaceted transition, including aspects of practical arrangements, such as adjustments in accommodation and contact with healthcare facilities (Liden, 2021). It is also a transition taking place through the experience of a wounded body in which frailty is often present in everyday life. Healthcare professionals who encounter ICU survivors at an older age may need to be familiar with frailty in old age, which can be perceived as a combination of strengths and weaknesses. Good health and vitality can be enjoyed because they are embedded in frailty and pain (Pickard, 2018). Jeitziner, Hamers, et al. (2015) found that older ICU survivors did experience pain and anxiety directly following ICU discharge, but after 1 year, these long-term consequences were gone, which underlines that the critical illness does not have to result in long-term consequences. An additional aspect of the transition is relational. Studies on older persons who had been cared for in hospitals indicate that relations to loved ones are sometimes significantly changed, placing an increased burden on the next of kin and causing feelings of guilt and shame in the person in need of care (Andreasen et al., 2015). All the above aspects require the attention of healthcare providers. Early specific interventions to improve the autonomy of elderly patients seem to be important (Somme et al., 2010). Silverglow et al. (2021) describe the importance of competence among health care personnel. A competent staff can support feelings of safety and "at-homeness among" frail older persons.

This study reveals critical knowledge for clinical practice, underlining the importance of multidisciplinary teamwork with dedicated leadership that prioritise patient-centred respectful care. Post-ICU clinics play an important role in giving special attention to frail elderly survivors. It may be reasonable to argue that this group needs a special post-ICU follow-up plan in which multidisciplinary teamwork is key. Older ICU survivors can place a special burden on their next of kin, so it is important to advocate for these caregivers in their everyday life situations as well. Future research is needed to understand how to design supportive, person-centred attention for these caregivers.

5.1 | Limitations

A scoping review was appropriate to investigate and map the available research, but this type of study also has the limitation of not being able to present a synthesis with the same depth as a systematic review (Arksey & O'Malley, 2005). The intention was also to gain an overview of literature in relation to the study aim, which indicated that a scoping review would be suitable (Munn et al., 2018). The search for literature was conducted in three databases with support from a librarian, which was a definite strength. All three authors also took part in all stages of the research, which helped substantiate credibility. A quality appraisal was conducted which ensured that the included articles were of good quality. The included articles represent a variety of countries, ICUs and study designs. However, the inconsistency in measurement tools for and diversity in study designs might impact the synthesis of findings. Due to the variation in study design, it is hard to draw conclusions about how life is experienced from the perspective of older persons being cared for in an ICU. This scoping review indicates an urgent need for more in-depth studies, preferably taking a qualitative approach.

6 | CONCLUSIONS

This scoping review illustrates how findings in well-being for older persons being cared for in an ICU include a variety of quantitative data. In addition, the studies applied different tools for measurement, which made it difficult to evaluate and compare the results from the included studies. The diversity in study designs impacts the synthesis of findings and the possibility of gaining a greater understanding of how life is experienced for older persons after being cared for in an ICU. The frailty of the older persons places ethical demands on researchers. In future research older persons perspectives needs to be evaluated through self-reported data and through qualitative in-depth interview studies. More research about the phenomena of well-being and recovery among older ICU survivors would provide an important knowledge contribution as to what way recovery and well-being can be experienced. Based on this review, we recommend further research that applies long-term prospective designs, measurements at certain time points and assessments via the same kind of research questionnaire. We also recommend further studies with a qualitative approach that can shed light on how life is experienced from the perspective of older persons who have survived ICU.

AUTHOR CONTRIBUTIONS

Study design, database searches, data analysis and manuscript writing: Åsa Israelsson-Skogsberg, Thomas Eriksson and Elisabeth Lindberg.

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CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest associated with this work.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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