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Future Working-Life Requirements for Health and Social Care Professionals: A Scoping Review

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ABSTRACT

Ever-changing societal forces impact the work of health and social care professionals. The aim of this study was to consult previous literature to identify future working-life requirements that apply to both health and social care professionals. The knowledge produced by this study could contribute to the strategic planning of degree and continuing education. A scoping review was conducted in which we searched for peer-reviewed scientific papers published in English from January 2017 to October 2023. The 28 papers selected in accordance with the predefined inclusion criteria were examined using thematic analysis. The findings show that health and social care professionals' future working-life requirements still reflect a traditional, client-centred, collaborative work orientation, such as in the use of advanced technology for care provision. It is worth noting that health and social care professionals are expected to integrate sustainability into all care and services. In addition, they are expected to be proactive and resilient so they can succeed in their future working lives. The findings indicate that both degree and continuing education must be constantly adapted to ensure health and social care professionals' success and relevance in their complex and evolving working lives.

1 | Introduction

Societal forces, such as an ageing population, environmental changes and political conflicts, impact the need for health and social care as well as how they are provided, imposing ever-changing requirements on the working lives of care professionals. By 'working-life requirements', we refer to expectations about the qualities and competencies—namely, the knowledge, skills and attitudes [1]—that professionals should possess so that they are well prepared for [2], equal to the challenges of and able to fulfil their purpose in society, their field of work and their specific professional role [3]. Working-life requirements include both the demands specific to a certain group of professionals [4, 5] and the more generic qualities expected from the wider working population [6].

Working-life requirements can be understood from a dual perspective. On the one hand, they are linked to employers' expectation that employees will be productive and maintain a high quality in work processes and results [7]. In general, employers appreciate practical skills as well as problem-solving and communication skills [8]. On the other hand, working-life requirements are connected to each individual professional's employability as determined by their capabilities, preparedness to navigate the labour market and ability to promote their own career [2, 9]. Research indicates that education has not

responded to employers' expectations by, for example, preparing students with sufficient practical skills [10, 11].

The equivalence of working-life requirements for health and social care professionals is notable for several reasons. First, it is important because of two simultaneous changes: an increasing need for care and services in this sector and a dwindling workforce [12]. Employers in health and social care are being forced to develop new types of services and find novel ways to allocate and optimise the scarce workforce [13, 14], while professionals need updated and adapted competencies to handle their new roles and tasks. Second, professionals must have up-to-date evidence-based knowledge because of clients' complex care and service needs [15]. In addition, scientific knowledge and technological innovations in the field are constantly increasing, enabling new types of care and services. Third, responding to clients' care and service needs requires health and social care professionals to fluently work together [16]. Fourth, from the employee's point of view, working life in health and social care is experiencing ongoing changes. New and flexible knowledge is needed because employment contracts are increasingly atypical and there is notable international variation in working positions. In addition, employees have reported that competencies that are increasingly required but incompatible with working life have decreased the attractiveness of the care sector and their commitment to working in this field [17, 18]. Despite these needs, knowledge that comprehensively prepares health and social care professionals for their shared working-life requirements is not being provided. Scholarly scrutiny of this issue and synthesis of the relevant findings are therefore needed to develop education that is relevant to the demands of modern working life.

2 | Aim

The aim of this study was to identify future working-life requirements that apply to both health and social care professionals based on recent scientific literature. The ultimate goal was to provide knowledge to aid the strategic planning of future-oriented degree and continuing education in the health and social care sectors.

3 | Materials and Methods

We used a scoping review method, which enabled us to include diverse articles to provide a rich overview of our multidimensional study topic and to assign a wide scope to the study aim. Based on preliminary searches, we recognised that multiple methods had been used in the previous studies that addressed the study topic. The scoping review method enabled us to include them all [19, 20], including theoretical papers based on previous literature and author expertise, which we considered important for multifaceted results within the study topic. We carried out the review in five stages developed by Arksey and O'Malley [19]: (i) formulating the research question, (ii) searching for the literature, (iii) selecting the studies, (iv) charting and analysing the studies and (v) reporting the results. We formulated the research question based on our preliminary literature search and the lack of an updated synthesis of work on the topic. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist [21] guided us in our reporting.

3.1 | Literature Search and Evaluation of Data

We carried out both electronic and manual literature searches to collect data. The electronic searches were conducted using the CINAHL, PubMed, SocINDEX, Scopus and Web of Science databases. We formulated search terms based on our preliminary searches and a consultation with an academic librarian. The search phrases were free words, terms and synonyms representing the future, working life, requirements and health and social care (Table 1). We limited the searches to peer-reviewed scientific research papers published in English. Given the future-oriented topic, we limited the search to recent work, starting with the 5-year period beginning in January 2017 and later including articles published up to October 2023. We thus gained 2152 results altogether. After removing duplicates ($n = 764$), we read the titles and abstracts ($n = 1388$) and full texts ($n = 86$). Our inclusion criteria required that the papers focus on future-oriented working-life requirements relevant to health and social care professionals in general, not just a certain group of professionals (Figure 1). Two researchers (H.K and M.L) carried out this process independently and collaboratively made the final selections. A third researcher (M.K) was consulted to ensure the relevance of the selections.

3.2 | Data Analysis

We conducted a thematic analysis [22] to systematically examine the data. First, we tabulated the data according to the author(s), year, country, aim(s), study design, methods and main results (Table 2). The first author then looked for initial themes applicable to future working-life requirements for health and social care professionals. From these themes, she extracted and brought together content referring to the same issues, thus forming sub- and main themes [22]. The analysis was discussed and finalised in meetings of the research group.

4 | Results

4.1 | Study Characteristics

Altogether, 28 papers met the eligibility criteria and were included in the review (Table 2). The studies were mostly ($n = 16$) theoretical papers drawing from selected literature. The 12 empirical studies were conducted with qualitative ($n = 8$), quantitative ($n = 2$) and mixed ($n = 2$) methods. In the empirical studies, data had been collected from staff, leaders, educators, experts, developers and researchers in the fields of health and social care. The papers were mostly published in health ($n = 16$) and social ($n = 11$) scientific journals, while one was published in a multidisciplinary journal. The studies came from North America ($n = 15$), Europe ($n = 8$), Asia ($n = 2$), Australia ($n = 2$) and Africa ($n = 1$). They were situated in the contexts of technology and digitalisation ($n = 10$), general working-life skills ($n = 8$), integrated and personalised care and services ($n = 4$), environmental well-being and pandemics ($n = 3$), care and services for older adults ($n = 2$) and end-of-life care ($n = 1$) (Table 2).

4.2 | Future Working-Life Requirements for Health and Social Care Professionals

Based on our results, future working-life requirements applicable to both health and social care professionals include a client-

TABLE 1 | Search words, search fields and results.

Search focus	Search words	Search fields used in different databases				
		CINAHL	PubMed	SocINDEX	Scopus	Web of Science
Future	anticipat* OR forecast* OR foreshadow* OR forethought OR future* OR prospect* OR tomorrow* OR trend* OR '21st century'	Title	Title	Title	Title	Title
Working life	employ* OR industr* OR job* OR labor OR labour OR manpower OR occupation* OR personnel OR professional* OR staff* OR vocation* OR work*	Abs.	Title + Abs.	Abs.	Title	Title
Requirements	appropriate* OR attitud* OR awareness OR *capa* OR completeness OR competen* OR correspon* OR 'educational needs' OR equivalen* OR experti* OR fitness OR 'graduate attributes' OR know* OR performance OR potential* OR prepar* OR proficien* OR qualifi* OR readiness OR requirement* OR savvy OR skill* OR suitab*	Abs.	Title + Abs.	All	Abs.	Topic
Health and social care	'health care' OR healthcare OR 'health sector' OR 'health services' OR 'health system*' OR nurs* OR rehabilitation OR 'social service*' OR 'social care' OR 'social welfare' OR 'social work*'	Title	Title	—	Title	Title
	care* OR health OR nurs* OR rehabilitation OR social OR therap*	—	—	Title	—	—
	Results ($N = 2152$)	339	845	274	332	362

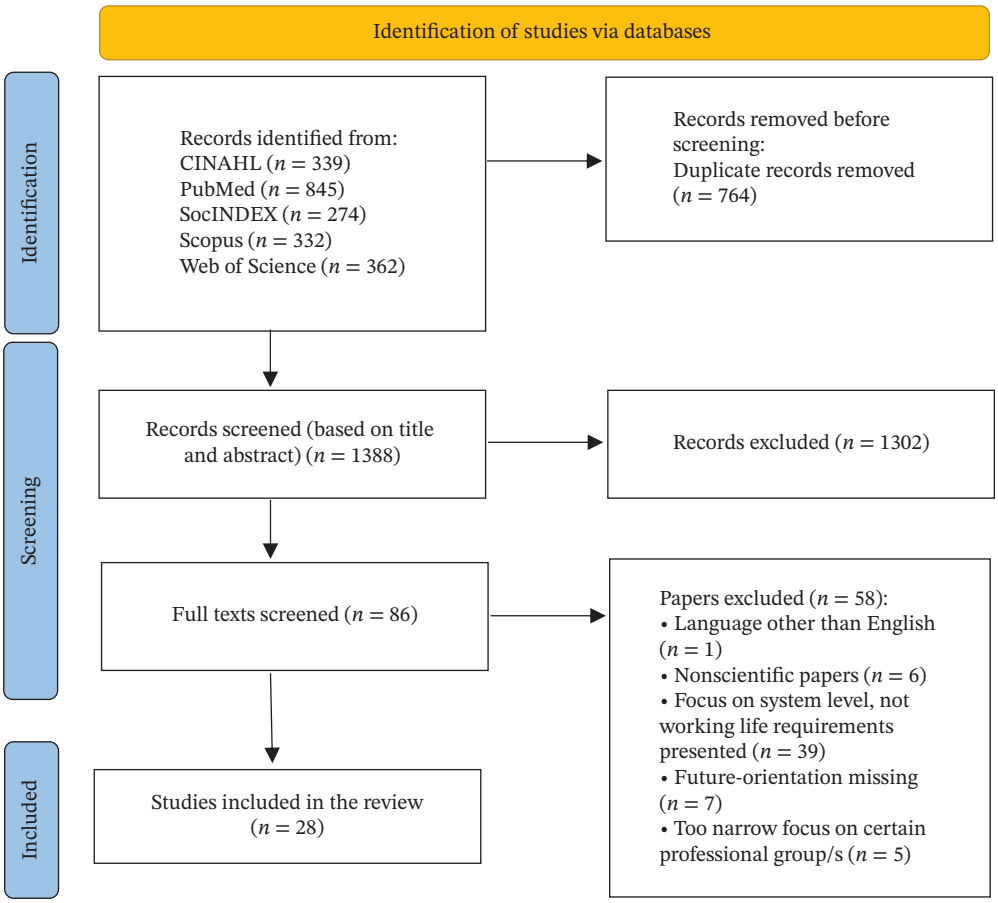

FIGURE 1 | Data search and selection process.

centred collaborative work orientation, the use of advanced technology, the provision of sustainable care and services and proactive and resilient employee attitudes.

4.2.1 | A Client-Centred Orientation—Achieving Goals Through Interprofessional Collaboration

The studies indicated that, in future, there will be a growing need for a client-centred orientation to achieve the best possible care and service. This refers to an individualised [23], empowering approach through which professionals encourage clients to take an active role in care processes and decision-making [24, 25]. Due to diminishing health and social service resources, families will assume a stronger role [24], and professionals will need to counsel them and involve them in care processes [23]. In addition, societal involvement must be increasingly encouraged to improve clients' and their families' collective well-being [26] and, for instance, to ensure access to benefits and services [24]. Professionals' age competencies were highlighted in light of the global demographic changes. In particular, key competencies will include gerontological knowledge and professional attitudes towards older adults [27], expertise in individual care for clients with geriatric and frailty syndromes [28] and awareness of ageism and the need to defend clients from it [24].

Responding to clients' complex problems [29], improving care efficacy [23, 24, 30] and achieving care outcomes [26, 28] require that knowledge be shared by health and social care professionals, highlighting their competence in interprofessional collaboration [26, 31]. Effective collaboration requires an open-minded attitude [31] and familiarity with other professionals' roles and competencies [23, 31, 32]. Professionals need to be willing to consult with other professionals and capable of doing so [23], work in teams [23, 29, 32, 33], communicate in concise language [30–32] and develop a shared understanding and common goals [34] to best serve clients. It is also crucial that professionals have good knowledge of the service systems [30] and the policies under which they operate [26] within their networks [35].

4.2.2 | Use of Advanced Technology—A Default Competence Area

In future, health and social services will be increasingly digitalised through the use of advanced technology. Services will continue to be automated and robotised [36], and the use of artificial intelligence [37, 38] will expand [39]. Therefore, competence in using advanced technology will be a central requirement of working life in future health and social care. Professionals need to have constructive attitudes towards technology [40]. Their openness, flexibility and motivation to adopt new innovations [38] will play a key role in successful digitalisation [36, 40]. However, professionals also need to maintain a critical approach to using and applying technology [41]. They need to understand its usability and evaluate its effectiveness and benefits [23] for individuals, professionals and society [38]. They must also demonstrate competence in evaluating the trustworthiness of the information produced by artificial intelligence [37] and not allow technology to take precedence over their own

TABLE 2 | Descriptions of the papers selected for the review ($n = 28$).

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Abbott and Esposto, 2021, Australia	To identify current and future healthcare and social assistance workforce needs in Gippsland.	Qualitative register study.	Data on employment taken from the O*NET database. Descriptive analysis.	The skill and knowledge intensity of this work will grow in future. Increasingly important skills include monitoring, troubleshooting, quality control analysis, management of financial resources and learning strategies. Growth in social skills, communication skills, IT skills, teamwork, critical thinking, problem solving and decision-making is important. Professionals will need to undertake lifelong learning. The role played by tertiary education providers will be critical to keeping up with the changes in skill and knowledge requirements.
Alqahtani et al., 2022, Saudi Arabia	To explore how prepared medical and nursing students are to care for geriatric patients in future.	Cross-sectional quantitative.	A survey of medical and nursing students ($n = 494$).	Compared to previous studies, students' knowledge of geriatrics was fair to moderate. Education in this field needs to be enhanced.
Ashton Glover et al., 2022, USA	To collect insights and advice from practicing emergency department nurses that can assist nurse educators in identifying challenges to overcome as they help prepare new graduate nurses for success and mental health safety.	Qualitative study.	A survey (two open questions) of emergency department nurses ($n = 66$).	New nurses were motivated to learn new things but lacked clinical, interpersonal, critical thinking and time management skills. They soon burned out, and the importance of resilience and self-care skills was emphasised.
Atasoy et al., 2023, Turkey	To examine the relationship between the individual innovativeness and 21st-century skills of nursing and midwifery students.	Cross-sectional quantitative.	A survey of nursing and midwifery bachelor students ($n = 748$).	The relationship was positive and so were students' attitudes towards innovation. Students' 21st-century skills were sufficient.
Azulai et al., 2022, Canada	To report findings from the Gerontology Symposium in Alberta, Canada (2018), regarding the current and future needs of gerontological social work in Alberta.	Qualitative study.	World Café method. Social work practitioners, researchers and educators ($n = 49$). Content analysis.	Strategies needed to help social workers better serve the older adult population include (1) possessing the personal traits of a social worker, (2) embodying a social worker's professional skills, knowledge and experience, (3) catering to the bio-psycho-social needs of older adults, (4) improving access to benefits and services, (5) improving access to benefits and services for older adults, (6) enhancing community connections, (7) improving gerontological social work education and programming to prepare qualified professionals, (8) developing integrated geriatric healthcare, (9) adjusting policy to adequately serve the growing population of older adults, (10) addressing ageism in society and (11) advocating for boosting the voices of older adults in society.

(Continues)

TABLE 2 | (Continued)

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Barasteh et al., 2021, Iran	To explore the future challenges of nursing in the Iranian health system from the perspectives of experts.	Qualitative study.	Semistructured interviews with nursing experts ($n = 11$). Framework analysis.	Nursing faces three serious challenges in future: (1) the need for coherent governance, with bargaining power shared with other institutions of the health system, (2) the need for professional development to meet social demands and (3) the challenges of human resource management.
Bibbs et al., 2023, USA	To explore whether a tool such as the Ethical Operating system can help enhance imagination, understanding and fluency regarding some of the ethical issues that are likely to appear in the social work practice landscape, and/or whether social workers themselves seek to develop or amplify the use of such technology in a specific way.	Theoretical (conceptual) paper.		The Ethical Operating System guides social workers in their practice and governs the ethical use of technology in the following domains: • Truth, disinformation and propaganda • Addiction and the dopamine economy • Economic and asset inequalities • Machine ethics and algorithmic biases • The surveillance state • Data control and monetisation • Implicit trust and user understanding • Hateful and criminal actors Several mental habits can help employees handle tech-related ethical problems: • Think about the purpose of the technology and its potential ripple effects • Listen deeply to multiple sources • Consider multiple effects and outcomes • Ask whether the technology promotes or inhibits liberation, harm and unnecessary risk • Respond as a student of technology • Be temporally flexible

(Continues)

TABLE 2 | (Continued)

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Dennelly et al., 2021, USA	To reflect upon what social workers had learnt a year into the global pandemic and whether they can apply this knowledge to shape the future of social work in primary care.	Theoretical paper.		The 'new normal' social worker must be an integrated, multidisciplinary and dynamic player in the post-pandemic healthcare landscape, particularly within primary care. Future social workers must possess knowledge of the reciprocal relationships between physical and mental health and the systems and policies that affect both.
Frost, 2017, UK	To argue that the future of social work can be understood as part of a fundamental shift towards co-located, multidisciplinary practice and networking.	Mixed-methods study.	Social theory, social history, policy analysis and qualitative data from semistructured interviews with social workers ($n = 6$) on co-located multidisciplinary teams.	The future of social work is both networked and multidisciplinary—the age of the specialist with a siloed profession is largely giving way to the dominance of multidisciplinary, and often co-located, social work. This is a global development. Networking has become central to a great degree. Professional training in social work should place more emphasis on multidisciplinary work.
Harris, 2019, USA	To discuss the content of a webinar on reported trends in ageing while integrating perspectives on the future of ageing services.	Theoretical paper.		The changing environment requires a different perspective that includes collaborating across disciplines to enable simultaneous and coordinated interventions. Interprofessional syndrome care is needed to avoid negative interactions, such as polypharmacy, between treatment plans for different conditions.

(Continues)

TABLE 2 | (Continued)

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Kaas, 2020, USA	To review the challenges and issues facing educators as they prepare the psychiatric–mental health nursing workforce to meet the needs of future practice.	Theoretical paper.		Psychiatric–mental health nursing requires the following knowledge and clinical skills: (1) interprofessional education and collaborative practice, (2) integrated care: coordinated delivery of general healthcare and mental healthcare, (3) an integrative care approach for holistic, evidence-based interventions, (4) self-care for students to prevent burnout, (5) use of technology, (6) genetics: a basic understanding of the appropriate use of genetic counselling for patients and families with psychiatric disorders, (7) social determinants of health/mental health; competency in serving a wide variety of populations and (8) global learning: engagement with global health issues.
Kauff et al., 2023, South Africa	The paper focuses on the preconditions for and education in interprofessional collaboration in healthcare.	Theoretical paper.		The preconditions were interprofessional competencies, a common language, overcoming stereotypes, building a social identity and believing in diversity. Interprofessional learning is facilitated by problem-based group work.
Kleib et al., 2022, Canada	To explore nursing students' self-perceived nursing informatic competence and preparedness in digital health, describe the available learning opportunities and identify perceived learning barriers to, and facilitators of, informatic competency development.	Mixed-methods study.	A survey of and interviews with senior undergraduate students ($n = 221$).	Students had a fragmented understanding of digital health and nursing informatics. They had little learning or hands-on experience in this regard. Students reported feeling overwhelmed with technological changes in the healthcare environment.
Laukka et al., 2022, Finland	To describe nurse leaders' and digital service developers' perceptions of the future role of artificial intelligence (AI) in specialised medical care.	Qualitative study.	Focus groups and interviews with nurse leaders ($n = 20$) and digital service developers ($n = 10$). Content analysis.	The future role of AI in specialised medical care: AI is transforming (1) work, (2) care and services and (3) organisations. AI will have a significant future role in specialised medical care, but it will likely reinforce, rather than replace, clinicians or traditional care. AI may have several positive consequences for clinicians' and leaders' work, as well as for organisations and patients. Leaders should be familiar with the potential of AI but also aware of risks.

(Continues)

TABLE 2 | (Continued)

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Lehman Held et al., 2019, US	To explore the social work skills and competencies required of social workers on integrated healthcare teams.	Qualitative study.	Semistructured individual interviews with social workers ($n = 10$). Content and thematic analysis.	Social work training remains a good fit for integrated healthcare practice, but additional content is needed to prepare the future integrated social work–healthcare workforce. Key areas of knowledge that are needed in the medical–social work curriculum include (1) an improved understanding of the social worker's role on integrated healthcare teams, (2) advocacy for team-based work, (3) medical knowledge, (4) use of brief interventions in integrated health settings and (5) an understanding of variations in professional codes of ethics.
Mishna et al., 2021, Canada	To highlight that social work education must prepare students for practice using information and communication technology (ICT) during COVID-19 and beyond.	Theoretical paper: teaching note.		Certain knowledge areas are important for future social work related to ICT use: (1) integrating theoretical foundations, (2) ethical considerations, (3) confidentially and documentation, (4) access and equity, (5) risk assessment and management and (6) supervision and policy. ICT use can provide flexible options to augment face-to-face sessions when appropriate and can offer consistency and continuity of social work services when physical proximity is not possible.
Mois and Fortuna, 2020, USA	To present the state of the science on digital gerontological social work education, identify implications for emerging technologies and define areas in which social work student competencies and proficiencies can advance the field of gerontological digital social work.	Theoretical paper.		Gerontological social work educators, researchers and field placement sites need to work together to create both classroom and field experiences that help enhance competency and understanding of technological resources (e.g., sensors, wearables, robots, tele-presence and PeerTECH). Gerontological digital social education should emphasise the role of social work in team science, implementation science and community-engaged research. The dissemination of knowledge should be extended to gerontological social workers through continued education.

(Continues)

TABLE 2 | (Continued)

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Petružytė et al., 2022, Lithuania	To present the perceptions of social work educators from Lithuania and Japan regarding the role of technology in the development of the profession.	Qualitative study.	The expert opinion method. Interviews with social work teachers and researchers ($n = 18$). Content analysis.	Technologies are autonomous actors. Therefore, the dehumanising effect of technologies on the social work profession becomes more acute than their potential to strengthen the relational (humanistic) nature of the profession. Some technologies that can be used in the social work field include (1) modern communication and information technologies, (2) robotics, (3) artificial intelligence, (4) the Internet of Things and (5) virtual reality or avatars.
Raffoul et al., 2019, USA	To consider how health profession education programmes can recruit and educate talented health professionals to create a high-performing workforce that is capable of serving in the healthcare system of tomorrow.	Theoretical paper.		Health profession education programmes must make changes to their admissions criteria (e.g., focussing on emotional intelligence and diversity, recruiting students from the communities where they will return to work and recruiting students who can bridge the gap between public health and healthcare). Health profession education research should be a focus of investment.
Ricciardi and Boccia, 2017, Italy	To highlight the challenges, benefits and consequences that might accompany the implementation of personalised healthcare.	Theoretical paper.		Prerequisites for radical change in future healthcare: (1) achieving better genetic literacy among professionals and the public, (2) engaging citizens in the discourse, (3) improving governance, consent and trust in healthcare, (4) feeding and harnessing the data–knowledge cycle for better health, (5) adopting and adapting the Health Technology Assessment framework for the evaluation of the new technologies and (6) retaining humanity and community in health and care. Issues of sustainability and inequality will arise in all health systems.
Risling, 2017, Canada	To identify key technological trends that are likely to influence nursing practice and education over the next decade.	Theoretical paper.		Key areas for nurse curriculum development: (1) the role of electronic health records, (2) wearable technologies, (3) big data and data analytics and (4) increased patient engagement. Nurses will continue to move into practice with strong critical thinking and self-reflection abilities. Nurses will require the skills needed to balance human needs with technological advancements.

(Continues)

TABLE 2 | (Continued)

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Share and Pender, 2018, Ireland	To address pertinent issues in the fields of social robotics, social care and the social professions.	Theoretical paper.		There is a trend towards the increasing application of information technologies in the social care field, in line with the growing economic and social importance of robotics more generally. Assistive living technologies are becoming more widely adopted, along with related processes, such as decision-support systems and artificial intelligence. There are challenges, for example, in terms of ethics, human–robot relationships, user experiences, social impacts and issues of autonomy and control, and in developing concerns about the professional identity of social work professionals.
Smith-Carrier and MacArthus, 2023, Canada	To explore the extent to which Canadian social work schools are preparing social workers to advance socio-ecological justice.	Theoretical paper.		Social workers should be helped to understand the connection between humans and the environment and advocate for environmental justice as an integral part of their work. Problem- and place-based learning could be beneficial for this purpose.
Suikkala et al., 2021, Finland	To describe the views of physicians and registered nurses regarding future competence needs within palliative care.	Qualitative study.	Open-ended questionnaire with physicians ($n = 54$) and nurses ($n = 110$). Content analysis.	The main competence needs within palliative care over the coming decade include (1) palliative care competence at all levels within healthcare and social welfare services, (2) individualised palliative care competence, (3) person-centred encounter competence and (4) systematic competence development within palliative care.
Sundean et al., 2019, USA	To describe a strategy for incorporating governance competencies into nursing curricula across all education levels by leveraging the American Hospital Association Governance Core Competencies and the Massachusetts Nurse of the Future Core Competencies.	Theoretical paper.		It is critical for all nurses to be prepared, as part of their professional identify, to contribute to health and healthcare improvements by identifying governance leadership and leveraging that understanding to influence governance discussions and decisions as voting board members.

(Continues)

TABLE 2 | (Continued)

Authors, year, country	Aim of the study	Study design	Methods, participants	Main results
Thomas et al., 2017, Australia	To describe how the future healthcare workforce should be prepared in Australia.	Theoretical paper.		Doctors face a rapidly changing medical landscape, which relies more and more upon interprofessional collaboration to optimise patient outcomes and upon nonclinical skills to provide care efficiently and cost effectively. Interprofessional clinical and nonclinical training and incorporation of a philosophy and style that accommodate innovation, communication and change are needed. The training of clinicians should be consistent in its philosophy of encouraging flexibility or adaptability, together with a capacity to reflect, evaluate and innovate. Training should incorporate interprofessional collaboration and should not centre on hospital inpatient care. A variety of authentic clinical environments should be utilised to reflect current and emerging clinical care processes and diverse patient populations.
Vandenberg, 2023, Canada	To advocate for curricular modifications using the Planetary Health Education Framework to improve awareness and understanding of climate health among future nurses.	Theoretical paper.		Nursing students should be guided to understand the promotion of planetary health as part of their field. Environmentally sustainable practice and fostering environmental justice should be seen as part of nurses' professional responsibilities and ethics. The Planetary Health Education Framework is helpful for guiding nurses in such practices and developing nursing education on the topic.
Zemaitaityte et al., 2023, Lithuania	To discuss the necessary developments of future social workers' digital competence in uncertain times during the implementation of the European Joint Master programme in Social Work with Children and Youth.	Theoretical paper.		Students' experiences with the digitalisation of studies were positive with respect to teachers' efforts and the Moodle platform as a learning environment. However, as the learning was online, the students lacked live contact with people. Moreover, technical problems make learning challenging. In addition to digital skills, studies have developed students' communication and information skills.

judgement [38]. In sum, professionals should stay aware of technological changes [42].

In future, professionals will require competencies in the ethical use of technology [42]. They must be familiar with health information legislation and privacy protection regulations [39] as well as workplace policies on technology use [43]. Maintaining confidentiality [44] and ensuring clients' awareness of the data collected on them [42] are becoming increasingly central. Professionals need to balance the use of technology with human interaction and presence [39] and recognise possible harms that its uses—such as social robotics—may cause within vulnerable groups [36]. They should advocate for clients to have equal opportunities to access digital services [39, 42] and ensure that clients' best interests remain the focus as technology develops [38]. Professionals working closely with practices and clients will also play a central role in recognising biases stemming from technological designs, which may cause ethical dilemmas in service provision [41, 42].

A crucial working-life requirement for health and social care professionals is to guide and educate clients in the use of technology [38, 39]. The polarisation of clients' technological competencies and digital literacy will increase [36], partially because of demographic changes [41]. Due to increasing disinformation, propaganda and hate speech [42], health and social care professionals play a key role in steering clients towards reliable information sources and social media networks [39].

4.2.3 | Sustainable Care and Services—Optimal Use of Resources and Effectiveness

The need to optimise the use of limited resources requires that future health and social care professionals provide care and services in a sustainable and effective manner. A high quality of care is imperative to ensure this [23, 28]. Therefore, professionals' quality and economic competencies [45] and their participation in quality and developmental work are increasingly needed [34]. This participation requires growth in certain leadership qualities as part of professional identity [34], the ability to work successfully on committees [30] and skills in searching and exploiting [23, 25, 29] relevant information and applying this new knowledge in practice [46]. These professionals interact within a financially precarious environment, and in future, economic considerations will be a growing part of every employee's everyday working life. Individual employees have to evaluate their own work from a financial perspective, so the management of scarce resources [45], economic sense [23] and entrepreneurial thinking [47] are increasingly important. However, researchers have found that professionals are not being sufficiently prepared to assess [34] and interpret organisational finances [30].

The sustainability of care and services includes the global dimension of environmentally responsible professional practices. Health and social care is one of the sectors causing environmental harm, and professionals' environmental competence is a future working-life requirement—one known to be currently deficient [46, 48]. Professionals should understand the interdependent connection between humans and the environment [46, 48] and grasp how environmental sustainability is an essential component of disease prevention [46], social justice and professional ethics [46, 48]. Professional practices need to be designed to avoid overconsumption of natural resources, unnecessary pollution generation and consequent environmental damage. Professionals also play a key role in acting as role models in sustainability and advocating policy changes to promote an environmentally sustainable society and clients' understanding of this sustainability [46, 48].

4.2.4 | A New Era of Employment Qualities—Proactivity and Resiliency

The papers highlighted that, in terms of requisite employment qualities, a new era is dawning in health and social care. What the sector requires of the new generation is an innovative, proactive and protean workforce instead of one that is externally regulated and inert [30]. In future, professionals' innovation skills and openness to new ideas and experimentations will be crucial. There is a need for professionals who are ready to question existing procedures and thus develop high-quality and effective services in future [47]. Creative problem-solving abilities are increasingly needed [23, 45, 47]. Due to these constant changes, professionals are expected to be responsive and capable of taking on new roles [30]. Their desire for continuous competence development and constant learning [23, 29, 45] is imperative, as are being aware of their own abilities, understanding which competences they should develop and having confidence in their professional identities [24]. High resiliency is vital to maintain their own well-being at work and to cope with demanding tasks and constant changes. Thus, each worker needs to possess professional self-care skills, an ability to reduce stress and suitable means of cherishing their own strength [29, 49] and recovery [30, 49].

5 | Discussion

The ability of the professional population to successfully meet the requirements of working life is the cornerstone of safe, effective and high-quality health and social care. Based on the recent literature, future working-life requirements for health and social care professionals centre on competence in advanced technology, the provision of sustainable care and services, novel employment and work-management skills and a traditional, client-centred and collaborative work orientation. When successfully embodied among health and social care professionals, these elements are likely to encourage a deconstruction of harmful hierarchies [50], a meaningful working life and a purposeful use of the workforce, professional competences and financial and environmental resources. However, both degree and continuing education must keep up with developments in the field to meet the requirements of working life.

Based on our findings, client-centredness and humanity are the central points of focus in future working-life requirements for health and social care professionals. The result is unsurprising but encouraging, as the primary aim of health and social care is to respond to clients' well-being needs with dignity [51]. Despite increasingly advanced technologisation and the expectation for effective mass production in health and social services, the core requirements have not seemed to shift away from people. However, future professionals must learn to meet and collaborate with future clients who are increasingly aware of their rights and have the ability to contribute their own care as stakeholders equal to professionals [52].

In addition, technologisation through automated, robotised and artificially intelligent solutions requires that professionals quickly learn to adopt new and changing technologies and systems but avoid letting machines and algorithms overshadow patient dignity and human encounters [53]. From an educational perspective, professionals would benefit from co-creative learning with clients [54] but also with those from other disciplines, such as technology and engineering. Thus, technologisation could increase the emphasis on securing ethical and humane care—which can be achieved through interprofessional education.

Therefore, interprofessional co-productive partnerships, integration of work approaches across different sectors and exploitation of others' competencies have been identified as necessary for overcoming service fragmentation and coordinating care around people's needs [55]. Interprofessional collaboration requires a common understanding and competences to be shared among professionals from different fields as well as their managers [56]. Accordingly, higher education institutions have started to integrate joint courses into curricula and emphasise the need to implement practices that promote collaboration between disciplines and professions [15]. In developing such education [57], cooperative work among different faculties and fields plays a key role [58], but several challenges tend to hinder the advancement of interdisciplinary education, such as specific regulations and degree requirements, resource pressures and differing cultures [15]. Thus, relevant courses have been shown to vary in frequency, duration and activities [59], resulting in current students being unequally prepared for integrative work [60].

Based on our findings, expectations regarding the roles of employees in health and social care are in transition. Health and social care have traditionally been professions based on calling, where women, especially, have been expected to be obedient and compliant [61]. Our results indicate the need for the expansion of health and social care professionals' employment qualities towards greater independence and a more proactive role. The findings strengthen our understanding of the requirement for resiliency, such as being increasingly tolerant of constant change, surprising societal situations and hectic work environments in the sector. The growing scarcity of monetary and staff resources [62] in relation to the demands of services calls for professionals to critically re-evaluate their practices and creative mindsets. Employees should not only offer services according to their employers' demands but also develop innovative methods for implementing effective and high-quality services [63]. As one such area, the results highlighted consumption habits in the care sector and the environmental harm they cause. Although this sector's global environmental footprint is significant [59], efforts to decrease it have been slow, and environmental demands are considered external and distant [60]. Overall, the topic of sustainable care and services is largely missing from health and social care education, and professionals' understanding of it has been shown to be narrow [61, 64]. The development of such education requires interdisciplinary work and the sharing of competencies. In fact, this would provide a suitable topic for interprofessional learning and courses in higher education.

In education, the independent and proactive role that professionals are expected to assume could be promoted by pedagogical methods based on active learning and future-oriented reflection [65]. In addition, career planning in the education phase [62] would help professionals develop these skills in their future working lives. An update to education for both professionals and leaders is needed not only to increase knowledge but also to alter the prevailing mindset in the care sector, which tends to respect traditions and autocracies, as these habits may prevent leaders from recognising employees as important contributors to the developmental work. Correlatively, professionals have often been used to taking operational models and solutions as externally given [61], preventing them from adopting a critical perspective. The shift towards such a role is dependent on cultural reform and renewal throughout the industry, requiring governmental, administrative and educational engagement to shift to a genuinely appreciative, inclusive and sharing standard for liaison.

The needs relevant to working life also concern continuing education in terms of both form and content. In general, employees are motivated to develop their competencies, but the need to harmonise work, studies and private life tends to create insuperable barriers for many [63]. To coordinate working life with education and develop flexible opportunities, a stronger integration of degree with continuing education and collaboration between higher education and working-life organisations are needed; educational development has been shown to benefit from the involvement of working-life organisations [58]. Educational relevance ultimately improves working-life conditions, and hospitals, for example, have collaborated on the development of educational programmes. The significance of trade unions in this collaboration has also been recognised [6]. Finally, large-scale work requires ministries to provide guidance and support to promote this trajectory of educational collaboration.

5.1 | Limitations

The strength of this study is that it scrutinised health and social care together based on diverse literature, but this also imposes possible limitations. In the literature search, this broad focus was challenging. Despite a careful selection of the search terms, we received numerous matches and had to limit several searches to the title level. Thus, it is possible that some relevant papers may have remained undiscovered. Additionally, studies that emphasise futural aspects often do so without mentioning the word future or closely related concepts. Therefore, our study may only present a narrow portion of the futural aspects of work requirements in health and social care. It is also notable that the papers selected did not include client participation or perspectives. Differences between health and social services or between education systems in different countries were not examined within the scope of this study. A significant portion of the data was theoretical in nature. The strength of this is that it is able to describe the phenomenon. At the same time, the paucity of empirical evidence is an obvious weakness of our study. Regarding the quality of our data, it should also be noted that there are no quality criteria that guide the writing of theoretical articles. We have ensured the transparency of our results through careful referencing.

6 | Conclusions

The success of health and social care in fulfilling its societally assigned role depends on a workforce that is protean and well

prepared for the demands of working life. Societal forces impact the requirements imposed on health and social care services, as well as the associated demands on professionals' working lives; these changes need to be anticipated in workforce management and education. According to recent research, a traditional client-centred value foundation is needed to support a collaborative work orientation, and up-to-date technological skills are crucial for improving the effectiveness of work by promoting critical thinking and human dignity. Due to constant exposure to changes, scarce resources and sustainability demands, professionals should also be tolerant, critical and proactive. They must see their own work in the context of large-scale, even global, phenomena and through the lens of sustainable care and services. Further research is needed on the education that is needed to prepare health and social care professionals for their future working-life requirements, including the integration of requirements for interprofessional collaboration and sustainability into curricula.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data consisted of scientific articles mentioned in the manuscript, all of which are available in electronic databases.

References

1. M. Cheng, O. Adekola, J. Albia, and S. Cai, "Employability in Higher Education: A Review of Key Stakeholders' Perspectives," *Higher Education Evaluation and Development* 16, no. 1 (2022): 16–31, https://doi.org/10.1108/heed-03-2021-0025.

2. P. C. Bing-Jonsson, C. Foss, and I. Torunn Bjørk, "The Competence Gap in Community Care: Imbalance Between Expected and Actual Nursing Staff Competence," *Nordic Journal of Nursing Research* 36, no. 1 (2015): 27–37, https://doi.org/10.1177/0107408315601814.

3. S. Billett, "Mediating Worklife Learning and the Digitalisation of Work," *British Journal of Educational Technology* 52, no. 4 (2021): 1580–1593, https://doi.org/10.1111/bjet.13115.

4. T. C. Koehler, H. Bok, M. Westerman, and D. Jaarsma, "Developing a Competency Framework for Pharmacy Technicians: Perspectives from the Field," *Research in Social and Administrative Pharmacy* 15, no. 5 (2019): 514–520, https://doi.org/10.1016/j.sapharm.2018.06.017.

5. S. Väisänen and L. Hirsto, "How Can Flipped Classroom Approach Support the Development of University Students' Working Life Skills?—University Teachers' Viewpoint," *Education in Science* 10, no. 12 (2020): 366, https://doi.org/10.3390/educsci10120366.

6. M. Jaana, M. Majdalani, H. Tamim, and R. Rahbany, "Perceived Healthcare Workforce Needs in Lebanon: a Step Towards Informed Human Resources Planning and Professional Development," *Eastern Mediterranean Health Journal* 24, no. 09 (2018): 855–865, https://doi.org/10.26719/2018.24.9.855.

7. I. Katić, N. Berber, A. Slavić, and A. Ivanišević, "The Relations Between Investment in Employees' Development and Organizational Productivity and Service Quality," *Teh Vjesn-Tech Gaz* 27, no. 4 (2020): 1077–1083.

8. H. M. Oraison, L. Konjarski, and S. T. Howe, "Does University Prepare Students for Employment? Alignment Between Graduate Attributes, Accreditation Requirements and Industry Employability Criteria," *Journal of Teaching and Learning for Graduate Employability* 10, no. 1 (2019): 173–194, https://doi.org/10.21153/jtlge2019vol10no1art790.

9. F. Suleman, "The Employability Skills of Higher Education Graduates: Insights Into Conceptual Frameworks and Methodological Options," *Higher Education* 76, no. 2 (2018): 263–278, https://doi.org/10.1007/s10734-017-0207-0.

10. T. Almahbashi, S. M. Aljunid, and A. Ismail, "Health Labour Market Requirements of Health Professional Education in Yemen," *Eastern Mediterranean Health Journal* 23, no. 6 (2017).

11. P. Kukkonen, H. Leino-Kilpi, S. Koskinen, L. Salminen, and C. Strandell-Laine, "Nurse Managers' Perceptions of the Competence of Newly Graduated Nurses: A Scoping Review," *Journal of Nursing Management* 28, no. 1 (2020): 4–16, https://doi.org/10.1111/jonm.12891.

12. World Health Organization, *Health in 2015: From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals* (World Health Organization, 2015).

13. Y. Angel and G. Fire, "Healthcare Policy Changes in an Era of Health Workforce Shortage," *Israel Journal of Health Policy Research* 12, no. 1 (2023): 28, https://doi.org/10.1186/s13584-023-00576-7.

14. National Health Services, *WE ARE THE NHS: People Plan 2020/21-Action for us all* (National Health Services, 2020), https://www.england.nhs.uk/wp-content/uploads/2020/07/We-Are-The-NHS-Action-For-All-Of-Us-FINAL-March-21.pdf.

15. A. Makkonen, H. Turunen, and A. Haaranen, "Social and Healthcare Students' Competence in patient-oriented Care Enhanced During Interprofessional Practice: A Scoping Review," *Nurse Education in Practice* 72 (2023): 103750, https://doi.org/10.1016/j.nepr.2023.103750.

16. World Health Organization, "WHO Global Strategy on People-Centred and Integrated Health Services," *Interim Report [Internet]* (World Health Organization, 2015), https://apps.who.int/iris/bitstream/handle/10665/155002/WHO_HIS_SDS_2015.6_eng.pdf?sequence=1%26isAllowed=y.

17. M. Flinkman, K. Coco, A. Rudman, and H. Leino-Kilpi, "Registered Nurses' Psychological Capital: A Scoping Review," *International Journal of Nursing Practice* 29, no. 5 (2023): e13183, https://doi.org/10.1111/ijn.13183.

18. J. H. A. M. Kox, J. H. Groenewoud, E. J. M. Bakker, et al., "Reasons Why Dutch Novice Nurses Leave Nursing: A Qualitative Approach," *Nurse Education in Practice* 47 (2020): 102848, https://doi.org/10.1016/j.nepr.2020.102848.

19. H. Arksey and L. O'Malley, "Scoping Studies: Towards a Methodological Framework," *International Journal of Social Research Methodology* 8, no. 1 (2005): 19–32, https://doi.org/10.1080/1364557032000119616.

20. K. K. Westphaln, W. Regoeczi, M. Masotya, et al., "From Arksey and O'Malley and Beyond: Customizations to Enhance a Team-Based, Mixed Approach to Scoping Review Methodology," *MethodsX* 8 (2021): 101375, https://doi.org/10.1016/j.mex.2021.101375.

21. A. C. Tricco, E. Lillie, W. Zarin, et al., "PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation," *Annals of Internal Medicine* 169, no. 7 (2018): 467–473, https://doi.org/10.7326/m18-0850.

22. V. Braun and V. Clarke, "Using Thematic Analysis in Psychology," *Qualitative Research in Psychology* 3, no. 2 (2006): 77–101, https://doi.org/10.1191/1478088706qp063oa.

23. A. Azulai, H. Tong, K. Quinn, and K. Mykietka, "Current and Future Needs of Gerontological Social Work Practice in Alberta: Findings from the World Café at the Gerontological Symposium in Edmonton, Canada," *Journal of Gerontological Social Work* 65, no. 8 (2022): 832–865, https://doi.org/10.1080/01634372.2022.2047860.

24. W. Ricciardi and S. Boccia, "New Challenges of Public Health: Bringing the Future of Personalised Healthcare into Focus," *The European Journal of Public Health* 27, no. suppl_4 (2017): 36–39, https://doi.org/10.1093/eurpub/ckx164.

25. A. Suikkala, A. Tohmola, E. K. Rahko, and M. Hökkä, "Future Palliative Competence Needs–A Qualitative Study of Physicians' and Registered Nurses' Views," *BMC Medical Education* 21, no. 1 (2021): 585, https://doi.org/10.1186/s12909-021-02949-5.

26. L. Dennelly, C. Sousa, and K. Roberts, "Shaping the Future of Social Work Practice in Healthcare: Addressing COVID-19 Needs Through Integrated Primary Care," *Social Work* 67, no. 1 (2021): 41–47, https://doi.org/10.1093/sw/swab046.

27. R. Alqahtani, S. Almuhaidib, and H. Jradi, "A Cross-Sectional Study: Exploring Knowledge and Attitude of Medical and Nursing Students to Care for Elders in the Future," *BMC Geriatrics* 22, no. 1 (2022): 856, https://doi.org/10.1186/s12877-022-03551-0.

28. J. Harris, "Geriatric Trends Facing Nursing With the Growing Aging," *Critical Care Nursing Clinics of North America* 31, no. 2 (2019): 211–224, https://doi.org/10.1016/j.cnc.2019.02.007.

29. M. Kauff, T. Bührmann, F. Gölz, et al., "Teaching Interprofessional Collaboration Among Future Healthcare Professionals," *Frontiers in Psychology* 14 (2023): 1185730.

30. M. J. Kaas, "Will We Be Ready? Preparing Psychiatric-Mental Health Nurses for Future Practice," *Journal of the American Psychiatric Nurses Association* 26, no. 1 (2020): 112–119, https://doi.org/10.1177/1078390319878767.

31. J. S. Thomas, T. R. Gilbert, and C. H. Thompson, "Preparing the Future Workforce for Healthcare in Australia," *Future Hospital J* 4, no. 1 (2017): 67–71, https://doi.org/10.7861/futurehosp.4-1-67.

32. M. L. Held, D. R. Black, K. M. Chaffin, K. C. Mallory, A. Milam Diehl, and S. Cummings, "Training the Future Workforce: Social Workers in Integrated Health Care Settings," *Journal of Social Work Education* 55, no. 1 (2019): 50–63, https://doi.org/10.1080/10437797.2018.1526728.

33. M. Raffoul, G. Bartlett-Esquilant, and R. L. Phillips, "Recruiting and Training a Health Professions Workforce to Meet the Needs of Tomorrow's Health Care System," *Academic Medicine* 94, no. 5 (2019): 651–655, https://doi.org/10.1097/acm.0000000000002606.

34. L. J. Sundean, K. R. White, L. S. Thompson, and L. D. Prybil, "Governance Education for Nurses: Preparing Nurses for the Future," *Journal of Professional Nursing* 35, no. 5 (2019): 346–352, https://doi.org/10.1016/j.profnurs.2019.04.001.

35. N. Frost, "From "Silo" to "Network" Profession–A Multi-Professional Future for Social Work," *Journal of Children's Services* 12, no. 2–3 (2017): 174–183, https://doi.org/10.1108/jcs-05-2017-0019.

36. P. Share and J. Pender, "Preparing for a Robot Future? Social Professions, Social Robotics and the Challenges Ahead," *Irish Journal of Applied Social Studies* 18, no. 1 (2018): 4.

37. E. Laukka, M. Hammarén, and O. Kanste, "Nurse Leaders' and Digital Service Developers' Perceptions of the Future Role of Artificial Intelligence in Specialized Medical Care: an Interview Study," *Journal of Nursing Management* 30, no. 8 (2022): 3838–3846, https://doi.org/10.1111/jonm.13769.

38. D. Petružytė, V. Gevorgianienė, M. Seniutis, M. Yamaguchi, E. Šumskienė, and L. Žalimienė, "Envisioning the Future of (Techno) Social Work Education: Perspectives of Japanese and Lithuanian Social Work Educators," *Social Work Education* (2022).

39. T. Risling, "Educating the Nurses of 2025: Technology Trends of the Next Decade," *Nurse Education in Practice* 22 (2017): 89–92, https://doi.org/10.1016/j.nepr.2016.12.007.

40. M. Kleib, L. M. Nagle, K. E. Furlong, P. Paul, U. Duarte Wisnesky, and S. Ali, "Are Future Nurses Ready for Digital Health?" *Nurse Educator* 47, no. 5 (2022): E98–E104, https://doi.org/10.1097/nne.0000000000001199.

41. G. Mois and K. L. Fortuna, "Visioning the Future of Gerontological Digital Social Work," *Journal of Gerontological Social Work* 63, no. 5 (2020): 412–427, https://doi.org/10.1080/01634372.2020.1772436.

42. T. D. Bibbs, S. Wolfe-Taylor, N. Alston, et al., "Constructing the Future of Social Work Tech Habits of Mind With the Ethical OS," *Advances in Social Work* 23, no. 1 (2023): 132–147, https://doi.org/10.18060/24978.

43. F. Mishna, J. E. Sanders, K. M. Sewell, and E. Milne, "Teaching Note—Preparing Social Workers for the Digital Future of Social Work Practice," *Journal of Social Work Education* 57, no. sup1 (2021): 19–26, https://doi.org/10.1080/10437797.2021.1912676.

44. I. Zemaitaityte, R. Bardauskiene, J. Pivoriene, and A. Katkonienė, "Digital Competences of Future Social Workers: The Art of Education in Uncertain Times," *Social Work Education* 43, no. 4 (2023): 1078–1091.

45. M. Abbott and A. Esposto, "The Future Growth of the Healthcare and Social Assistance Workforce and Its Skills Base: the Case of Gippsland in Australia," *Australasian Journal of Regional Studies* 27, no. 2 (2021).

46. S. Y. Vandenberg, "Planetary Health: Preparing Nursing Students for the Future," *Nurse Educator* 48, no. 6 (2023): 293–297, https://doi.org/10.1097/nne.0000000000001420.

47. I. Atasoy, S. Ç. Özdemir, and M. Evli, "Relationship Between Individual Innovativeness and 21st Century Skills of Nursing and Midwifery Students: a Cross Sectional Study," *Nurse Education Today* 126 (2023): 105830, https://doi.org/10.1016/j.nedt.2023.105830.

48. T. Smith-Carrier and J. MacArthur, "The State of Eco-Social Work Training in Canada: Transformative Praxis for Climate Constrained Futures," *International Social Work* 67, no. 4 (2024): 905–921.

49. H. Ashton Glover, A. Hitt, and L. Harrington, "From the Frontlines to the Future: Emergency Department Nurses' Advice During the COVID-19 Pandemic," *Journal of Nursing Education* 61, no. 12 (2022): 711–715, https://doi.org/10.3928/01484834-20221003-07.

50. R. Essex, J. Kennedy, D. Miller, and J. Jameson, "A Scoping Review Exploring the Impact and Negotiation of Hierarchy in Healthcare Organisations," *Nursing Inquiry* 30, no. 4 (2023): e12571, https://doi.org/10.1111/nin.12571.

51. N. Goodwin, "Understanding Integrated Care," *International Journal of Integrated Care* 16, no. 4 (2016): 6, https://doi.org/10.5334/ijic.2530.

52. O. Nummela, S. Juujärvi, and T. Sinervo, "Competence Needs of Integrated Care in the Transition of Health Care and Social Services in Finland," *International Journal of Care Coordination* 22, no. 1 (2019): 36–45, https://doi.org/10.1177/2053434519828302.

53. World Health Organization, "Transforming and Scaling up Health Professional Education and Training. Policy Brief on Regulation of Health Professions Education," *World Health Organization Guidelines 2013* (World Health Organization, 2013), https://www.who.int/publications/i/item/transforming-and-scaling-up-health-professionals%E2%80%99-education-and-training.

54. R. W. C. Tourse, J. F. Mooney, J. Shindul-Rothschild, et al., "The university/community Partnership: Transdisciplinary Course Development," *Journal of Interprofessional Care* 22, no. 5 (2008): 461–474, https://doi.org/10.1080/13561820802355615.

55. H. Kallio, J. Salminen, and M. Tuominen, "Preparing Students for Interprofessional Collaboration in Services for Children with Special Needs in Finland: A Document Analysis," *International Journal of Care Coordination* 26, no. 2 (2023): 85–91, https://doi.org/10.1177/20534345231153813.

56. K. Almendingen, M. Molin, and J. Šaltytė Benth, "Preparedness for Interprofessional Learning: An Exploratory Study Among Health, Social Care, and Teacher Education Programs," *Journal of Research in Interprofessional Practice and Education* 11, no. 1 (2021).

57. World Health Organization, *Global Strategy on Human Resources for Health: Workforce 2030* (World Health Organization, 2016), https://www.who.int/publications/i/item/9789241511131.

58. M. E. Kruk, A. D. Gage, C. Arsenault, et al., "High-Quality Health Systems in the Sustainable Development Goals Era: Time for a Revolution," *Lancet Global Health* 6, no. 11 (2018): e1196–e1252, https://doi.org/10.1016/s2214-109x(18)30386-3.

59. M. J. Eckelman, K. Huang, R. Lagasse, E. Senay, R. Dubrow, and J. D. Sherman, "Health Care Pollution and Public Health Damage in the United States: An Update," *Health Affairs* 39, no. 12 (2020): 2071–2079, https://doi.org/10.1377/hlthaff.2020.01247.

60. A. Anåker, M. Nilsson, Å. Holmner, and M. Elf, "Nurses' Perceptions of Climate and Environmental Issues: A Qualitative Study," *Journal of Advanced Nursing* 71, no. 8 (2015): 1883–1891, https://doi.org/10.1111/jan.12655.

61. T. Leppänen, T. Kvist, R. McDermott-Levy, and P. Kankkunen, "Nurses' and Nurse Managers' Perceptions of Sustainable Development in Perioperative Work: A Qualitative Study," *Journal of Clinical Nursing* 31, no. 7–8 (2022): 1061–1072, https://doi.org/10.1111/jocn.15970.

62. H. Kallio, M. Kangasniemi, and M. Hult, "Registered Nurses' Perceptions of Having a Calling to Nursing: A Mixed-Method Study," *Journal of Advanced Nursing* 78, no. 5 (2022): 1473–1482, https://doi.org/10.1111/jan.15157.

63. H. Kallio, H. Liljeroos, M. Koivunen, A. Kuusisto, M. Hult, and M. Kangasniemi, "Organizational Support for Nurses' Career Planning and Development: A Scoping Review," *Journal of Nursing Management* 2024, no. 1 (2024): 8296762–15, https://doi.org/10.1155/2024/8296762.

64. H. Kallio, "Environmental Responsibility in Nursing in Hospitals," Dissertations in Health Sciences No 564, Kuopio, Finland, Publications of the University of Eastern Finland, 2020.

65. A. Koyama and T. Kawai, "A Study of the Effects of Four Years of University Learning and Development on Proactive Behavior at Work," *Japan Journal of Educational Technology* 49, no. 2 (2025): 197–209.