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SYSTEMATIC REVIEW

Nurses' experiences of competence in lifestyle counselling with adult patients in healthcare settings: A qualitative systematic literature review

Anne Kaarina Oikarinen PhD, Senior Lecturer[1,2] | Outi Kähkönen PhD, RN, PhD, Senior Lecturer[2,3] | Pirjo Kaakinen PhD, RN, Adjunct Professor[1,2] | Maria Kääriäinen PhD, Professor[1,2] | Mari Virtanen PhD, Principal Lecturer[4] | Karoliina Paalimäki-Paakki PhD, Principal Lecturer[5] | Krista Hylkilä MSc, RN, Doctoral Researcher[2,6] | Niko Männikkö PhD, Adjunct Professor[1,2] | Heli Kerimaa PhD, University Teacher[1,2] | Kirsi Kivelä PhD, RN, PhD, Service Manager, Director of Nursing[7] | Miia Jansson PhD, Adjunct Professor[1,2,8] | Outi Kajula PhD, RN, PhD, Principal Lecturer[5] | Merja Männistö PhD, Director[2,9] | Minna Lahtinen MSc, PhD-candidate[1] | Minna Vanhanen PhD, MHSc, RN, Lecturer[2,5] | Mira Rajala RN, MSc, University Teacher[1,2]

[1]Research Unit of Health Science and Technology, Medical Research Centre Oulu, Faculty of Medicine, Oulu University, Oulu, Finland

[2]The Finnish Centre for Evidence-Based Health Care: A Joanna Briggs Institute Centre of Excellence Group, Helsinki, Finland

[3]Department of Nursing Science, Faculty of Health Sciences, University of Eastern Finland, Kuopio, Finland

[4]Helsinki Metropolia University of Applied Sciences, Helsinki, Finland

[5]Oulu University of Applied Sciences, Oulu, Finland

[6]Research Unit of Health Science and Technology, Faculty of Medicine, Oulu University, Oulu, Finland

[7]Wellbeing Services Country of North Ostrobothnia, Oulu, Finland

[8]RMIT University, Melbourne, Australia

[9]Master School at Diaconia University of Applied Sciences, Helsinki, Finland

Abstract

Aims and Objectives: To identify and synthesise nurses' experiences of competence in lifestyle counselling with adult patients in healthcare settings.

Background: Modifiable lifestyle risk behaviours contribute to an increased prevalence of chronic diseases worldwide. Lifestyle counselling is part of nurses' role which enables them to make a significant contribution to patients' long-term health in various healthcare contexts, but requires particular competence.

Design: Qualitative systematic literature review and meta-aggregation.

Method: The review was guided by Joanna Briggs Institute's methodology for conducting synthesis of qualitative studies. PRISMA-checklist guided the review process. Relevant original studies were search from databases (CINAHL, PubMed, Scopus, Medic and Psych Articles, Ebscho Open Dissertations and Web of Science). After researcher consensus was reached and quality of the studies evaluated, 20 studies were subjected to meta-aggregation.

Results: From 20 studies meeting the inclusion criteria, 75 findings were extracted and categorised into 13 groups based on their meaning, resulting in the identification of 5 synthesised findings for competence description: Supporting healthy lifestyle adherence, creating interactive and patient-centred counselling situations, acquiring competence through clinical experience and continuous self-improvement,

Correspondence
Anne Kaarina Oikarinen, Research Unit of Health Science and Technology, Medical Research Centre Oulu, Faculty of Medicine, Oulu University, Oulu, Finland.
Email: anne.oikarinen@oulu.fi

collaborating with other professionals and patients, planning lifestyle counselling and managing work across various stages of the patient's disease care path.

Conclusion: The review provides an evidence base that can be used to support nurses' competence in lifestyle counselling when working with adult patients in healthcare settings. Lifestyle counselling competence is a complex and rather abstract phenomenon. The review identified, analysed and synthesised the evidence derived from nurses' experience which shows that lifestyle counselling competence is a multidimensional entity which relates to many other competencies within nurses' work.

Implications for the Profession: Recognising the competencies of nurses in lifestyle counselling for adult patients can stimulate nurses' motivation. The acquisition of these competencies can have a positive impact on patients' lives and their health.

Patient or Public Contribution: No Patient or Public Contribution.

Impact: The research may enhance nurses' competence in lifestyle counselling, leading to improved health outcomes, better adherence to recommendations and overall well-being. It may also drive the development of interventions, improving healthcare delivery in lifestyle counselling.

Reporting Method: The review was undertaken and reported using the PRISMA guidelines.

Protocol Registration: Blinded for the review.

KEYWORDS
competence, counselling, healthcare settings, lifestyle behaviour, nurse

1 | INTRODUCTION

Modifiable lifestyle risk behaviours such as smoking, eating an unhealthy diet, harmful alcohol intake and insufficient physical activity contribute significantly to the increased prevalence of chronic diseases (Devesa et al., 2023; Mensah et al., 2023). The World Health Organisation (WHO) states that chronic diseases are the leading cause of death globally. Every year, 41 million people die from heart attacks, stroke, cancer, chronic respiratory diseases, diabetes or a mental disorder. These make up more than 70% of all deaths worldwide and are associated with crippling economic impacts on society in general due to increased costs of healthcare and declining productivity (Mensah et al., 2023).

Fortunately, a reduction in lifestyle risk behaviours can both delay the onset of chronic disease and help those with chronic diseases to optimise their health (Devesa et al., 2023), and it is every nurse's role, but also responsibility, to have the competence to counsel and be engaged in a preparedness and response capacity and in the delivery of essential lifestyle counselling (Van Dillen & Hiddink, 2014). The Nurses' Health Study (1980–2014) showed that healthy lifestyle behaviours could prevent more than 40% of instances chronic diseases (Li, Pan, et al., 2018). In this context, the greatest challenge for health providers is to promote healthy behaviours by counselling people to better manage their own health (Stonerock & Blumenthal, 2017). Counselling enables patients to internalise information about the principles and practices of making successful, healthy life choices (Dwarswaard et al., 2016). It also honours the patient's right to receive easy-to-understand information about their health, risk factors, treatment options and their effects (Act on the Status and Rights of Patients, 785/1992, section 5). However, it takes more than legislation or ethics to provide counselling: it also draws on the clinical and pedagogical skills of nurses and their ability to educate patients while exercising their responsibilities (Richard et al., 2018).

Healthcare professionals can make a significant contribution to patients' lifestyle behaviours by providing interactive lifestyle

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

- Nurses can make a significant contribution to patients' long-term health in different healthcare contexts if they adopt different areas of lifestyle counselling competence.
- In the education and training of nurses, it is important to consider various areas of lifestyle counselling competence to achieve the best possible expertise for benefiting patients' health.

counselling through which they identify the patient's unhealthy behaviours and orientate them towards healthy lifestyles (Pool et al., 2014). Nurses, in particular, have the potential to play a significant role in both raising awareness of the need for lifestyle changes and supporting patients in making those changes, through lifestyle counselling (James et al., 2020; Van Dillen & Hiddink, 2014). Nurses have a professional responsibility for supporting patients to promote their health choices (Noordman et al., 2013) and providing counselling related to the prevention, self-care and treatment of chronic diseases (Barr & Tsai, 2021). However, implementing lifestyle change is a complex process that requires both the patient to adhere to the change and the nurse to support them (Morris et al., 2022). Lifestyle counselling at its best can be understood as a method that is interactive and patient-centred, planned and adequately resourced to provide information on healthy lifestyle-related factors, in a way that will positively affect patient outcomes (Kääriäinen, 2007; Kääriäinen & Kyngäs, 2010; Oikarinen et al., 2018; Vasiloglou et al., 2019).

Although nurse-led interventions could support patients in self-managing chronic diseases and reducing their lifestyle risks, nurses' experiences of their role in lifestyle counselling are mixed (Stephen et al., 2018). Nurses have reported their willingness to implement a patient-centred approach, which refers to trust and respect, individual rights and personal preferences in the nursing relationship, but they did not want to undermine rapport with patients by raising subjects such as weight management which have the potential to be emotionally charged (James et al., 2020). For example, in the study by van Dillen and Hiddink (2014), it was found that time pressure relates the type, quality and duration of lifestyle risk counselling that nurses can provide.

Lifestyle counselling requires a certain competence from nurses, which is evident when sensitive issues relating to lifestyle behaviours are discussed (Kwame & Petrucka, 2021; Lam & Schubert, 2019). However, nurses have expressed uncertainty as to whether they have the relevant core competencies, such as communication skills (Kwame & Petrucka, 2021; Van Dillen & Hiddink, 2014), knowledge, effectiveness, confidence and motivation to undertake lifestyle risk communication within a counselling role (Hörnsten et al., 2014; James et al., 2020). Further, lifestyle counselling should always arise at the patient's initiative, and be tailored to their individual needs and goals (Walters et al., 2015; Wanyonyi et al., 2011). Another concern is that the results of lifestyle change interventions are often unconvincing. The statements above indicate a need for a more comprehensive understanding of nurses' competence in conducting lifestyle counselling to better support and enhance their capabilities in this area. From a perspective of lifestyle counselling competence, the research is fragmented, and the aspect of nurses' lifestyle counselling competence has not been previously studied and no previous qualitative literature review has been conducted. It is important to identify the areas that nurses need when counselling patients with these challenges. This systematic review aimed to identify and synthesise nurses' experiences of competence in lifestyle counselling among adult patients in healthcare settings. The review question was How do nurses experience their competence in lifestyle counselling of adult patients in diverse healthcare settings?

2 | METHODS

2.1 | Study design

The review was conducted according to the published Prospero protocol (Blinded for the review) and followed the Joanna Briggs Institute guidelines for systematic reviews of qualitative evidence (Lockwood et al., 2020). This review was undertaken using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021; Appendix S1).

2.2 | Search methods and strategy

A PICo strategy was used, in accordance with good practice for systematic reviews of qualitative evidence (Lockwood et al., 2020). An initial limited search of MEDLINE (PubMed) and CINAHL (EBSCO) was undertaken, followed by analysis of the text words contained in the titles, abstracts and index terms used to describe the articles. The final search strategy was carried out with the assistance of an information specialist and included six databases (CINAHL, PubMed, Scopus, Medic and PsychArticles, Ebscho Open Dissertations and Web of Science). The search included both published and unpublished studies. To avoid important studies from being left outside the search, the MedNar database was also consulted. Studies published in Finnish, Swedish and English were considered for inclusion. No date limitation was set. Data retrieval was carried out in December 2022, by an information specialist. The search was updated in December 2023. The search strategies by database are presented in Table 1. The inclusion criteria were chosen according to the PICo protocol as follows:

2.2.1 | Participants

This review considered studies that included nurses in different healthcare settings: practical nurse, registered nurse, licensed nurse, nurse practitioner, public health nurse, health visitor, occupational healthcare nurse, occupational health, advanced practice nurse and healthcare practitioner.

2.2.2 | Phenomena of interest

This review considered studies that explored the experiences of competence in lifestyle counselling with adult patients. In this review, competence is defined as knowledge, skills and attitudes. Healthy lifestyle is defined as smoking cessation/prevention, moderating alcohol intake, healthy diet, stress management, gaming

TABLE 1 Examples of search strategies by database: CINAHL, SCOPUS and PubMed.

Search terms	Results retrieved
CINAHL ((MH "Nursing as a Profession+") OR (MH "Nurses+") OR (MH "Practical Nursing") OR (MH "Nursing Practice+")) OR (nurs* OR "care assistant*" OR "advanced practitioner*" OR "health visitor*" or "health care practitioner*") AND ((MH "patient education+") OR (MH "counseling+")) OR ("patient education" OR counsel* OR guidance OR "informational support" OR "informational knowledge" OR (information N2 giv*) OR (information N2 need*) OR coach*) AND ((MH "Professional Competence+") OR (MH "Professional Knowledge+") OR (MH "Attitude of Health Personnel+")) OR (competenc* or knowledge or skill* or attribute or attitude* or expertise or knowhow or capability or capacity or qualification* or abilit* or value*) AND (MH "Drinking Behavior+") OR (MH "Eating Behavior+") OR (MH "Habits+") OR (MH "Health Behavior+") OR (MH "Risk Taking Behavior+") OR (MH "Life Style+") OR (MH "Exercise+") OR (MH "Physical Activity") OR (MH "Sleep+") OR (MH "Sleep Disorders+") OR (MH "Diet+") OR (MH "Stress+") OR (MH "Video Games+") OR (MH "Social Media+") OR (MH "Screen Time") OR "life style*" OR lifestyle* OR sedentary OR exercis* OR "physical activity" OR "physical inactivity" OR diet OR "food habit*" OR smok* OR cigar* OR tobacco OR alcohol* OR drinking OR "digital gam*" OR "electronic gam*" OR "video gam*" OR "computer gam*" OR "mobile gam*" OR "social media" OR "screen time" OR internet OR stress OR sleep* OR dyssomnia* OR (behavio* N2 (risk* OR problem* OR health))	#4991
SCOPUS (TITLE-ABS-KEY (nurs* OR "care assistant*" OR "advanced practitioner*" OR "health visitor*" OR "health care practitioner*") AND TITLE-ABS-KEY ("patient education" OR counsel* OR guidance OR "informational support" OR "informational knowledge" OR (information w/2 AND giv*) OR (information w/2 AND need*) OR coach*) AND TITLE-ABS-KEY (competenc* OR knowledge OR skill* OR attribute OR attitude* OR expertise OR knowhow OR capability OR capacity OR qualification* OR abilit* OR value*) AND TITLE-ABS-KEY ("life style*" OR lifestyle* OR sedentary OR exercis* OR "physical activity" OR "physical inactivity" OR diet* OR "food habit*" OR smok* OR cigar* OR tobacco OR alcohol* OR drinking OR "digital gam*" OR "electronic gam*" OR "video gam*" OR "computer gam*" OR "mobile gam*" OR "social media" OR "screen time" OR internet OR stress OR sleep* OR dyssomnia* OR (behavio* W/2 (risk* OR problem* OR health)))	#6239
PUBMED ((("Drinking Behavior"[Mesh]) OR "Health Behavior"[Mesh]) OR "Risk Reduction Behavior"[Mesh]) OR "Smoking"[Mesh]) OR "Tobacco Use"[Mesh]) OR "Feeding Behavior"[Mesh]) OR "Diet"[Mesh]) OR "Life Style"[Mesh]) OR "Exercise"[Mesh]) OR "Sleep"[Mesh]) OR "Dyssomnias"[Mesh]) OR "Stress, Psychological"[Mesh]) OR "Screen Time"[Mesh]) OR "Social Media"[Mesh]) OR "Video Games"[Mesh]) OR ("life style*"[Text Word] OR lifestyle*[Text Word] OR sedentary[Text Word] OR exercis*[Text Word] OR "physical activity"[Text Word] OR "physical inactivity"[Text Word] OR diet[Text Word] OR "food habit*"[Text Word] OR smok*[Text Word] OR cigar*[Text Word] OR tobacco[Text Word] OR alcohol*[Text Word] OR drinking[Text Word] OR "digital gam*"[Text Word] OR "electronic gam*"[Text Word] OR "video gam*"[Text Word] OR "computer gam*"[Text Word] OR "mobile gam*"[Text Word] OR "social media"[Text Word] OR "screen time"[Text Word] OR internet[Text Word] OR stress[Text Word] OR sleep*[Text Word] OR dyssomnia*[Text Word])) AND ((((((("Nursing"[Mesh]) OR "Nurses"[Mesh]) OR (nurs*[Text Word] OR "care assistant*"[Text Word] OR "advanced practitioner*"[Text Word] OR "health visitor*"[Text Word] OR "health care practitioner*"[Text Word])) AND (((("Patient Education as Topic"[Mesh]) OR "Counseling"[Mesh]) OR ("patient education"[Text Word] OR counsel*[Text Word] OR guidance[Text Word] OR "informational support"[Text Word] OR "informational knowledge"[Text Word] OR coach*[Text Word])) OR ("give information"[Text Word] OR "information giving"[Text Word] OR "need information"[Text Word] OR "information need*"[Text Word]))) AND ((("Professional Competence"[Mesh]) OR "Attitude of Health Personnel"[Mesh]) OR (competenc*[Text Word] OR knowledge[Text Word] OR skill*[Text Word] OR attribute[Text Word] OR attitude*[Text Word] OR expertise[Text Word] OR knowhow[Text Word] OR capability[Text Word] OR capacity[Text Word] OR qualification*[Text Word] OR abilit*[Text Word] OR value*[Text Word]))))	#6797

control and exercise/physical activity. Lifestyle counselling means counselling that is patient-centred, interactive and goal-oriented.

2.2.3 | Context

This review considered studies in all healthcare settings in any geographic region. The types of settings included inpatient services (e.g. long-stay hospital care, hospitals and general hospitals) and outpatient services (e.g. primary healthcare, day centres and hospitals, health centres, domiciliary care and home visits, residential care, health rehabilitation and community health services). The review excluded all psychiatric nursing and mental health settings.

2.2.4 | Types of studies

The review included studies that used qualitative methods including, for example, descriptive studies, phenomenology, grounded theory, ethnography, action research and feminist research. Qualitative

data from mixed-method studies was also included. The review included studies published in English, Finnish or Swedish with no date limitations.

2.3 | Study selection and quality appraisal

All identified citations were uploaded into Covidence, and duplicates were removed. Identified studies were screened for eligibility by title and abstract, and full texts by two independent reviewers using the pre-defined inclusion and exclusion criteria. Any disagreements between the reviewers were resolved through discussion or with a third reviewer.

Two researchers independently evaluated the methodological quality of the original studies selected for the review after screening the full texts, using the JBI Systematic Reviews Checklist for Qualitative Research (Lockwood et al., 2020). The list comprises 10 items, each subject to evaluation as 'yes', 'no' or 'unclear', with a maximum point allocation of 10. Any disagreements between the reviewers were resolved through discussion or with a third reviewer. Studies were not excluded on the grounds of quality.

2.4 | Data extraction

The data from the chosen studies were extracted according to the details of each study using the standardised JBI data extraction tool JBI SUMARI. The details extracted included participants, study context, geographical location, study methods, phenomena of interest and results (Table 2).

2.5 | Data synthesis

The data were pooled and synthesised by two independent reviewers using a meta-aggregation approach in JBI SUMARI (Lockwood et al., 2020). Meta-aggregation is a method for collating findings and illustrations from qualitative studies and grouping them into categories by similarity of meanings (Aromataris & Munn, 2020). Findings were extracted based on the themes or sub-themes in each article, depending on whether or not they were accompanied by an illustrative quotation directly attributed to a nurse's experiences of competence in lifestyle counselling. Only unequivocal (findings accompanied by an illustration that is beyond reasonable doubt and therefore not open to challenge) and credible (findings accompanied by an illustration lacking clear association with it and therefore open to challenge) were included in the synthesis. Further, the reviewers decided which of the levels (themes or sub-themes) was most representative of the phenomenon of interest. This process entailed extracting categories verbatim and then consolidating or synthesising the findings to create a series of statements that encapsulate the aggregation. This was achieved by assembling the findings and categorising them based on their similarities in meaning. Categories were labelled according to their content. Categories were then synthesised as a set of synthesised findings.

3 | RESULTS OF THE REVIEW

3.1 | Results of the search

The records identified through databases and other sources totalled 23,152. After removing duplicates, a total of 15,120 titles and abstracts were screened for inclusion and 160 were deemed eligible for full-text review. Additionally, 139 studies were excluded during the full-text review. The results of the searches and selection process is reported in the PRISMA flow diagram (Figure 1).

3.2 | Methodological quality

A total of 21 studies were reviewed for methodological quality. The quality ranged from moderate to high as follows: Two articles (Li, Lee, et al., 2018; Liu et al., 2018) met nine of the critical appraisal criteria, 14 articles (Alenius et al., 2023, Braga et al., 2020, Brobeck et al., 2011, Casey, 2005, Gianfrancesco & Johnson, 2020, Hörnsten et al., 2014, Issakainen et al., 2020, Jansink et al., 2010, James et al., 2020, Karlsson et al., 2005, Koutoukis et al., 2018, Lambe & Collins 2009; Lundberg et al., 2017, Svavarsdóttir et al., 2016) met eight criteria, two articles (Khalaf et al., 2018; Wright et al., 2001) met seven criteria and three articles (Broyles et al., 2012; Holmgren et al., 2017; Whyte et al., 2006) met six criteria. The assessment of the methodological quality of included studies is presented in Table 3.

3.3 | Characteristics of the studies

The characteristics of the studies included in the qualitative meta-aggregation are presented in Table 3. The original studies in the review were conducted in Brazil ($n=1$), Sweden ($n=5$), USA ($n=1$), Ireland ($n=2$), United Kingdom ($n=4$), Finland ($n=1$), Australia ($n=1$), Netherlands ($n=1$), Jordan ($n=1$), Taiwan ($n=1$), China ($n=1$) and Norway ($n=1$). Participants in the included studies were nurses working in primary healthcare (Braga et al., 2020, Brobeck et al., 2011, Holmgren et al., 2017, Jansink et al., 2010, Lundberg et al., 2017, Svavarsdóttir et al., 2016), general practice (James et al., 2020), medical surgery units (Broyles et al., 2012), university hospitals (Karlsson et al., 2005; Khalaf et al., 2018; Li, Lee, et al., 2018; Liu et al., 2018), healthcare centres (Gianfrancesco & Johnson, 2020; Hörnsten et al., 2014; Issakainen et al., 2020) and other settings (Casey, 2005; Koutoukis et al., 2018; Whyte et al., 2006; Wright et al., 2001). Data were collected using focus groups and individual interviews and analysed using methods such as inductive content analysis, deductive content analysis and thematic analysis.

TABLE 2 Data extraction table: characteristics of included studies ($n = 21$).

Study	Methods for data collection	Data analysis	Country	Phenomena of interest	Setting	Participant characteristics and sample size	Main results
Alenius et al. (2023)	A descriptive qualitative study Individual interviews	Inductive content analysis	Sweden	Experiences and perceptions of health promotion through the health dialogue	Primary care clinics	12 nurses and other healthcare professionals	Analysis resulted four main categories: A more health-promoting mindset would benefit primary care; empower individuals; facilitate sustainable lifestyle changes; challenges, tools, and support for the implementation of the health dialogue
Braga et al. (2020)	A descriptive qualitative study with semi-structured individual interviews A phenomenological approach	Thematic analysis	Brazil	Action of nurses towards obesity	Primary healthcare	12 nurses who worked in primary healthcare units	Three categories emerged as expressing the actions of nurses towards obesity prevention and control: guidance on healthy lifestyle habits, barriers to the actions of nurses, and focusing specifically on obesity
Brobeck et al. (2011)	A qualitative descriptive design, semi-structured individual interviews	Content analysis	Sweden	Nurses' experiences with motivational interviewing	Primary healthcare	20 nurses in primary care using motivational interviewing in lifestyle counselling	Motivational interviewing was seen as a valuable tool for primary healthcare nurses' lifestyle counselling and is a demanding, enriching, and useful method promoting awareness and guidance in counselling
Broyles et al. (2012)	A descriptive qualitative study, with focus group interviews A grounded theory approach	Thematic analysis	USA	Potential barriers and facilitators associated with nurse-delivered alcohol screening, brief intervention, and referral to treatment for hospitalised patients	Three medical-surgical units in specialised healthcare	Total of 33 medical surgical nurses in seven focus groups	Six categories related to barriers were identified: lack of alcohol-related knowledge and skills; limited interdisciplinary collaboration and communication around alcohol-related care; inadequate alcohol assessment protocols and poor integration with the electronic medical record; concerns about negative patient reaction and limited patient motivation to address alcohol use; questionable compatibility of screening, and logistical issues for example, lack of time/privacy Facilitators related to: improved provider knowledge, skills, communication, and collaboration; expanded processes of care and nursing roles; and enhanced electronic medical record features
Casey (2005)	A descriptive qualitative study using observations and interviews	Data coding	Ireland	Hospital-based nurses health promoting nursing practice	Acute surgical ward in teaching hospital	Eight nurses working on day shifts	Two categories were identified: health promotion strategies and content and patient participation

(Continues)

TABLE 2 (Continued)

Study	Methods for data collection	Data analysis	Country	Phenomena of interest	Setting	Participant characteristics and sample size	Main results
Gianfrancesco and Johnson (2020)	A qualitative approach using semi-structured interviews	Deductive analysis using the framework model of behaviour change	United Kingdom	Situation from the perspectives of practice nurses on the services that they provide and the issues they face	General practices	Nine practice nurses providing diabetes care	Seven domains were identified: environmental context and resources; social influences; knowledge; skills; professional role and identity; beliefs about capabilities; and beliefs about consequences
Holmgren et al. (2017)	A descriptive qualitative design with face-to-face individual interviews A grounded theory approach	Inductive coding accordance with grounded theory	Sweden	Public health nurses' experiences of intervening with obesity patients	Urban primary healthcare centre	10 public health nurses	Initiating the conversation emerged as the main concern in conversations with obesity patients. Public health nurses' facilitators for communicating lifestyle changes consist of the categories; person-centredness in the situation, experience and knowledge, strengthening conditions, access to other professionals and prioritisation in everyday work.
Hörnsten et al. (2014)	A qualitative approach, with in-depth interviews	Inductive content analysis	Sweden	Dialogic strategies about health and lifestyle used by primary healthcare nurses	Healthcare centre	10 public health nurses	Five themes were identified as dialogical strategies in lifestyle counselling: guiding patients versus pressuring them; adjusting to patients versus directing the conversation; inspiring confidence versus instilling fear; motivating and supporting patients versus demanding responsibility; and lastly, introducing emotionally charged subjects or avoiding them
Issakainen et al. (2020)	A descriptive qualitative study containing focus-group theme-interviews	Inductive content analysis	Finland	Public health nurses' experience and assessment of nutritional and physical activity counselling of women with gestational diabetes	Healthcare centre	11 public health nurses	Five main themes were identified: competency in nutrition and physical activity counselling, challenges of counselling, positive experiences of counselling, printed material and counselling practices
James et al. (2020)	A qualitative approach with observations	Deductive content analysis	Australia	How general practice nurses communicate lifestyle risk reduction to patients presenting for chronic disease consultations	General practice	14 general practice nurses	Nurses demonstrated relational skills including the use of open-ended questions, content reflections, and affirmations. Greater use of collaborative agenda setting, double-sided reflections, summarising patient priorities, and importance and confidence scales could enhance discussions about life-style risk reduction

TABLE 2 (Continued)

Study	Methods for data collection	Data analysis	Country	Phenomena of interest	Setting	Participant characteristics and sample size	Main results
Jansink et al. (2010)	A qualitative approach with semi-structured interviews	Deductive content analysis	Netherlands	Lifestyle counselling barriers that nurses encounter on three levels - nurse, patient and practice	Primary care	13 primary care nurses	Nurses found they needed skills in motivating the patients to make lifestyle changes and skills in motivating the patients, that is, concrete tools to increase patient adherence to recommended lifestyle changes in daily care
Karlsson et al. (2005)	A mixed- method study, qualitative phase used individual interviews A Phenomenological approach	Thematic analysis	Sweden	Feasibility of computerised alcohol screening and intervention in patients seeking care at an emergency department	University Hospital, emergency department	9 nurses working in the emergency department	Two main themes were identified: attitudes and previous experience of alcohol prevention and attitudes to the proposed project
Khalaf et al. (2018)	A qualitative approach with focus groups	Inductive content analysis	Jordan	Nurses' perceptions related to smoking cessation, health promotion and interventions provided to hospitalised patients	Hospital setting	22 registered nurses in three focus groups	Three subthemes were identified: nurses use a variety of strategies to promote smoking cessation, patients have faith in nurses and the patient's family could be the key in supporting the patient to quit smoking
Koutoukis et al. (2018)	Semi-structured qualitative telephone and face to face interviews	Inductive content analysis	United Kingdom	Health professionals' perspectives on lifestyle advice (on healthy eating, physical activity, smoking and alcohol) for cancer survivors	Secondary care	21 healthcare professionals	Three main themes were identified: survivorship-centred barriers to provision, healthcare professional-centred barriers to provision and optimal delivery of lifestyle advice
Lambe and Collins (2009)	A descriptive qualitative study with focus group interviews	Deductive analysis using Kruger's framework	Ireland	The views of Irish primary healthcare practitioners about behavioural risk factor management in particular the provision of lifestyle counselling and identifying barriers to behavioural risk factor management	Primary healthcare	56 participants (GP, practice nurses) in six focus groups	Four main themes were identified: insufficient time, patient resistance, lack of funding for prevention and lack of training
Li, Pan, et al. (2018); Li, Lee, et al. (2018)	A qualitative descriptive study	Inductive content analysis	Taiwan	Nurse-counsellors' perspectives on the facilitators and barriers in the implementation of effective smoking cessation counselling services for inpatients	Health promotion city hospitals	16 nurses providing counselling services	Smoking cessation programmes should be patient-centred and provide a supportive environment encouraging patients to modify their lifestyles

(Continues)

TABLE 2 (Continued)

Study	Methods for data collection	Data analysis	Country	Phenomena of interest	Setting	Participant characteristics and sample size	Main results
Liu et al. (2018)	A qualitative study using semi-structured individual interviews	Inductive and deductive content analysis	China	Perspectives of health professionals on the health education currently being provided, between hospital admission and discharge to home, to patients who present with acute coronary syndrome who also have Type 2 diabetes mellitus	Coronary care unit, major city-hospital	15 health professionals (inc. 9 registered nurses)	Three themes identified: health education is an essential embedded component of treatment; health education comprises varied strategies to facilitate behavioural change; and barriers and required resources to deliver effective health education
Lundberg et al. (2017)	A qualitative descriptive approach with individual semi-structured interviews	Inductive content analysis	Sweden	District nurses' experiences of working on health prevention actions among patients with risk factors for cardiovascular disease, identifying facilitators and obstacles in health promotion practices	Primary care	12 district nurses	Nurses regarded health promotion practices as the core of their work, and counselling and coaching such as motivational interviewing were reported as crucial elements in carrying out the work. Both positive and negative attitudes, and presence or lack of organisational culture and structure, were identified as facilitators and barriers
Svavarsdóttir et al. (2016)	A qualitative study with semi-structured individual interviews	Systematic text condensation	Norway and Iceland	Health professionals' views on the knowledge and skills necessary to conduct high-quality patient education for adults recently diagnosed with coronary heart disease	Primary care	9 registered nurses	Sound updated theoretical and clinical knowledge, along with advanced communication skills, was considered essential for counselling. Includes being able to establish interpersonal relationships with patients, capturing their learning needs, facilitating an effective dialogue and providing individualised patient-centred education and lifestyle counselling
Whyte et al. (2006)	A descriptive qualitative study using observation and semi-structured interviews	Deductive content analysis	UK	Nurses' provision of opportunistic health education on smoking for hospital patients	General Hospitals	12 acute care nurses	Nurses recognised opportunities to introduce health education on smoking during nursing care, evidence from patients' interactions indicated opportunity for nurses to provide smoking-related health information. Content of nurses' interactions on smoking varied with some limited by poor communication skills and inadequate knowledge of smoking and smoking cessation

TABLE 2 (Continued)

Study	Methods for data collection	Data analysis	Country	Phenomena of interest	Setting	Participant characteristics and sample size	Main results
Wright et al. (2001)	A qualitative descriptive approach with individual interviews	Thematic analysis	UK	Information on what happens during a patient's initial assessment for secondary prevention of ischemic heart disease with a practice nurse	General practice	7 practice nurses	Nurses demonstrated useful knowledge in conducting patient history counselling, providing reassurance and offering dietary counselling; however, they exhibited lower levels of confidence in discussing patients' comprehension of heart disease and related medication

3.4 | Nurses' experiences of competence in lifestyle counselling with adult patients in healthcare settings–synthesised findings

A total of 75 findings were aggregated into 13 categories, and then into five synthesised findings: (1) competence to support healthy lifestyle adherence (2) competence in creating an interactive and patient-centred counselling situation; (3) competence acquired through clinical experience and self-improvement; (4) competence to collaborate with other professionals and patients; and (5) competence in planning lifestyle counselling and one's own work at different stages of a patient's disease care path. The findings, illustrations and level of credibility are described in Table 4, and the summary of findings is presented in Table 5.

3.4.1 | Synthesised finding 1. Competence to support healthy lifestyle adherence

The first synthesised finding included three categories which reflected 24 findings. The first category, *competence to use different kinds of counselling methods*, was supported by 10 findings. The competencies that nurses experienced needing were flexibility (Jansink et al., 2010); coaching, counselling and motivational interviewing (Lundberg et al., 2017); giving guidance (James et al., 2020); understanding strategies for and content of health promotion (Casey, 2005); applying patient-centred techniques, useful information and teaching resources (Li, Lee, et al., 2018); different approaches to lifestyle counselling (Lambe & Collins, 2009); understanding of behavioural strategies and tailoring psychological support to educational content (Liu et al., 2018); and a range of strategies for promoting specific behaviours, for example, smoking cessation (Khalaf et al., 2018).

The second category, *competence in evaluating a patient's current situation*, was supported by four findings. Nurses expressed they need competence in evaluating perceptions of survivors' current health behaviours (Koutoukis et al., 2018), using health dialogue (Lundberg et al., 2017) and taking patient-centredness into account in a situation (Holmgren et al. 2017) such as pointing out to a smoker that modifying their lifestyle is essential (Li, Lee, et al., 2018).

Knowledge about healthy lifestyle habits and their implications for long-term illnesses, the third category, was supported by 10 findings. Nurses expressed that it is important to have basic, specific and theoretical knowledge (Issakainen et al., 2020; Jansink et al., 2010; Svavarsdóttir et al., 2016) about healthy lifestyle behaviours and what they mean for long-term illnesses. They also mentioned: applying patient-centred techniques, useful information and teaching resources (Li, Lee, et al., 2018; Li, Pan, et al., 2018) relating to lifestyle behaviours and counselling on healthy lifestyle habits (Braga et al., 2020); positive attitudes and previous experience, for example, of alcohol prevention (Karlsson et al., 2005); and detailed knowledge about specific lifestyle issues, for example, obesity (Braga et al., 2020). Nurses felt that

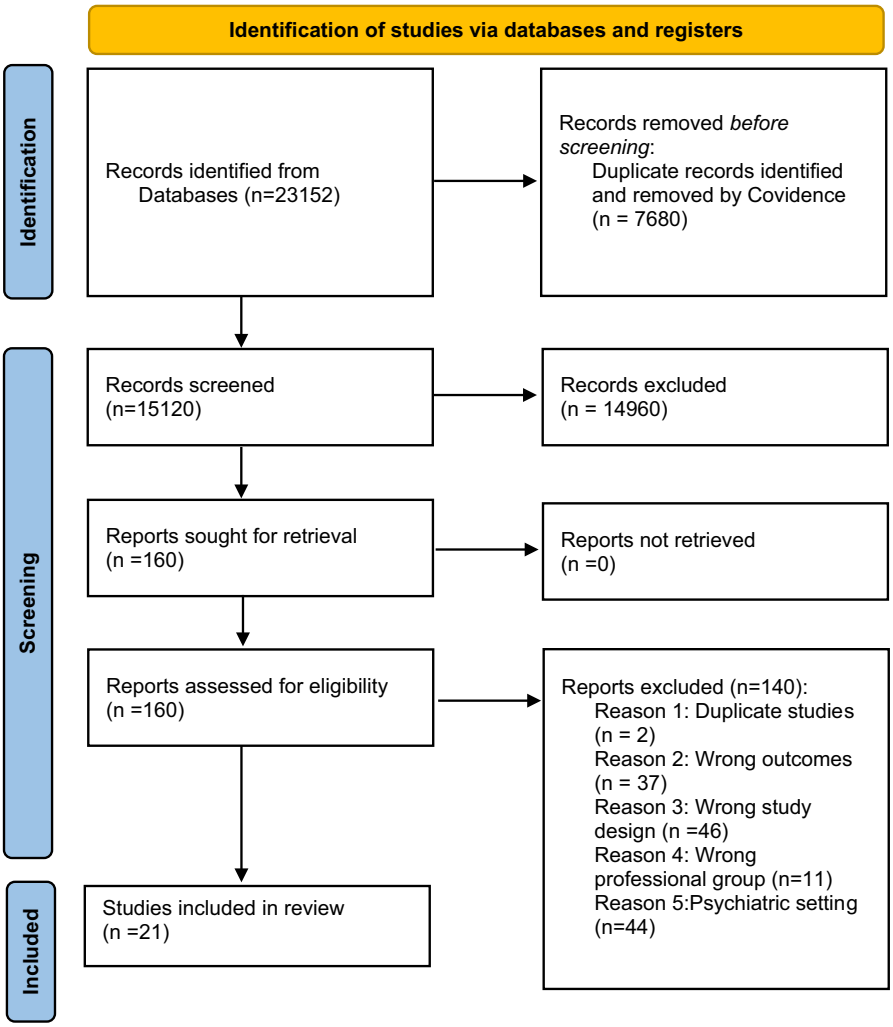

FIGURE 1 PRISMA flow diagram for search results and study selection and inclusion process (Page et al., 2021). *From*: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. [Colour figure can be viewed at wileyonlinelibrary.com]

their acquired up-to-date knowledge about a healthy lifestyle benefited patients (Alenius et al., 2023).

3.4.2 | Synthesised finding 2. Competence in creating an interactive and patient-centred counselling situation

The fourth category, *interaction skills in the counselling situation*, was supported by five findings. Nurses explained that in the counselling situation they need skills for advanced communication (Svavarsdóttir et al., 2016), counselling (Issakainen et al., 2020), good knowledge of, and collaboration with, providers (Broyles et al., 2012) and the ability to assess the psychological factors in how to approach the patient (Issakainen et al., 2020) as well as to explore issues with the patient (James et al., 2020).

Competence in facilitating patient participation in counselling was the fifth category and was supported by seven findings. Nurses described that to facilitate patients' participation it was important to inspire confidence instead of instilling fear (Hörnsten et al., 2014) and aim to promote a healthier lifestyle at an individual level (Lundberg et al., 2017), increasing patient participation by asking about the patient's own perception of their situation and success in adhering to lifestyle change (Casey, 2005). They mentioned that it was important to apply patient-centred techniques in counselling, with useful information, and have appropriate resources for counselling (Li, Lee, et al., 2018). Nurses also mentioned strengthening the conditions for patients to make lifestyle change by supporting them to eliminate socioeconomic barriers to healthy behaviours (Holmgren et al. 2017, Koutoukis et al., 2018). Nurses described that patients' families could play a key role in supporting the patient to make lifestyle changes such as giving up smoking (Khalaf et al., 2018).

The sixth category, *competence in motivating the patient*, was supported by five findings. Nurses described that it is important to have the competence to motivate and support the patient with changing their lifestyle rather than demanding that they take responsibility (Hörnsten et al., 2014), and to respect and understand the patient's current situation (Brobeck et al., 2011). They also said that it is important to be competent in guiding patients rather than pressuring them, and in adjusting to the patient's situation rather than directing the conversation (Hörnsten et al., 2014), giving them the opportunity to make choices (James et al., 2020).

Expertise in addressing sensitive issues was the seventh category, supported by three findings. Nurses experienced that they need

TABLE 3 Assessment of methodological quality of included studies ($n = 21$).

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total
Alenius et al. (2023)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Braga et al. (2020)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Brobeck et al. (2011)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Broyles et al. (2012)	Y	Y	Y	Y	Y	N	N	Y	N	N	6/10
Casey (2005)	N	Y	Y	Y	Y	N	Y	Y	Y	Y	8/10
Gianfrancesco and Johnson (2020)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Holmgren et al. (2017)	N	Y	Y	Y	Y	N	N	Y	N	Y	6/10
Hörnsten et al. (2014)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Issakainen et al. (2020)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Jansink et al. (2010)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
James et al. (2020)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Karlsson et al. (2005)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Khalaf et al. (2018)	Y	Y	Y	Y	Y	N	N	Y	N	N	7/10
Koutoukis et al. (2018)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Lambe and Collins (2009)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Li, Lee, et al. (2018)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	9/10
Liu et al. (2018)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	9/10
Lundberg et al. (2017)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	8/10
Svavarsdóttir et al. (2016)	Y	Y	Y	Y	Y	N	Y	Y	N	Y	8/10
Whyte et al. (2006)	N	Y	Y	Y	Y	N	N	Y	N	Y	6/10
Wright et al. (2001)	N	Y	Y	Y	Y	N	N	Y	N	Y	7/10
%	80.9	100	100	100	100	9.5	10	100	71.4	90.5	–

Notes: JBI critical appraisal checklist for qualitative research:

Q1 = Is there congruity between the stated philosophical perspective and the research methodology?

Q2 = Is there congruity between the research methodology and the research question or objectives?

Q3 = Is there congruity between the research methodology and the methods used to collect data?

Q4 = Is there congruity between the research methodology and the representation and analysis of data?

Q5 = Is there congruity between the research methodology and the interpretation of results?

Q6 = Is there a statement locating the researcher culturally or theoretically?

Q7 = Is the influence of the researcher on the research and vice-versa addressed?

Q8 = Are participants and their voices adequately represented?

Q9 = Is the research ethical according to current criteria, for recent studies, and is there evidence of ethical approval by an appropriate body?

Q10 = Do the conclusions drawn in the research report flow from the analysis, or interpretation of the data?

Abbreviations: N, no; U,unclear; Y, yes.

TABLE 4 Findings, illustrations and level of credibility.

Findings	Illustration	Level of credibility
Category 1: Competence to use different kinds of counselling methods		
Skills	I do not know what the best way is to counsel patients. At the end of the consultation, I must have a concrete action plan, such as: eat less high-fat cheese. It is difficult to make things concrete and do this in a structured manner. (N 11, p.3) Jansink et al. (2010)	C
Counselling	With respect to nutrition, I have some brochures from the National food Agency which fit well into conversations about food and eating habits. Patients often ask for written advice and I believe it's easier to converse with someone if you have uncomplicated materials as support, which the patients can also bring home which also the patients can bring home (I:7, p. 111) Lundberg et al. (2017)	U
Coaching	I find the issue of tobacco use important since smoking is one of the most significant risk factors for cardiovascular disease, of course since I am into coaching on smoking cessation this is a question close to my heart (I:3, p.111) Lundberg et al. (2017)	U
Motivational interviewing	I find MI a useful tool in health promotion and lifestyle interventions. For the individual, it is often about changing something inside to be able to change your habits, and then it is good to know MI (I:11, p.111) Lundberg et al. (2017)	C
Application of patient-centred techniques, useful information and teaching resources	I think it is an individual experience. The situation varies among patients…There are different stages for smoking cessation. Healthcare providers need to provide different patients with different things; you need to help them identify better ways [to quit] by providing patients with the appropriate information for their stage [of quitting].' (Counsellor A, p.4790) Li, Lee, et al. (2018)	C
Approaches to lifestyle counselling	I've a chart that shows what's in a cigarette and I'd come down heavy on them, telling them there's arsenic and rocket fuel in it. They'd be horrified (Practice Nurse, p.221) Lambe and Collins (2009)	U
Behavioural strategies and psychological support tailored to educational content	According to the classification of the heart function, if you exercise and then rest but cannot alleviate the uncomfortableness, then this exercise or work should not be done. (Nurse G, p. 7) Liu et al. (2018)	U
Health promotion strategies and content	…when you're in bed here tomorrow just take a few deep breaths every hour, big deep breaths (O5, p.586) Casey (2005)	U
Guiding	No lectures, it's just, you know, channel that - whatever it is that's going to - it sounds like it's going to be locking in a date will help you. (General Practice Nurses, p. 3086) James et al. (2020)	C
Nurses use a variety of strategies to promote smoking cessation	The way they respond…how they reply.provide them…tell them…on their condition and their family"(Nurse, p. 3402) Khalaf et al. (2018)	C
Category 2: Competence in evaluating a patient's current situation		
Perceptions of survivors' current health behaviours	…when it comes to alcohol it can be quite tricky. Sometimes we'll have relatives who will say, 'Are you aware this person is drinking?' particularly if they are on chemotherapy. And the side effects of chemotherapy, and then to add alcohol onto it. I think that's a more difficult area to try and challenge people on. (Colorectal Cancer Nurse F, 54y, p.3) Koutoukis et al. (2018)	C
Modifying a Smoker's lifestyle is essential	Healthcare providers should not only emphasise how crucial quitting smoking is for promoting patient's health, but they should also shift their emphasis to other health-promoting behaviours such as exercising, maintaining a healthy diet, and managing stress. (Counsellor D, p.4789) Li, Lee, et al. (2018)	C
Person-centredness in the situation	I try to personalise, try to scan that person's ability to do and that you give advice based on that… (#6, p. 2160) Holmgren et al. (2017)	C
Health dialogue	Well, these health dialogues that we must perform on patients, some find them a negative obligation that patients can find intrusive, but I actually find them useful–you are forced to ask the patients questions about their lifestyle (I:2, p.111) Lundberg et al. (2017)	U
Category 3: Knowledge about healthy lifestyle habits and their implications for long-term illnesses		
Knowledge	Some patients have had bad experiences with dieticians and refuse to go to them. This means that I have to get down to the diet advice. I can tell the patients what is good or bad for them, but for specific diet advice they still have to go to the dietician. (N2, p.3) Jansink et al. (2010)	C

TABLE 4 (Continued)

Findings	Illustration	Level of credibility
Skills of specific knowledge	But it is not self-evident, if you don't understand [that you need] to read the information yourself somewhere..., you don't find the appropriate studies or you don't get training on the subject. (p.3) Issakainen et al. (2020)	C
Theoretical knowledge	There are more young individuals who are well-read on the Internet. You need to follow-up on that information, and that is a challenge and time-consuming… But they can be well read in something that is complete nonsense… Somehow, you need to correct those ideas. (p.52) Svavarsdóttir et al. (2016)	C
Knowledge and skills	… when someone asks you how many slices of bread, they should have a day and things like that. Because you don't have ongoing education and things sometimes, I think, 'Do you know, I've got absolutely no idea'. So, it affects your confidence quite a bit that you've got no idea (N6; p. 267) Gianfrancesco and Johnson (2020)	U
Skills of basic knowledge	But it is not self-evident if you don't understand to read the information yourself from somewhere, you don't find the appropriate studies or you don't get training on the subject. (p.3) Issakainen et al. (2020)	U
Application of patient-centred techniques, useful information and teaching resources	[Quitting smoking], I think, is an individual experience. The situation varies among patients…There are different stages for smoking cessation. Healthcare providers need to provide different patients with different things; you need to help them identify better ways [to quit] by providing patients with the appropriate information for their stage [of quitting].(Counsellor A, p. 4790) Li, Lee, et al. (2018)	C
Guidance on healthy lifestyle habits	Upon admission, I assist hypertensive and diabetic people and provide guidance on nutrition, need for physical activity, and weight control. (N1, p. 3) Braga et al. (2020)	C
Attitudes and previous experience of alcohol prevention	It's a health-promoting activity, so I think you should do it more often, actually. It would be good to have some kind of guidelines. We aren't specially trained in alcohol prevention. (…) Some sort of instructions would come in handy when you come across this type of thing. Because, sure, I think it is part of our job… (p.125) Karlsson et al. (2005)	U
Focusing specifically on obesity	One of the goals is to feed the dietary markers to carry out a clearer population diagnosis of who has a normal weight and who is overweight and obese, and then, discuss and propose strategies with the team…This is one of my expectations. (N6, p. 4) Braga et al. (2020)	C
The healthcare professionals' new knowledge will benefit patients	I think that you get a completely new understanding of the whole person, by not just focusing on, for example, the medical part, and staring blindly at that because it is all about the holistic view. We have talked a lot about this, that you learn to see the whole person, not just a small area with a problem. (Informant 10) Alenius et al. (2023)	U
Category 4: Interaction skills in the counselling situation		
Improved provider knowledge, skills, communication and collaboration	… we could actually have someone give us a sheet that says something like "Here are some little pointers or tips on how to address these issues with your patient" because, like I said, I've been here my whole entire nursing career and not once have I ever had anybody tell me (that type of information)."(p.11) Broyles et al. (2012)	U
Advanced communication skills	'It is more effective to have a conversation with the patient instead of lecturing, or telling him what to do… Involve the patient in the education' (Nurse, p. 59) Svavarsdóttir et al. (2016)	C
Skills of giving counselling	And then these psychological skills that you need, they come from somewhere else. Maybe it is the encountering which comes naturally. It is the central part of being a nurse.' (p.3) Issakainen et al. (2020)	U
Psychological factors	Sometimes you have to think about how you approach your customer and how do you pay attention to her. And at the same time, you have to remain aware of the importance of the issue and uphold your professionalism. And you must take the issue forward from there, taking it seriously. Sometimes it's difficult. (p.3) Issakainen et al. (2020)	C
Exploring	What would you eat for breakfast normally? (General Practice Nurse, p. 3085) James et al. (2020)	U

(Continues)

TABLE 4 (Continued)

Findings	Illustration	Level of credibility
Category 5: Competence in facilitating patient participation in counselling		
Inspiring confidence versus instilling fear	She had a full score on everything until the last point when she was asked to score her own health, and she suddenly objected and said that it was impossible; she could not score very high, since she did not feel well. If we hadn't had such a trusting dialogue initially, she would never have admitted it. [10, p.240) Hörnsten et al. (2014)	U
An opportunity to promote healthier lifestyle on an individual level	It feels absolutely wonderful! I graduated as a district nurse a year ago, and I am so looking forward to deal with the different aspects of health promotion and disease prevention. I feel that I have so many possibilities to affect the way people are living their lives and I really believe in health promotion. I have seen examples where people have become more physically active after having PAPs, and also reduced their waist circumference—that is so encouraging for them. Well, I really find that the work with disease prevention and lifestyle interventions are natural tasks for district nurses in primary healthcare (I:7, p.110) Lundberg et al. (2017)	U
Strengthening conditions	… then the doctors put notes in my mail-box, 'wish to lose weight…'…'need to lose weight' and then I start by calling and asking about the motivation. I mean, working with a patient who absolutely not… Is it the doctor who wants it or is it the patient? It is first and foremost important in all behavioural changes (#7, p.2161) Holmgren et al. (2017)	U
Socioeconomic barriers to practising health behaviours	Think the difficulty is that depending on the demographics of patients you've got how practical it can be to either give the information or encourage people to follow the guidelines. As I say, our demographics are such that there's a lot of poverty within our catchment area. So that's often the biggest barrier to doing that. There's also… depending on cultural backgrounds, some of our patients are not keen to take responsibility, they prefer the paternalistic approach. So that can be quite difficult. We also have a lot of patients who are very socially isolated, and are not inclined to go shopping, or cook for themselves. (Colorectal Cancer Nurse F, 55y, p.5) Koutoukis et al. (2018)	C
Application of patient-centred techniques, useful information and teaching resources	[Quitting smoking], I think, is an individual experience. The situation varies among patients…There are different stages for smoking cessation. Healthcare providers need to provide different patients with different things; you need to help them identify better ways [to quit] by providing patients with the appropriate information for their stage [of quitting].'(Counsellor A, p.4790) Li, Pan, et al. (2018); Li, Lee, et al. (2018)	C
Patient's family could be the key towards supporting the patient to quit smoking	Well, why not involve the family? This would motivate the patient and would assist them in following the treatment regimen at home. (Nurse, p. 3403) Khalaf et al. (2018)	U
Patient participation	What do you find the best for that? And did you find that one good? All right, we'll try that one again. (O4, p.586) Casey (2005)	U
Category 6: Competence in motivating the patient		
Motivating and supporting patients versus demanding responsibility	I consider most people to be quite aware of the effect of diet and exercise on health outcomes. I try to pro-vide tools to succeed in order to… adhere to my recommendations, but in small doses. (5, p. 240). Hörnsten et al. (2014)	U
Respect and understanding	I feel that you cannot push someone into anything…you have to sense how far you can go in your motivating interview…if you notice that this patient is not the slightest interested in what you are saying, you must realise that you are trying your best to have a good interview even so. (Nurse 13, p. 3325) Brobeck et al. (2011)	U
Guiding patients versus pressuring to them	You should not smoke; you should not eat fatty food or food with sugar; you should exercise. All patients know this, and when they feel that they can't possibly follow all these rules, and they have not…they may feel that there is no way out. (2, 239) Hörnsten et al. (2014)	U
Adjusting to patients versus directing the conversation	It becomes ridiculous to talk about sugar and coke if they feel very bad, inside, in their souls, I mean. (2, p.239) Hörnsten et al. (2014)	U
Choosing	How else - what else are you thinking you might be able to do? Because most people have some sort of a plan. If you're concerned about moving and that's wearing you out, what else are you thinking you might be able to do? (General Practice Nurses p. 3086) James et al. (2020)	C

TABLE 4 (Continued)

Findings	Illustration	Level of credibility
Category 7: Expertise in addressing sensitive issues		
Introducing emotionally charged subjects or avoiding them	Overweight people have sometimes expressed relief, because I have a unique opportunity to understand their underlying problems and the difficulties of trying to lose weight. (Nurse 4, p. 240) Hörnsten et al. (2014)	C
Strengthening conditions	… then the doctors put notes in my mail-box, wish to lose weight…need to lose weigh and then I start by calling and asking about the motivation. I mean, working with a patient who absolutely not… Is it the doctor who wants it or is it the patient? It is first and foremost important in all behavioural changes (#7, p. 2161) Holmgren et al. (2017)	U
Barriers to the actions of nurses	Sometimes, I deal with the eating issue, but I feel limited in terms of specific knowledge, such as how to prepare a diet for a diabetic person… An expert is required. (N3, p.4) Braga et al. (2020)	U
Category 8: Clinical expertise derived from experience		
Clinical knowledge	You can probably conduct acceptable patient education after a couple of years [in clinical] work. You could have good theoretical knowledge; however, you might not have that much experience with patients yet. There are so many variations, individual differences, which I think you will learn to recognise over time. (Nurse p.59) Svavarsdóttir et al. (2016)	U
Experience and knowledge	I think the more years you have worked, the easier it is for you to dare and find opportunities where it would be appropriate to initiate it… (#8, p. 2160) Holmgren et al. (2017)	U
Professional experience	When you are a newly-qualified nurse, there are a lot of technical issues and when meeting the patient, it is so new and everything. So in order to have a deeper interview, I think you must have worked for some time, that's what I think. (Nurse 20) Brobeck et al. (2011)	U
Improved provider knowledge, skills, communication and collaboration	… we could actually have someone give us a sheet that says something like: Here are some little pointers or tips on how to address these issues with your patient" because, like I said, I've been here my whole entire nursing career and not once have I ever had anybody tell me (that type of information; p.11) Broyles et al. (2012)	U
Attitudes and previous experience of alcohol prevention	It's a health-promoting activity, so I think you should do it more often. It would be good to have some kind of guidelines. We aren't specially trained in alcohol prevention. (…) Some sort of instructions would come in handy when you come across this type of thing. Because, sure, I think it is part of our job… (p.125) Karlsson et al. (2005)	U
Category 9: Competence in professional self-development for lifestyle counselling		
Knowledge and attitudes towards evidence and guidelines for health behaviours	I do take the guidance into consideration, but I do a bit more patient-centred approach, really. (Colorectal Cancer Nurse F, 51y, p. 5) Koutoukis et al. (2018)	U
Training	I think it depends completely on how motivated you yourself are as a professional person when it comes to using this method. Just because you participate in a course does not mean you know it…you must practice and practice all the time. (Nurse 1, p. 3325) Brobeck et al. (2011)	U
Practice nurses' knowledge and skills	Because medication is changing so much we've got to have ongoing training all the time. (Practice Nurse 6, p. 186) Wright et al. (2001)	U
Barriers to the actions of nurses	Sometimes, I deal with the eating issue, but I feel limited in terms of specific knowledge, such as how to prepare a diet for a diabetic person… An expert is required. (N3, p.4) Braga et al. (2020)	C
Referring patients to other counselling resources	Professional counsellors must learn constantly and accumulate experience to become more confident and capable of identifying solutions and resources [that can] assist their patients. If they are [neither confident nor capable], then they have to make a referral. (Counsellor K, p.4790) Li, Lee, et al. (2018)	C

(Continues)

TABLE 4 (Continued)

Findings	Illustration	Level of credibility
Category 10: Competence to cooperate in interprofessional and multidisciplinary teams		
Improved provider knowledge, skills, communication and collaboration	… we could actually have someone give us a sheet that says something like "Here are some little pointers or tips on how to address these issues with your patient" because, like I said, I've been here my whole entire nursing career and not once have I ever had anybody tell me (that type of information) (p.11) Broyles et al. (2012)	U
Access to other professionals	… you have to have multi-professional collaboration with physiotherapist and dietician. You can't do it your-self, there has to be a collaboration around it all (#3, p. 2161) Holmgren et al. (2017)	C
Collaboration with other health professionals to develop a supportive cessation-oriented environment	For patients to quit smoking, they require a whole team of health professionals to support and assist them. (Counsellor Nurse, p. 4788) Li, Lee, et al. (2018)	U
Category 11: Competence to provide counselling within the professional role of a nurse		
Attitudes	We have a nurse who is so good and enthusiastically shares her knowledge and teaching us about her strategies in talking to patients about more sensitive issues. It's beneficial, I find her a good example for all of us, and of course, we also have a manager who has a positive attitude to health promotion (I:7, p.112) Lundberg et al. (2017)	C
Attitudes	It is very difficult for patients to change their lifestyles. I have to tell them the same thing all the time, mostly without any result. This makes me feel powerless. (Nurse 3, p.3) Jansink et al. (2010)	U
Belief in consequences	I can think of quite a few people who have lost weight and their diabetes has practically disappeared. (Nurse 1, p. 268) Gianfrancesco and Johnson (2020)	C
Attitudes to lifestyle counselling	[prevention is] part of what we do. It's not all about medications (Practice Nurse, p. 220) Lambe and Collins (2009)	C
Interest	It is a method that you perhaps must be interested in yourself as a nurse to motivate helping patients in this way. (Nurse 13, p. 3325) Brobeck et al. (2011)	C
Factors that facilitate educating patients about smoking cessation	If the nurse has the will and intention to provide smoking education, he will find the time to do it. (Nurse, p.3404) Khalaf et al. (2018)	C
Self-identification as the right person to provide lifestyle advice	And I think we have a duty to advise patients on quitting smoking and reducing alcohol intake and stuff. (Colorectal Cancer Nurse F, 38y, p. 5) Koutoukis et al. (2018)	C
Professional role and identity	I think I am a bit of a signpost person. So yes, I'll talk to people about healthy eating but I'll also see who else could get involved because I think it's important because they only see me fairly rarely so try and get as many people on board as possible actually'(Nurse 1, p. 168) Gianfrancesco and Johnson (2020)	C
Beliefs about capabilities	'Sometimes I'm at a loss to be fair. I've had patients that have just sat there and said well I don't like that and I'm not doing that. It's so difficult with some patients, very tricky. I just think and they go out and I just sit there and think 'Oh dear. Where am I going to go with this one?' This is where I want to find somebody, help!'(Nurse 4, p.268) Gianfrancesco and Johnson (2020)	U
Attitudes and previous experience of alcohol prevention	It's a health-promoting activity, so I think you should do it more often, actually. It would be good to have some kind of guidelines. We aren't specially trained in alcohol prevention. (…) Some sort of instructions would come in handy when you come across this type of thing. Because, sure, I think it is part of our job… Karlsson et al. (2005)	U

TABLE 4 (Continued)

Findings	Illustration	Level of credibility
Category 12: Competence in planning targeted counselling at different stages of a disease		
Timing for initiating smoking cessation after hospitalisation	If we have good timing, then patients are more likely to be willing to quit. (Counsellor D, p. 4789) Li, Lee, et al. (2018)	C
Tailored advice delivered throughout the cancer journey	I think online is probably the best thing, if patients have access and they're computer literate, because they can do it at their own time and at their own pace. (Colorectal Cancer Nurse F, 55y, p. 6) Koutoukis et al. (2018)	C
The teachable moment	Yes we used to have smoking rooms for patients (pause)right, we'll just pop that under there (pause) that's fine how's your arm feeling today? (Nurse, p. 572) Whyte et al. (2006)	U
Teaching approaches during acute care and community follow-up	We need [to] control the time. We don't have enough time if it takes too long. Five-minute follow-up is able to give us a rough idea [about how the patient is].We might prolong a little if the patient shows some confusion on the phone. I would give him [or her] some advice if I can solve their problems, patients younger than 60 years old and post percutaneous coronary intervention (PCI). We'll follow-up twice. (Nurse E, p. 7) Liu et al. (2018)	U
Category 13: Competence in resourcing counselling within one's own work		
Factors that facilitate educating patients about smoking cessation	If the nurse has the will and intention to provide smoking education, he will find the time to do it. (Nurse, p. 3404) Khalaf et al. (2018)	C
Prioritisation in everyday work	…a lot is given low priority and this is such a thing – lifestyle habits. It is after all, the first choice in all treatment with regard to osteoarthritis, hypertension, obesity. The first achievement, comes last (#9, p.2162) Holmgren et al. (2017)	U
Time	If everyone studies themselves and thinks about how long it takes to change, a change you have made or are thinking about usually takes several years…when the patient comes to healthcare, we have expectations that everything should go very fast, a couple of months perhaps, that is not actually feasible. (Nurse 3, p. 3325) Brobeck et al. (2011)	U
Application of patient-centred techniques, useful information and teaching resources	[Quitting smoking], I think, is an individual experience. The situation varies among patients…There are different stages for smoking cessation. Healthcare providers need to provide different patients with different things; you need to help them identify better ways [to quit] by providing patients with the appropriate information for their stage [of quitting].(Counsellor A, p.4790) Li, Lee, et al. (2018)	U

Note: C = credible—findings accompanied by an illustration lacking clear association with it and therefore open to challenge ($n = 33$). U = unequivocal—findings accompanied by an illustration that is beyond reasonable doubt and therefore not open to challenge ($n = 42$).

TABLE 5 Data synthesis of findings into categories and synthesised findings.

Findings ($n = 75$)	Categories ($n = 13$)	Synthesised findings ($n = 5$)
Skills Counselling Coaching Motivational interviewing Application of patient-centred techniques, useful information and teaching resources Approaches to lifestyle counselling Behavioural strategies and psychological support tailored to educational content Health promotion strategies and content Guiding Nurses use a variety of strategies to promote smoking cessation	1.Competence to use different kinds of counselling methods	1. Competence to support healthy lifestyle adherence Nurses experienced that they need knowledge about healthy lifestyle habits and their implications for long-term illnesses, and the competence to use different kinds of counselling methods as well as to evaluate a patient's current situation when counselling them to change their lifestyle behaviour
Perceptions of survivors' current health behaviours Modifying a smoker's lifestyle is essential Person-centredness in the situation Health dialogue	2. Competence in evaluating a patient's current situation	
Knowledge Skills of specific knowledge Theoretical knowledge Knowledge and skills Skills of basic knowledge Application of patient-centred techniques, useful information and teaching resources Guidance on healthy lifestyle habits Attitudes and previous experience of alcohol prevention Focusing specifically on obesity The healthcare professionals' new knowledge will benefit patients	3. Knowledge about healthy lifestyle habits and their implications for long-term illnesses	
Improved provider knowledge, skills, communication, and collaboration Advanced communication skills Skills of giving counselling Psychological factors Exploring	4. Interaction skills in the counselling situation	2. Competence in creating an interactive and patient-centred counselling situation. Nurses experienced that it is important to have competence in facilitating patient participation and to have good interaction skills in the counselling situation. Also to have competence in motivating the patient to adherence to lifestyle change and to have expertise in addressing sensitive issues relating to lifestyle issues when necessary
Inspiring confidence versus instilling fear An opportunity to promote healthier lifestyle on an individual level Strengthening conditions Socioeconomic barriers to practising health behaviours Application of patient-centred techniques, useful information, and teaching resources Patient's family could be the key towards supporting the patient to quit smoking Patient participation	5. Competence in facilitating patient participation in counselling	

TABLE 5 (Continued)

Findings ($n = 75$)	Categories ($n = 13$)	Synthesised findings ($n = 5$)
Motivating and supporting patients versus demanding responsibility Respect and understanding Guiding patients versus pressuring to them Adjusting to patients versus directing the conversation Choosing	6. Competence in motivating the patient	
Introducing emotionally charged subjects or avoiding them Strengthening conditions Barriers to the actions of nurses	7. Expertise in addressing sensitive issues	
Clinical knowledge Experience and knowledge Professional experience Improved provider knowledge, skills, communication and collaboration Attitudes and previous experience of alcohol prevention	8. Clinical expertise derived from experience	3. Competence acquired through clinical experience and self-improvement Nurses experienced that lifestyle counselling competence derives from their clinical experience and ongoing self-development in healthy lifestyle-related issues
Knowledge and attitudes towards evidence and guidelines for health behaviours Training Practice nurses' knowledge and skills Barriers to the actions of nurses Referring patients to other counselling resources5	9. Competence in professional self-development for lifestyle counselling	
Improved provider knowledge, skills, communication and collaboration Access to other professionals Collaboration with other health professionals to develop a supportive cessation-oriented environment	10. Competence to cooperate in interprofessional and multidisciplinary teams	4. Competence to collaborate with other professionals and patients Nurses need competence to co-operate in interprofessional and multidisciplinary teams when planning and implementing lifestyle counselling. Also the competence to perform within a nurse's professional role when counselling the patient about lifestyle-related issues
Attitudes (2) Belief in consequences Attitudes to lifestyle counselling Interest Factors that facilitate educating patients about smoking cessation Self-identification as the right person to provide lifestyle advice. Professional role and identity Beliefs about capabilities Attitudes and previous experience of alcohol prevention	11. Competence to provide counselling within the professional role of a nurse	
Timing for initiating smoking cessation after hospitalisation Tailored advice delivered throughout the cancer journey The teachable moment Teaching approaches during acute care and community follow-up.	12. Competence in planning targeted counselling at different stages of a disease	5. Competence in planning lifestyle counselling and one's own work at different stages of the patient's disease care path Nurses need competence in planning and resourcing their own work in order to target appropriate lifestyle counselling at different stages of the patient's disease care path
Factors that facilitate educating patients about smoking cessation Prioritisation in everyday work Time Application of patient-centred techniques, useful information and teaching resources	13. Competence in resourcing counselling in one's own work	

competence in introducing emotionally charged subjects with patients and not avoiding them (Hörnsten et al., 2014), as well as the ability to strengthen their conditions for making lifestyle changes (Holmgren et al. 2017) and lowering the barriers to the actions recommended by the nurse (Braga et al., 2020).

3.4.3 | Synthesised finding 3. Competence acquired through clinical experience and self-improvement

The eighth category, *clinical expertise derived from experience*, was supported by five findings. Nurses experienced that some of their competence for lifestyle counselling comes from their professional experience (Brobeck et al., 2011, Holmgren et al., 2017) and from the clinical knowledge they have acquired (Holmgren et al., 2017; Svavarsdóttir et al., 2016). For lifestyle counselling it is also necessary to have good professional knowledge, appropriate skills for communication and collaboration (Broyles et al., 2012), a positive attitude and previous experience of lifestyle counselling (Karlsson et al., 2005).

The ninth category, *competence in professional development for lifestyle counselling*, included five findings. Nurses described that, for their own personal development, it is important to have a positive attitude towards, and understanding of, evidence regarding healthy lifestyle behaviours and related guidelines (Koutoukis et al., 2018). They also mentioned that it is important to have training (Brobeck et al., 2011); opportunities to practice their skills and knowledge (Wright et al., 2001); understanding of the barriers that patients face in implementing recommended lifestyle changes (Braga et al., 2020); and up-to-date knowledge about where to refer patients for further counselling resources (Li, Lee, et al., 2018).

3.4.4 | Synthesised finding 4. Competence to collaborate with other professionals and patients

Competence to cooperate in interprofessional and multidisciplinary teams, the tenth category, included three findings. Nurses felt that it is important to be competent in collaborating with other health professionals to develop a supportive environment, for instance a smoking cessation-oriented environment (Li, Lee, et al., 2018; Li, Pan, et al., 2018). Other competencies mentioned included good knowledge of providers, communication and collaboration skills (Broyles et al., 2012) and functional access to other healthcare professionals (Holmgren et al., 2017).

The eleventh category, *competence to provide counselling within the professional role of a nurse*, was based on nine findings. Nurses felt that their competence to carry out lifestyle counselling involved identifying themselves as professionals in that situation (Gianfrancesco & Johnson, 2020), believing in their own capability (Gianfrancesco & Johnson, 2020) and having a good attitude about lifestyle counselling (Jansink et al., 2010; Karlsson et al., 2005; Lambe & Collins, 2009; Lundberg et al., 2017). They felt it was important both to be interested in providing lifestyle counselling (Brobeck et al., 2011) and to believe in its outcomes (Gianfrancesco & Johnson, 2020), and to be able to recognise the factors that facilitate counselling patients about specific issues (Khalaf et al., 2018) while self-identifying as the right person to provide the relevant advice (Koutoukis et al., 2018).

3.4.5 | Synthesised finding 5. Competence in planning lifestyle counselling and one's own work at different stages of the patient's disease care path

Competence in planning targeted counselling at different stages of a disease, the twelfth category, was supported by four findings. Nurses felt that it is important to recognise teachable moments (Whyte et al., 2006) and the appropriate timing for initiating discussions about lifestyle change, for example, raising smoking cessation with a patient after a period of hospitalisation (Li, Lee, et al., 2018). They identified the need to be able to use different counselling methods during acute care and community follow-up (Liu et al. 2018), and deliver tailored advice throughout, for example, the cancer journey (Koutoukis et al., 2018).

The thirteenth category, *competence in resourcing counselling within one's own work*, was supported by four findings. Nurses felt that it is important to be competent in prioritising lifestyle counselling within their everyday work (Holmgren et al., 2017), and finding time to counsel patients, for instance about smoking cessation (Khalaf et al., 2018, Brobeck et al., 2011). They also raised the importance of applying patient-centred techniques, current information and relevant teaching resources (Li, Lee, et al., 2018).

4 | DISCUSSION

This meta-aggregation aimed to synthesise the existing literature surrounding nurses' experiences of competence in lifestyle counselling with adult patients in healthcare settings. Five synthesised findings were identified based on thirteen categories and findings. The first interesting finding in this study concerned competence to support healthy lifestyle adherence. This is the core competence of nursing work and is particularly important in successful counselling. It requires nurses to apply their skills flexibly and use a variety of approaches to supporting patients' adherence to a healthy lifestyle. In line with prior evidence (Vallis et al., 2018; Vasiloglou et al., 2019; WHO, 2021), our results emphasised that nurses need to maintain their own knowledge about healthy lifestyles and their implications in order to evaluate a patient's situation, motivation, communication skills and confidence with participatory approaches. Previous studies have similarly concluded that providing personalised information, advice and counselling are essential nursing skills that increase patients' ability to reduce their lifestyle risks (Beishuizen et al., 2019; Morris et al., 2022).

In line with previous studies (Kähkönen et al., 2015; Morris et al., 2022), motivation has been proven to be a key factor in making beneficial changes to some aspects of unhealthy lifestyles. Motivational interviewing has been specifically developed to strengthen patients' intrinsic motivation and adherence to a healthy lifestyle (Miller & Rollnick, 2014), and its methods can be integrated into everyday practice to improve conversations and catalyse behaviour change (Beckwith & Beckwith, 2020). However, this requires that nurses are appropriately trained and that their skills in motivational counselling and interviewing are maintained.

The second finding in this study related to nurses' competence in creating an interactive and patient-centred counselling situation. Competence in patient-centredness emerges as an important factor in this study and has been highlighted in previous research. For instance, Morris et al. (2022) indicated that patient-centred care and collaborative relationships between nurses and patients promote patients' participation, motivation, readiness for change, health literacy and capacity for risk reduction, at the same time enabling shared decision-making. WHO (2021) has noted that there is synergy between patient empowerment, engagement and enablement and shared decision-making. A patient-centred approach refers to nurses building relationships with patients which are based on trust and respect, individual rights, personal preferences and interactive communication (James et al., 2020).

The third main finding of this study establishes that a core component in building interactive and patient-centred counselling is clinical expertise based on experience. This finding aligns with previous evidence on relational sensitivity and empathy in lifestyle counselling (James et al., 2020; Walseth et al., 2010) It has therefore been suggested that training, role modelling and mentoring in these areas is needed to grow and develop these competencies within nursing practice (Morris et al., 2022). And, as concluded by Van Dillen and Hiddink (2014), the role of a nurse in lifestyle counselling is crucial. In addition to playing a significant role in conducting lifestyle counselling, there is an emphasis on encouraging other nurses to participate in this important aspect of patient care (Vasiloglou et al., 2019).

The results of this study indicated that nurses need to have expertise in addressing sensitive issues. However, they may find this challenging and feel afraid of bringing up emotionally sensitive or difficult topics. This concern is supported by an earlier study by James et al. (2020) which showed that nurses sometimes avoid sensitive discussions because they fear that they will undermine their patient-centred approach. Competence acquired through clinical experience and self-improvement also encompasses the understanding that clinical expertise is derived from practical experience. Thus, nurses have observed that certain competencies required for lifestyle counselling are developed through their professional experiences. This finding has been validated by Morris et al. (2022), who indicated that through practice and experience, there is an augmentation in relational sensitivity and empathy. They propose that the cultivation and development of these competencies necessitate training, role modelling and mentoring (Morris et al., 2022).

This study identified competence to collaborate with other professionals and patients as a key competence. Nurses felt that it is important to be competent at collaborating with other health professionals. However, according to previous studies, interprofessional and intersectoral collaboration are poorly implemented in practice, despite nurses calling for more collaborative interdisciplinary relationships, interprofessional training and professional development to optimise their role and advance their practice (Bräutigam et al., 2021). An interesting finding of this study concerns nurses' competence to provide counselling within the professional role of a nurse. This competence was associated with nurses' beliefs and attitudes, and their ability to recognise factors associated with implementing counselling. Although nurses' attitudes towards counselling may be positive, as shown by Morris et al. (2022), environmental circumstances may create challenges to identifying what role they should play in counselling. Nurses' ambiguity about their role in counselling has been influenced by historical patterns of care and hierarchy within healthcare contexts. However, clarifying roles in clinical practice can provide a basis for effective counselling.

Our finding about competence in planning lifestyle counselling and one's own work at different stages of the patient's disease care path is topical and reflects both an ideal and a challenge. First, it is almost impossible to plan counselling at the different stages of the patient's disease care path, which has been documented as a cause for concern, because regular follow-ups do not occur systematically (Perk et al., 2015). Second, it is difficult for nurses to resource counselling as part of their work: previous research has shown that problems such as lack of prioritisation, time, training, funding, interprofessional collaboration and organisational support undermine nurses' ability to plan their work around providing lifestyle counselling (Morris et al., 2022). Although digital lifestyle counselling is emphasised nowadays, the review of studies has not yet revealed specific competence areas related to this phenomenon. In a period of rapid digitalisation, it is likely that competence requirements for lifestyle counselling related to informatics will become increasingly important (Jarva et al., 2022; Kaihlanen et al., 2021).

5 | LIMITATIONS OF THE STUDY

Although the study was designed to be thorough and rigorous some limitations need to be addressed. The first relates to concepts of counselling and competence which, by their nature, are rather abstract and challenging to research. The research group sought to address this by describing the contents clearly at the beginning and through conversations during the process. The study group included a librarian to enhance the overall quality of the review. Although numerous databases were consulted using different keywords in the literature search, there is a chance that some studies relevant to the

review topic may nonetheless have been missed. Most of the studies included were conducted in western countries, which creates a bias meaning that the results may not be generalisable to all countries and cultures. The search was limited to languages understood by the research team, which limited our capacity to identify studies implemented in other countries.

6 | CONCLUSION

This systematic review provides insight and an evidence base which can be used to design education to support nurses' competence in lifestyle counselling when working with adult patients in healthcare settings. Lifestyle counselling competence is a complex and rather abstract phenomenon. However, the review identified, analysed and synthesised the evidence derived from nurses' experience, which shows that lifestyle counselling competence is a multidimensional entity which relates to many other competencies within nurses' work. Specifically, it draws on competencies around supporting healthy lifestyle adherence, creating an interactive and patient-centred counselling situation, clinical experience and continuous self-improvement, collaboration with others and planning counselling within one's own work at different stages of a patient's disease care path.

7 | RELEVANCE TO CLINICAL PRACTICE

The evidence derived from this review can help nurses to strengthen their role as the appropriate professional to implement lifestyle counselling when they meet patients facing relevant challenges in various health care contexts. It also supports nurses in identifying lifestyle counselling competence as a skill that the literature suggests they should have. The insights from this study may also be useful for nurse managers and leaders and can be used when educating nursing students and professionals in continuing education. However, the results are rather general and lifestyle counselling for different patient groups may include distinct sensitivities which should be further investigated. It is also possible that the results of the study could be used to develop instruments for measuring lifestyle counselling competence. Finally, it is worth noting that lifestyle counselling is increasingly implemented in digital and remote formats which create further opportunities and challenges to be explored.

AUTHOR CONTRIBUTIONS

AO, OK, KK, MR: Made substantial contributions to conception and design, or acquisition of data or analysis and interpretation of data; AO, OK, PK, MK, MV, KP-P, HK, NM, HK, KK, MJ, KO, MM, ML, MV, MR: Involved in drafting the manuscript or revising it critically for important intellectual content; AO, OK, PK, MK, MV, KP-P, HK, NM, HK, KK, MJ, KO, MM, ML, MV, MR: Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content; AO, OK, PK, MK, MV, KP-P, HK, NM, HK, KK, MJ, KO, MM, ML, MV, MR: Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

Data available on request from the authors. The data that support the findings of this study are available from the corresponding author upon reasonable request. As the study was a literature review. Data sharing is not applicable to this article as no new data were created or analysed in this study.

ORCID

Anne Kaarina Oikarinen https://orcid.org/0000-0002-3509-8912
Outi Kähkönen https://orcid.org/0000-0002-6009-987X
Pirjo Kaakinen https://orcid.org/0000-0002-4991-671X
Maria Kääriäinen https://orcid.org/0000-0001-8295-8172
Mari Virtanen https://orcid.org/0000-0003-4995-7033
Karoliina Paalimäki-Paakki https://orcid.org/0000-0001-6559-3773
Krista Hylkilä https://orcid.org/0000-0002-1371-0031
Niko Männikkö https://orcid.org/0000-0003-1292-4852
Heli Kerimaa https://orcid.org/0000-0001-9597-4147
Kirsi Kivelä https://orcid.org/0000-0003-0700-4920
Miia Jansson https://orcid.org/0000-0001-5815-0325
Outi Kajula https://orcid.org/0000-0002-4221-1696
Merja Männistö https://orcid.org/0000-0002-0017-6343
Minna Lahtinen https://orcid.org/0000-0002-9416-393X
Minna Vanhanen https://orcid.org/0000-0002-7771-9756
Mira Rajala https://orcid.org/0000-0002-1096-5530

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