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Lifestyle risk communication by general practicenurses: An integrative literature review

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Abstract

Background: The growth of the general practice nursing workforce, has created opportunities to enhance activities aimed at lifestyle change to optimise health and reduce risk. While health status and risk levels are amenable to behaviour change, a number of complex interrelated factors influence the general practice nurses' (GPN) role, often resulting in the underutilisation of nurses. This can limit their capacity to respond to patients' needs, including communication regarding lifestyle risk factors and their chronic health conditions. Understanding GPNs' views on lifestyle risk communication and factors influencing this can inform improvement in chronic disease management and effectiveness of lifestyle risk communication by GPNs.

Aim: To review the literature examining the experiences and perspectives of GPNs regarding communication with patients about lifestyle risk factors. **Method:** An integrative literature review was conducted using the methods of Whittemore and Knafl (2005). CINAHL, Scopus, MEDLINE, Cochrane Library and Joanna Briggs Institute of Systematic Reviews were searched for articles published in English from January 2006-October 2016. Peer-reviewed papers reporting primary research which focussed on GPNs' perceptions, attitudes, experiences and/or perspectives of lifestyle risk communication with adults were included. Included papers were assessed for methodological quality and findings extracted for thematic analysis. **Results:** Fifteen articles were included, yielding four themes; GPNs' views of the nurse-patient relationship, motivational interviewing (MI), barriers to practice, and role parameters. Data revealed GPNs' needs relating to role clarity, maintenance of therapeutic relationships, as well as organisational, government policy and technique support. **Conclusion:** GPNs are increasingly managing and coordinating care for people with, or at risk of, chronic disease. Lifestyle risk counselling effectively supports chronic disease management and lifestyle risk

reduction. This review synthesises GPNs' current experiences and perspectives of lifestyle risk communication, as well as highlighting additional research needs.

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Key words: communication, counselling, general practice, health education, lifestyle, nurse, primary care.

Introduction

Modifiable lifestyle risk behaviours such as smoking, unhealthy diet, harmful alcohol intake and inadequate physical activity significantly contribute to an increased prevalence of chronic disease (World Health Organization, 2017). Internationally, funding and government policy inadequacies are reflected in lifestyle risk factor increases (World Health Organization, 2017). For example, rapid unplanned urbanisation and the globalisation of unhealthy lifestyles can foster conditions such as obesity (World Health Organization, 2017). The World Health Organization (2017) reports that each year 4.9 million people die from tobacco use, 2.6 million die from being overweight or obese, 1.9 million die due to physical inactivity, 7.1 million die as a result of raised blood pressure and 4.4 million people die secondary to high cholesterol levels.

A reduction in lifestyle risk behaviours can delay the onset of chronic disease and assist those with chronic disease to optimise their health. Achieving behavioural change is a complex process that often requires both patient commitment to change and health professional support (Mason & Butler, 2010). The general practice nurse (GPN) has the potential to play a significant role in both raising awareness of the need for behaviour change and supporting patients through this process (Halcomb, Davidson, Salamonson, & Ollerton, 2008). This review explores GPNs' views of lifestyle risk communication to

inform strategies for the optimal delivery of preventative health care.

Background

Nurses comprise the largest non-physician workforce in primary care, and GPNs playa pivotal role in community-based health care (Joyce & Piterman, 2011; Oelke, Besner, & Carter, 2014; Primary Health Care Nurse Innovation Evaluation Team, 2007). Internationally, primary care settings, including general practice, are contending with increasing patient demand as well as a decreasing medical
workforce (Freund et al., 2015; Keleher, Parker, Abdulwadud, & Francis, 2009). Whilst there is variability amongst international primary care settings and systems, governments in New Zealand, the United Kingdom and Australia have implemented policies that have supported nursing workforce growth and enhanced roles for nurses, to assist in meeting the growing demands in primary care (Australian Medicare Local Alliance, 2012; Health Workforce New Zealand, 2011; Primary CareWorkforce Commission, 2015).

General practice nurses are increasingly involved in both chronic disease management and assessment of those at risk of chronic disease (Halcomb et al., 2008). Indeed, some 67.2% of GPN-patient encounters In Australia consist of disease specific health education (Halcomb, Salamonson, Davidson, Kaur, & Young, 2014). Interventions provided by GPNs to prevent and manage chronic disease are acceptable, feasible, sustainable, as well as clinically and cost effective for both patients and general practitioners (GPs) (Afzali, Karnon, Beilby, Gray & Holton, 2014;Hegney, Patterson, Eley, Mahomed, & Young, 2013; Keleher et al., 2009).

Furthermore, when GPNs work with a broad scope of practice and high levels of autonomy, patients experience high levels of satisfaction and enablement (Desborough et al., 2016).

Nurses in other sectors perceive an absence of opportunities in preventative health education (Oelke et al., 2014). GPNs and their role in chronic disease management has the potential for further involvement in preventative activities such as lifestyle riskcommunication. However, lifestyle risk reduction requires communication to be specific and relevant in order to encourage ongoing motivation for behaviour change (Jansink, Braspenning, van der Weijden, Elwyn, & Grol, 2010). Directive and person-centred behaviour change techniques such as MI have been found to be effective, rather than traditional authoritarian approaches to lifestyle risk communication (Noordman, van der Weijden, & van Dulmen, 2012). The GPN is a key health professional in providing such person-centred support given their practice in a

primary care setting and prolonged engagement with patients and their families (Desborough et al., 2016; E.J. Halcomb, Davidson, Daly, Yallop, & Tofler, 2004). Despite the conceptual allure of the GPN role in lifestyle risk reduction, it has been suggested that current clinical practice in this area is inadequate (Swerissen, Duckett, & Wright, 2016). Workplace organisation, funding, as well as patient, personal and professional factors influence the GPN role (Brown & Thompson, 2007; Hörnsten, Lindahl, Persson, & Edvardsson, 2014; Joyce & Piterman, 2011; McInnes, Peters, Bonney, & Halcomb, 2017; Nolan, Deehan, Wylie, & Jones, 2012; Phillips, 2007). Additionally, it has been reported that the GPN role is largely underutilised, particularly in terms of nurses being supported to work to their full scope of practice (Desborough et al., 2016; Halcomb et al., 2008; Phillips et al., 2009). Exploring GPNs' views of lifestyle risk communication is an important foundation to inform effective GPN service delivery in the management of chronic disease and lifestyle risk.

Aim

This integrative review sought to examine the experiences and perspectives of GPNs in communicating with patients about lifestyle risk factors.

Methods

Integrative review

The integrative review design was chosen due to the mixed approaches used and limited availability of relevant literature. This method combines and summarises data from a variety of research designs, allowing a more comprehensive view of the topic area (Whittemore & Knafl, 2005). Using a broad methodological sampling frame, rigour was employed from the stages of problem identification, literature search, data evaluation, data analysis and presentation (Whittemore & Knafl, 2005).

Search strategies

An initial search of Scopus, MEDLINE, CINAHL, Joanna Briggs Institute and Cochrane was conducted for peer-reviewed papers published in the English language. Due to the growth and evolving nature of nursing in general practice, onlypapers from January 2006 to October 2016 were considered. Key search terms are identified in Figure 1. Papers were eligible for inclusion if they reported primary research, which focussed on GPNs' perceptions, attitudes, experiences and/or perspectives of lifestyle risk communication with adults. Nurse practitioners, advanced practice nurses and midwives were excluded due to their different scopes of practice. Additional papers were retrieved via hand searching of reference lists ofretrieved papers and key journals were reviewed for further articles.

****INSERT FIG 1 HERE****

Search outcomes

The initial search identified 667 articles (see Figure 2). Titles and abstracts were reviewed against the inclusion criteria, after which, the full manuscript of remaining articles was screened by one author (##). Following the removal of duplicates, 2 authors (## and ##) independently screened the remaining papers to determine suitability for inclusion. Fifteen studies met the inclusion criteria.

****INSERT FIG 2 HERE****

Quality appraisal

Articles were appraised using the tool described by Pluye et al. (2011). Scoring wasbased on a percentage, 100% denoted all quality criteria were met. Included papers scored 75% or above. Most quantitative studies scored 75% due to the reported response rates. Given

minor methodological concerns, all identified studies were included.

Data abstraction and synthesis

Papers were individually extracted into a table, categorised, grouped, and compared Whittemore and Knafl (2005) . Following abstraction, verification of new conceptualisations was conducted in consultation with the primary data sources (Whittemore & Knafl, 2005). A synthesis of key themes was verified by all authors in terms of identification, analysis and interpretation and reporting (Braun & Clarke, 2006).

Results

Of the 15 included papers, 12 (80%) were from Europe and 3 (20%) were from Australia (see Table 1). Most were qualitative (n=9, 60%) and used a variety of methodologies.

****INSERT TABLE 1 HERE****

Analysis revealed four key themes: 1. GPNs' views of the nurse-patient relationship,

2. Motivational interviewing 3. Barriers to practice, and 4. Role parameters. Each ofthese is discussed in detail below.

1. *GPN views of the nurse-patient relationship*

The studies described how nurses strived to take a person-centred and directive approach to their communication with patients (Hörnsten et al., 2014; Lambe, Connolly, & McEvoy, 2008; Nolan et al., 2012). When discussions went off-track, a directive approach was employed to steer conversations back to the consultation's purpose (Hörnsten et al., 2014). Aspects of person-centred care were evident where communication was individually tailored after consideration of content, context and delivery, language, culture, and knowledge deficits (Boase, Mason, Sutton, & Cohn, 2012; Brown & Thompson, 2007; Hörnsten et al., 2014; Jansink et al., 2010; Nolan et al., 2012). Contextualising care to the individual patient was found to be important but needed to be done within a relationship of trust (Boase et al., 2012; Cass, Ball, & Leveritt, 2014; Douglas et al., 2006; Hörnsten et al., 2014). When this trust was present, person-centred care was facilitated through attention to patients' social supports, resources and environmental constraints, and showing sensitivity and empathy (Brown & Thompson, 2007; Jansink et al., 2010; Lambe et al., 2008; Östlund, Wadensten, Kristofferzon, & Häggström, 2015).

The use of person-centred, or culturally appropriate communication delivery, was enacted inconsistently. Some GPNs used instructive approaches, while others used 'shock tactics' to encourage behaviour change (Hörnsten et al., 2014; Lambe et al., 2008; Nolan et al., 2012). Despite reports of nurses' beliefs in taking a person- centred or culturally appropriate approach to care, they were often described as being frustrated by their perceptions of patients' poor self-discipline, unwillingness and limited insight regarding the need to make lifestyle changes (Hörnsten et al., 2014; Jallinoja et al., 2007; Jansink et al., 2010; Lambe et al., 2008). Patient empowerment was considered the key for motivation and ownership of an individual's health care (Boase et al., 2012). The absence of lifestyle risk communication, and the method employed were two factors that impacted on patient engagement. For example, some nurses were uncomfortable with addressing issues

such as weight or smoking, or did not strive for open and empathetic modes of communication delivery (Brown & Thompson, 2007; Hörnsten et al., 2014; Jallinoja et al., 2007; Lambe et al., 2008; Michie, 2007; Östlund, Kristofferzon, Häggström, & Wadensten, 2015). There were inconsistencies in the included studies about whether the use of documentation and adherence to protocols assisted in patient engagement or built the trust deemed necessary for individually meaningful lifestyle risk communication (Boase et al., 2012; Hörnsten et al., 2014; Nolan et al., 2012).

2. Motivational Interviewing

Three studies assessed nurses' experiences using MI and self-rated performance as a framework for lifestyle risk factor communication (Brobeck, Bergh, Odencrants, & Hildingh, 2011; Östlund, Kristofferzon, et al., 2015; Östlund, Wadensten, et al., 2015). While clinically demanding, MI was seen as a satisfying, stimulating, useful and effective method in assisting lifestyle change (Brobeck et al., 2011; Östlund, Wadensten, et al., 2015). Managerial support, patience, flexibility, and interest in MI were seen as key factors to the technique's implementation and success (Brobeck etal., 2011; Östlund, Wadensten, et al., 2015).

Motivational interviewing assisted in providing structure for communication and facilitating patient clarification of self-determined strategies for change, while maintaining person-centred care (Brobeck et al., 2011). However, despite positive regard expressed by nurses trained in MI, it was reported that nurses tended to overestimate their self-rated performance compared with assessor scoring (Östlund, Kristofferzon, et al., 2015). Ongoing support, training and feedback were identified asimportant to maintaining proficiency (Brobeck et al., 2011; Östlund, Kristofferzon, et al., 2015).

3. Barriers to practice

Preventative and health promotion tasks were viewed positively by nurses, who aspired to increase their practice of these (Douglas et al., 2006; Keleher & Parker, 2013). However, personal, professional and organisational factors created barriers torole expansion.

a) Personal factors

Personal barriers centred on the nurses' interest, confidence and struggles with communication techniques. Nurses lacked confidence due to perceived knowledge deficits and the emotional consequences of subjects such as weight management (Cass et al., 2014; Hörnsten et al., 2014). Nurses also required motivation to use specific techniques, such as MI, to ensure the communication technique's adoption (Brobeck et al., 2011; Östlund, Wadensten, et al., 2015). Motivation was therefore required to contend with difficulties learning a new technique and the change from traditional communication methods (Östlund, Wadensten, et al., 2015).

Nurses' reported challenges with their motivation when lifestyle advice was provided repeatedly with uncertain commitment to behaviour change, potentially impacting on empathy for the patient (Jansink et al., 2010; Lambe et al., 2008; Martin, Leveritt, Desbrow, & Ball, 2014; Nolan et al., 2012). Some papers described nurses' struggles with internal conflict or cognitive dissonance, such as in weight management consultations, or when there was potential for patients' perceptions of the nurses' own lifestyle risk factors (such as being overweight) to be an impediment to patient receptiveness (Brown & Thompson, 2007; Hörnsten et al., 2014; Jansink et al., 2010;Michie, 2007). Additionally, one paper described inhibiting factors for providing dietary advice, such as time, were more likely to be reported amongst nurses who were overweight (Martin et al., 2014).

b) Professional factors

Improving nurses' knowledge, experience and the availability of training regarding communication content and delivery featured prominently as a barrier to lifestyle risk discussions. The consultation technique, involving a person-centred approach rather than an advising or educating model, was acknowledged as an important factor in supporting behaviour change (Jansink et al., 2010). Training and experience was seen to improve opportunistic lifestyle risk encounters, personal resourcefulness and self-perceived effectiveness (Cass et al., 2014; Douglas et al., 2006; Hörnsten et al., 2014; Jansink et al., 2010; Martin et al., 2014; Michie, 2007; Nolan et al., 2012).

However, many nurses, particularly those with more experience, described feeling underprepared to provide lifestyle risk factor counselling (Cass et al., 2014; Jallinoja et al., 2007; Martin et al., 2014; Nolan et al., 2012). Barriers to achieving knowledge and skill improvement were found to exist around time, funding and availability of training opportunities (Cass et al).

c) Organisational factors

Organisational and practice resourcing constraints included government funding for lifestyle discussions, the availability of patient educational materials and appropriate consultation space (Boase et al., 2012; Douglas et al., 2006; Keleher & Parker, 2013; Lambe et al., 2008; Östlund, Wadensten, et al., 2015). Workplace and government priorities, such as time allocation and funding structures, impacted on GPN lifestyle discussions, which were seen to require considerable amounts of time (Keleher & Parker, 2013; Lambe et al., 2008). Time allocation impacted on the volume to be discussed, establishment of rapport and the progressive delivery of information over time (Cass et al., 2014; Douglas et al., 2006; Jallinoja et al., 2007; Jansink et al., 2010; Keleher & Parker, 2013; Lambe et al., 2008; Martin et al., 2014; Östlund, Wadensten, et al., 2015).

4. Role parameters

While GPNs were viewed as approachable and well positioned to provide lifestyle risk advice, this mainly occurred opportunistically within chronic disease management consultations, rather than having clearly defined dialogue content, roles and responsibilities within the multidisciplinary team (Cass et al., 2014; Keleher & Parker, 2013; Lambe et al., 2008). This was true of interventions related to weight management between general practitioners and nurses, and nutrition care between dieticians and nurses (Cass et al., 2014; Jansink et al., 2010; Nolan et al., 2012). The inherent complexity of health education and the multidisciplinary approach to lifestyle risk communication necessitated collaboration between providers (Jansink et al., 2010; Keleher & Parker, 2013). However, more feedback from providers such as dieticians was sought by nurses (Jansink et al., 2010).

Discussion

This review highlighted four key areas that are important for effective lifestyle risk communication with patients in primary care: the nurse-patient relationship; motivational interviewing, barriers to practice, and role parameters. Addressing these individually provides an inadequate platform for effective lifestyle risk communication between nurses and patients. However, a concerted approach for improved GPN roles and interventions could support lifestyle risk factor reduction, encouraging patients' self-management of chronic disease (Desborough et al., 2016, Stephen, McInnes & Halcomb, 2018).

A person-centred approach refers to nurses' relationships with patients, based on trust and respect, individual rights and personal preferences (Australian College of Nursing, 2014). A person-centred approach is also associated with improved patient care, satisfaction and involvement as well as decreased interventions (Mason & Butler, 2010). This review identified that GPNs wanted to undertake a person-centred

approach to lifestyle risk communication but did not want to undermine rapport by raising potentially emotionally charged subjects such as weight management (Boase et al., 2012; Brown & Thompson, 2007; Hörnsten et al., 2014; Jansink et al., 2010; Nolan et al., 2012). However, person-centredness is essential to lifestyle risk communication, including building rapport, and sensitive discussion of potentially difficult subjects (Mason & Butler, 2010; Resnicow & McMaster, 2012). While behaviour change theories were not the focus of the study, the GPN's reflective listening allows patients to express reasons for not changing behaviour without feeling pressure or judgement (Resnicow & McMaster, 2012). "Rolling with resistance" is a key component of the MI process (Resnicow & McMaster, 2012). As such, discussion of emotionally charged subjects forms part of the person-centred delivery of lifestyle risk communication and underscores GPN training and educational needs.

Time is essential for lifestyle risk communication, both in terms of duration and timing to ensure readiness for behaviour change (Mason & Butler, 2010). Availability of time, however, is dictated by workplace priorities and government funding arrangements (McInnes et al., 2017; Phillips, 2007). In this review, time allocation was found to directly impact on the presence, type, quality, and duration of lifestyle risk communication (Boase et al., 2012; Brobeck et al., 2011; Cass et al., 2014; Douglas et al., 2006; Jallinoja et al., 2007; Jansink et al., 2010; Keleher & Parker, 2013; Lambe et al., 2008; Nolan et al., 2012). Furthermore, nurses expressed uncertainty about their knowledge, effectiveness, confidence and motivation to undertake lifestyle risk communication. Allocating time and workplace support for ongoing training in behaviour change counselling techniques, such as MI, can maintain confidence and competence in these techniques (Cass et al., 2014; Hörnsten et al., 2014; Jansink et al., 2010; Lambe et al., 2008; Martin et al., 2014; Nolan et al., 2012; Schwalbe, Oh, & Zweben, 2014).

Funding models have been demonstrated to influence GPN clinical practice (Halcomb et al., 2008; Hegney et al., 2013; Phillips et al., 2009). In the primary care environment, where chronic disease care demands are increasing, there is both opportunity and need for organisational and government support of GPN activities to be bolstered (Halcomb et al., 2008). Alternative funding arrangements supporting ongoing GPN provision of lifestyle risk communication could fill the needs identified in this review for those at risk of lifestyle-related diseases.

Issues of role clarity and expansion identified within the review resonate with the literature regarding the GPN role (Halcomb et al., 2008; Lorch et al., 2015). Role ambiguity has been influenced by historical patterns of care and hierarchy within general practice (Oelke et al., 2014). However, clarified roles provide a basis for effective optimisation of GPNs' roles (Oelke et al., 2014).

Despite its contribution to knowledge the review has limitations. First, the review focused on lifestyle risk communication with adults in primary care. Given the complexities and differences in lifestyle risk factor modification in younger people, this group were excluded. However, with a predominance of chronic disease in the adult population, we believe the review covered the most relevant demographic.

Second, the available literature did not describe the use of non-verbal communication in GPN-patient lifestyle risk encounters, identifying an important gap in the research and the need for further research in this area.

Conclusion

The findings of this review are reflective of influences on the GPN role more broadly, strengthening the findings of previous research. While the evidence unequivocally supports the effectiveness of GPNs working with patients to modify lifestyle risk factors, to date there has been limited investigation of the experiences of nurses in providing such support. It demonstrates that further optimisation of the GPN

workforce and skills could enhance the provision of lifestyle risk communication. For GPNs to deliver ongoing and effective lifestyle risk communication, ongoing and effective training, funding and infrastructure supports need to be in place. Our findings demonstrate a gap in the evidence regarding non-verbal lifestyle risk communication between nurses and patients. Research in this area would further bolster our capacity to inform effective communication strategies and management ofchronic disease in primary care.

References

nurs* AND

“family practice” OR “general practice” OR primary care AND

“lifestyle” OR “life style” OR “behav* risk factor*” OR “chronic disease management” AND

“health promotion” OR “patient education” OR counsel* OR “motivational interview*” OR communication OR “patient relations” OR prevention AND

attitude* OR perception* OR experience* OR perspective*

Figure 1 Search Terms

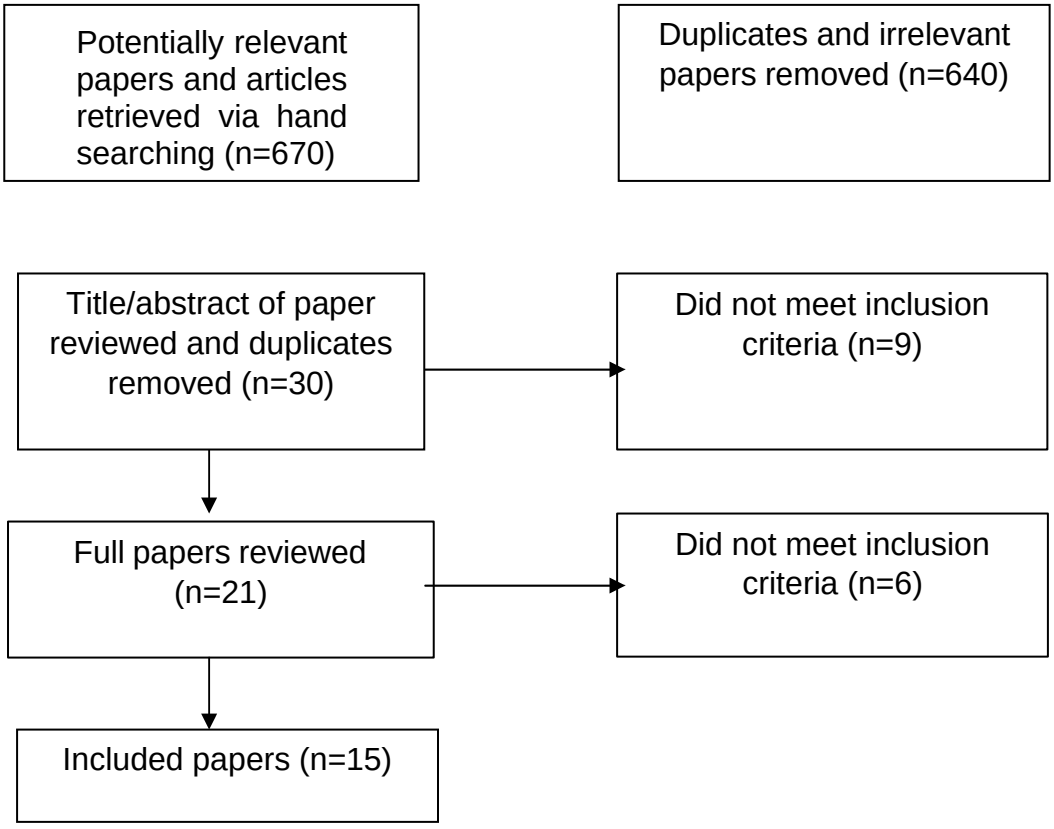

Figure 2 Process of paper selection – Prisma Flow diagram

Table 1: Overview of included studies

Reference	Aim	Country	Sample	Methods	Findings
Boase et al. (2012)	Nurse perspectives communicating cardiovascular (CV) risk	United Kingdom	28 Nurses	Qualitative Focus Groups Interviews	• Nurses' concerns: CV risk guidelines / templates helpful but potentially risked patient engagement and trust necessary for individually appropriate empowerment and motivation. • Making risk scores individually meaningful was a challenge: 1.Time constraints concerning volume to be discussed, establishing rapport, opportunities for lifestyle risk discussion and 'drip feeding' of information over time. 2. Individual context needed for face to face discussion. Additionally, introduction of CV risk discussion potentially depended upon other personal circumstances, and the ability to 'pitch' language and information. 3. Risk scores can empower or cause patients to adopt a sick role. To combat this, nurses focussed generally on risk reduction, maintaining and improving health.
Brobeck et al. (2011)	Nurse experiences of health promotion using MI	Sweden	20 Nurses	Qualitative Interviews	• MI was seen as a valuable tool. Perceived to be stimulating, providing development in new ways of thinking, facilitating better dialogue, and effective compared to other methods. • Demands: MI requires time to learn and undertake MI, professional experience, ongoing training, interest and motivation, respect and understanding. • Awareness: Assists clarification of nurses' role and patient determined lifestyle change strategies. • Care relationship: Assists trust where the patient has a central role in behavioural change, reciprocity where patients are expert in their motivational impetus, and tolerance if lifestyle change was unsuccessful.
Brown and Thompson (2007)	Nurse attitudes, perceptions and beliefs of their body size in relation to giving obesity advice	United Kingdom	15 Nurses	Qualitative Interviews	• Sensitivity about obesity: Awkwardness is dependent upon nursing context, consultation purpose, nurse knowledge and presence of clinical guidelines. Awkwardness is also driven by difficulties achieving change. Strategies included softening language, visual aids and discussion of lifestyle and general health. • Complexity of obesity: Individualised, empathetic and non-judgemental approach was used avoiding stereotypes and over simplistic explanations. • Effects of own body size: 1. Nurses with high BMI felt guilt about being an appropriate role model, possessed high empathy but critical and judgemental about obese people. 2. Nurses with low BMI were particularly sensitive about not wanting to appear to lack empathy. Strategies were to avoid broaching the subject, discuss experiences of others, and portrait themselves as being weak.

Reference	Aim	Country	Sample	Methods	Findings
Cass et al. (2014)	Nurse role and competency in providing nutrition care	Australia	20 Nurses	Qualitative Interviews	• Perception that basic nutrition care is an important part of GPNs role as they are ideally placed, approachable and highly trusted. • Nurses are aware of and reluctant to cross professional boundaries that exist around nutrition care, boundaries are not always clear. Referral based on PN confidence. • Nurses felt effective nutrition care requires assessment, communication and evidence based knowledge. Delivery should occur nonjudgmentally and with empathy. • Nurses wanted nutrition education opportunities that are specific, ongoing and mandatory. Barriers to education include time, funding and opportunity. • Barriers: Time, lack of nutrition knowledge, confidence and lack of patient enthusiasm.
Douglas et al. (2006)	Nurse attitudes, beliefs and practice associated with physical activity (PA) advice	Scotland	381 HVs and GPNs	Mixed methods Survey Interviews	• Health Visitors (HVs) and GPNs wrongly felt PA levels were increasing amongst the general population. Relatively low levels of accuracy and knowledge about PA guidelines were shown by HVs (11%) and PNs (9%). PNs and HVs identified benefits of PA in terms of health promotion, wellbeing and self-esteem as well as moderating the effects of ageing. • Advice tailored based on GPN perception of the patient's circumstances such as underlying and presenting conditions, personal circumstances and access to PA. HVs were more likely than PNs to discuss psychological benefits of PA. • Enthusiasm and importance of PA promotion were indicated by both groups. PNs and HVs would discuss PA even if the patient did not mention it. HVs were more likely to indicate they had sufficient knowledge to promote PA and agree regarding its importance. System factors such as priorities, resource constraints and time meant PA focus was largely with high-risk groups. • Inhibiting factors: Lack of educational materials, training and patient motivation. Lack of time was also an important factor (HVs10% vs 21% PNs). Lack of patient motivation was an unlikely barrier to raising PA.

Reference	Aim	Country	Sample	Methods	Findings
Hörnsten et al. (2014)	Dialogue strategies by nurses about health and lifestyle within an intervention program	Sweden	10 Nurses	Qualitative Interviews	• Using a tool to guide discussions could put pressure on patients who were not ready to make changes. • Individual, sensitive and patient centred health communication was important, as was the need to steer conversation. Focus of discussion had changed over time from delivering results and facts to discussing lifestyle, stress and social conditions. • Voluntariness was part of the confidence raising process. Gaining trust was used to deal with patient avoidance. Nurse knowledge and experience allowed casual, spontaneous and personal exchange. However, some chose to use shock tactics for those who did not understand risks or the need for change. • Tools for motivation and self-efficacy were used to facilitate lifestyle change. However, nurses were frustrated with patient's who did not take ownership for improving their health. When confronted with patients who were hard to motivate, nurses introduced change in small steps that could be evaluated. • Confidence and feelings of vulnerability affected discussion of emotionally charged subjects, such as overweight, sexuality, loneliness, abuse and violence. Nurses used strategies such as raising their own weight problem or focussing on one problem at a time.
Jallinoja et al. (2007)	Doctor and nurse perceptions of lifestyle disease and risk factor management in primary care	Finland	59 Doctors 161 Nurses	Quantitative Survey	• 95% nurses felt patients must accept responsibility for lifestyle decisions. The majority of nurses also considered that a major barrier is patient unwillingness for change, more so than insufficient knowledge. • A majority of nurses considered the provision of information, motivation and support to be part of their role but >50% felt they had adequate lifestyle counselling skills. Nurses with more professional experience (43%) were less confident than those with fewer years experience (70%) in skills for lifestyle counselling. • 66% felt they have been able to help many patients change their lifestyle to be healthier. However, nurses more than GPs felt uncomfortable about discussing smoking or weight management. • 50% nurses compared to 75% GPs reported that their schedule is too busy to analyse patient life situations.

Reference	Aim	Country	Sample	Methods	Findings
Jansink et al. (2010)	Nurse barriers for lifestyle counselling of patients with type 2 diabetes	Netherlands	12 Nurses	Qualitative Interviews	• Barriers were found to exist at the nurse, patient and practice level. • Nurse: Lack of knowledge, communication skills, knowledge of how to structure action plans, motivation, empathy and time. Nurses were also hesitant to discuss lifestyle change at the peril of an existing patient relationship. Difficulties were also experienced in adapting counselling to the patient's stage of behaviour change as well as involving the patient in the decision making process. • Patient: Knowledge barriers exist relating to misinformation from peers, language difficulties and poor insight into their own behaviour and its effects. Skill restrictions exist from smoking addiction, financial and physical issues, poor access to exercise space, advice compliance and psychosocial challenges. Attitude is affected by existing habits, previous experiences, cultural differences and an unwillingness to change. Decreased discipline, poor result immediacy, difficulties and relapse all affect compliance. • Practice: Barriers include decreased time, dietician feedback, lack of role clarity and unclear responsibilities between nurses and dieticians, availability of local facility knowledge, information resources and protocols.
Keleher and Parker (2013)	Nurse perceptions of current and future roles in health promotion	Australia	78 Nurses	Qualitative Survey	• Nurses described their health promotion practice in terms of chronic disease management whereby most discussions are opportunistic, brief interventions but also include group work, clinics, patient education and referrals to address social determinants. • Most nurses would like to extend their prevention and health promotion role, particularly in healthy lifestyles, sexual health and screening. Other opportunities exist in lifestyle coaching, health education, establishing relationships, self-management education, underserved groups and patient determined lifestyle risk goals. • Barriers included; time, space, funding and resistance to nursing role expansion. However, enablers were funding and doctor attitudes.

Reference	Aim	Country	Sample	Methods	Findings
Lambe et al. (2008)	Frequency, perceived effectiveness and barriers to lifestyle counselling amongst nurses	Ireland	53 Nurses	Mixed Methods Survey Focus group	• Nurses regularly counselled patients on smoking, PA, healthy eating and weight management. • 95.7% used lifestyle counselling to help patients understand the relationship between lifestyle, health and disease. 89.1% nurses involved patients in determining risk factors for change, 88.9% involved other health care professionals, and 87% undertook goal setting. 26.1% designed action plans. • Most nurses perceived themselves to be minimally effective/ineffective at helping patients change addictive behaviours of smoking (47.6%) and risky drinking (63.6%). Highest perceived effectiveness (29.5%) was in helping change dietary behaviour. • 83.3% agreed that nurses are most appropriate to provide lifestyle counselling. 51.2% felt it was a difficult task. • Barriers to lifestyle counselling: Almost 75% reported insufficient time. Reluctance of patients to receive advice, lack of clear guidelines and insufficient patient educational materials were indicated by 50% of nurses. Only 31% indicated they would be more likely to undertake lifestyle counselling if financial incentives were available. • Lifestyle counselling strategies and approaches were largely directive health education or shock tactics but client centred and collaborative approaches were deemed best practice. • Professional support: GPs should be supportive of lifestyle counselling role to ensure continuing care. Role of the GP was deemed more medically oriented whereas nurses were seen as more approachable and effective at helping people understand information. These views were not unanimous. • While general practice was deemed the most appropriate setting for lifestyle counselling, barriers included time, perceived ineffectiveness, complexity of behaviour change and patient factors.

Reference	Aim	Country	Sample	Methods	Findings
Martin et al. (2014)	Nurse perceptions regarding the provision of nutrition care in chronic disease management	Australia	181 Nurses	Quantitative Survey	• Nurses felt obligated to provide nutrition care but there was inconsistency around self-perceived capacity and training sufficiency. 50.3% nurses used the Australian Guide to Healthy Eating (AGTHE) with most of their patients. • Most nurses (56.4%) were unsure of their counselling effectiveness. • 98% of nurses felt that further nutrition education would be of benefit but factors such as expense, family commitments, and lack of time impeded attendance. • 78.3% nurses >7years practice were more likely to have attended a nutrition based continuing professional development in their career compared with less experienced nurses. A higher proportion of overweight and very overweight nurses (75%) reported a lack of time to provide nutrition care compared to healthy weight or underweight nurses (59%). 70% of nurses >50 years perceived they had enough knowledge to provide nutrition care compared with younger nurses (51%).
Michie (2007)	GP and nurse communication for overweight and obesity	United Kingdom	40 GPs 47 Nurses	Quantitative Survey	• Nurses were more likely than GPs to discuss a patient's overweight status regardless of the presence or absence of a related medical problem. When there was no identified medical problem 14% nurses compared with 38% GPs reported raising the issue on less than 50% of occasions. • When overweight was raised, only 9% followed up with weight loss solutions or health promotion advice. • GPs and nurses were concerned about raising overweight as an issue (GPs 52% and nurses 28%) due to the emotionally charged nature of the topic potentially compromising the practitioner-patient relationship. • Both GPs and nurses felt they were more likely to communicate patient need for weight loss in a directive way, however, they also felt this manner was not necessarily best practice. • Both groups desired more resources, training, knowledge and skills.

Reference	Aim	Country	Sample	Methods	Findings
Nolan et al. (2012)	Professional and practice based factors that affect the management of obese patients	United Kingdom	22 Nurses	Qualitative Interviews	• Role legitimacy and role adequacy in the management of obese patients was related to: • Whilst part of the role, familiarity with guidance resources and training was needed for client-centred empowerment strategies particularly around obesity. • Motivation was intuitively assessed and compliance sought with preventative medical procedures such as weight. However, expertise and knowledge of community based programs, how to motivate patients, nutrition, child obesity and assessment was sought. • Nurses believed their communication skills were beneficial for rapport but some contexts and patient types were more appropriate to raise weight management than others. • Nurses who had weight management training and time to implement what they had learnt felt effective but this contrasted with beliefs about limitations of outcome resulting from patient motivation. • There was ambivalence about the practice's effectiveness compared with commercial slimming groups. • Decreased practice based priority for obesity as well as lack of time available, role clarity and workload pressures featured.
Östlund et al. (2015a)	Assessment of nurse MI performance compared to self-rated MI performance	Sweden	12 Nurses 32 Consults	Quantitative Observation Survey	• Nurses had training and used MI to varying degrees over the previous 2-11 years. • Scored on Motivational Interviewing Integrity Code (MITI) 3.1.1 • Nurses self-rated highly on all 5 dimensions, showing an overestimation of performance compared with MITI scores on 4 dimensions. • Variations existed within nurses own sessions as well as between nurses. • Nurses self-rated more simple reflection than complex, more open than closed questions, and more MI adherent than nonadherent. Actual performance indicated an overestimation of open questions and an underestimation of complex reflections. • No nurse achieved beginning proficiency on every variable in all sessions. Most nurses achieved beginning proficiency on complex reflection, then empathy. Lowest was open questions and MI spirit rating. • Those with high MITI scores were more likely to have had extensive training. MI training does improve skills but extended contact, feedback and interventions results in more skill retention.

Reference	Aim	Country	Sample	Methods	Findings
Östlund et al. (2015b)	Experiences of MI use by nurses	Sweden	20 Nurses	Qualitative Interviews	• Mutual interest and support by the nurse, patient and organisation is required for MI use. • Nurses experience internal resistance adopting MI due to difficulties and aversion to learning new techniques and insecurities about technique use. Additionally, MI is a technique requiring openness to ongoing learning as well as an encouraging work climate and collective agreement in its use. • Sufficient time to use and reflect on the technique, feedback on practice, appropriate office space, patient volume, training and managerial understanding and support in its use is required. • Users and nonusers of MI felt the technique elicits patient motivation. The technique also develops the nurses' ability to motivate through understanding, engagement, empowerment, and empathy.

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