Nurses' role in health promotion and prevention: a critical interpretive synthesis

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Abstract

Background: Role confusion is hampering the development of nurses' capacity for health promotion and prevention. Addressing this requires discussion to reach agreement among nurses, managers, co-workers, professional associations, academics and organizations about the nursing activities in this field. Forming a sound basis for this discussion is essential.

Aims and objectives: To provide a description of the state of nursing health promotion and prevention practice expressed in terms of activities classifiable under the Ottawa Charter and to reveal the misalignments between this portrayal and the ideal one proposed by the Ottawa Charter.

Methods: A critical interpretive synthesis was conducted between December 2018 and May 2019. The PubMed, CINAHL, Scopus, PsychINFO, Web of Science and Dialnet databases were searched. 62 papers were identified. The relevant data were extracted using a pro-forma and the reviewers performed an integrative synthesis. The ENTREQ reporting guidelines were used for this review.

Results: 30 synthetic constructs were developed into the following synthesizing arguments: (1) addressing individuals' lifestyles VS developing their personal skills; (2) focusing on environmental hazards VS creating supportive environments; (3) action on families VS strengthening communities; (4) promoting community partnerships VS strengthening community action; and (5) influencing policies VS building healthy public policy.

Conclusions: There are notable misalignments between nurses' current practice in health promotion and prevention and the Ottawa Charter's actions and strategies. This may be explained by the nurses' lack of understanding of health promotion and prevention and political will, research methodological flaws, the predominance of a biomedical perspective

within organizations and the lack of organizational prioritization for health promotion and prevention.

Key words: health promotion, disease prevention, nursing role, critical interpretive synthesis

1. Introduction

The Ottawa Charter came up as a new approach to address population's health in response to critique regarding the biomedical nature of the health system and the limitations of education strategies for improving health (Kickbush, 1986). In particular, the Ottawa Charter put forward the involvement of the health sector and multiple stakeholders with a broader social, political, economic and physical environmental focus in pursuing five action areas: building healthy public policy, creating supportive environments, strengthening community action, developing personal skills and reorienting health services; that could be addressed using three strategies: advocacy, enablement and mediation (See Table 1) (WHO, 1986).

Research provides evidence that health promotion and prevention (HPP) interventions using a combination of the Ottawa Charter's action areas and strategies are effective and cost-effective in preventing chronic diseases, addressing health determinants and improving the population's health (Jackson et al., 2006). However, the implementation of HPP following the Ottawa Charter's principles has been challenging in health systems and services, largely due to the lack of workforce capacity for HPP (Potvin and Jones, 2011).

Among the existing HPP health care workforce, nurses are especially relevant. Nurses not only have close contact with patients, a positive attitude and interest in HPP (Wilhelmsson and Lindberg, 2009) but also have been described as competent for developing this role due to their professional knowledge, skills and philosophy (Pender, 2013). This is especially true for community and public health nurses or nurses who work in community-based settings, prisons, schools, health promoting hospitals and planning and management positions where opportunities for HPP abound (Whitehead, 2011; WHO, 2017).

The development of nurses' capacity for HPP is being hindered by the existing uncertainty about what activities nurses should perform to accomplish their role in this field, something that Biddle (2013) has called role confusion. Role confusion precedes role avoidance (Rizzo et al., 1970). If professionals are not sure of what their role entails, they tend to miss, omit or improvise actions, exposing themselves to the risk of errors, ineffectiveness or inefficiency (Mañas et al., 2018; Rizzo et al., 1970; Tucker et al., 2015); and to think that other professionals are responsible for those activities. The resulting stress and loss of accountability leads to disengagement and lowered role performance (Hassan, 2013; Mañas et al., 2018).

Role confusion is evident in the literature discussing nurses' practice in HPP, where the consensus on the scope and boundaries of nurses' practice in this field has not been reached (Whitehead, 2011). While some authors restrict nurses' activities in HPP to health education (Hoekstra et al., 2016; Lundberg et al., 2017) or disease prevention (Dobrowolska et al., 2014; Taggart, 2009) others recognise a much broader range of activity focused on positive health, creation of supportive environments, community and political action (Gonzaga et al., 2014; Whitehead, 2011). Role confusion is also shown among health system planners and managers when they set blurred limits for the HPP role in rules and regulations (Dahl et al., 2014; source deleted for blinded review) or incoherent strategic plans where HPP goals are prioritised without consideration of necessary changes to work schedules, reporting systems or incentives (Wilhemsson and Lindberg, 2009; source deleted for blinded review).

Addressing role confusion requires reaching intra and inter-professional agreement regarding the expectations for the role activities (Biddle, 2013; Card et al., 2014). In the field of HPP, and more specifically nursing, this would mean reaching agreement among nurses, managers,

co-workers, professional associations, academics and organizations. Research interventions directed at addressing role confusion have shown that this can be ameliorated by encouraging discussion on studied role' activities (Brault et al., 2014; Olsen and Stensaker, 2013). For this discussion to be useful, it should be based on a situational analysis of practice, which includes achieving a reasonable understanding of three aspects: the portrait for the ideal role to be pursued, the state-of-practice and the misalignments between the ideal and current practice (Biddle, 2013; Brault et al., 2014; Ly et al., 2018).

In the HPP field, the Ottawa Charter can underpin the portrait for the ideal nurses' role in HPP since, apart from providing structure for HPP practice, it enjoys legitimacy, which guarantees widespread recognition among healthcare professionals, academics or planners. Gaps in current HPP practice can be found by comparing the Ottawa Charter's actions and strategies with the state of nursing HPP practice. The latter, however, is not a straightforward exercise. Despite some reviews have provided descriptions of nursing HPP practice they have not expressed them in terms of specific activities but either in terms of nurses' competencies (Kemppainen et al., 2013) or in an abstract way (Whitehead, 2000, 2005, 2006). The nature of the existing research makes difficult comparison of data on current nursing HPP practice with the Ottawa Charter's actions and strategies.

Therefore, the aims of this study were: (1) to provide a description of the state of nursing HPP practice expressed in terms of activities classifiable under the Ottawa Charters' actions and strategies; and (2) to reveal the misalignments between this description of nursing HPP practice and the ideal one portrayed by the Ottawa Charter.

2. Methods

A critical interpretive synthesis (CIS) approach was used. This method helps synthesize and integrate large amounts of literature through an interpretive process. This approach offers an opportunity to critically examine decisions made by authors while conducting research (Dixon-Woods et al., 2006). Conceptual and methodological decisions reflect authors' expectations of the nurses' activities in HPP, providing important information for a better understanding of the evidence available in this area.

This CIS comprises the following phases: formulating the review questions, searching for literature, sampling, determining the quality of the papers, and conducting an interpretive synthesis (Dixon-Woods et al., 2006). The ENTREQ reporting guidelines (Tong et al., 2012) were used for enhancing transparency in reporting this synthesis (Supplementary File 1).

2.1 Formulating the review questions

According to CIS, research questions can be relatively broad, as one of the main purposes of this method is to allow the definition of the phenomenon to emerge from the analysis of the literature (Flemming, 2010). The review questions were:

- What activities do nurses develop in HPP practice?
- How nurses' HPP activities can be classified under the Ottawa Charters' actions and strategies?
- How nurses' HPP activities align with the Ottawa Charters' actions and strategies?

To avoid previous research limitations, operational definitions of health promotion, prevention and health education were chosen for their relevance (see Table 2).

2.2 Searching the literature

The CINAHL, Web of Science, PubMed, Dialnet, Scopus and PsycINFO databases were searched for the identification of relevant papers. The terms and variations used in this search included nurse (nurs*), health promotion/health prevention (health promotion, positive health, salutogen*, health assets, health prevention, preventive healthcare, and preventive health care) and role (role*, task*, practice*, responsibilit*, activit*, competence*, "scope of practice" and "professional boundaries"). Strings were used to retrieve the maximum number of references. Papers from 2005 onwards were considered because the literature regarding HPP began increasing considerably at that time (Kemppainen et al., 2013).

2.3 Sampling

Sampling was performed purposively to maximize the inclusion of a wide variety of studies that helped explain a complex phenomenon such as nurses' activities in HPP. The inclusion criteria were: (1) original research using quantitative, qualitative or combined methods; (2) the objective was to describe nursing activities, roles, tasks, practices or responsibilities in HPP in all types of professional contexts; (3) the participants were nurses, working in any position or role; and (4) the papers were written in English or Spanish. The exclusion criteria were as follows: (1) published works that were editorials, overviews, opinions, discussions or textbooks addressing ideal rather than current practice; (2) investigations focusing on nurses' activities, roles, tasks, practices or responsibilities other than HPP; and (3) works involving data about nurses' practice that were not reported independently from other professionals or nurses' activities that were not evident in the results section. As seen in Figure 1, showing the Prisma flow chart (Moher et al., 2009), the quest to find relevant studies retrieved a considerable number of papers (n=19.969). Initially, titles and abstracts

were reviewed for their potential relevancy. All 123 papers that appeared relevant according with the inclusion criteria were accessed in full text. The selection criteria were applied, leading to the exclusion of 61 papers, and ultimately, 62 full text papers were retained.

2.4 Determining quality

Dixon-Woods et al (2006), as the main CIS proponents, agree that decisions regarding paper inclusion should be based on relevance more than on the quality appraisal. Their appraisal checklist was chosen as it recognizes that papers might be relevant even if they do not comply with strong methodological standards while allowing for the detection of fatally flawed papers. Thus, three authors applied the following analysis to each paper: 1) clarity of stated aims and objectives; 2) appropriateness of the research design; 3) clarity of the analysis process; 4) appropriateness of the interpretations and conclusions based on the data; and 5) appropriateness and reproducibility of the analysis. Three categories were used for every quality domain, i.e. 'yes', 'no' or 'not reported'. Meetings were held to discuss and reach agreement about the papers with methodological weaknesses and only those with fatal flaws were excluded.

2.5 Conducting the interpretive synthesis

The interpretive synthesis consisted of four steps (see Figure 2) and was conducted by three researchers: understanding the paper in relation to itself, determining how the studies are related to each other, a reciprocal translation analysis and expressing the synthesis (Dixon-Woods et al., 2006; Flemming, 2010).

First, selected studies were read to establish an overview of the data and understand the content and context of each study. A pro-forma was developed (see Figure 2), allowing for

the recording of the relevant characteristics of the papers: bibliographic information, aims, study design, definitions of the main concepts that were used by the authors (role, health education, health promotion, prevention) and major findings. From each paper, the researchers extracted the titles of the categories and sub-categories and a summary of the nurses' activities in HPP. The exact terms used in the papers by the different authors were used to name the initial categories, making sure their meaning was not lost in later more interpretative stages of the analysis. Second, the categories were grouped into themes and the themes were translated from one study into another, in order to produce a reduced account of the content and context of all studies (Flemming, 2010).

The third step or reciprocal translation analysis consisted of synthesizing the previous translations, interpreting the evidence as a whole and transforming the data into new conceptual forms or synthetic constructs (Flemming, 2010). To facilitate this process, the Ottawa Charter was used as a framework and an integrative grid was developed (see Figure 2) in which its actions and strategies were directly compared with the activities from the papers. The five action areas for HPP were placed along the top of the grid. The column on the right side reflected the following three strategies for HPP: advocacy, enablement and mediation. The definitions were included in the grid, allowing the researchers to maintain consistency while interpreting and classifying each activity under the action areas and strategies for HPP. The visualization of the activities using the grid facilitated the coding process and development of synthetic constructs (see example in Figure 2). Fourth, the relationships among the synthetic constructs were studied, and authors' reflections were incorporated to generate higher order interpretations of the data or synthesizing arguments. By analysing and reflecting upon the frequency distributions and labelling of the synthetic

constructs, synthesizing arguments representing the misalignments between nurses' current activities and the Ottawa Charters' actions and strategies were generated.

3. Results

Sixty-two papers were analysed (for details see supplementary file 2). Thirty-four studies were qualitative, 19 quantitative, six mixed-methods and three literature reviews. Papers described nurses' practice in HPP in a wide variety of work settings: hospitals (11), schools (9), primary care centres (33) and other type of community settings (7) such as public dental and occupational health services or residential aged care centres. Two papers looked at nurses' practice either in hospitals and community services. Regarding nurses' titles, all the studies included registered nurses in their samples. Some of them provided specifications of nurses' different types of qualifications: district nurses (9), school nurses (7), parish nurses (1), nurse practitioners (8), clinical nurse specialists (2), occupational nurses (2), community health nurses (4) , practice nurses (4), primary health care nurses (1), mental health nurses (1), midwifes (1) and public health nurses (7). The majority of papers included front-line professionals and only two papers considered nurses in middle or top management positions.

Based on the analysis, 30 synthetic constructs representing translations of nurses' activities into activities classifiable under the Ottawa Charters' actions and strategies (see Figure 2) were identified and developed into five synthesizing arguments describing the alignment between nurses' activities and the Ottawa Charter's actions and strategies.

3.1 Addressing individuals' lifestyles VS developing their personal skills

This argument reflects that the Ottawa Charter's action of developing personal skills is reduced in nursing practice to addressing individuals' risk factors and lifestyles. In several

papers, this is the only action nurses develop (Aldossary et al., 2013; Al-Ghamdi et al., 2018; Casey, 2007a; Crnica et al., 2013; Hidalgo et al., 2016; Hong, 2010; Hurkmans et al., 2011; Jerden et al., 2006; Johnson et al., 2018; Karvinen et al., 2012; Lundberg et al., 2016; Lundberg et al., 2017; Quinn et al., 2018; Shoqirat, 2014; Tanda et al., 2017; van de Glind et al., 2016) and generally performed in an individualistic, opportunistic and disease-focused way.

After assessing the health status, nurses commonly address lifestyles by providing information to individuals with the objective of changing behaviours. All selected papers mention that health education, counselling and providing advice are important nursing activities. Two activities were considered essential for educating individuals: creating an appropriate environment for the educational process (Gonzaga et al., 2014; Grundberg et al., 2016; Jerden et al., 2006; Larsson et al., 2014; Pham and Ziegert, 2016; Samarasinghe et al., 2010) and establishing an interpersonal relationship that allows for the continuity and evaluation of actions (Berg et al., 2005; Gonzaga et al., 2014; Hernandez and Anderson, 2012; Jerden et al., 2006; Larsson et al., 2014; Lundberg et al., 2016; Lundberg et al., 2017; Marent et al., 2016; Runciman et al., 2006; Samarasinghe et al., 2010). Providing emotional or spiritual support also appears to be relevant for nurses as a way to enhance individuals' life-skills (Dobrowolska et al., 2014; Grundberg et al., 2016; King and Pappas-Rogich, 2011; Morrison-Sandberg et al., 2011; Richard et al., 2010; Runciman et al., 2006; Samarasinghe et al., 2010).

Nurses advocate for their clients' health and mediate between the clients and other health care professionals who can help address lifestyle issues. Occasionally, nurses refer patients to other services, such as physical therapists, fall clinics, dietitians, lifestyle programmes,

smoking cessation services and addiction care (Casey, 2007a; Ganz et al., 2015; Geller et al., 2011; Gonzaga et al., 2014; Goodman et al., 2011; Grundberg et al., 2016; Hahn, 2014; King and Pappas-Rogich, 2011; Samarasinghe et al., 2010; Taggart, 2009; van de Glind et al., 2016).

However, evidence of patient participation in the decision-making process (Abe et al., 2014; Alexandropoulou et al., 2010; Gonzaga et al., 2014; Hernandez and Anderson, 2012; Larsson et al., 2014; Runciman et al., 2006; van de Glind et al., 2016), planning educational activities (Abe et al., 2014; Alexandropoulou et al., 2010; Gonzaga et al., 2014; van de Glind et al., 2016), practice of skills or evaluation of skill development (Abe et al., 2014; Alexandropoulou et al., 2010; Larsson et al., 2014; Runciman et al., 2006; Tanda et al., 2017) is limited, highlighting the misalignment between nurses' activities and the Ottawa Charter's proposal for developing individuals' personal skills.

3.2 Focusing on environmental hazards VS creating supportive environments

Instead of being involved in the development of the physical and social environment in a way that supports health as suggested by the Ottawa Charter, nurses provide services and programmes that protect individuals from environmental hazards.

Some evidence suggests that nurses assess the quality and safety of the physical environment (Geller et al., 2011; Grundberg et al., 2016; Hahn, 2014; Javanainen-Levonen et al., 2007; Naumanen and Liesivuori, 2009). These assessments are mainly conducted to detect risk factors present in the home or workplace. Hoekstra et al. (2016) provides an example of how nurses assess environmental impacts on community health during periods of greater risks, such as drought.

Some nurses provide families with information about environmental risks at home (Samarasinghe et al., 2010). In their literature review of injury prevention, Crnica et al. (2017) highlighted that nurses counsel about chemical storage in the household or the use of railings on stairways among others.

Regarding the protection of individuals from environmental hazards, many activities, such as vaccination campaigns (Hoekstra et al., 2016; Irvine, 2007; King and Pappas-Rogich, 2011; Kwatubana, 2018; Richard et al., 2010; Roden et al., 2016; Samarasinghe et al., 2010; Thompson et al., 2008), disease screening, contact tracing and partner notification to prevent sexually transmitted diseases (Abe et al., 2014; Sannisto and Kosunen, 2009; Thompson et al., 2008), are performed to protect individuals from biological aggression.

There are only a few examples of activities performed to achieve a healthier natural environment, such as nurses advocating for a safer environment, educating communities or promoting recycling (Muckian et al., 2017; Naumanen and Liesivuori, 2009; Runciman et al., 2006).

There is no evidence of nurses promoting or developing activities to change built and/or social environments to support health, highlighting a misalignment with the Ottawa Charter's idea of creating supportive environments.

3.3 Action on families VS strengthening communities

Nurses concentrate most of their activities on families rather than the community in its broader definition as suggested by the Ottawa Charter.

They include family members in the education process (Arpalahti et al., 2012; Dobrowolska et al., 2014; Gonzaga et al., 2014; Khalaf et al., 2017; Larsen et al., 2006; Morrison-Sandberg

et al., 2011; Muckian et al., 2017; Pham and Ziegert, 2016; Richard et al., 2010; Sannisto and Kosunen, 2009; Spivack et al., 2010; Taggart, 2009; Whitehead et al., 2008) and carry out interventions with the family members (Hoekstra et al., 2016; Onnela et al., 2014; Samarasinghe et al., 2010).

However, there is no evidence of the establishment of partnerships with relatives or skill development. Few studies provide evidence of planning and implementing interventions with relatives (Onnela et al., 2014; Samarasinghe et al., 2010).

Focusing on families while overlooking the broader community as a source of support shows an obvious distance from the Ottawa Charter's action of strengthening community action. This gap is recurrent, as it is shown in the following argument.

3.4 Promoting community partnerships VS strengthening community action

Nurses attempt to sustain established community partnerships to organize new activities or refer individuals to other community resources, but there is no evidence of communities being supported by nurses in decision-making processes and collective action for HPP. The latter is an essential feature of the Ottawa Charter's action directed toward strengthening community action.

Some authors describe nurses' activities or partnerships within the community to address specific determinants of health , such as physical exercise and sexual or emotional health (Hernandez and Anderson, 2012; Larsson et al., 2014; Marent et al., 2016; Morrison-Sandberg et al., 2011; Onnela et al., 2014; Ribera et al., 2005; Samarasinghe et al., 2010). Nurses strive to maintain sustainable relationships with other institutions at the local level, including neighbourhoods, community workers, churches, the volunteer sector, fitness

centres, teachers, food service staff at schools and city councils (Heidemann et al., 2019; Kwatubana, 2018; Manasatchakun et al., 2017; Marent et al., 2016; Marent et al., 2018; Morrison-Sandberg et al., 2011; Muckian et al., 2017; Onnela et al., 2014; Ribera et al., 2005; Samarasinghe et al., 2010). In the hospital setting, nurses support patient involvement within the community and organize patients' clubs both inside and outside hospitals to increase emotional support from other individuals with identical pathologies (Pham and Ziegert, 2016). There is also an example of nurses organizing and participating in a walking programme in the community (Hernandez and Anderson, 2012) and nurses referring individuals to community health assets, such as swimming pools or walking groups (Goodman et al., 2011).

Occasionally, nurses' activities address more complex social determinants of health, managing social and community networks when they address underprivileged populations. Nurses develop networks and coordinate stakeholders, such as social care, counsellors, the Red Cross Organization, community volunteers, the economic sector and municipal services, all of which can provide different types of assistance (Abe et al., 2014; dos Reis Moreira and O'Dwyer, 2013; Hoekstra et al., 2016; King and Pappas-Rogich, 2011; Samarasinghe et al., 2010). In addition, nurses provide community education, facilitate community support groups and refer individuals to social services in the community.

A few papers demonstrate that community assessment is a common nursing activity in HPP (Gonzaga et al., 2014; Hoekstra et al., 2016; Heidemann et al., 2019; Whitehead et al., 2008), but there are no examples of bringing people together to discuss, plan and develop community action. This evidence illustrates an important misalignment with the Ottawa Charter's definition of strengthening community action.

3.5 Influencing policies VS building healthy public policy

Nurses are involved in influencing local policies; however, this involvement is far from advocating or participating in government (international, national, state and/or local) implementation of measures addressing legislation, regulation, and/or fiscal matters suggested by the Ottawa Charter. There is little information regarding the influence exercised by nurses on policies, and no description of the types of activities nurses perform. In their study investigating the HPP practices of school nurses, Alexandropoulou et al. (2010) stated that a small percentage of nurses in their survey influenced school policies. Similarly, other authors emphasize that nurses exert pressure to influence social issues affecting older people (Runciman et al., 2006) or that they exert influence on policies by being involved in wellness councils (Morrison-Sandberg et al., 2011).

There is no evidence of nurses placing health on the agenda of policy makers in multiple sectors at the international, national or state level, highlighting the misalignment with the Ottawa Charter's action of building a healthy public policy.

4. Discussion

This CIS provided an analysis of nurses' current practice in HPP expressed in terms of activities classifiable under the Ottawa Charters' actions and strategies. In addition, it highlighted that in HPP practice, nurses' activities are not aligned with the actions and strategies proposed by the Ottawa Charter. Five synthesizing arguments describe these misalignments: (1) addressing individuals' lifestyles VS developing their personal skills; (2) focusing on environmental hazards VS creating supportive environments; (3) action on families VS strengthening communities; (4) promoting community partnerships VS

strengthening community action; and (5) action on policies VS building healthy public policy. Another misalignment between nurses' HPP practice and the Ottawa Charter proposals highlighted in this review is that there is little combination between actions and strategies.

Indeed, addressing individuals' lifestyles is the only identified action in several papers. There might be different explanations for this finding, such as the existence of methodological flaws in the research, the lack of an understanding of the concept of HPP, or the lack of nurses' political will and action.

Methodological flaws might have prevented the identification of activities in nurses' practice other than addressing individuals' lifestyles. Reducing HPP to health education is a common conceptual mistake that biases data collection in studies of nurses' HPP practice. For example, several surveys used closed questions that focused on nurses' educational activities in their attempt to describe nurses' practice in HPP (Aldossary et al., 2013; Crnica et al., 2013; Dobrowolska et al., 2014; Ganz, 2015; Geller et al., 2011; Goodman et al., 2011; Hidalgo et al., 2016; Johnson et al., 2018; Hurkmans et al., 2011; Karvinen et al., 2012; Larsen et al., 2006; Leviniene et al., 2009; Naumanen and Liesivuori, 2009; Quinn et al., 2018; Sannisto and Kosunen, 2009; Spivack et al., 2010; Taggart, 2009; Tanda et al., 2017). In addition, the fact that research efforts have been biased towards investigating the activity of front-line nurses may have led to the underrepresentation of activities that are being developed by nurses working at planning or managerial positions such as those related to influencing or developing of public health policies. Future research is needed to find out whether this is the case.

The predominance of "addressing individuals' lifestyles" can also be explained by nurses' lack of understanding of what "HPP is and what it does" (Whitehead, 2007). Different authors have emphasized that nurses tend to identify HPP as health education (Irvine, 2007; Whitehead, 2011). This lack of understanding might be facilitated by the design of nursing curricula, health care organizational issues and/or governments' persistence in prioritizing behavioural approaches in HPP. Indeed, over previous decades, the design of nursing curricula has been grounded in a biomedical approach such that teaching has focused on diseases and curative and preventive interventions. Accordingly, the content devoted to equipping students with knowledge and skills for HPP has been scant and reduced to health education (Whitehead, 2007). Nursing curricula should be reformed to incorporate broader elements of HPP. Nurses need to learn how they can contribute to influencing and developing public policies, engage in community-based work or develop built and social environments to support health.

The reduction of HPP to health education is also reinforced by health care organizations' strategies and managerial approaches (Kemppainen et al., 2013; Wilhemsson and Lindberg, 2009). Indeed, health organizations' goals and resource allocation seem to respond more to acute care needs and health education than to proactively developing a broader range of HPP activities (Wilhemsson and Lindberg, 2009). A reorientation of organizational objectives and incentives towards HPP and a redesign of nurses' agendas are needed to avoid the preponderance of medicalized tasks and the reduction of HPP practice to health education (source deleted for blinded review; Whitehead, 2011). For instance, including new HPP goals that extend beyond traditional health education goals into health care providers' performance evaluation could help these providers realize the broader range of HPP activities. The

overemphasis on health education is also present at the government and international agencies level. These institutions have directed the majority of HPP policies toward changing lifestyles and risky behaviours, emphasizing social marketing and health education as available HPP strategies (Baum and Fisher, 2014). If policies do not prioritize other activities in HPP, educational institutions and health care organizations will not be under pressure to change.

Nurses' lack of attention to political issues might also prevent them from becoming involved in the broader practice of HPP. The lack of activities related to influencing policies is a major misalignment with the action of building healthy public policy. Some authors have criticized nurses' lack of political will and/or opportunity to become involved in matters related to health and social care policy (Fyffe, 2009). Nurses at the front line of patient care may believe that this action should be carried out by academic leaders, professional organizations or nurses working at managerial levels as they might be more influential (Fyffe, 2009). However, small activities that could be carried out by health care professionals at any position, such as creating community awareness about healthy public policies or advocating for greater participation from communities in influencing policies, are necessary (Saan and Wise, 2011). Becoming aware of policy windows can help achieve the required shift from "political consciousness" to "political action" in both nursing education and practice (Whitehead, 2011).

In addition to the lack of combination of actions and strategies and nurses' focus on individuals' lifestyles, the misinterpretation of some of the Ottawa Charter's actions was evident in this CIS. Nurses' tendency to focus on individuals and their families rather than on the community has also been previously highlighted (Richard et al., 2010; Runciman,

2014). Further research is necessary to understand the reasons behind these misinterpretations. In the meantime, expanded and more precise definitions of key concepts in HPP such as community, ecosystem, social network, environmental and support systems could be reinforced in healthcare professionals' curricula and HPP training activities.

This CIS was preceded by a clarification of concepts to prevent a misunderstanding of the terms. The CIS process provided deep insight and allowed for a critical interpretation of nurses' HPP activities. This analysis is particularly important for this topic because the amount of literature is vast and complex, and literature that would typically be excluded from a systematic review should be analysed. Although every effort was made to reduce bias in this CIS, relevant papers might not have been identified due to language restrictions. The validity and credibility of CIS is occasionally questioned compared with conventional systematic reviews that allow for the reproduction of findings, but the CIS approach "can generate testable hypotheses and empirically valuable questions for future research" (Dixon-Woods et al., 2006, p. 11).

5. Conclusion

Role confusion is hampering the development of nurses' capacity for HPP. Addressing role confusion requires discussion to reach agreement among nurses, managers, co-workers, professional associations, academics and organizations about the expected nursing activities in HPP. This CIS has provided a sound basis for this discussion: an analysis of nurses' activities in HPP expressed in the terms of the Ottawa Charter's action and strategies and the identification of the misalignments between ideal and current nursing practice in HPP.

To develop their role in HPP, nurses should direct their efforts to address the practice gaps identified in this review. In this sense, the authors recommend to work under the paradigm of positive health, focusing on equity in health and ways to address structural and intermediary determinants of health. The health determinants approach can guide nurses' professional development towards involvement in the creation of healthy public policies as well as in health policies. This implication will allow modifying the living conditions in which health is created, including the health system, social and community networks and lifestyles, understanding that the latter are the result of the afore mentioned influences, and not only the responsibility of individuals.

Relevance to clinical practice

In this CIS, nursing state of practice in HPP was analysed and misalignments were identified between nurses' practice and the Ottawa Charter's actions and strategies. Explanations of why these misalignments occur have been discussed. The findings of this CIS can raise awareness and stimulate discussion about nurses' role in HPP among different stakeholders. This discussion might help recognize common stances and realign role expectations. Having coincident role expectations is the first step for addressing role confusion, one of the main barriers for the development of nurses' capacity in HPP.

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

- Identifies the scope of published literature about nursing activities, roles, tasks, practices or responsibilities in HPP in all types of professional contexts and job positions.

- Highlights role confusion as one of the barriers to address for developing nurses' capacity for HPP.
- Provides the basis for discussing nurses' role in HPP and, thus, addressing role confusion: an analysis of nurses' activities in HPP expressed in the terms of the Ottawa Charter's action and strategies and the identification of the misalignments between ideal and current nursing practice in HPP.

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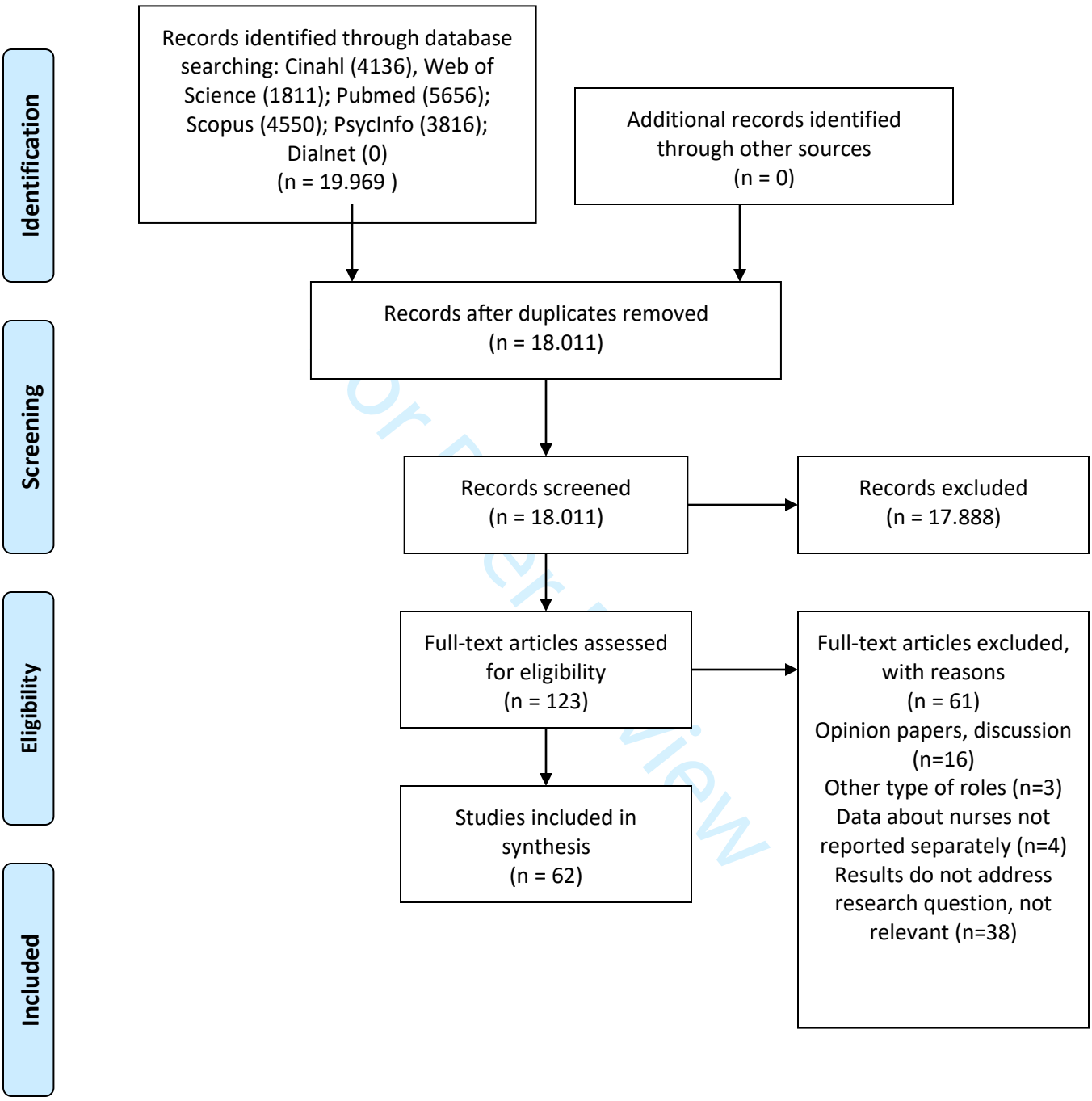
Table 1. Framework for the critical interpretive synthesis adapted from WHO's framework for Health Promotion

ACTION AREAS	STRATEGIES
BUILDING HEALTHY PUBLIC POLICY Place health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health. Identify obstacles to the adoption of healthy public policies in non-health sectors and ways of removing them. The aim must be to make the healthier choice the easier choice for policy makers as well.	**ADVOCACY FOR HEALTH** A combination of individual and/or social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular health goal or programme.
CREATING SUPPORTIVE ENVIRONMENTS Protection of the natural and built environments and the conservation of natural resources. Systematic assessment of the health impact of a rapidly changing environment is essential and must be followed by action to ensure positive benefits to the health of the public.	
STRENGTHENING COMMUNITY ACTION Health promotion works through concrete and effective community action in setting priorities, making decisions, and planning and implementing strategies to achieve better health. At the heart of this process is the empowerment of communities, their ownership and control of their own destinies.	**ENABLEMENT** Action in partnership with individuals or groups to empower them through the mobilization of human and material resources in order to promote and protect their health.
DEVELOPING PERSONAL SKILLS Health promotion supports personal and social development by providing information, providing education for health, and enhancing life skills. This has to be facilitated in school, home, work and community settings	
REORIENTING HEALTH SERVICES The role of the health sector must move increasingly in a health promotion direction beyond its responsibility for providing clinical and curative services. This role requires stronger attention to health research as well as changes in professional education and training, which must lead to a change of attitude and organization of health services that refocuses on the total needs of the individual.	**MEDIATION** Reconciling conflicts and the different interests of individuals and communities and different sectors (public and private) in ways that promote and protect health.

Table 2: Operational definitions adopted for the critical interpretive synthesis

Concept	Operational definition
Health promotion	Health promotion enables people to increase control over their own health. It covers a wide range of social and environmental interventions that are designed to benefit and protect individual people's health and quality of life by addressing and preventing the root causes of ill health, not just focusing on treatment and cure (WHO, 1986).
Health education	Any combination of planned learning experiences based on sound theories that provide individuals, groups, and communities the opportunity to acquire information and the skills needed to make quality health decisions (Gold & Miner, 2002).
Disease prevention	A desire to avoid the disease or to detect it early, this involves activities aimed at avoiding disease, with an emphasis on disease rather than health and on risk factors leading to disease (Pender, 2013).

PRISMA 2009 Flow Diagram



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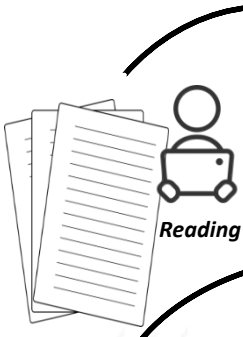
For more information, visit www.prisma-statement.org.

STEP1: UNDERSTANDING THE PAPER

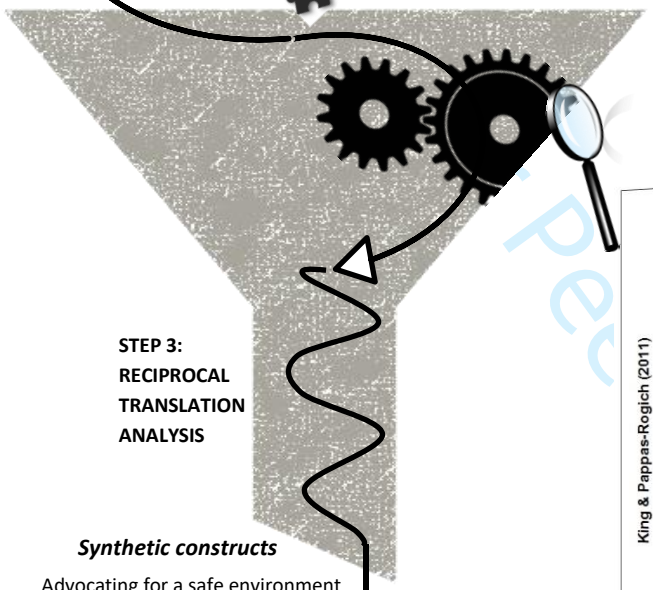


Reading

Authors/ Publication year	Aims/ Diseas or health oriented?	Key definitions	Design/ Sample	Methods: Data collection/ Analysis	Major findings	Categories/ sub-categories
Paper 1						
Paper 2						
...						

Data extraction pro-forma

STEP 2: DETERMINING HOW STUDIES ARE RELATED



STEP 3: RECIPROCAL TRANSLATION ANALYSIS

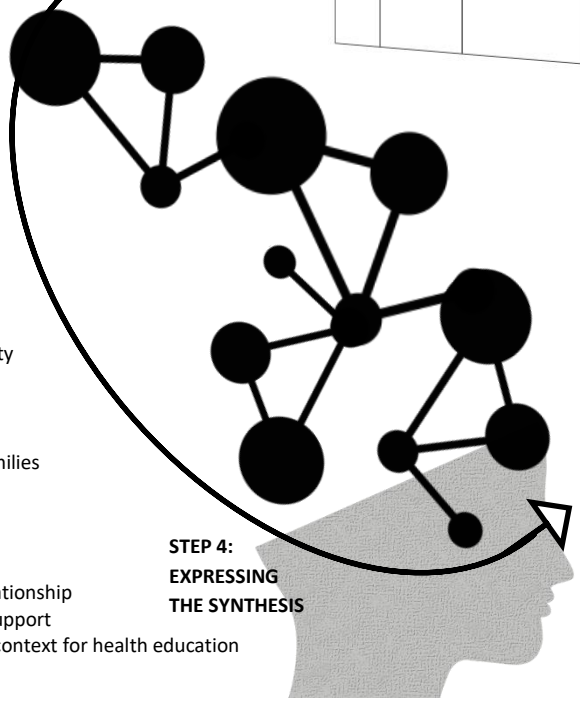
	Building healthy public policy	Creating supportive environments	Strengthening community action	Developing personal skills	Reorienting health services	
King & Pappas-Rogich (2011)		***Advocating for a safe environment*** Encourage immunizations for the prevention of infectious diseases for children and adults	***Community involvement*** Support groups ***Making referrals*** Referral to social services	***Making referrals*** Refer to health services	***Improving access*** Speak out to help client obtain needed health services	Advocacy
		Creating a safe environment Educate to promote healthy environments Promotion of recycling	***Community work for health*** Facilitates community support groups Coordinates volunteers from Health Ministry who help those in need	***Health education*** Counsel about health concerns Encourage healthy lifestyles: nutrition, physical activity, emotional health, tobacco and other substances, sexual health, reduction of violence ***Spiritual support*** Integrates faith and health by working to improve health of body, mind, spirit, community, and creation		Enablement
			Networking/Partnership Cooperates with volunteers, community support groups			Mediation

Integrative grid

Synthetic constructs

Advocating for a safe environment
Family/community involvement
Family health education
Health Assessment
Working with families
Family assessment
Cooperation/teamwork
Making referrals
Health education
Emotional support
Spiritual support
HP intervention
Evaluation
Improving access
Improving equity
Creating a safe environment
Assessing environmental quality
Influencing policy
Networking/Partnership
Role modelling
Establish partnership with families
Establish partnership
Community assessment
Community education
Community work for health
Establish interpersonal relationship
Advocating for patients' support
Creating an appropriate context for health education

STEP 4: EXPRESSING THE SYNTHESIS



Synthesizing arguments

- Adressing individuals' lifestyles VS Developing their personal skills
- Focusing on environmental hazards VS Creating supportive environments
- Action on families VS Strengthening communities
- Promoting community partnerships VS Strengthening community action
- Influencing policies VS Building healthy public policy

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Abe et al., (2014)		Advocating for a safe environment	Family and community involvement			**Advocacy**
			Family health education Community education Community work for health	Health assessment Health education		**Enablement**
			Networking/Partnership			**Mediation**
Al-Ghamdi, (2018)						**Advocacy**
				Health education		**Enablement**
						Mediation
Aldossary et al., (2013)						**Advocacy**
				Health education		**Enablement**
						Mediation
Alexandropoulou et al., (2010)	Influencing policy					**Advocacy**
	Cooperation/Teamwork			Establish partnership Health assessment Health education HPP intervention Evaluation Cooperation/Teamwork		**Enablement**
			Networking/Partnership			**Mediation**
Al-Motlaq et al., (2010)						**Advocacy**
			Community assessment	Health education	Improving access	**Enablement**
						Mediation
Arpalathi et al., (2012)			Family involvement			**Advocacy**
			Family health education	Health education		**Enablement**
						Mediation
Brobeck et al., (2013)						**Advocacy**
				Health education	Improving service	**Enablement**
						Mediation
Casey, (2007a)				Making referrals		**Advocacy**
				Establish Partnership Health Education		**Enablement**
						Mediation
Casey, (2007b)			Family involvement	Making referrals		**Advocacy**
				Health assessment Health education		**Enablement**
						Mediation
Crnica et al., (2013)						**Advocacy**
		Creating a safe environment		Health education		**Enablement**
						Mediation

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Dobrowolska et al., (2014)			Family involvement			**Advocacy**
			Family health education	Health assessment Health education HPP intervention Evaluation Emotional support Cooperation/Teamwork		**Enablement**
						Mediation
Dos Reis Moreira and O'Dwyer (2013)			Community involvement			**Advocacy**
			Community education	Health assessment Health education		**Enablement**
			Networking/Partnership			**Mediation**
Ganz et al., (2015)				Making referrals		**Advocacy**
				Health education		**Enablement**
						Mediation
Geller et al., (2011)				Making referrals		**Advocacy**
		Assessing environmental quality		Health assessment Health education HPP intervention		**Enablement**
						Mediation
Gonzaga et al., (2014)			Family involvement	Making referrals		**Advocacy**
			Family assessment Establish partnership with families	Establish interpersonal relationship Health assessment Health education HPP intervention Evaluation		**Enablement**
						Mediation
Goodman et al., (2011)			Making referrals	Making referrals		**Advocacy**
				Health assessment Health education		**Enablement**
						Mediation
Grundberg et al., (2016)			Making referrals Family and community involvement	Making referrals		**Advocacy**
		Assessing environmental quality		Creating the appropriate context Health assessment Health education Emotional support Cooperation/Teamwork		**Enablement**
			Networking/Partnership			**Mediation**

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Hahn, (2014)				Making referrals		**Advocacy**
		Creating a safe environment		Health assessment Health education HPP intervention		**Enablement**
						Mediation
Heidemann et al., (2019)						**Advocacy**
			Community assessment	Health education HPP intervention		**Enablement**
			Networking/Partnership			**Mediation**
Hernandez and Anderson (2012)						**Advocacy**
			Community work for health	Establish partnership Establish interpersonal relationship Health assessment Health education		**Enablement**
						Mediation
Hidalgo et al., (2016)						**Advocacy**
				Health education		**Enablement**
						Mediation
Hoekstra et al., (2016)			Family and community involvement	Making referrals		**Advocacy**
		Creating a safe environment	Community assessment Community education Working with families	Health assessment Health education HPP intervention		**Enablement**
			Networking/Partnership			**Mediation**
Hong, (2010)						**Advocacy**
				Health assessment Health education		**Enablement**
						Mediation
Hurkmans, (2011)						**Advocacy**
				Health education		**Enablement**
						Mediation
Irvine, (2007)						**Advocacy**
		Creating a safe environment		Health assessment Health education		**Enablement**
						Mediation
Javanainen et al., (2007)			Family involvement			**Advocacy**
		Assessing environmental quality	Family assessment Family health education	Health assessment Health education		**Enablement**
						Mediation

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Jerdén et al., (2006)						**Advocacy**
				Creating appropriate context Establish interpersonal relationship Health education		**Enablement**
						Mediation
Johnson et al., (2018)				Making referrals		**Advocacy**
				Health assessment Cooperation/Teamwork		**Enablement**
						Mediation
Karvinen et al., (2012)						**Advocacy**
				Health assessment Health education		**Enablement**
						Mediation
Keleher and Paker, (2013)						**Advocacy**
			Community education	Health education		**Enablement**
						Mediation
Khalaf et al., (2018)			Family involvement			**Advocacy**
			Family health education	Health assessment Health education		**Enablement**
						Mediation
King and Pappas-Rogich (2011)		Advocating for a safe environment	Community involvement Making referrals	Making referrals	Improving access	**Advocacy**
		Creating a safe environment	Community work for health	Health education Spiritual support		**Enablement**
			Networking/Partnership			**Mediation**
Kwatubana, (2018)				Making referrals		**Advocacy**
		Creating a safe environment		Health assessment Health education		**Enablement**
			Networking/Partnership			**Mediation**
Larsen et al., (2006)			Family involvement			**Advocacy**
			Family health education	Health assessment		**Enablement**
						Mediation

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Larsson et al., (2014)		Advocating for a safe environment	Family and community involvement	Making referrals		**Advocacy**
				Creating the appropriate context Establish partnership Establish interpersonal relationship Health assessment Health education Evaluation		**Enablement**
			Networking/Partnership			**Mediation**
Leviniene et al., (2009)			Family involvement			**Advocacy**
				Health education		**Enablement**
						Mediation
Lundberg et al., (2017)						**Advocacy**
				Establish interpersonal relationship Health assessment Health education		**Enablement**
						Mediation
Manasatchakun et al., (2018)			Family and community involvement			**Advocacy**
			Community work for health	Health assessment Emotional support Spiritual support		**Enablement**
			Networking/Partnership			**Mediation**
Marent et al., (2016)			Community involvement			**Advocacy**
			Community work for health	Establish partnership HPP intervention Health assessment Health education		**Enablement**
			Networking/Partnership			**Mediation**

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Mcilfatrick et al., (2014)						**Advocacy**
				Health assessment Health education HPP intervention		**Enablement**
						Mediation
Morrison-Sandberg et al., (2011)			Family and community involvement			**Advocacy**
	Influencing policy		Family health education	Health assessment Health education Emotional support Cooperation/Teamwork		**Enablement**
			Networking/Partnership			**Mediation**
Muckian et al., (2017)		Advocating for a safe environment	Family and community involvement			**Advocacy**
		Creating a safe environment Role modelling	Family health education	Health education		**Enablement**
			Networking/Partnership			**Mediation**
Naumanen and Liesivuori, (2009)		Advocating for a safe environment				**Advocacy**
		Assessing environmental quality		Health education HPP intervention		**Enablement**
						Mediation
Onnela et al., (2014)			Family and community involvement			**Advocacy**
			Community education Working with families	Health assessment Health education		**Enablement**
			Networking/Partnership	Networking/Partnership		**Mediation**
Pham and Ziegert, (2016)			Family and community involvement			**Advocacy**
			Family health education Community work for health	Creating appropriate context Establish interpersonal relationship Health education		**Enablement**
						Mediation
Quinn et al., (2018)				Making referrals		**Advocacy**
				Health assessment Health education		**Enablement**
						Mediation

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Ribera et al., (2018)			Community involvement			**Advocacy**
				Health education		**Enablement**
			Networking/Partnership			**Mediation**
Richard et al., (2010)			Family involvement			**Advocacy**
		Creating a safe environment	Family education	Health assessment Health education Emotional support		**Enablement**
						Mediation
Roden et al., (2016)			Community involvement		Improving access	**Advocacy**
	Influencing policy	Creating a safe environment	Community work for health	Health education	Improving access	**Enablement**
						Mediation
Runciman et al., (2006)	Influencing policy	Advocating for a safe environment	Family and community involvement		Improving equity	**Advocacy**
	Influencing policy		Family assessment Community education Community work for health	Establish partnership Health assessment Health education Emotional support HPP intervention Evaluation		**Enablement**
			Networking/Partnership			**Mediation**
Runciman, (2014)			Advocating for patient's support Community involvement			**Advocacy**
			Community assessment Community education	Health education		**Enablement**
			Networking/Partnership			**Mediation**
Samarasinghe et al., (2010)			Family and community involvement	Making referrals		**Advocacy**
		Creating a safe environment	Family assessment Working with families Community work for health	Creating appropriate context Establish partnership Health assessment Health education Emotional support		**Enablement**
			Networking/Partnership			**Mediation**

PAPER	BHPP	CSE	SCA	DPS	RHS	STRATEGIES
Sannisto and Kosunen, (2009)		Advocating for a safe environment	Family and community involvement			**Advocacy**
			Community education Family health education	Health assessment Health education HPP intervention		**Enablement**
						Mediation
Shoqirat, (2014)						**Advocacy**
				Health education Cooperation/Teamwork		**Enablement**
						Mediation
Spivack et al., (2010)			Family involvement			**Advocacy**
			Family health education	Health education		**Enablement**
						Mediation
Taggart, (2009)			Family involvement	Making referrals		**Advocacy**
			Family health education	Health education		**Enablement**
						Mediation
Tanda et al., (2017)				Making referrals		**Advocacy**
				Health assessment Health education Evaluation		**Enablement**
						Mediation
Thompson et al., (2008)		Advocating for a safe environment		Making referrals		**Advocacy**
		Creating a safe environment		Health assessment Health education HPP intervention		**Enablement**
						Mediation
Van De Glind et al., (2016)				Making referrals		**Advocacy**
				Establish partnership Health assessment Health education HPP intervention		**Enablement**
						Mediation
Whitehead et al., (2008)			Family involvement			**Advocacy**
			Family health education	Health education		**Enablement**
						Mediation
Woods (2006)						**Advocacy**
				Health education		**Enablement**
						Mediation

ENTREQ STATEMENT

No	Item	Guide and description	
1	Aim (page 4)	State the research question the synthesis addresses.	X
2	Synthesis methodology (page 4)	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology *(e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).*	X
3	Approach to searching (page 5)	Indicate whether the search was pre-planned (*comprehensive search strategies to seek all available studies)* or iterative (*to seek all available concepts until they theoretical saturation is achieved).*	X
4	Inclusion criteria (pages 5-6)	Specify the inclusion/exclusion criteria *(e.g. in terms of population, language, year limits, type of publication, study type).*	X
5	Data sources (page 5)	Describe the information sources used (e.g. *electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists)* and when the searches conducted; provide the rationale for using the data sources.	X
6	Electronic Search strategy (page 5)	Describe the literature search *(e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits).*	X
7	Study screening methods (pages 5-6)	Describe the process of study screening and sifting *(e.g. title, abstract and full text review, number of independent reviewers who screened studies).*	X
8	Study characteristics (page 8)	Present the characteristics of the included studies *(e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions).*	X
9	Study selection results (page 6)	Identify the number of studies screened and provide reasons for study exclusion *(e,g, for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications t the research question and/or contribution to theory development).*	X
10	Rationale for appraisal (page 6)	Describe the rationale and approach used to appraise the included studies or selected findings *(e.g. assessment of conduct (validity and*	X

No	Item	Guide and description	
		robustness), assessment of reporting (transparency), assessment of content and utility of the findings).	
11	Appraisal items (page 6)	State the tools, frameworks and criteria used to appraise the studies or selected findings *(e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope* [25]*; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting).*	X
12	Appraisal process (page 6)	Indicate whether the appraisal was conducted independently by more than one reviewer and if consensus was required.	X
13	Appraisal results (page 6)	Present results of the quality assessment and indicate which articles, if any, were weighted/excluded based on the assessment and give the rationale.	X
14	Data extraction (pages 7-8)	Indicate which sections of the primary studies were analysed and how were the data extracted from the primary studies? *(e.g. all text under the headings "results /conclusions" were extracted electronically and entered into a computer software).*	X
15	Software	State the computer software used, if any.	
16	Number of reviewers (page 7)	Identify who was involved in coding and analysis.	X
17	Coding (pages 7-8)	Describe the process for coding of data *(e.g. line by line coding to search for concepts).*	X
18	Study comparison (pages 7-8)	Describe how were comparisons made within and across studies *(e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).*	X
19	Derivation of themes (pages 7-8)	Explain whether the process of deriving the themes or constructs was inductive or deductive.	X
20	Quotations	Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations of the author's interpretation.	
21	Synthesis output (pages 8-13)	Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g. *new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).*	X