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Development of a taxonomy of activities in health prevention and promotion for primary care

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DEVELOPMENT OF A TAXONOMY OF ACTIVITIES IN HEALTH PREVENTION AND PROMOTION FOR PRIMARY CARE

Abstract

Aim: To develop a taxonomy of activities in health prevention and promotion for primary care.

Background: Despite health promotion being considered a keystone for population health and health care sustainability, its implementation remains insufficient. Customized evaluation tools are needed to address prevention and promotion omissions in primary care.

Method: A taxonomy was designed using documentary analysis. Documents describing frontline primary care professionals' health prevention and promotion activities or omissions were identified and analysed using framework analysis.

Results: The 'Taxonomy of Activities in Health Prevention and Promotion for Primary Care' (TaxoPromo) includes 43 activities grouped into 8 categories: planification, situational analysis, capacity building, development of awareness/public opinion, advocacy, development of networks, development of partnerships, and intervention strategies.

Conclusion: By contrasting the usual practices with the activities collected in the TaxoPromo, opportunities for improvement can be unveiled.

Implications for Nursing Management: The TaxoPromo can be used at organizational and system levels to identify actions to integrate health prevention and promotion activities into a systematic, data-driven process; design implementation plans and tailor-made strategies for capacity building; enable benchmarking; and address omissions. The TaxoPromo can serve as a catalyst tool for the clarification and expansion of the nursing role in health prevention and promotion.

Key words: Health promotion, Preventive Health Services, Capacity Building, Nursing Care, Taxonomy

Background

This article presents the first taxonomy of activities in health prevention and promotion for primary care and the research process conducted for its development. Best practices in this level of care can be identified when it is clear what health prevention and promotion entails.

STATE OF PRACTICE

Health prevention and promotion is included in the service portfolio of the most solid healthcare systems. The provision and development of these services is considered a keystone for the protection, maintenance and improvement of population health and health systems' sustainability (Potvin & Jones, 2011). This assumption stems from recognising the potential of health prevention and promotion to impact health determinants, such as social circumstances, environmental conditions or behavioural choices (Jackson et al., 2006), which have been found to be behind a considerable percentage of early deaths (McGinnis et al., 2002) and to play a decisive role in the efficiency of health systems (Allin et al., 2015).

Nevertheless, the implementation of health prevention and promotion remains insufficient, variable and dependent on the involved professionals' willingness (Cabeza et al., 2016). This is evident in the case of nursing professionals. Despite being a highly competent professional group with a positive attitude towards health prevention and promotion (Wilhelmsson & Lindberg, 2009), their activity in this field is limited to a lifestyle approach through health education. Indeed, the literature reveals a shortage of nursing interventions that: (1) reflect WHO's recommendation to incorporate combinations of actions and strategies of the Ottawa Charter, which is necessary for the

interventions' effectiveness; or (2) specifically address the development of healthy environments, the support of communities in decision-making processes and collective action for health, the establishment of community collaborations and prescription of community assets or the development of healthy public policies (Iriarte et al., 2020).

THE COST OF THE LACK OF IMPLEMENTATION

The lack of health prevention and promotion implementation appears to have been accepted and normalised. In fact, health prevention and promotion omissions are rarely considered a patient safety issue, even though the harm they cause has already been documented (Woolf, 2004). A study on 27 OECD countries found that the main sources of harm in primary care were failures and delays in the detection and treatment of chronic diseases. By reducing patients' ability to manage their disease over time, these errors lead to the deterioration of their health status and an increased likelihood of hospitalization. In the countries investigated, counting only hospitalizations related to diabetes, hypertension, heart failure, chronic obstructive pulmonary disease and bronchiectasis, and asthma, this resulted in 2.7 million avoidable hospitalizations (2.6% of total admissions) in 2014 (OECD, 2018).

ROOT CAUSES AND SOLUTIONS

The origin of the lack of awareness regarding omissions in health prevention and promotion is multifactorial. The difficulty in assessing and demonstrating the impact of health prevention and promotion has generated scepticism about its effectiveness and certainty about the innocuousness of its omission. This has not helped in the development of an appropriate sense of accountability for health prevention and promotion (Rubio-Valera et al. 2014), especially in clinical settings where patient safety

is still incipient. The latter is the case with primary care, which is, paradoxically, the setting with an explicit mandate for the provision of health prevention and promotion (Panesar et al., 2016).

The lack of awareness regarding omissions in health prevention and promotion can be perpetuated if primary care bases the development of its patient safety systems on a mere reproduction of those implemented in the hospital setting. These focus on the management of errors related to acute and specialised medical care, which may differ from those that occur in the care of the wellbeing, chronicity and prevention (Lutfey & Freese, 2007; Allen-Scott, 2014). Furthermore, patient safety systems in the hospital setting have the weakness of being overly focused on commission errors as opposed to omission errors (Poghosyan et al., 2017).

The agenda proposals for the advancement of patient safety in primary care recognize the need to develop research, systems and tools customized for this clinical context (Verstappen et al., 2015). The generalization of this opinion could give rise to a new focus on advancing and standardizing health prevention and promotion. However, the latest proposed tools for the study of safety in the specific field of primary care continue to diminish health prevention and promotion and, in particular, health prevention and promotion omissions, indicating that the problem remains unaddressed (See Table 1.).

Having identified this significant research and managerial gap, the authors set out to develop the first taxonomy of activities in health prevention and promotion for primary care.

Methods

The development of the taxonomy was conceived as the definition of a catalogue of activities that should be carried out by frontline health professionals to fully develop health prevention and promotion in primary care. Through a review of these activities, areas of improvement in health prevention and promotion can be identified, including neglected practices, or omission errors.

Four premises underlie this overall conception. The first relates to the understanding and usage of the umbrella term health prevention and promotion. Health prevention and health promotion are considered to overlap to some extent, especially in relation to primary prevention; however, the starting points and loci for action of the two differ. Furthermore, while the preventative component has a longer trajectory, there is a need to build capacity to develop and implement health promotion actions to promote health at the population level. To do so, it is necessary to shift the focus from illness to health and embracing intersectoral action and partnership working (EXPH, 2019). In this scenario, the taxonomy was built with a broad health promotion approach in an effort to explicitly include activities that can contribute to the improvement of individual and population health and not only to disease prevention.

The other three premises underlying the overall conception of the taxonomy reflect the need to keep it relevant and customised for primary care; helpful, in order to shorten the gap between theory and practice; and useful for managerial decision-making while engaging in frontline professionals.

To preserve this orientation, the incorporation of varied experts was deemed crucial. Thus, a researcher team comprising academics specialised in health prevention and

promotion, patient safety, community care, and healthcare management and frontline primary care professionals was gathered to develop the taxonomy.

After reviewing the existing patient safety taxonomies and classifications designed for primary care and verifying that none of them had initiated the cataloguing of health prevention and promotion best practices (see Table 1), the research team decided to develop the taxonomy from scratch using documentary analysis (Hodder, 2003).

Furthermore, the Ottawa Charter was taken as the theoretical framework. It defines five actions that should be combined for the development of health prevention and promotion: build healthy public policy, create supportive environments, strengthen community actions, develop personal skills, and reorient health services (World Health Organization, 1986). The charter also includes three strategies to deploy the actions: advocate, mediate and enable. Fry and Zask's (2017) detailed definitions of the Ottawa Charter's action areas were also considered to further operationalize the theoretical framework. This theoretical framework guided the sampling, selection and analysis of documents.

Purposeful sampling (Patton, 2002) was carried out based on the following criteria: documents identifying omissions or activities in health prevention and promotion that could be carried out by frontline primary care professionals either as their main objective or as part of their theoretical or state-of-practice analysis of one or a combination of Ottawa's actions. Documents that focused exclusively on preventive care or practice in secondary care settings were excluded.

To identify the documents, team members carried out 5 bibliographic searches in Medline, each with a specific keyword combination to locate records related to a specific

action area of the Ottawa Charter. Searches were limited to English and Spanish and within January 2007 to January 2018. The snowballing technique was applied. Table 2 details the search strategies and subsequent results.

Once selected, the documents were analysed following a framework approach. The framework approach offers a well-defined analytical process comprising five stages: familiarisation, identification of a thematic framework, indexing charting, and mapping and interpretation. This method was preferred because while it is heavily grounded in data, it also facilitates the testing of *a priori* issues (Ritchie & Spencer, 1994).

To achieve familiarisation with the data, each team member read the documents they had identified several times. Throughout these readings, key emerging issues in relation to the nature of health prevention and promotion practice and its goals and outcomes were listed. In a group meeting, the thematic framework was built using this information and *a priori* assumptions offered by the theoretical framework adopted in the study. Table 3 shows the thematic framework used to index the data. It included expanded definitions of the 5 areas of action proposed in the Ottawa Charter and strategies for the deployment of those actions. The expansion of the definitions of Ottawa Charter's actions reflected the need to incorporate the insights gained in the familiarisation analysis stage.

The analysis of the documents applying the thematic framework resulted in an initial list of descriptive codes of the activities to be carried out by frontline professionals in primary care within each of the 5 actions proposed by the Ottawa Charter. To develop this list, individual researchers maintained the original terminology and added memos

to retain their meaning and avoid distortions during the joint analysis meetings (Ritchie & Spencer, 1994).

Indeed, all of the researchers gathered several times to present the initial coding, discuss the relevance of the codes applied, detect duplications and the need for dividing or combining codes.

Once this second phase of coding was completed, the codes were lifted from the original context (the specific Ottawa Charter action area) and rearranged into categories according to type of activity. The team members' decision to opt for this categorization scheme responded to the need to give practicality to the taxonomy. It also helped to emphasize that health prevention and promotion is a process in which synergistically related activities are integrated. Finally, the phase of mapping and interpreting consisted of creating agreed explanatory descriptors of the categories and activities included in each of them.

Results

Bibliographical searches and the application of the snowball technique yielded a total of 4321 documents. After contrasting the inclusion and exclusion criteria with titles, abstracts and full texts, a total of 62 documents were included. The analysis of the documents applying the thematic framework resulted in an initial list of 47 codes. Table 4 lists the codes after the first refinement stage.

The Spanish version of the final Taxonomy of Activities in Health Prevention and Promotion for Primary Care (TaxoPromo) can be found in Appendix 1 (the English and

Portuguese versions can be obtained contacting the authors). TaxoPromo includes 43 health prevention and promotion activities grouped into 8 categories: planification, situational analysis, capacity building, development of awareness/public opinion, advocacy, development of networks, development of partnerships, and intervention strategies that reveal health prevention and promotion as a process.

PLANIFICATION

This category includes 7 actions designed to formalise, structure and systematize practice and capacity building within primary care. These actions should inform the primary care centre managers and/or competent authorities in their decision making in relation to the strategic planning of the primary care centres or systems.

More specifically, the actions included in this category involve the collaboration of frontline health professionals in the establishment of short and midterm objectives for health prevention and promotion within primary care centres, as well as in planning activities oriented towards health improvement and/or the training of individuals and communities. The planification category also includes planning activities directed at improving organisational and workforce capacity for health prevention and promotion practice, such as developing the evidence needed, contributing to the improvement of the primary care centre's organization, collaborating on the identification of the primary care centre's need for multidisciplinary development, taking part in the design of plans for frontline professionals training in health prevention and promotion, and collaborating in the identification of standards and competencies in health prevention and promotion practice.

SITUATIONAL ANALYSIS

This category has 4 activities designed to explore and understand the situation at individual, community and organizational levels, which will allow the formulation and planning of health prevention and promotion strategies and healthy public policies. The activities include evaluating the health status and health literacy of individuals and communities and assessing the environment surrounding those communities accounting for the use individuals make of them. To complete their participation in the situational analysis, frontline professionals should collaborate in the evaluation of the organizational context by identifying and assessing organizational factors that influence the achievement or execution of health prevention and promotion objectives, plans and activities in the primary care centre.

ORGANIZATIONAL CAPACITY BUILDING

This category includes 4 activities directed at increasing and improving the allocation and coordination of the human, relational, material, structural and financial resources of primary care centres required for health prevention and promotion implementation. The first activity is to update competencies in health prevention and promotion by participating in training and scientific activities. The second is to identify community leaders or people who can use their influence for advancing health prevention and promotion due to the authority that the community has given to them. The third is to contribute to the advancement of health prevention and promotion theoretical bases and scientific evidence. The final activity is to collaborate in the formulation of a business case for health prevention and promotion.

DEVELOPMENT OF AWARENESS/PUBLIC OPINION

The category of generating awareness/public opinion in individuals, communities and systems about the social determinants of health and their repercussions includes 6 activities. One activity is increasing individuals' and communities' awareness of healthy public policies, which also includes fostering community mobilization for the policies. Two additional important activities are contributing to the development of a sense of belonging among individuals in the community and promoting awareness about the interrelation of the environment and healthy lifestyles. Finally, frontline professionals must contribute to generating awareness among themselves regarding the impact of health prevention and promotion and systematically evaluate activities directed at generating awareness for health prevention and promotion.

ADVOCACY

This category addresses the need for strategies inside and outside the health system that allow the promotion of health from the social determinants of health perspective and the issues that have an impact on them. The category includes 10 activities advocating for: safe and healthy environments, a community approach in primary care and programmes, community interventions, community-oriented-primary care and in health education programmes, activation and sustainability of community health councils or committees, and increasing resources for health prevention and promotion in primary care. Two more activities are included in this category: advocacy for the health sector's role in the construction of healthy public policies and the systematic evaluation of all advocacy activities carried out for health prevention and promotion.

DEVELOPMENT OF NETWORKS

This category includes 4 activities for the development of community and social networks. One of these focuses on performing activities to encourage the relationships and social links between community members, which enhances the health of the population. Additionally, this category includes an activity aimed at identifying groups that promote the use of environments to perform health prevention and promotion activities and the socialization of individuals. Referring patients to community assets through social prescription and systematically evaluating the actions aimed at developing networks in health prevention and promotion are the last activities of the category.

DEVELOPMENT OF COLLABORATIONS

This category comprises 4 activities that aim to identify key stakeholders for health prevention and promotion and build up collaborations with them. The activities are: regenerate community health councils, establish collaborations with key stakeholders for the construction of public policies and healthy environments, establish collaborations with research centres and universities for methodological support for advancing health prevention and promotion science, and collaborate in the systematic evaluation of the efforts carried out in the primary care centre for developing partnerships for health prevention and promotion.

INTERVENTION STRATEGIES

This category includes 4 activities aimed at improving individuals' skills regarding health and the environments in which they live so that healthy behaviours are favoured. These activities are: provide brief advice for the promotion of healthy lifestyles, develop

individual or group health education programmes, develop community programmes that involve community members throughout the entire process and finally, design programmes that support a positive interaction of individuals with the environment. The development of health education and/or promotion programmes is, in turn, subdivided into five activities: planning, implementation, collaboration in clinical, cost-effectiveness and process evaluation.

Conclusions

TaxoPromo is the first tool designed to guide systematic evaluations of health prevention and promotion practices in primary care. It offers a catalogue of 43 activities grouped into 8 categories that reflect the steps of the health prevention and promotion process: planification, situational analysis, capacity building, development of awareness/public opinion, advocacy, development of networks, development of partnerships, and intervention strategies. Contrasting the usual practices with the activities collected in TaxoPromo, areas of improvement can be identified and prioritized. These areas of improvement may relate both to the development, dissemination and facilitation of health prevention and promotion activities and also to dimensions that stand out for their frequency of omission and/or impact.

TaxoPromo can be applied at the primary care organisation level or at the health care system level. A way of using the taxonomy could be to apply it at each primary care organization in regular meetings involving all members of the team to both review it and interpret in a global way the findings regarding specific areas for improvement. Using this methodology, at the primary care organisation level, the data can be used to (1)

design annual health prevention and promotion implementation plans or objectives; (2) identify actions to integrate health prevention and promotion activities into a systematic, consistent and data-driven process; (3) design tailor-made strategies for capacity building in health prevention and promotion; and (4) enable benchmarking.

Because data collection on health prevention and promotion practice at the primary care organisation level can be systematized using TaxoPromo, data aggregation from different primary care organisations in a region or even at the national level is possible. This exercise would allow for eliciting priority routes of action at the regional or state level, but more importantly, it would allow for the establishment of capacity building plans for health prevention and promotion in primary care and building the case for better budgeting (Merkur et al., 2013). Evidence shows that nursing participation in health prevention and promotion evaluation, strategic planning and the development of healthy public policies is especially scarce (Iriarte et al., 2020). Having global data on practice (which also contain and position nursing activity) can stimulate the interest and ability of nurses in participating in these processes of analysis and decision-making. As long as nursing does not take on these activities, care will continue to be under-represented and under-resourced in healthcare organisations and systems (Rigolosi, 2013).

TaxoPromo can also be used as a catalyst tool for organisational learning and safety culture. Omissions in health prevention and promotion may be due to role confusion or a lack of knowledge or accountability (Rubio-Valera et al., 2014). Exposing professionals to reviewing the dimensions and activities collected in TaxoPromo can help them become more aware and knowledgeable about the variety of activities covered by

health prevention and promotion and, consequently, of opportunities for improvement in this field. At the same time, this level of awareness can instigate a reflection on one's own role in health prevention and promotion that, in turn, redound to the clarification and expansion of the role and the development of a greater sense of accountability (Olsen & Stensaker, 2014; Rubio-Valera et al., 2014). For nursing, the latter is especially important, not only because role confusion has been identified as one of the main causes of poor performance and burnout (Dasgupta, 2012), but also because the expansion of its role in health prevention and promotion is a first-order goal nowadays (Halcomb et al., 2016).

Moreover, since TaxoPromo explicitly outlines planning aspects of both health prevention and promotion activities and the organizational conditions mediating the implementation of these activities, it enables healthcare professionals to become more aware of their own role in building capacity for health prevention and promotion in primary care. This managerial role of health professionals is gaining importance, given the current tendency towards horizontalisation of organizational structures and decision-making (De Brún et al., 2019). In the field of health prevention and promotion, nurses are the professionals called to fill leadership positions (Whitehead, 2009; Halcomb et al., 2016), so again, TaxoPromo can serve as a tool for the expansion of the role of this profession.

Critically comparing novel taxonomies to existing research provides a method for evaluating their face validity (Szopinski et al., 2019). While, to the knowledge of the authors, there are no previous attempts to develop tools for the systematic evaluation of health prevention and promotion practice in primary care, there have been other type

of research efforts directed at expanding health prevention and promotion and its outcomes. A remarkable one is the Robert Wood Johnson Foundation's Culture of Health Action Framework, which provides an operational scheme to catalyse work toward improved population health, well-being and equity in America (Chandra et al. 2016). This framework includes four action areas: Making Health a Shared Value, Fostering Cross-Sector Collaboration to Improve Well-Being, Creating Healthier, More Equitable Communities and Strengthening Integration of Health Services and Systems, that cluster themes common across the datasets analysed for its development. The fact that these areas and themes find a close reflection in the categories and activities included in TaxoPromo provides support for its face validity (Szopinski et al., 2019).

Another aspect that may have strengthened the validity of the tool is the fact that the research team was composed of both academics with varied expertise and frontline primary care professionals. Specifically, this aspect provided balance to the debate when judging what activities could indeed be attributed to frontline professionals and also whether such activities are aimed at the direct attention of individuals and populations or at capacity building for health prevention and promotion. Nevertheless, future research should aim to further validate this tool, especially in primary care settings other than the Spanish context.

TaxoPromo has limitations. First, it only allows us to study the practice by frontline professionals, although improvements can also be catalysed by managers and planners of the healthcare system. Lapses in system design and management can represent latent conditions, which Reason (2016) considers the riskiest, given their insidious nature. The inclusion of health prevention and promotion activities to be carried out by those

involved in the planning and management of primary care organisations in the TaxoPromo was ruled out because, such inclusion might potentially reduce the practicality of the tool. Thus, in future research, other complementary taxonomies could be developed to examine these activities. The creation of checklists, classifications or models that help analyse root causes of practices and omission and commission errors in health prevention and promotion, are other areas that deserve the attention of researchers and managers involved in improving practice and safety in primary care.

Nevertheless, the use of the TaxoPromo can set the scene for primary care professionals to relaunch health prevention and promotion avoiding focusing only on the direct interaction with patients and families but instead also looking at their involvement at the organizational level and the general community context they are working with/within. This is useful for identifying and leveraging the work that nurses and other frontline primary care professionals are actually doing in health prevention and promotion and minimising the actions they are missing.

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Table 1. Tools for the study of patient safety in primary care: Representation of health promotion and prevention best practices and omissions

TOOL/ OBJECTIVE / REFERENCE	DOES IT PAY ATTENTION TO…	
	…Health promotion and prevention?	…Omissions?
Patient Safety Incident Classification for Primary Care (PSIC-PC) To collect and analyse patient safety data derived from various sources but originated in primary care. Klemp, K., Dovey, S., Valderas, J. M., Rohe, J., Godycki-Cwirko, M., Elliott, P., Hoffmann, B. (2015). Developing a patient safety incident classification system for primary care. A literature review and Delphi-survey by the LINNEAUS collaboration on patient safety in primary care. *European Journal of General Practice*, 21, 35-38. doi: 10.3109/13814788.2015.1043723	1 out of 9 items of the category "Incident related to clinical task" refer to prevention.	✘
International Classification for Patient Safety To enable categorization of patient safety information using standardized concepts. World Health Organization: World Alliance for Patient Safety, Taxonomy (2009) The Conceptual Framework for the International Classification for Patient Safety. Final Technical Report. Version 1,1. Retrieved from: http://www.who.int/patientsafety/implementation/taxonomy/en/	1 out of 13 subcategories of incident types refers to "Patient Accidents". 9 out of 42 items of the "Nutrition", "Clinical Process/Procedure", "Clinical administration" subcategories may be interpreted in relation to health promotion and prevention.	3 references throughout the tool in relation to 3 subcategories of incident types: "Clinical Process/Procedure", "Documentation" and "Clinical administration"
Poghosyan et al. (2017) Typology of errors of omission To categorize errors of omission from the primary care providers' perspective and to understand what factors within practices led to/ prevent them. Poghosyan, L., Norful, A. A., Fleck, E., Bruzzese, J. M., Talsma, A. N., & Nannini, A. (2017). Primary care providers' perspectives on errors of omission. *Journal of the American Board of Family Medicine*, 30(6), 733–742. doi: 10.3122/jabfm.2017.06.170161	1 theme out of 4 refers to "Patient teaching". 1 extra item refers to Health Prevention "Depression screening"	✓
Stocks et al. (2018) Survey To measure the frequency of occurrence of potentially harmful preventable problems in primary care from the patient's perspective. Stocks, S. J., Donnelly, A., Esmail, A., (2018) Development and piloting of a survey to estimate the frequency and nature of potentially harmful preventable problems in primary care from a UK patient's perspective. *BMJ Open,* 8: e017786. doi: 10.1136/bmjopen-2017-017786	1 out of 17 items regarding preventable problems refer to Health Prevention ("Not offering prevention or screening programmes").	4 items ("Wrong or late diagnosis", "Not referred for further investigation", "Not referred to a specialist", "Not offering of prevention or screening programmes").
Threats to Australian Patient Safety (TAPS) taxonomy To describe patient safety events in general practice. Makeham, M.A.B., Stromer ,S., Bridges-Webb C, et al. (2008) Patient safety events reported in general practice: a taxonomy. Qual Saf Health Care, 17, 53–57.	2 items refer to immunisations ("Errors in the process of providing immunisations", "Knowledge or skills errors in undertaking immunisations").	✘

TOOL/ OBJECTIVE / REFERENCE	DOES IT PAY ATTENTION TO…	
	…Health promotion and prevention?	…Omissions?
Canadian variant of the Primary Care International Study of Medical Errors (PCISME) international taxonomy Jacobs, S., O'Beirne, M., Derflingher, L.P., Vlach, L., Rosser, W., Drummond, N. (2007) Errors and adverse events in family medicine. Developing and validating a Canadian taxonomy of errors. *Can Fam Physician*, 53, 271-276.	✘	✘

Table 2. Search strategies and results

OTTAWA CHARTER ACTION AREA	KEYWORDS COMBINATIONS	RESULTS of DATABASE SEARCH + SNOWBALLING	RECORDS INCLUDED in ANALYSIS
BUILDING HEALTHY PUBLIC POLICY	"building public healthy policy" **OR** "building healthy public policy" **OR** "build healthy public policy" **OR** "healthy public policy" **AND** "health promotion" **OR** "positive health"	83	17
CREATING SUPPORTIVE ENVIRONMENTS	"Changing" **AND** "natural environment" **OR** "built environment" **OR** "psychosocial environment" **OR** "economic environment" **OR** "cultural environment" **AND** "Support health"	804	16
STRENGTHENING COMMUNITY ACTION	program* **OR** network* **OR** strateg* **OR** tool* **AND** primary care **OR** primary health care **OR** primary healthcare **OR** community care **OR** collective care **OR** community care **OR** community caring **OR** community health **OR** community healthcare **OR** community health care **AND** community empower* **OR** community action* **OR** community leadership **OR** community decision **OR** community health development **OR** community health promotion **OR** community capacity	1562	8
DEVELOPING PERSONAL SKILLS	primary care **OR** primary health care **AND** skill* development **OR** developing personal skills	513	9
REORIENTING HEALTH SERVICES	reorient* **OR** transform* **OR** restructur* **OR** reorienting health services [Title/Abstract] **AND** primary care **OR** primary health care **OR** health system **OR** health care system **OR** health service* **OR** health care service* **AND** health promotion **OR** health promotion and prevention **OR** positive health	1359	12

Table 3. Thematic framework

OTTAWA CHARTER ACTION AREA EXPANDED DEFINITION	HEALTH PROMOTION AND PREVENTION ACTIVITY	
BUILDING HEALTHY PUBLIC POLICY Government (international, national, state and local) involvement (Leadership) in cross-sectoral partnerships and actions, including steering communities and civil society, that advocate, establish and/or implement population-wide improvements of health and/or conditions of daily life.	Planning and managing health-enhancing ***structures***	Build cross-sectoral partnerships
		Steer communities and civil society
		Develop health-enhanci cross-sectoral policies
		legislation measures
		regulation measures
		fiscal measures
	Planning and managing health-enhancing ***mechanisms***	Build cross-sectoral partnerships
		Steer communities and civil society
		Develop health-enhanci cross-sectoral policies
		legislation measures
		regulation measures
		fiscal measures
	Planning and managing health-enhancing ***actions***	Build cross-sectoral partnerships
		Steer communities and civil society
		Develop health-enhanci cross-sectoral policies
		legislation measures
		regulation measures
		fiscal measures
CREATING SUPPORTIVE ENVIRONMENTS Developing physical and/or social environments in ways that support health and protect against physical hazards and socially and psychologically damaging practices. This can be done by changing physical or social environments, by organizational change, or by offering additional infrastructure, programmes or services. Physical environments encompass the natural and built environments, and social environments encompass psycho-social, economic and cultural environments. Steps to create supportive environments can be taken by individuals, community groups, organizations and governments and can take place at structural, social and personal levels.	Changing ***natural*** environments	Individuals at: personal level
		social level
		structural level
		Community groups at: personal level
		social level
		structural level
		Organisations at: personal level
		social level
		structural level
		Governments at: personal level
		social level
		structural level
	Changing ***built*** environments	Individuals at: personal level
		social level
		structural level
		Community groups at: personal level
		social level
		structural level
		Organisations at: personal level
		social level
		structural level
		Governments at: personal level
		social level
		structural level

OTTAWA CHARTER ACTION AREA EXPANDED DEFINITION	HEALTH PROMOTION AND PREVENTION ACTIVITY		
	Changing ***psycho-social*** environments	Individuals at:	personal level
			social level
			structural level
		Community groups at:	personal level
			social level
			structural level
		Organisations at:	personal level
			social level
			structural level
		Governments at:	personal level
			social level
			structural level
	Changing ***economic*** environments	Individuals at:	personal level
			social level
			structural level
		Community groups at:	personal level
			social level
			structural level
		Organisations at:	personal level
			social level
			structural level
		Governments at:	personal level
			social level
			structural level
	Changing ***cultural*** environments	Individuals at:	personal level
			social level
			structural level
		Community groups at:	personal level
			social level
			structural level
		Organisations at:	personal level
			social level
			structural level
		Governments at:	personal level
			social level
			structural level
	Organizational change	Individuals at:	personal level
			structural level
		Community groups at:	structural level
		Organisations at:	structural level
		Governments at:	social level
			structural level
	Offering additional ***infrastructure, programmes*** or ***services***	Individuals at:	social level
		Community groups at:	social level
		Organisations at:	personal level
			social level
			structural level
		Governments at:	personal level
			social level
			structural level

OTTAWA CHARTER ACTION AREA EXPANDED DEFINITION	HEALTH PROMOTION AND PREVENTION ACTIVITY	
STRENGTHENING COMMUNITY ACTION Expanding the resources and capacity of communities to make decisions and take collective action to empower citizens over the determinants of their health. Actions can include developing programs or networks for capacity building, and advocacy for service or community participatory programme improvements, organizational change and/or for public policy change.	***Development*** of:	Programmes
		Networks
	Advocating for:	Service improvements
		Programme improvements
		Organizational change
		Public policy change
DEVELOPING PERSONAL SKILLS Enabling individuals to understand and critically use health information and to develop skills to improve their health. This is often but not necessarily done through educational processes and/or by increasing health literacy. Developing personal skills includes developing the capacity of individuals to assess their health needs and to identify possible changes to their own actions and the wider environment.	***Educational processes***	To enable: Understanding of health information
		Using health information critically
		Assessment of personal health needs
		Identification of changes to personal actions
		Identification of changes to the wider environment
	Increasing ***health literacy***	To enable: Understanding of health information
		Using health information critically
		Assessment of personal health needs
		Identification of changes to personal actions
		Identification of changes to the wider environment
REORIENTING HEALTH SERVICES Developing the capacity of health systems and programmes to achieve improved population health and health equity, and enabling all people to move along the health-illness continuum in the direction of health. Actions to develop/ reorient health programmes and services to HPP include increasing infrastructure and resources for HPP, extending HPP attention to new issues and strategies, adding health promotion and early intervention components to clinical services, and adapting clinical services. These actions can take place at structural, organizational and service levels.	Increasing ***infrastructure*** for HPP	Structural level
		Organizational level
		Service level
	Increasing ***resources*** for HPP	Structural level
		Organizational level
		Service level
	Extending HPP ***attention to new issues/ strategies***	Structural level
		Organizational level
		Service level
	Adding ***health promotion*** and ***early intervention components*** to services	Structural level
		Organizational level
		Service level
	Adapting clinical services	Structural level
		Organizational level
		Service level

HPP: Health promotion and prevention

Table 4. Codes resulting from the thematic framework analysis and first refining stage

BUILDING HEALTHY PUBLIC POLICY	• Assessing community health for public policies • Establishing collaborations with researchers/ universities • Generating public awareness/opinion of HPP policies • Mobilising community for advocacy for HPP policies • Building partnerships with community stakeholders for public policies • Participating in regenerating community health committees • Advocate for funding/investment for community partnership
CREATING SUPPORTIVE ENVIRONMENTS	• Assessing community environment characteristics (Population, environment, resources) • Developing community programmes approaching environmental improvement • Reorienting/ Developing HPP programmes taking into account the environment • Rising awareness about the impact of healthy lifestyles on the environment • Rising awareness about the impact of the environment on health • Advocacy for policy action: regenerating/creating community health committees • Advocacy for policy action: developing supportive environments • Building partnerships with other stakeholders to improve environments • Developing social networks
STRENGTHENING COMMUNITY ACTION	• Developing programmes for community empowerment • Developing networks for community empowerment • Advocacy for community inclusion in services improvement • Advocacy for including community approach in existing HPP programs • Advocacy for including community intervention in the primary care agenda
DEVELOPING PERSONAL SKILLS	• Advocacy for individuals' participation in educational processes • Formal assessment of individuals health status for developing health education programmes • Formal assessment of individuals health literacy for developing health education programmes • Developing health education programmes (Planning, implementation and evaluation of the health education process) • Mediating between individuals and other sectors/ health professionals for skills development • Referring individuals to other services for skills development
REORIENTING HEALTH SERVICES	• Extending attention towards HPP • Advocacy for health sector reorientation • Advocacy for health sector role in HPP • Increasing HPP infrastructures • Increasing infrastructures for HPP: Develop partnerships and collaborate with the community • Increasing resources for HPP: Evidence/theoretical basis • Increasing resources for HPP: Evidence of interventions effectiveness • Increasing resources for HPP: Evidence of interventions cost-effectiveness • Increasing resources for HPP: Materials and tools • Increasing resources for HPP: Time • Investing time in systematic evaluation • Building workforce capacity: Coordinating professionals for HPP • Building workforce capacity: HPP training for increasing understanding/ updating • Building organizational capacity: Developing organisational culture • Building organizational capacity: Leadership • Building organizational capacity: Planning for HPP • Planning for HPP: Collaborate identifying standards and competencies • Planning for HPP: Identifying multidisciplinary needs • Planning for HPP: Contributing to services organisation improvement • Planning for HPP: Systematic evaluation of HPP activities