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Implementing primary care concepts in higher education: a mixed method study in Flanders (Belgium)

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Abstract

Background The policy shift towards person-centred integrated primary care systems drives interest in primary care across higher education programs. In Flanders, the Primary Care Academy (PCA) is established to support this policy shift. The PCA focusses on the concepts of goal-oriented care, self-management, and interprofessional collaboration to support the shift towards integrated care and to integrate them in curricula in order to strengthen and develop a futureproof health system. Therefore, the aim of this study is if and how lecturers implement these concepts in the curriculum and what they need for a successful implementation.

Methods A sequential explanatory mixed method study design was used combining quantitative and qualitative data. A cross-sectional survey was sent to 276 Flemish health care education programs. Qualitative data was collected through focus groups in which lecturers participated.

Results The results showed that 89% of the higher education programs address goal-oriented care, self-management, and interprofessional collaboration with regard to primary care. Further analysis of courses within the programs reveals that the concept of self-management is covered in only 58%, while goal-oriented care (73%) and interprofessional collaboration (80%) appear more frequently. The level at which the themes are addressed in the courses are often limited to an introduction.

The focus groups revealed that primary care is present in education programs, however lecturers are limited aware where primary care is integrated in their own and other programs. Lecturers expressed a need for more collaboration between research, education and practice in developing educational content. When new concepts are introduced, lecturers want them to be translated into educational content, learning objectives and competencies.

Conclusions The study shows that the concepts of goal-oriented care, self-management, and interprofessional collaboration are present in higher education programs to a varying degree. Lecturers are eager to implement these new

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primary concepts but they lack collaboration between education, research and practice. Lecturers indicate the need for a competence profile for primary care professionals as common framework to guide curriculum development.

Keywords Primary health care, Higher education, Interprofessional education, Primary care identity

Background

Primary health care is the corner stone in health systems across the world. The Alma-Ata Declaration, in 1978, was the first milestone to stress the importance of primary health care in attaining health for all. In the years after the Declaration, the importance of primary health care was further recognised and associated with improved health outcomes [1]. The report of the World Health Organization (WHO) in 2008 “Primary Health Care, now more than ever” stressed the importance of a policy shift towards stronger primary care systems as a response to many challenges faced by current health systems [2]. One of the challenges is the growing number of people with complex and chronic care needs and its increasing pressure on the healthcare system. Especially in chronic care, a paradigm shift is needed from a biomedical-oriented approach towards a more person-centred approach [3, 4] and integrated care [5]. Primary care is the first point of access to the care system and a proactive, person-centred, community-based and holistic primary care approach is considered to respond better to chronic and complex care needs because it puts individuals’ personal experience, preferences and goals at the centre and improves their capacity for self-management [6–9]. Therefore, person-centred integrated care is needed.

One of the models of person-centred integrated care is the chronic care model in which self-management is in the centre [5]. Researchers, such as Steele Gray et al. [10] argue that goal-oriented care might be a catalyst for integrated care. Integrated care and goal-oriented care urge professionals and organisations to collaborate towards the same goal, being that of the patient and the informal caregiver [11]. In this respect, the shift towards integrated care requires interprofessional collaboration and breaking down silos within and between the healthcare and welfare sectors [12]. Thus, goal-oriented care [13], self-management [14] and interprofessional collaboration [15] are pivotal concepts in the implementation of person-centred integrated care.

The shift towards goal-oriented care, self-management, and interprofessional collaboration is on the agenda in Flanders (the Dutch speaking part of Belgium), as documented in several policy plans and position papers but remains challenging [16]. Research to strengthen primary care and primary care education is needed to facilitate this shift. The Fund Dr Daniel De Coninck, managed by the King Baudouin Foundation, a philanthropy

organisation in Belgium, financed the Primary Care Academy (PCA) in 2019. The PCA is a cooperative consortium of four universities, six universities of applied sciences, primary care providers, and the Flemish Patient Representative Association. The PCA focuses on primary care research on the concepts of goal-oriented care, self-management and interprofessional collaboration and the implementation of results in education to strengthen the evidence-based foundation in primary care practice.

Strong future proof primary care asks for strong education programs aiming to deliver up-to-date health and welfare professionals [17]. The educational system must respond to the requirements of the health system. One way to do this is by redesigning the education programs and accompanying courses to specific contexts when paradigm shifts and accompanying innovations are present [17, 18]. These education programs play an important role in shaping professional knowledge, competencies, and attitudes [19].

Therefore, the aim of this study is to get an overview of primary care in educational programs in Flanders, focusing on concepts such as goal-oriented care, self-management, and interprofessional collaboration. The following research questions are formulated.

- How do lecturers incorporate concepts such as goal-oriented care, self-management, and interprofessional collaboration into their curricula?
- What are the perceived needs of lecturers to facilitate successful implementation of these primary care concepts?

Method

Study design

This study was based on a sequential explanatory mixed method study design [20]. In the first phase, a quantitative study has been performed by means of a cross-sectional survey. This was followed by a qualitative focus group study to broaden and better understand the quantitative results.

Context

In the European Qualifications Framework, different degrees and levels of the education system are described [21, 22]. Table 1 displays the relation between the European Qualification Framework and the training of primary care professionals in Flanders.

Table 1 Overview of higher education

European qualifications framework	Level of the education system	Training of primary care professionals in Flanders
Secondary degree	Level 4	Secondary education
Associate degree	Level 5	Vocational higher education
Bachelor's degree	Level 6	Universities of applied sciences
Master's degree	Level 7	Universities
Doctoral degree	Level 8	Universities

The leading research team consisted of researchers with specific expertise in primary care, and representing different education programs, such as occupational therapy (DB, RH, LV, PDV & DVDV), medicine (PB, PP & RR), sociology (SP), agogic sciences (EV) and nursing (SM). Some of the researchers are also educators in the corresponding programs (DVDV, PDV, PP, PB). Some of the researchers are also working as a family physician (PB, PP & RR). Members of the PCA, who are not part of the leading research team, provided feedback on the survey, analysis and validated the results.

Development of survey and interview guide

An online cross-sectional descriptive survey was developed, to map the extent to which and how education

programs work around primary care and pay attention to goal-oriented care, self-management, and interprofessional collaboration. A combination of close-ended and open-ended questions were used, see Table 2 for an example of questions used in the survey. The survey was in Dutch.

The survey was developed in an iterative process with different rounds of feedback by members of the research team (SP, SM, EV, RR, DVDV, PDV). Six people piloted the survey and gave feedback via comments and a group discussion. After the pilot, the answer options of questions were formulated more clearly and a definition of the concept of goal-oriented care, self-management and interprofessional collaboration was added.

The survey itself contained questions about goal-oriented care, self-management and interprofessional collaboration in the programs, focused on primary care, the extent to which they were covered in specific courses and on what level of theoretical expertise; introductory, deepening, and/or specialising (Table 3). Goal-oriented care was defined as 'care based on and evaluated according to the goals expressed by the person with care and support needs' [4]. Self-management was defined as 'the person is able to live well with their chronic condition by adapting to its consequences' [9]. Interprofessional collaboration was defined as 'collaboration between healthcare

Table 2 Examples of question

Example of close-ended question	Example of open-ended questions
Does the program offer content related to primary care? Primary care consists of directly accessible care and welfare services (e.g., family physician, pharmacist, home health nurse, social worker, family care services, etc.).	Is there any information you would like to include about the course unit/subject/module/learning activity that is needed to understand the uniqueness of the course unit/subject/module/learning activity?
Is "goal-oriented care" explicitly stated in the ECTS sheet/description of the course unit/course/course/module/learning activity?	Why do you consider this course unit/subject/module/learning activity to be an innovative good practice?
Does the topic of "interdisciplinary collaboration" appear in the course unit/course/module/learning activity?	
Interdisciplinary collaboration is the cooperation between health and welfare providers from different disciplinary backgrounds.	
Are students from different courses/training backgrounds taking this course unit/subject/module/learning activity together?	

Table 3 levels of expertise

Level	Explanation	Example
Introductory	The students receive a basic introduction, learning the foundational terms, fundamental concepts, and the associated framework. No prior knowledge is required.	The student knows the difference between goal-oriented care and problem based care.
Deepening	The students zoom in on subareas, explore the state of the art of new knowledge and ongoing scientific debates, or acquire specific methods and techniques.	The student shows how to apply goal-oriented care in a simulation setting.
Specialising	The students integrate and synthesize knowledge, learn to make predictions based on theory, engage in theory-building using research data, or contribute their own ideas to conceptual frameworks.	The student integrates the principles of goal-oriented care during their internship and related innovation project.

and welfare providers from different disciplinary backgrounds' [23]. The survey is available upon request by the authors.

A semi-structured interview guide was developed for the focus groups. The interview guide was piloted among three colleagues, that are not part of the research team. After the pilot, questions asking for good practices were added. The interview guide has questions about the introduction of the participants, primary care in the education program, experiences with introducing new content in the education program and perceived support to implement new content. The interview guide can be found in the supplementary materials (Supplementary File 1).

Participants

For the quantitative part, the participants were selected based on a desk top research that inventoried all the current health care and welfare education programs in the database of the Flemish Higher Education Register. Program directors, course coordinators, and lecturers from the following education programs were identified and contacted by email to complete the survey; medicine, psychology, occupational therapy, nursing, midwifery, physiotherapy, gerontology, health promotion, management in health care, social work, speech and language therapy, audiology, podiatry, applied psychology, dietetics, orthopedagogics, movement science, (social) rehabilitation science, health science, medical office management, wellbeing and vitality management, and creative therapy. The respondents provided the information based on their program and course description.

Via purposive sampling the participants for the qualitative part were selected. All respondents of the survey were invited for the qualitative part by indicating their willingness to participate at the end of the survey, these participants were later contacted by email. Maximum variation sampling was aimed at in terms of training and profile of the participants [24].

Data collection

Quantitative data was collected between March 2020 and July 2020. In March 2020, the participants were invited by email to complete the survey and evaluate their education program through self-reporting. In case they did not have the needed knowledge to complete the survey, they were asked to forward the survey to appropriate colleagues within the institution.

Between December 2021 and February 2022, qualitative data was collected through online focus groups. The focus groups were purposefully composed across educational organisations and programs to promote the exchange of ideas among the participants. Participants from fourteen different education programs were

included. The focus groups were organized in two stages and participants were expected to attend both. A first stage was conducted to explore to what extent and how primary care is already present in the curriculum. The second stage allowed to map how lecturers want to be supported to implement new concepts concerning primary care in their programs. During the focus groups, the moderator (LV) was supported by an assistant (RH or DB) who made field notes [25].

Ethical approval was obtained from the Social and Societal Ethics Committee (SMEC) of KU Leuven (reference number G-2019 11 1868). All participants gave their informed consent.

Data analysis

Data from the survey were analysed, in Excel, using a descriptive quantitative analyses, calculating summarized statistics with regard to: (1) the presence of the concepts in education programs, (2) the presence of the concepts in particular courses, (3) the explicit mentioning of the concepts in course descriptions (European Credit Transfer System (ECTS) description), and (4) the level of expertise (introductory, deepening or specialising) of the courses regarding the concepts. The analyses were limited to survey data completed by the participants through self-reporting. The researchers themselves did not analyse education programs.

The online focus groups were recorded and transcribed. The analysis was a thematic analysis in an iterative process done by the whole research team (LV, RH, DB, PB, DVDV, PDV, PP) in different steps and constellation. The recorded data were analysed manually and supported by a data extraction table in Excel. The field notes were added to the data analysis [25]. Firstly, the data was read thoroughly to get a first understanding of the content. Meaningful text fragments were distilled into meaning units by LV and an initial set of codes was made. These meaning units and corresponding codes were presented to PDV, PB, RH & DB and subthemes were discussed by this group based on the codes. After two rounds of analyses with the research team (PDV, DVDV, PB, RH, DB, LV) the subthemes were categorised into themes [26]. Then the preliminary analyses were presented by LV and PDV to three experts in educational development and curriculum design, who were not a part of the broader research team, to enhance credibility. After this moment, the research team had another round of analyses to redefine the themes. Another round of feedback followed where the analyses were presented to all members of the PCA through an online presentation. Their feedback was taken into account while further analysing and concluding the final themes. Finally, a member check was done, participants of the focus groups received a digital report of the

Table 4 Example thematic analysis

Quote	Meaning unit	Code	Subtheme	Theme
The various programs in the campus themselves do not know each other. This is something we have been trying to address for years, but somehow don't succeed.	The various programs in the campus do not know each other	Not knowing other health and welfare educational programs	Limited knowledge of other programs	Lecturers' limited awareness of their own and others programs

themes and were able to give feedback on the themes [27]. Table 4 gives an example of the analytic steps in the thematic analysis.

Results

Quantitative results

In the Flemish speaking part of Belgium, we identified 276 healthcare and welfare education programs. In Flanders, there are five universities and 14 universities of applied sciences offering a health and welfare program. All five universities participated. Ten universities of applied sciences participated. Seven partnerships for associate degrees participated. One Hundred Thirty responses to the survey were withheld for analysis, representing 22 education institutions and 95 education programs offered by these institutions. Table 5 shows the number of education programs per level of degree. Programs included are medicine, psychology, occupational therapy, nursing, midwifery, physiotherapy, gerontology, health promotion, management in health care, social work, speech therapy, audiology, podiatry, applied psychology, dietetics, orthopedagogics, movement lecturer, (social) rehabilitation science, health science, office management, wellbeing and vitality management and creative therapy.

First, Table 5 shows to what extent the specific concepts (goal-oriented care, self-management, and interprofessional collaboration) are addressed in the education programs. This is expressed as the number of participating education programs where the concepts are included. In the participating education programs, 10 out of 95 programs do not mention the concepts of goal-oriented care, self-management, and interprofessional collaboration. In 85 programs out of 95 programs, or 89%, the concepts are represented. Regarding professional bachelor programs, the concepts are discussed in 36 out of 41 programs.

Second, Table 5 shows that there are fewer courses on self-management compared to goal-oriented care or interprofessional collaboration. Goal-oriented care appears to be integrated in 73% of the registered courses and in 58% of academic masters. Self-management is included on average 58% of the courses, especially in vocational associate degree programs (88%). Interprofessional collaboration is well-represented as a course concept (80%), but less so in universities of applied sciences' associate degree programs (57%).

Third, it was examined whether the specific concepts covered in the courses were explicitly mentioned in the course descriptions (ECTS description). Table 5 shows the percentage of courses that explicitly mention the concept in the course description, per level of degree. Overall, the percentage of courses that made the concept explicit is low, especially for goal-oriented care (21%) and self-management (30%), in contrast to interprofessional

collaboration (48%). Outliers are courses on self-management in universities of applied sciences' associate degree programs (100%), and courses on interprofessional collaboration in universities of applied sciences' associate degree programs (25%), and in vocational education associate degree programs (71%). The overall low percentages of courses that explicitly mention the specific concept in the course descriptions are particularly interesting in view of the higher number of courses for which it is reported that they do cover the concepts.

Finally, the extent to which the specific concepts are addressed at an introductory, deepening, and/or specialised level in the courses are mentioned in Table 6. The percentage of introductory courses is 51% for goal-oriented care, 63% for self-management, and 51% for interprofessional collaboration, followed by deepening courses at 23% for goal-oriented care, 24% for self-management and 33% for interprofessional collaboration. The total percentages of courses at the specializing level are below 14% for each concept. Additionally, the percentage of deepening and specializing courses seems to be higher in the bachelor's and master's degree programs compared to associate degree programs.

Qualitative results

Eleven focus groups took place with 33 participants (Table 7). Nine Flemish institutes of higher education participated and fourteen education programs were represented. All participants are involved in an education program, however some of the participants have a hybrid role and are also working in primary care practice in their related discipline. The results from the focus group interviews revealed five main themes. Theme 1 describes the place of primary care in the education program. Theme 2 focusses on the awareness of lectures on their own and other education programs. Theme 3 expresses that more collaboration is needed between education, practice and academic research. Theme 4 describes the need for educational content. Theme 5 highlights the need for a competency profile for the primary care professional.

Theme 1: primary care is offered integrated or isolated in education programs

When participants were asked about how primary care is addressed in their education programs and courses, two main approaches were identified. On the one hand, primary care appears to be offered in an isolated manner, in which a specific course is dedicated to primary care. On the other hand, primary care was integrated throughout the education program and was intertwined within the content and teaching of certain competences and skills, such as interprofessional collaboration and communication techniques, relevant for primary care.

Table 5 Topics represented in the programs

Educational institution	Level of degree (level in European Qualification Framework)	Participants in the survey (n)	Programs where the specific topics are present (n)	Courses where the topics are present (n)	Courses that address a topic (n) (%)			Courses that explicitly mention topic in course description (n) (%)		
					GOC ^b	SM ^b	IPC ^b	GOC	SM	IPC
Secondary education	Secondary degree (4)	8	7	7	7 (100)	2 (29)	4 (57)	1 (14)	2 (100)	1 (25)
Vocational education	Associate degree (5)	9	8	8	7 (88)	7 (88)	7 (88)	1 (14)	2 (29)	5 (71)
University of applied sciences	Associate degree (5)	1	0	0	0	0	0	0	0	0
	Professional bachelor's degree (6)	41	36	71	49 (69)	39 (55)	58 (82)	10 (20)	12 (31)	22 (38)
	Postgraduate degree (^a)	16	15	14	12 (86)	9 (64)	10 (71)	4 (33)	1 (11)	6 (60)
Universities	Academic bachelor's degree (6)	7	7	8	7 (88)	5 (63)	8 (100)	2 (29)	2 (40)	5 (63)
	Academic master's degree (7)	13	12	24	14 (58)	14 (58)	18 (75)	2 (14)	4 (29)	11 (61)
Total		95	85	132	96 (73)	76 (58)	105 (80)	20 (21)	23 (30)	50 (48)

^a Postgraduate degrees are not a part of EQF. They lead to certificates instead of diplomas

^b GOC goal-oriented care, SM self-management, IPC interprofessional collaboration

Table 6 Course level per topic

Educational institution	Level of degree	I			ID ^a			IS ^a			IDS ^a			D			DS ^a			S		
		GOC	SM	IPC	GOC	SM	IPC	GOC	SM	IPC	GOC	SM	IPC	GOC	SM	IPC	GOC	SM	IPC	GOC	SM	IPC
Secondary education	Secondary degree	71	50	50	0	0	0	0	50	0	0	0	29	0	0	0	0	0	0	0	0	0
Vocational Education	Associate degree	75	100	67	25	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Universities of applied sciences	Associate degree	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Professional bachelor's degree	43	64	49	2	2	2	36	26	36	4	5	4	9	5	4	9	5	9	5	5	9
	Postgraduate degree	58	67	70			17	30	22	30		11										
Universities	Academic bachelor's degree	57	100	63	25	25	25	13	13	13												
	Academic master's degree	43	29	25	8	8	8	50	43	50	8	14	8	8	14	8	8	14	8	8	14	8
Mean (per topic)		51	63	51	8	7	7	23	24	33	8	7	4	8	5	6	8	5	6	8	5	6

Legend: I introductory, D deepening, S specialized, GOC goal-oriented care, SM self-management, IPC interprofessional collaboration

^a Are combinations of I, D, S

Table 7 Participants focus group

Institution	Education program	
Artevelde university of applied sciences	Bachelor occupational therapy	n=8
	Bachelor nursing	n=2
	Bachelor physical education and movement recreation	n=1
	Bachelor podiatry	n=2
	Bachelor midwifery	n=1
	Researcher with expertise in healthcare education	n=1
Ghent university	Master of Science in Occupational Therapy	n=1
	Bachelor of Science in Medicine, Master of Medicine in Medicine and Master of Medicine in Family Medicine	n=2
UCLL university of applied sciences	Bachelor nursing	n=2
Karel de Grote university of applied sciences	Bachelor nursing	n=2
University of Antwerp	Postgraduate of Nursing in General Practice	n=1
	Bachelor of Science in Medicine, Master of Medicine in Medicine and Master of Medicine in Family Medicine	n=1
Thomas More university of applied sciences	Bachelor nursing	n=2
HoGent university of applied sciences	Bachelor occupational therapy	n=2
	Bachelor speech therapy and audiology	n=1
	Bachelor nursing	n=1
VUB University Brussels	Master of Science in Management, Care and Policy in Gerontology	n=1
	Bachelor of Science in Medicine, Master of Medicine in Medicine and Master of Medicine in Family Medicine	n=1
Vives university of applied sciences	Lecturer in a variety of programs: Bachelor nursing, midwifery, occupational therapy, speech therapy and audiology, social work, care technology	n=1
n=9	n=14	n=33

It is throughout the program, there is no specific course for primary care, is there? There isn't, but it does come up that really all students are going to come into contact with that, for example interprofessional collaboration we also have as a course. But that's not an elective with us. We all have to do that (lecturer bachelor speech therapy and audiology)

Theme 2: lecturers' limited awareness of their own and others programs

Lecturers expressed the importance of primary care, but experienced at the same time that their educational programs aim to educate students towards a specific profession and not specifically towards primary care. From this perspective, the participants felt that they have a limited overview if and to what extent primary care is integrated in their programs. This limited awareness was also apparent regarding the fact whether goal-oriented care, self-management and interprofessional collaboration were integrated into their education program.

There are also colleagues who do indeed offer the social map in the first courses so the teaching con-

cepts that you mentioned are also in ours, albeit very scattered in the courses and I don't know, I can't grasp it in which courses that the colleagues are teaching very specifically about primary care (lecturer bachelor occupational therapy).

Participants also expressed limited knowledge about other programs, even within the same institution. Additionally, they have no insight into equivalent programs at other institutions. Nevertheless, lecturers expressed a desire to establish connections between each other. They indicated that it would be helpful if each program provides an overview of which lecturer covers which subject and their area of expertise.

The various programs in the campus themselves do not know each other. This is something we have been trying to address for years, but somehow don't succeed (lecturer bachelor podology).

Due to the fact that lecturers have been recruited based on their specific expertise as a specific professional, and the fact that they experienced a lot of autonomy to determine the content of the curriculum it becomes a challenge to map out where primary care is addressed in the curriculum.

Theme 3: the need for collaboration between research, education and practice

When new theoretical concepts, models, or research is implemented in the curriculum, it primarily occurs through the initiative of individual lecturers. The lecturers experienced that there is limited collaboration between research and education. Lecturers indicated that before new concepts can be implemented they need to be informed about ongoing research. Lecturers explicitly requested the need of a selection of relevant research for incorporation in the curriculum.

Furthermore, lecturers expressed a discrepancy between education and the professional field. New concepts introduced in the curriculum often seem distant from the reality. One lecturer considered it a challenge to convey new evidence in relation to real-life practice. The lecturer questioned the usefulness of investing time in this if students cannot yet apply it in practice. However, other participants hold a different perspective, asserting that education can certainly be a precursor to the professional field.

If there is a new concept, such as case management, that is a very nice concept, but that is still very far from the practice and very far from the reality of the implementation of really using it. Should we then start teaching that to our students? If they then come in practice and don't actually see any of that? (...) Then I find it a little bit double, what are you going to teach to your future professionals versus a reality in practice? (lecturer and coordinator master general practice)

To enhance collaboration and co-creation among different education programs, institutions, and organizations, lecturers expressed that they would benefit from learning how to engage in interaction and co-creation with other programs. Participants expressed that the time spent working separately would be better invested in collaborating together and bringing together what already exist. Lecturers also seek to engage in co-creation with the field of practice.

The participants highlighted that the focus groups themselves are already experienced as supportive and inspiring, as they bring together various lecturers from education programs and institutions.

Theme 4: translating new concepts into educational content

Lecturers want to align new concepts with the existing curriculum. They prefer minor adjustments to the curriculum to accommodate these new concepts, avoiding significant disruptions to the existing curricula.

Lecturers acknowledged the existence of various terms and concepts, making it challenging to determine what is being discussed. They suggested the development of a lexicon that formulates concepts such as goal-oriented care, self-management, empowerment, etc. This would allow for assessing whether there is already existing content related to these concepts, albeit using different terminology. Lecturers would feel supported if the translation of abstract concepts into concrete examples has already been provided, such as testimonials, case studies, or knowledge clips where the concept is applied in practice.

Supporting in speaking the same language. Just what do we mean by self-management? And in that respect for students it is very enlightening, but also for us (...) What are we talking about here and is it the same or not? (lecturer bachelor nursing)

Theme 5: translating new concepts into learning objectives and competencies

The participants mentioned that a Flemish competency profile for the primary care professional is lacking. This results in the absence of a corresponding educational profile with associated competencies.

The participants expressed the idea of establishing a range of primary care learning objectives and competencies. Subsequently, lecturers expressed the need to develop different educational content packages for this range. They suggested to divide the educational packages in generic and specific competencies. The generic competencies encompass the competencies that a primary care professional must possess. The generic competencies are inherent to the educational package and cannot be modified. This ensures that students from different programs acquire the generic competencies. On the other hand, the specific competencies should be left open-ended, allowing the education program to define them. This allows for adaptability to each student's level and provides the opportunity for the program to link the educational content to what already exists in the curriculum.

Actually, I am convinced that we should have some basic competencies for everyone. And then there should be no difference between bachelor and master students, because that's a basic competency. But you can start with masters' students at a certain level and differentiate to a higher level to keep it a little more engaging for those students. (...) But what are basic competencies? And then maybe there are some competencies that are very specific to medical students, right? (lecturer living labs)

The lecturers suggested that the generic competencies should be developed according to a standardized framework so that every education program recognizes them. Possible frameworks suggested by the lecturers were CanMEDS, IPEC Core Competencies, and Bloom's Taxonomy.

Discussion

This study's aim is to get an overview of primary care topics in educational programs in Flanders, focusing on goal-oriented care, self-management and interprofessional collaboration and how lecturers incorporate these and what they need for successful implementation in their courses.

In the Flemish speaking part of Belgium, we identified 276 healthcare and welfare education programs, from which 95 education programs participated. The results demonstrate that only 11% of the programs do not pay any attention towards goal-oriented care, self-management or interprofessional collaboration. Of the three domains interprofessional collaboration is most often presented (80%) followed by goal-oriented care (73%) and self-management (58%).

While the quantitative data shows that most education programs pay attention to these concepts, the qualitative findings reveal a lack of clarity among lecturers regarding where and how these concepts are integrated into the curricula. This shows a discrepancy between the qualitative and quantitative data. However discrepancy between quantitative and qualitative data in a mixed-method study design is not a rarity [28, 29]. Lecturers, who participated in the focus groups, lack the overview that curricula directors have when filling in the survey for the quantitative data. The discrepancy between the quantitative and qualitative data is consistent with the experiences lecturers have regarding the integration of primary care in the curricula. The concepts may not be explicitly recognized by lecturers. This highlights the importance of clearly identifying primary care concepts into the curriculum to enhance their visibility and impact on the understanding of primary care [30].

When looking at the quantitative data with a focus on courses on goal-oriented care, self-management and interprofessional collaboration, the qualitative data supports the quantitative data. Concepts are not always explicitly mentioned in course descriptions. Only 21% of goal-oriented care courses, 30% of self-management courses, and 48% of interprofessional collaboration courses include these concepts in their descriptions. In some course descriptions, the primary care concepts are not mentioned but yet taught. This lack of explicit mention may indicate that these concepts are either being

integrated into courses where they are not the primary focus or are not fully integrated into the curriculum. Ideally, both dedicated courses and those that incorporate these concepts more superficially are needed [31]. This is also perceived in the qualitative results, where primary care is either integrated and implicit or isolated and more explicit. However, well-established education programs should consistently emphasize these concepts throughout their curriculum by explicitly mentioning them in course descriptions and raising awareness of the interconnections between concepts and courses [32].

Our participants perceived the implementation of clinical and academic research into the education program as complex. The translation of research findings into educational materials should be facilitated by translational research [33, 34]. Translational research aims to bridge the gap between theory and practice. In education, there is a 'know-do' gap [34]. This gap arises due to various factors such as unawareness of existing information, lack of comprehension, the information is perceived as irrelevant or dissent towards the information [34]. By providing education materials, based on research, this gap could be closed. Furthermore, it's important for researchers, educators and practitioners to meet in order to build interactions and explore their boundaries of action [35, 36]. This is a need expressed by our participants. A way to connect is through an academic collaborative centre (ACC) [37]. An ACC facilitates the co-creation and collaboration between research, education and practice; and could be a platform for lecturers to connect [37].

Another challenge is that lecturers are bound to discipline specific curricula. However primary care cuts across disciplines [2]. Interprofessional education could be a solution, as it supports the knowledge of other programs and contribute to more collaboration between education programs [38]. The results of this study show that lecturers themselves are asking for more collaboration. The WHO report on interprofessional education highlights that professionals having the competencies to work with other professionals are an important foundation for person-centred integrated care, which encompasses the concepts of goal-oriented care, self-management and interprofessional collaboration [39]. However, research highlights that higher education institutions often focus more on teaching and education than on research. Even within institutes for higher education, there is limited collaboration between research and education [40]. This is also experienced by our participants, they highlight the need for more transfer of research findings within higher education institutions to support interprofessional collaboration.

Lecturers expressed the need for a generic primary care competence profile. In higher education programs,

students are offered a certain degree of deepening and specialisation. Not only specialization is needed, but also general skills. In literature, the interplay between generic competencies and specific competencies is described as the t-shaped professional [41]. The t-shaped professional has a depth of knowledge in one discipline and has a breadth of knowledge in understanding other disciplines with boundary crossing competencies [42]. It offers an interesting framework to develop these competencies. The competencies for future healthcare workforce were described by a metaforum workgroup [43]. They describe discipline-focused education as the main challenge in the current education [43]. This supports the need for a competency profile with attention to generic competencies. The optimal place of deepening and specialisation regarding these concepts in the primary contexts makes one wonder whether a shared interprofessional primary care program for all future primary care professionals is something to be considered [44, 45]. The t-shaped professional for primary care can be translated into a competency profile for person-centred primary care. Furthermore, this could support lecturers in becoming t-shaped educators themselves, capable of integrating and emphasizing primary care concepts across disciplines and education programs.

Existing competency frameworks, such as CanMeds, offer a foundation but are often discipline-specific and not focused solely on primary care [46, 47]. A general competency profile merely for primary care is lacking. The Miller Pyramid, a framework used to assess clinical competence, is often used in education. It is divided in the following levels: 'knows', 'knows how', 'shows how' and 'does' and focusses on knowledge, attitude and skills [48]. In literature, there is some debate about competency-based education, because competency frameworks are mostly outcomes-based and are not able to measure every little nuance of professional training [49, 50]. Competency frameworks are mainly individually on the person as a professional and do not focus on the professional as a person [51]. Therefore it is better to invest in a common primary care identity to shift the focus not only on the professional but also on the person. The research of Cruess et al. [52] links the Miller pyramid to professional identity. They suggest adding the level 'is' to the Miller pyramid, representing the professional identity, through the incorporation of values and attitudes [52].

Strengths and limitations

There are some limitations to this study. Not all education programs participated, 95 programs participated out of 276 unique programs. Consequently, the results of our survey cannot be considered to be fully representative for all education programs and courses. The concepts, and

their presence in programs and courses, were evaluated through self-reporting by the program and course coordinators. Most participating education programs belong to institutions that are part of the Primary Care Academies' network, and we may have specially collected data of 'innovators' or 'early adopters' with regard to offering courses around goal-oriented care, self-management, and interprofessional collaboration.

The survey questions focused mainly on knowledge and less on attitude and skills. Future research should go as far as to administer the actual knowledge, skill and attitude transfer regarding these concepts. Yet, an inventory of competence indicators per concept is needed, which requires even more research. There is no overview of the non-responses of educational programs.

In the qualitative part, the respondents were mainly related to health care programs and less to social care. However social care is also an important actor of primary care and therefore the results are perhaps more medical oriented. Overall, the education programs are discipline specific programs that prepare students for a profession in primary care, but also for secondary care and tertiary care. Regarding the research design, different actions such as field notes, different rounds of analysis, member check were undertaken to guarantee credibility. When reporting the results, quotes were used to guarantee confirmability.

Further research on the collaborative development of a primary care competency profile could support more collaboration and the development of a primary care identity.

Conclusion

The study shows that goal-oriented care, self-management, and interprofessional collaboration as pillars of person-centred integrated care are to a varying degree present in higher education and mostly at an introductory level. Despite the fact that these concepts are present in curricula, lecturers experience a lack of knowledge on how and where these concepts are embedded in the curricula, and of primary care in general. They felt a lack of collaboration between the different programs and a challenge to link education and practice. Overall, they indicated the need for a competence profile for primary care professionals as common framework to guide curriculum development.

Supplementary Information

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Supplementary Material 1.

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Authors' contributions

SP, SM, EV, RR, DVDV, PDV were responsible for the survey development, quantitative data collection and quantitative analysis. LV, RH, DB, PB, DVDV, PDV, PP were responsible for the qualitative data collection and analysis. SP and LV wrote the manuscript. All authors read and approved the final manuscript.

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Data availability

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Ethical approval was obtained from the Social and Societal Ethics Committee (SMEC) of KU Leuven (reference number G-2019 11 1868). All participants gave their informed consent. The study was in accordance with the principles outlined in the Declaration of Helsinki.

Competing interests

The authors declare no competing interests.

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