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Co-creating a person-centred approach in primary care for patients with low socioeconomic status and chronic conditions: *a participatory learning & action study*

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Abstract

Aim: To tailor an existing Person-Centred Integrated Care (PC-IC) approach to the needs of patients with low socioeconomic status (LSES) and chronic conditions in primary care. *Background:* While Disease Management Programs (DMPs) have been introduced to reduce the burden of chronic diseases, their effectiveness for patients with LSES remains uncertain due to insufficient attention to the individual context. A PC-IC approach may enhance patient outcomes by addressing patients' cultural backgrounds, values, and health literacy needs, because these factors are particularly relevant for patients with LSES. *Method:* A qualitative study was conducted using three co-creation sessions with patients with LSES and chronic conditions, along with general practitioners and practice nurses, to adapt, develop, and test specific elements of the PC-IC approach. Participatory learning and action (PLA) techniques incorporating visual materials were employed to ensure meaningful engagement and input by all participants, including those with limited reading and language skills. Following these sessions, we conducted a validation check by patients on the draft materials. *Findings:* In the co-creation sessions, an existing PC-IC approach was tailored to the needs of LSES patients with chronic conditions in primary care. The adapted PC-IC approach emphasized key elements as trust, being seen as a person in the social context, shared decision-making, and access to clear and easily understandable information. Existing materials needed to be adapted, resulting in a visual conversation tool. This tool covers the physical, social, and mental health domains as well as daily life, each domain with six to eight topics. It helps to get better insight into the patient's daily life, wishes, and possibilities. It maps medical and psychosocial issues and supports the patient in gaining a better understanding. The adapted PC-IC approach with the conversation tool is being presented in a training for primary care professionals.

Introduction

Healthcare systems around the world are affected by an increasing prevalence of chronic diseases (Chen *et al.*, 2020, WHO, 2024). In the Netherlands, more than half of the adult population suffer from one or more chronic conditions (Rijksinstituut voor Volksgezondheid en Milieu, 2018). Chronic diseases are two to four times more common among patients with low socioeconomic status (LSES), which is defined as having a basic or lower vocational level of education (Rijksinstituut voor Volksgezondheid en Milieu, 2024). In addition, income and occupation are also indicators of SES (Shavers, 2007).

To reduce the burden of chronic diseases, Disease Management Programs (DMPs) have been introduced focusing on single chronic conditions, but their effectiveness on patient-reported outcomes is unclear (Grumbach and Bodenheimer, 2002). Health-related quality of life (HRQoL) has not improved for individuals on DMPs (Cramm and Nieboer, 2016, Tsiachristas *et al.*, 2014). One reason could be that DMPs tend to concentrate on the medical elements of a particular disorder, paying less attention to social issues or other chronic conditions that could potentially affect HRQoL. In addition, the needs of patients with LSES, particularly regarding limited health literacy and psychosocial context, are often overlooked (WHO, 2024). Patients with LSES and chronic conditions are more likely to have multiple chronic diseases alongside psychosocial problems, such as financial insecurity,

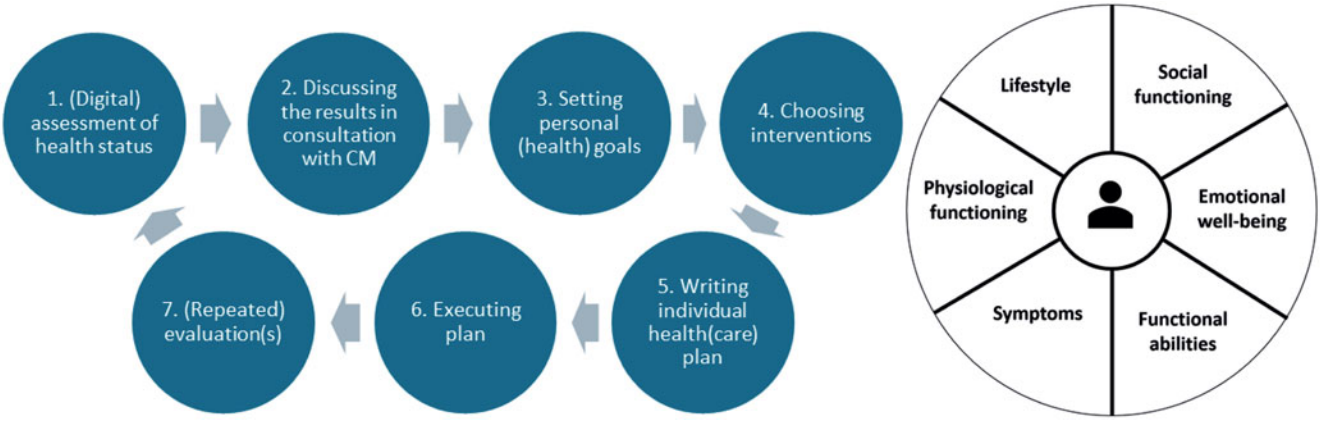


Figure 1. The Person-Centred and Integrated Care (PC-IC) approach for patients with chronic conditions and multimorbidity in general practice. The patient completes a comprehensive health assessment at home (e.g. Positive Health questionnaire) (Step 1). The outcomes are used for discussion (Step 2). Together with the PN or GP, the patient prioritizes dimensions and sets individual goals (Step 3). Treatment or support options are selected to align with these goals (Step 4), and the care plan is documented in the electronic health record for sharing with other health care providers (Step 5). The interventions are implemented in practice (Step 6). Follow-up visits are scheduled (Step 7). The patient's health status is evaluated regularly, e.g. annually (Raaijmakers *et al.*, 2023).

unemployment, and feelings of exclusion or loneliness. These factors contribute to long-term stress, negatively affecting their health (Guidi *et al.*, 2021). Strategies are needed to help healthcare providers (HCPs) in recognizing and supporting these patients to ensure understanding, appropriate treatment, and improved health outcomes (Murugesu *et al.*, 2022). A Person-Centred Integrated Care (PC-IC) approach tailored to individual needs and contexts, could address these issues (Ahmed *et al.*, 2022, Van Bommel *et al.*, 2025). Person-centred care (PCC) can be defined as shifting the focus from the medical condition to the individual, recognizing each person's unique goals, needs and preferences. PCC addresses not only physical, but also psychological, emotional, and social needs (Burgers *et al.*, 2021). This includes shared decision-making and involvement of the patient and his family (Ahmed *et al.*, 2022). Integrated care (IC) ensures coordinated health services across levels and settings, delivering needs-based care according to their needs over time that is coordinated across different levels of the health system (WHO, 2016).

In a previous study on a recently developed PC-IC approach in the Netherlands (Raaijmakers *et al.*, 2023), we found an overall positive experience among patients and GPs with the PC-IC approach. Our key findings were related to patients felt taken more seriously and seen as individuals with personal needs rather than just a disease. It also revealed, however, that the approach and the tools, including the Positive Health dialogue tool, did not fully address the needs of patients with LSES (Van Bommel *et al.*, 2025). Therefore, the PC-IC approach should be tailored to the needs of patients with LSES, considering their cultural background, values, and health literacy. In addition, strategies that promote shared decision-making in these patients should be identified (Ahmed *et al.*, 2023). Recommended adaptations for patients with LSES could include creating materials that are clear and easy to understand and offering communication training for healthcare professionals.

The aim of our study was to tailor an existing recently developed PC-IC approach to the needs of patients with LSES and chronic conditions in primary care, and to develop appropriate materials to support primary care professionals in patient care.

Method

Setting

In some European countries like United Kingdom and the Netherlands, general practitioners (GPs) are the first contact for health issues and act as gatekeepers in the healthcare system (The Commonwealth Fund, 2020). In the Netherlands registration with a GP is mandatory, and consultations are covered by compulsory health insurance. DMPs for diabetes type 2, cardiovascular conditions, COPD, and asthma have been implemented in almost all general practices. Until now, the care is mainly delivered by practice nurses (PN), who work with strict protocols and under GP supervision. A person-centred integrated approach (PC-IC) has recently been developed to better support GPs and PNs in tailoring care to the needs of patients with chronic conditions including multimorbidity (Raaijmakers *et al.*, 2023).

Person-centred care approach

The PC-IC approach consists of seven steps and addresses a wide range of dimensions of life (see Figure 1) (Raaijmakers *et al.*, 2023).

The PC-IC approach was tested in a feasibility study in seven Dutch GP practices in three regions, in collaboration with regional primary care cooperatives responsible for the DMPs. It showed an overall positive experience of patients and GPs with the PC-IC approach. However, the study revealed that the tools and approach did not fully address the needs of patients with LSES (Van Bommel *et al.*, 2025). The use of (digital) questionnaires to assess health status caused substantial stress for those with low literacy or limited digital skills.

Design

We conducted a qualitative study using co-creation sessions with patients with chronic condition and LSES background, GPs and nurses, to test and adapt elements of the PC-IC approach. Employing Participatory Learning and Action (PLA) techniques with visual materials (O'Reilly-de Brún *et al.*, 2018) ensured meaningful participation of all patients, including those with limited literacy or language skills (O'Reilly-de Brún *et al.*, 2016). Prior to the first PLA session, the research team developed a visual

Table 1. Different participatory learning and action techniques (Van den Muijsenbergh *et al.*, 2020, de Brún *et al.*, 2017)

Participatory learning and action (PLA) techniques	
Flexible brainstorm	A quick and imaginative method that generates knowledge and concepts about a subject by using resources like images.
Direct ranking	A democratic and open procedure that lets a group of people express their opinions or priorities.
Commentary chart	Is used to systematically capture feedback, observations, or insights from participants. It provides a visual and interactive overview of opinions, ideas, experiences, or perspectives on a specific topic or process.
Speed evaluation	Short written or spoken assessments are frequently utilized at the conclusion of a PLA session to let participants and researchers know what is important. There have been neutral, negative, and/or favourable experiences.

representation of the model as a supplement to the existing PC-IC approach (Figure 1 and Appendix 1 in supplementary file). Findings from the feasibility study (Van Bommel *et al.*, 2025) and input from HCPs were incorporated, including tips for HCPs and organizations. Subsequently, the tailored PC-IC approach for patients with LSES and chronic conditions was created in three co-creation sessions. Following these sessions, we conducted a validation check by patients on the draft materials. The sessions occurred from March to June 2022.

Study population

We composed a co-creation session group including GPs and PNs and LSES patients, aiming for diversity in age, sex, educational level, migration background, and geographical location.

LSES patients with different chronic conditions were recruited via the ABC foundation, which is a Dutch advocacy organization of and for people with low literacy skills. This Dutch organization supports ambassadors representing people with limited health literacy who learned to read and write later in life, and still have limited health literacy skills. GPs and PNs were recruited by approaching participants of the feasibility study and the Pharos network (Dutch Centre of Expertise on Health Disparities).

The participants for the validation check were recruited from the patient group involved in the feasibility study (Van Bommel *et al.*, 2025) and from the ABC foundation.

Data collection

Three PLA-moderated sessions taking 2.5 hours each were moderated by an experienced facilitator [TL] using different PLA techniques (Table 1). The sessions were audio-recorded and transcribed verbatim. Photos of flip charts, containing images, post-it notes, and stickers, were added to the dataset.

During each PLA session, one hour was dedicated to discussing the requirements and adjustments needed to tailor the steps of the existing PC-IC model (Figure 1) to the needs of LSES patients. The remaining time was dedicated to co-creating materials to support the PC-IC approach for LSES patients (Figure 2 and Table 1).

At the beginning of the first session, ample time was taken to get to know one another. We used pictures and images to facilitate participation without requiring writing. Together, we also established ground rules, including that everything discussed would remain confidential within the group.

For the first co-creation session, we used two existing models and one conversation tool commonly applied in Dutch general practice: (a) The Positive Health Tool, emphasizing a holistic view of health, (b) The Four Domain model, with emphasis on socioeconomic topics, and (c) a smiley tool, commonly used as conversation starter. These were used to explore what worked well and what did not in terms of engaging patients with LSES and chronic conditions, in order to identify potential improvements and adaptations for better alignment with their needs (Appendix 2 in supplementary file). For the second and third sessions, we developed materials and procedures based on the input from the previous session. In this way, collaboratively a PC-IC approach tailored to the needs of LSES patients was developed.

After the three sessions, participants of the validation check were individually interviewed using a semi-structured topic guide (Appendix 3 in supplementary file) to assess the comprehensibility, applicability, design, and clarity of the materials. Paper copies of the materials were provided during the interviews.

Data analysis

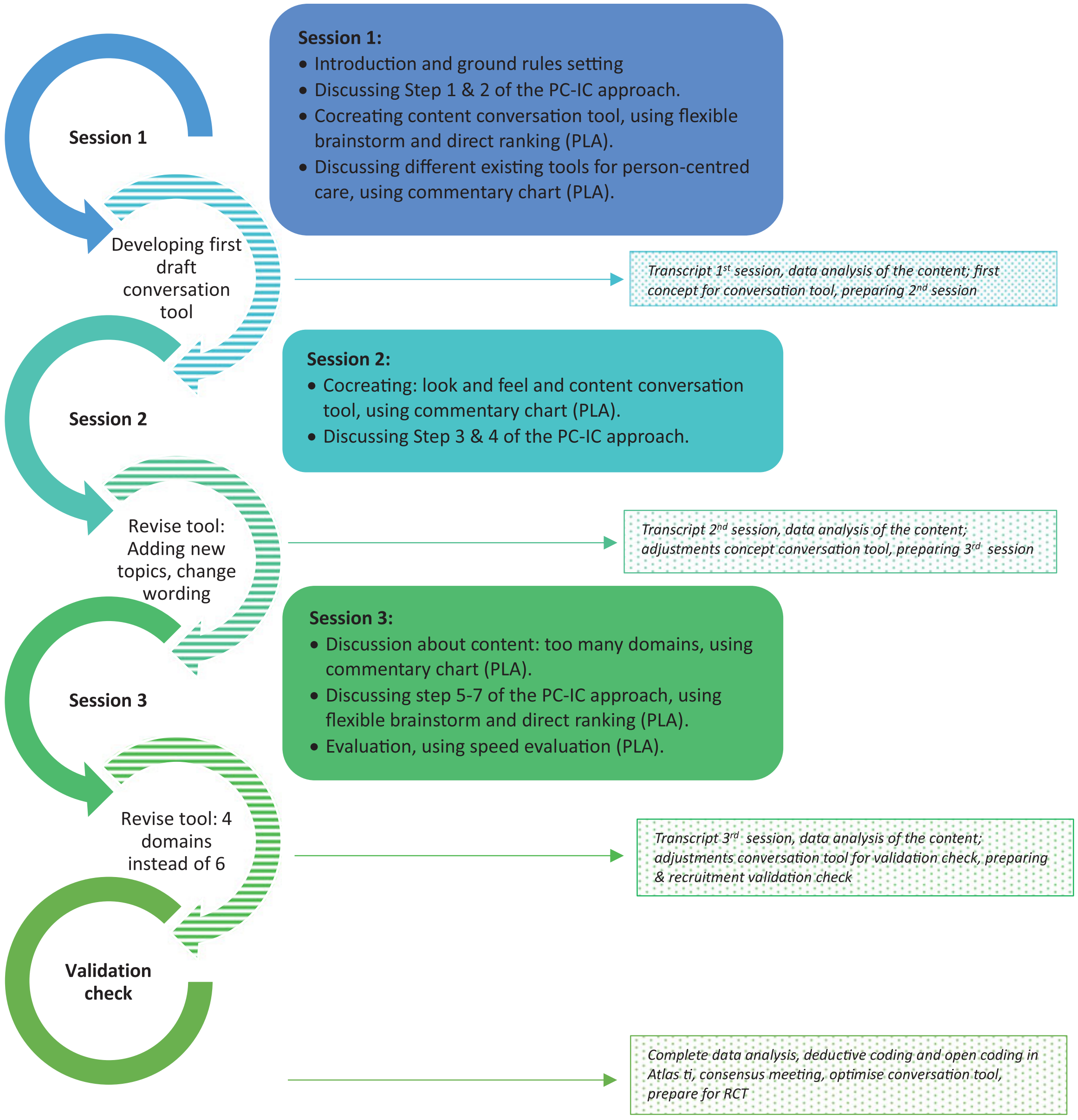
The collaborative data and analysis during the PLA session enabled an iterative process, which was used and reflected back into the next session. After the PLA sessions, all data were analysed following the principles of thematic analysis in qualitative research (Patton, 2002, Kiger and Varpio, 2020). The project leader [HB] generated an initial list of codes based on the existing PC-IC approach for patients with a chronic condition (Raaijmakers *et al.*, 2023) (Figure 1). The transcriptions of the sessions and the flip chart papers were coded by two researchers [HB & SA] independently, using ATLAS.ti (ATLAS.ti Scientific Software Development GmbH, version 9.1.6). The first transcript was coded using the initial list, with new codes added if they emerged (open coding). Any coding differences between the two researchers were discussed until consensus was reached, and a codebook was created to guide the coding of the remaining transcripts.

The data of the validation check were documented in Excel (Microsoft Excel version Microsoft 365 MSO). We analysed all results pragmatic from respondents for what they indicated as unclear and areas for improvement. All data were organized according to the different steps for the PC-IC approach and materials. Illustrative quotes were selected to support the findings.

Results

Characteristics of the participants

In total, nine persons alongside the researchers participated in three co-creation sessions: four LSES patients with chronic conditions (three female, one male), three GPs (two female, one male) and two PNs (both female). All patients had primary or preparatory vocational secondary education (level 1) and limited literacy skills. One patient had a migration background. Two had multiple chronic conditions (DM2 and CVRM, one also with COPD), one had DM2, and one had CVRM. The sessions took place between March and June 2022.



Session 1:
- Introduction and ground rules setting
- Discussing Step 1 & 2 of the PC-IC approach.
- Cocreating content conversation tool, using flexible brainstorm and direct ranking (PLA).
- Discussing different existing tools for person-centred care, using commentary chart (PLA).

Transcript 1st session, data analysis of the content; first concept for conversation tool, preparing 2nd session

Session 2:
- Cocreating: look and feel and content conversation tool, using commentary chart (PLA).
- Discussing Step 3 & 4 of the PC-IC approach.

Transcript 2nd session, data analysis of the content; adjustments concept conversation tool, preparing 3rd session

Session 3:
- Discussion about content: too many domains, using commentary chart (PLA).
- Discussing step 5-7 of the PC-IC approach, using flexible brainstorm and direct ranking (PLA).
- Evaluation, using speed evaluation (PLA).

Transcript 3rd session, data analysis of the content; adjustments conversation tool for validation check, preparing & recruitment validation check

Complete data analysis, deductive coding and open coding in Atlas ti, consensus meeting, optimise conversation tool, prepare for RCT

Figure 2. Iterative process of co-creation sessions and data analysis.

PC-IC approach tailored to the needs of low SES patients

Participants identified key elements for each step in the PC-IC approach. For example, the importance of trust in the HCP, continuity of care, and being recognized as a person rather than just an illness, setting goals together, and understandable and easily accessible information were highlighted. These key elements are integrated into the relevant steps of the PC-IC approach (Table 2). All key elements and skills for the adapted PC-IC approach were merged into a training course for GPs and PNs.

STEP 1: (Digital) assessment of health status

Patients experienced the benefits of preparation in advance of the consultation so they knew they could talk about other things than health, such as their life, mental physical, and social issues. One of the patients confirmed that it is beneficial to have more attention given to these issues.

> *We also often don't know what kind of problems we can go to the GP with, [. . .]but we are also ashamed of those other complaints. For example, whether I can pay for it is also a very important question, sometimes I can't pay for the medication, I also have to pay my own risk etc. but I don't always dare to say that.(P4)*

However, they preferred the preparatory tool on paper instead of the existing digital tool, so they could take it home and review it, if necessary with assistance. They also suggested that pictures could improve understanding and clarity. The HCP were uncertain whether patients would prepare at home, but acknowledged that it would be beneficial if they did, as it allows patients to reflect on their concerns in advance. The HCP may introduce the person-centred conversation tool during the consultation, provide it to the patient for reflection, and revisit it in a subsequent contact to facilitate discussion. Patients may benefit from receiving the conversation tool in advance, allowing them time to prepare and reflect on what matters to them before the consultation.

Table 2. Key elements of person-centred care integrated into the step-by-step PC-IC approach

PC-IC approach	Key elements
STEP 1: (Digital) assessment of health status	• Preparing the consultation at home (multiple issues) • Person-centred conversation tool (preparation)
STEP 2: Discussing the results in consultation with HCP/ case manager	• Using person-centred conversation tool • Respect • Being seen as a person, not as a patient • Trust and continuity of healthcare professional
STEP 3 Setting personal (health) goals and STEP 4 Choosing interventions	• Promoting shared decision-making • Realistic tailored and achievable goals
STEP 5 Writing individual (health)care plan, STEP 6 executing plan and STEP 7 (repeated) evaluation(s)	• Clear and easily accessible information • Using teach-back method

> *As a follow-up, you can give them the whole conversation map with them, and in follow-up consultation, you can talk about it again, or come up with another topic.(GP 2)*

STEP 2: Discussing the results in consultations with HCP/ case manager

The brainstorming with participants identified topics for discussion between HCPs and patients ranging from healthy lifestyle, nutrition, outcomes of checkups or tests, medication, sleeping problems, family and network, stress, finances, reading and digital skills, and social problems like mourning. All topics were considered important, but using direct ranking, the top three topics emerged: lifestyle, sleep, and clear information about medication. This ranking served to support rather than limit the inclusion of topics in the tool.

> *I have one more thing, sleepless nights, which is a disaster for low-literate people, because you are always worrying at night about how you get through each day. Also when you have to go to the doctor, how to do that, how to prepare and ask the right questions. I try to draw pictures, so that you don't forget what I want to ask the doctor. (P2)*

The participating HCP mentioned that they would be afraid to embarrass patients by asking them whether they can read or write. The patients, however, reacted that they always can ask this as long as it is done with respect and followed up. Due to stigma patients often feel too ashamed to discuss low literacy or financial concerns and may not bring them up themselves, especially when dealing with multiple issues.

One of the HCP said that he always started with the question *'How are you?'* to keep the conversation open. However, all patients responded that this was not the right question to ask. As one of them pointed out *'I say good and I am gone again'*. A better question would be *'How can we help you, what can I do for you?' (P2)*. The patients highlighted the importance of being seen by their GP or PN as a whole person and emphasized the need for professionals to show genuine interest, rather than just asking 'how are you doing?'.

> *Nice when the GP or PN know you and knows what you can and cannot do, then they can adjust their language and treatment accordingly, and they can then also take time for you.(P2)*

Another point, particularly highlighted by the patient-participants, is the feeling of being judged or not being valued, and feeling like just a number.

> *I do know that I told my GP that I couldn't read or write, however, I was so stuck at the time. I do know that trust is the most important thing. You know as a low-literate person that a GP has privacy. If they say in a certain way: can't you read or write, you're a Dutch guy after all. Then that door will close and you will never hear anything again. Formulate it differently: indicate that the Dutch language is also difficult. Help these people to learn to read and write. (P2)*

The patients reported the importance of continuity of care and the value of seeing each time the same HCP, rather than a different HCP at each visit. Consistent interactions with the same HCP foster trust and a deeper understanding of the patient's needs, which may be hindered by frequent changes in HCP.

> *You know what I experience now with GPs? In our practice at the moment. There is no permanent doctor anymore, you don't get a confidential relationship with a GP. Every time it is a different one.(P3)*

> *I think as a GP you have to create some kind of safety in the practice first before you start the conversation. You can't expect patients to just throw their whole lives on the table with someone you don't know.[. . .]; At least not for chronic care, then you need a permanent face. (GP 2)*

To support effective PC conversations, existing tools were reviewed and enhanced (see paragraph *Co-creation of the visual conversation tool*). The conversation tool is mainly used in steps 2 and 3 to clarify the patient's social context and provide appropriate care.

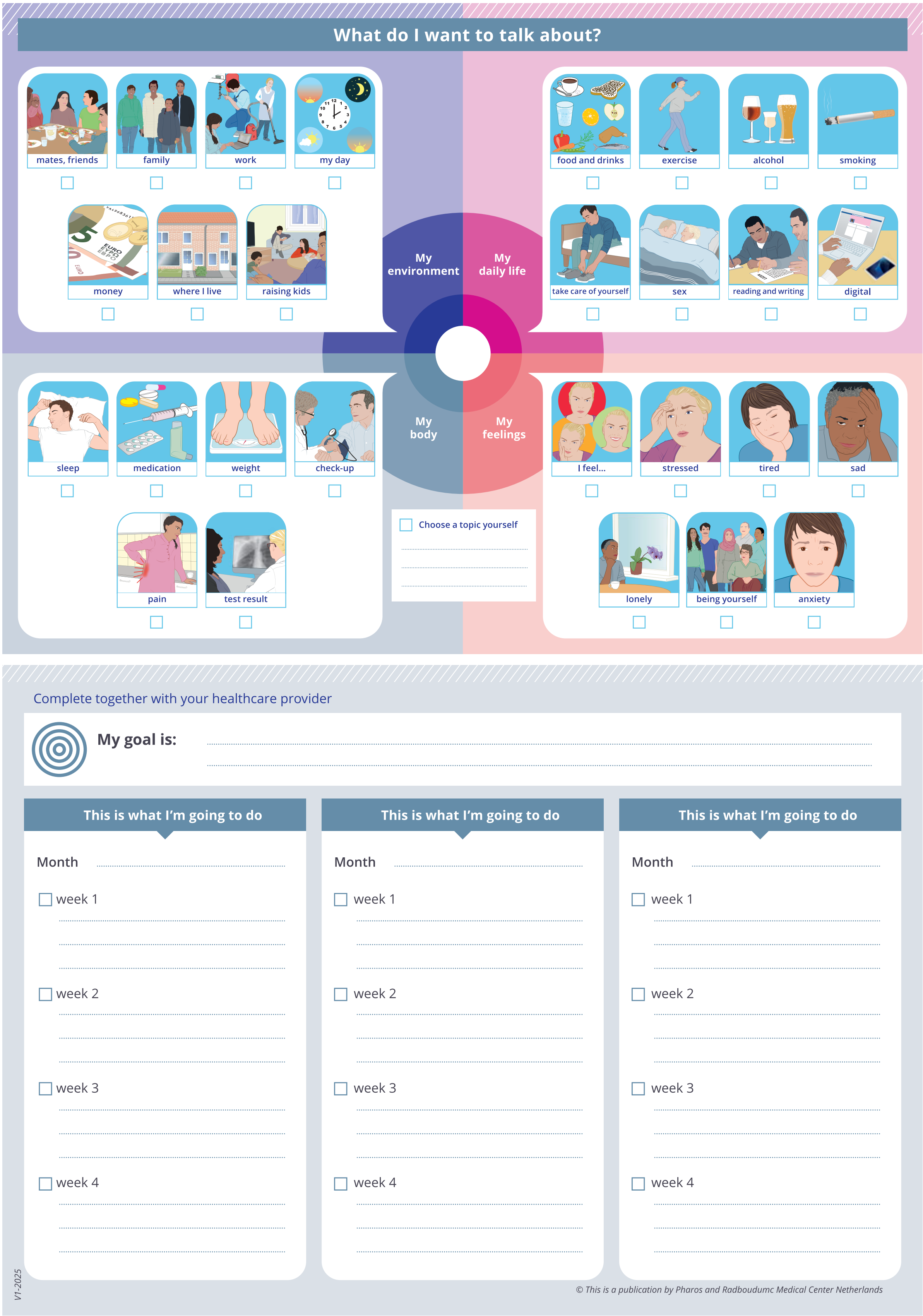
STEP 3 and 4: Setting personal (health) goals and choosing interventions

The participants mentioned that it is essential to collaboratively navigate the person-centred conversation tool to identify important topics from both the patient's and the HCP's perspectives (step 1 and step 2). This process also supports setting goals together and promotes shared decision-making. Several example phrases were suggested: '*How do you do this at home?, What are you hoping for?, How would you like to approach this?, What would you like to do in your situation?, What would you be able to do? What is your dream? How can you achieve this?*' The participants agreed that goals should be feasible and affordable, such as taking a walk or running instead of recommending a gym membership. The participants suggested using the back side of the conversation tool for this purpose (Figure 3). For each goal, a weekly activity can be outlined for the patient to work on. This approach allows goals to be tailored and scaled to a manageable size.

> *Yes, and indeed, don't set goals that are too big, because sometimes I notice in conversations that people suddenly want to accomplish 10 things at once. That won't work.(PN 4)*

STEP 5, 6 and 7: Writing an individual (health)care plan, Executing the plan, and (repeated) Evaluation(s)

The patients preferred receiving their care plans in both paper format and digitally. The information provided should be clear and easily accessible, for instance, through a user-friendly app. The patients also emphasized the importance of easy access to the HCP



What do I want to talk about?

My environment

☐ mates, friends
☐ family
☐ work
☐ my day
☐ money
☐ where I live
☐ raising kids

My daily life

☐ food and drinks
☐ exercise
☐ alcohol
☐ smoking
☐ take care of yourself
☐ sex
☐ reading and writing
☐ digital

My body

☐ sleep
☐ medication
☐ weight
☐ check-up
☐ pain
☐ test result

My feelings

☐ I feel...
☐ stressed
☐ tired
☐ sad
☐ lonely
☐ being yourself
☐ anxiety

☐ Choose a topic yourself

Complete together with your healthcare provider

My goal is:

This is what I'm going to do	This is what I'm going to do	This is what I'm going to do
Month	Month	Month
☐ week 1	☐ week 1	☐ week 1
☐ week 2	☐ week 2	☐ week 2
☐ week 3	☐ week 3	☐ week 3
☐ week 4	☐ week 4	☐ week 4

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Figure 3. Final visual person-centred conversation tool. Front side 4 domains with topics, back side a goal-setting template.

for questions. The HCP, particularly PN, observed that the mere availability of contact can often provide patients with a sense of reassurance.

> *On my working days, I set aside half an hour in the afternoon and tell patients to notify the assistants, and I will call them back the same day. The fact that this is possible provides so much peace of mind, especially for patients with breathing difficulties.(H5)*

This perception of support consequently decreases the actual need for patients to utilize that contact. They also mentioned personal support and assistance with referrals or scheduling appointments with other HCPs.

To find out whether the patient understands everything correctly, both patient and HCP suggested applying the so-called teach-back method. *This* is a communication technique in which HCPs ask patients to restate the information or instructions provided, in their own words, in order to assess and confirm their understanding (Ha Dinh *et al.*, 2016). However, some HCPs found this technique not easy to use.

> *It is a logical question, but I feel a kind of embarrassment to ask if someone understood. Because then you give the other person the idea that they look like they do not understand very well.(PN 4)*

Co-creation of the visual conversation tool

All participants agreed that the conversation tool to support the PC-IC approach should include visual elements to support LSES patients, such as those with lower literacy levels. A conversation tool is recommended to clarify underlying issues in the first two steps of the approach.

The patients also emphasized the importance of clarity and simplicity in the tool's design. They perceived the 4D model and the Positive Health tool as too abstract and challenging to use (Appendix 2 in supplementary file). They also indicated that they would prefer concrete topics mentioned in the tool such as stress, reading and writing, money, pain, etcetera. Based on these inputs a first draft of a tool was made by the project leader[HB], that addressed six domains (Figure 1) which are respectively social functioning, emotional well-being, functional abilities, symptoms, physiological functioning, and lifestyle.

After the feedback from the first session, the conversation tool was adjusted for the second session by adding images to the six domains, using colours and frames, and incorporating short, easily understandable words. Participants were more satisfied with the tool. This layout was noted to help patients prepare at home for their conversation with the GP or PN. However, patients identified other missing elements, such as an image representing digital skills (e.g. computer use), loneliness, and test results or interactions with other HCPs. Additionally, some terms were considered too complex, such as 'living situation'.

> *Yes, but for me, it's a good way to prepare. The pictures at least give you an idea of what you can talk about, because often you don't know what the doctor can help with. (P2)*

In the third session, participants agreed to reduce the number of domains from six to four to make the tool more user-friendly. The domains Functional abilities and Symptoms were merged and renamed 'My body', as respondents considered the topics as relating to or being expressed through the body. Similarly, the domains Physiological Functioning and Lifestyle were combined into 'My daily life', encompassing everyday activities and challenges in which personal behaviour or skills may play a role. The remaining two domains were also reformulated using plain language, becoming 'My environment' and 'My feelings'. Each domain consists of six to eight subtopics. The final version of the visual conversation tool is shown in Figure 3.

Participants highlighted the usefulness of a visual conversation aid on paper (A3 size) for discussing medical and psychosocial issues during consultations. They preferred keeping it on the caregiver's desk for easy access. Patient wanted to receive the tool before the consultation to mark topics at home or take it home during the consultation for later discussion. They wished to review it with their GP or PN to focus on relevant topics. One GP noted that this approach makes it easier to address stigmatized issues, starting with general topics before progressing to more sensitive ones.

Validation check

The participants of the validation check consisted of four men and three women aged 53-71 years. They all had a chronic condition and were familiar with chronic care in primary care. They all had an educational level not higher than primary or primary vocational education. One of the participants had a migration background.

The participants found the visual conversation tool clear and understandable. One of them commented on the high number of images, but the colours and layout made it clear. A few words were unclear such as 'social environment' and the image of 'being yourself'.

> *This gives me peace of mind. The pictures help me understand what I can express, such as issues I am dealing with—for example, sleeping poorly or concerns about my weight. I can point to a picture for my sugar [blood sugar] or express these emotions. Although the form is busy, it also brings calmness because of the pictures. It is clear, visually appealing, and even uplifting, which encourages me to engage with it and learn more. [. . .] It is well-organized, and the pictures being consistent in style adds to the sense of calm. (V2)*

Discussion

Summary

The aim of our study was to tailor a new existing PC-IC approach to the needs of patients with LSES and chronic conditions in primary care, and to develop appropriate materials to support them. In the co-creation sessions with HCPs and patients, we identified key elements. Patients like to prepare before the consultation. Being seen and heard is important, as are trust and continuity of care by the HCP. Setting achievable and realistic goals that match the patient's skills and abilities is essential. Using clear information and the teach-back method are also key. GPs and PNs consider additional training in this beneficial, including training in recognizing health literacy and identifying underlying problems and social context. A conversation tool was co-developed to support the PC-IC conversation. This tool facilitates the discussion of all relevant life domains, including sensitive issues such as financial stress or literacy skills. The visual conversation tool can shift the focus of the consultation from diseases to individual needs of the patient fostering a person-centred approach to care.

Comparison with existing literature

A European study (Van der Heide *et al.*, 2018) found that while integrated care programs for multimorbidity used methods like motivational interviewing, patient involvement was limited, especially in co-design. Van Bommel *et al.* (2025) and the co-creation sessions of the current paper showed that patients valued the PC-IC approach but stressed the need to tailor it to their abilities – something only achievable through direct collaboration.

The results of the co-creation process demonstrated that visual materials for LSES patients would be an important tool for starting a person-centred conversation. Other studies also found that images are a powerful tool in health communication. The 'pictorial effect' suggests that people remember health information better when it is accompanied by images (Schubbe *et al.*, 2020). Additionally, images can help engage patients more actively in their healthcare process (Schubbe *et al.*, 2020). It could also improve recall and lead to more positive attitudes concerning health behaviour. Moreover, simple health communication is effective for a broader audience and does not harm highly literate individuals. It is recommended that health education should be visually designed with input from the target audience to maximize effectiveness. Our study highlighted the importance of this approach, as complex terminology could be promptly adapted, and patients contributed valuable insights into topics that represent daily challenges for them, like financial stress or limited literacy skills.

The comprehensive, integrated approach in healthcare, including communication training and supportive tools, has been advocated before to achieve better health outcomes for patients with limited health literacy (Andrulis and Brach, 2007). Similarly, Murugesu (2022) highlighted the challenges HCPs face when communicating with patients with low health literacy, which can lead to miscommunication, lack of understanding, and non-adherence to medical advice. This became also clear in our co-creation sessions, where HCPs emphasized the need for not only supportive tools but also (communication)training specifically tailored to LSES patients. A key aspect of this training should be practising the teach-back method (Shersher *et al.*, 2021). Also, others (Kuipers *et al.*, 2021) emphasized the importance of listening to patients, checking their understanding, and adapting explanations, especially in patients with limited health literacy.

In addition, jointly setting achievable goals that fit the patient's skills and abilities is an important part of good PC care (Kuipers *et al.*, 2021). However, in practice, patients with limited health literacy are less involved in decision-making and more likely to regret their treatment choice compared to patients with higher health literacy (Van der Weijden *et al.*, 2022). Applying an approach tailored to their needs could improve this.

Trust and continuity of care in general practice significantly contribute to improved patient outcomes, and underscore the importance of maintaining and fostering a strong relationship between patients and their regular GP within primary care (Sandvik *et al.*, 2022, Ljungholm *et al.*, 2022). The research by Groot et al. (Groot *et al.*, 2025) highlights the importance of a permanent GP and PN with good communication. This is particularly relevant for older patients with chronic conditions. They often receive care from multiple caregivers across different organizations.

These studies did not specifically examine low SES, but it is likely that for LSES patients with chronic conditions, who often face complex problems in multiple areas of life, having a permanent GP and PN is even more crucial for building a trusting relationship.

Participants confirm that having a permanent HCP gives them more confidence. Seeing the same GP helps, especially with sensitive issues like reading or writing difficulties or money worries. Trust makes them more likely to share, allowing the GP to consider this in their care.

Strengths and limitations

The strengths and limitations of this study are discussed in relation to established quality criteria for qualitative research, structured around the three COREQ domains: (1) research team and reflexivity, (2) study design, and (3) data analysis and reporting (Tong *et al.*, 2007).

Our method of co-creation, facilitated by Participative Learning and Action techniques turned out to be successful in tailoring an approach to the needs of LSES people and developing appropriate materials. After development, the conversation tool was checked for validation with patients. This validation check relates to practice and asks whether the research aligns with their opinion. It helps improve and assess research quality while preventing blind spots (Busetto *et al.*, 2020).

Although co-creation is based on principles of equality, we were aware of potential power dynamics, especially between healthcare professionals and patients. In practice, the joint sessions were characterized by mutual respect, and no single group appeared to dominate the conversation.

To support inclusion, visual aids and plain language were used to bridge differences in health literacy and communication styles.

The credibility was enhanced through iterative PLA method during the co-creation sessions, and validation check with patients. However, validation with professionals outside the co-creation group was limited, mainly due to high workload of HCPs and COVID-19, which could have reduced the diversity of the professional input.

As small-scale Dutch primary care study, transferability is limited, though the use of plain language and the emphasis on lived experiences are relevant in other settings as well.

While structured documentation, coding and analysis by multiple researchers supported credibility, further testing in real consultations and with a wider range of professionals and patients would strengthen the findings.

Another limitation of this study is the possible bias due to the participation of motivated HCPs in the sessions. They will be more likely to apply this tailored PC-IC method than other HCPs. In combination with the insufficiently broader validation check among HCPs, implementation of this approach will require thorough training and facilitation of HCPs.

Implications for research and practice

The next step is to study the effectiveness of this tailored PC-IC approach and the conversation tool for patients classified as LSES in a large cluster randomized controlled trial (CRCT) that is currently ongoing in the Netherlands (ClinicalTrials.gov NCT05972031). This CRCT will also examine whether the approach, including advanced skills training for HCPs practising with the materials such as the visual PC conversation tool, initiating discussions, and identifying social issues and underlying problems, enhances patients' understanding. Ultimately, the study will assess whether this leads to improvements in patient-reported outcome measures.

Further studies could also look into the applicability of this approach for LSES patients in other primary care settings, such as physiotherapy or social work. This could benefit LSES patients, as a consistent approach across HCPs would enhance clarity for them.

Another implication for further research is how to support HCPs in differentiating patient care. Not all patients require the same approach, but how can this distinction be made? What supports HCPs in this process of identifying who needs what?

Conclusion

Involving service users, particular those with limited reading skills or health literacy proved to be possible and beneficial for the co-creation of a PC-IC approach tailored to the needs of patients with LSES and chronic conditions in primary care. The refined PC-IC approach includes key elements such as trust, being seen as a person in the social context, shared decision-making, and clear and easily accessible information. During the co-creation sessions materials were adapted to the needs of these patients, resulting in a visual conversation tool. Together, these key elements and the conversation tool form the adapted PC-IC approach that is also presented in a training for HCPs and will be tested for its effectiveness in a CRCT.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/S1463423625100431

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