The interprofessional collaboration between general practitioners and physiotherapists in treating low backpain in Flanders

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Abstract

Low back pain (LBP) is a common condition contributing significantly to the burden of disease. Interprofessional collaboration (IPC) between caregivers, such as general practitioners (GPs) and physiotherapists (PTs), has emerged as a promising approach to managing LBP more effectively. However, there is limited research exploring the perspectives of both these groups regarding IPC in managing LBP. Therefore, we conducted individual interviews with 2 GPs and 5 PTs and a focus group with 11 GPs. Thematic analysis was done using the QUAGOL guide. Role distribution and communication emerged as main themes. GPs identified their responsibilities as diagnosing patients, excluding red flags, offering drug advice, and assessing the need for referrals, while PTs should provide therapy, education, and ample explanation. PTs emphasized treatment, education, prevention, and patient empowerment, whereas GPs should focus on diagnostics, excluding red flags, referrals, education, and drug advice. Limited personal and professional familiarity between GPs and PTs, partly due to inadequate interprofessional exchanges during education, lead to discrepancies in role perception, underscoring the importance of enhanced and continued training emphasizing collaborative skills. Participants highlighted the need for improved communication channels and mutual respect to enhance collaboration between GPs and PTs. Addressing these perceptions and misconceptions at individual and structural levels could improve care quality and patient outcomes. Ultimately, this study provides valuable insights into the dynamics of interprofessional collaboration between GPs and PTs in managing LBP, offering a foundation for targeted interventions and educational initiatives to foster effective teamwork and improve patient outcomes. Future research should focus on developing interventions to promote IPC in the management of LBP and evaluate their effectiveness in improving patient outcomes.

Abstract nederlands

Lage rugpijn (LRP) is een veelvoorkomend gezondheidsprobleem dat aanzienlijk bijdraagt aan de ziektelast. Interprofessionele samenwerking (IPC) tussen huisartsen en kinesitherapeuten is geopperd als een veelbelovende aanpak om LRP effectiever te behandelen. Er is echter weinig onderzoek gedaan naar de opvattingen van beide groepen met betrekking tot IPC bij de aanpak van LRP. Aldus namen we individuele interviews af bij 2 huisartsen en 5 kinesitherapeuten, en organiseerden een focusgroep met 11 huisartsen. Thematische analyse gebeurde aan de hand van de QUAGOL guide. Rolverdeling en communicatie kwamen als centrale thema's naar voren. Huisartsen noemden diagnosestelling, het uitsluiten van rode vlaggen, het geven van medicamenteus advies en het beoordelen van de noodzaak tot doorverwijzing als hun verantwoordelijkheden, terwijl kinesitherapeuten therapie, educatie en voldoende uitleg zouden moeten geven. Kinesitherapeuten benadrukten het belang van therapie, educatie, preventie en patient empowerment, terwijl huisartsen zich zouden moeten richten op diagnostiek, het uitsluiten van rode vlaggen, doorverwijzen, educatie en medicatieadvies. Beperkte persoonlijke en professionele betrokkenheid tussen huisartsen en kinesitherapeuten, deels te wijten aan onvoldoende interprofessionele samenwerking tijdens de opleiding, leidde tot discrepanties in rolperceptie, wat het belang van onderstreept van verbeterde en doorlopende training die de nadruk legt op samenwerkingsvaardigheden. Participanten benadrukten de noodzaak tot betere communicatiekanalen en wederzijds respect om de samenwerking tussen huisartsen en kinesitherapeuten te verbeteren. Het bijsturen van deze percepties en misvattingen op individueel en structureel niveau zou de kwaliteit van zorg en patiëntuitkomsten kunnen verbeteren. Dit onderzoek biedt waardevolle inzichten in de dynamiek van interprofessionele samenwerking tussen huisartsen en kinesitherapeuten bij de behandeling van LRP en biedt een basis voor gerichte interventies en educatieve initiatieven om effectievere samenwerking te bevorderen en zo patiëntuitkomsten te verbeteren. Toekomstig onderzoek moet zich richten op het ontwikkelen van interventies om IPC te bevorderen bij de behandeling van LRP en het evalueren van hun effectiviteit in het verbeteren van patiëntuitkomsten.

Introduction

Low back pain (LBP) is a common acute and chronic condition affecting a large portion of the population (Gorasso et al, 2023). It's one of the three leading causes of non-fatal health loss (James et al, 2018), and it has been identified as a leading cause of growing disability-adjusted life years. Despite ample research and spent resources (Buchbinder et al, 2018; Foster et al, 2018; Maher et al, 2016), the burden on patients, families and health care systems has only increased (Seaton et al, 2021), undoubtedly affecting the quality of the care that is being given. Combined with a globally ageing population, resulting in an epidemiological transition from acute to chronic diseases, the need to reduce hospitalizations and a relative shortage of health care providers, this leads to a change in balance between healthcare needs and healthcare provision (Supper et al, 2015).

Consequently, health care professionals are urged to set up and provide interprofessional care (D'Amour et al, 2008; WHO, 2010), as this is considered essential in the management of chronic diseases, such as LBP, since we need to tackle the fragmentation of knowledge into disciplines (D'Amour et al, 2005) and need to ensure patient safety (Oandasan et al, 2006), while this uses available resources most efficiently (Green & Johnson 2015; Supper et al, 2015; WHO, 2010). Apart from that, many clinical practice guidelines now recommend multi- or interdisciplinary interventions for treating LBP (Perreault et al, 2014), considering positive outcomes have been documented for variables such as reported pain, disability, return to work and quality of life with this approach of care (Guzman et al, 2002; Karjalainen et al, 2003; Norlund et al, 2009; van Geen et al, 2007).

Effective collaboration between all caregivers, including general practitioners (GP), registered nurses (RN) and physiotherapists (PT), is essential for providing optimal care and improving outcomes for patients with LBP. In comparison to interprofessional care between GPs and nurses (Supper et al, 2015), collaboration between general practitioners and physiotherapists remains relatively unexplored however (Buchan & Calman, 2005), and there's much room for improvement. Although several barriers for developing interprofessional care have already been described, such as poor communication (Paz Lourido & Kuisma, 2013), educational background (Paz Lourido & Kuisma, 2013), unsupportive environment for learning interdisciplinary care (Paz Lourido & Kuisma, 2013), shortage of health care professionals (Hansson et al, 2008), and lack of interest (Hansson et al, 2008).

Understanding professionals' ideas regarding their collaboration in treating LBP is essential in trying to identify areas for improvement. By exploring the dynamics of collaboration between GPs and PTs, like their perceptions, conceptions, and misconceptions regarding role distribution, this study aims to contribute to our understanding of effective teamwork between GPs and PTs in treating LBP. What do they perceive as essential aspects of their role and the functioning of both parties and does their vision of how these roles get fulfilled differ? Does a potential difference in perception influence the cooperation of general practitioners and physiotherapists, and if so, how? Are any of these (mis)conceptions based on evidence or are they mere assumptions? By getting a better understanding of how general practitioners and physiotherapists collaborate and why they collaborate like they do, we could potentially look for ways to improve interprofessional care, lowering the burden for all parties involved. The results of this study could potentially form a basis for later courses to correct or prevent possible misconceptions or errate assumptions.

Methods

We started our study with a thorough review of the available literature concerning this topic which involved a combination of electronic database searches, e.g. pubmed, web of science, medline and Cochrane, and hand searches of reference lists of the papers we already included. Regarding study design, we concluded that a qualitative research design conducting a thematic, inductive analysis oriented toward interpretive description with either individual interviews or focus groups functioning as a basis would be most fitting. As such, we enable health workers to share their views, opinions, and experiences about interprofessional care in a primary care setting. Ethics approval was obtained from the Ghent University Ethics Committee. We recruited GPs and PTs in Flanders, Belgium by mailing all the general practitioners' medical posts and all the local peer-supported groups of physiotherapists in the province. Further communication was also conducted via e-mail. We used this approach since there is no clear overview of all the physiotherapists and general practitioners and their respective contact information in Flanders. 2 GPs and 5 PTs responded to our e-mail and were willing to participate in our study by partaking in an interview, 1 other GP was willing to set up a focus group with other GPs to discuss this topic with 11 other colleagues (see table 1). Inclusion criteria included working as a PT or GP in Flanders and speaking Dutch. Possible candidates were excluded if they had less than 5 years of experience, didn't speak Dutch or didn't carry out their professional activities in Flanders, Belgium. No study participants had a working relationship with the research team. All participants agreed to their interview being audio-recorded and transcribed and provided written informed consent. Audio-recorded interviews were transcribed verbatim by the interviewer. Analysis was performed using the QUAGOL guide, a theory and practice-based qualitative analysis guide, characterized by iterative processes of digging deeper, constantly moving between the various stages of the process, that supports and facilitates the process of analyzing qualitative interview data (Dierckx de Casterlé et al, 2012).

Table 1. Demographic and workplace information of participants

Code	Profession	Gender	Age	Practice type
P1	PT	Female	53y	Group
P2	PT	Female	27y	Dual
P3	PT	Female	40y	Group
P4	PT	Female	50y	Group
P5	PT	Female	28y	CHC
G1	GP	Female	48y	Multidisciplinary Group
G2	GP	Female	32y	CHC
G3	GP	Female	46y	Group
G4	GP	Female	30y	Group
G5	GP	Male	31y	Group
G6	GP	Female	53y	Solo
G7	GP	Male	55y	Solo
G8	GP	Female	35y	Dual
G9	GP	Male	34y	Dual
G10	GP	Female	43y	Group
G11	GP	Male	68y	Solo
G12	GP	Male	58y	Solo
G13	GP	Male	42y	Solo

PT= physiotherapist, GP = general practitioner, CHC = community health centre. The multidisciplinary group practice consists of 4 general practitioners, one psychologist, one registered nurse and one dietician. In the community health centre work physicians, registered nurses, physiotherapists, social workers, and people in administration and reception.

Results

Semi-structured face-to-face interviews, based on an interview guide developed by the research team, were done by the author at a location of the participants' choice between February 2023 and September 2023, duration ranged from 32-80 minutes (mean = 56 minutes), and they continued until each subject indicated they didn't have anything more to add. We divided the results part in a couple of sections as a basis to structure this part of the article, namely physiotherapists' views on their own

role and the GP's role in treating low backpain as well as general practitioners' views on their own role and the PT's role in treating low backpain. During analysis we also noticed communication and time being a recurring theme, so we dedicated a section to this as well here.

Physiotherapists' views on their role in treating low backpain

In treating patients with low back pain physiotherapists report several tasks as essential to their job, with treatment and education being the most prominent. They all regard therapy as an integral part of their role as it is something that only they, in principle, can carry out. How therapy is set up varies interindividually according to the training and the various courses the physiotherapist has followed, but it comprises, among other things, manual therapy, manipulations, exercise therapy and pain reduction, as well as motivating and coaching the patient. Another main responsibility for physiotherapists according to them is education, as they all mention it as an essential part of their job. This includes advice on motion and body awareness as well as ergonomic tips.

> P2 - On the one hand, of course our role consists of manual treatments, especially since I'm a manual therapist, but on the other hand, it also comprises talking a lot to your patient, explaining things, educating them, and giving them exercises.

One physiotherapist explicitly mentions they factor in social and psychological aspects in educating their patients (P1), it's implied by one other interviewee (P3).

> P1 - Those are all aspects that are talked about too during our treatment, [...] because we also ask about medication, their job, their situation at home, whether they feel good about themselves, etc. These are also things that are part of it, and often the patient will not always tell us directly if we don't ask, so we ask them these things.

Another physiotherapist (P3) explains the principles of their treatment in detail so their patients better understand what's causing the pain and what they themselves can do to reduce the pain and to prevent it from reoccurring. As part of educating their patients, more than half of the respondents working as physiotherapists disclose that they try to improve the self-reliance and autonomy of their patients (P2, P3 & P4).

> P2 - We also try to give patients the idea that they can do something about their pain themselves, that the treatment plan is partly in their own hands, and that they don't have to depend on us, which used to be the case more in the past.

The idea behind this is that, as a result, they're less dependent on therapists, they get more insight into their illness, and they can better rationalize their pain. In trying to consciously use imaging in treating patients with low back pain, educating patients is also important, as imaging without proper explanation can lead to inaccurate convictions as one respondent explains.

> P5 - Sometimes patients see something in the images, and they think that's the cause of their pain. Then we must discuss with them that sometimes that's not linked to their pain or not to the extent that they think, yet once they've seen something in the images, it's very difficult to get people out of that idea, that's the difficult part.

Another element in educating patients is prevention, referred to by more than half of the physiotherapists in their interviews (P1, P3 & P4).

> P4 - I think our role is twofold, namely curative and preventive. We try to get rid of the patient's pain at that acute moment, but then we also try to give them something of a script or something like that so that they can help themselves a bit. Now you also have people who aren't very active and then we're also going to try to encourage them to walk or cycle a lot or something like that.

This already starts with some physiotherapists, like P4, with the case history in the first consultation in asking questions about the patients' lifestyle and general health. During treatment, prevention in this case includes activating patients, particularly more sedentary patients. Prevention also encompasses motivating patients to adopt and maintain a more active and healthier lifestyle to decrease the chances of reoccurring low back pain. Two physiotherapists describe their role as a coach to the patient who guides them during treatment and motivates them to stay active afterward to prevent relapses (P2 & P5). One physiotherapist specifically mentions diagnosing the patient, in cooperation with general practitioners, as part of their role (P1), but it's implied by the other physiotherapists as well when they elaborate on the process of their treatment.

> P1 - Our role as physiotherapists in treating LBP comprises trying to get rid of or minimize the symptoms and often advise and re-educate patients as well. This includes making the right diagnosis, in consultation with the GP or other doctors who refer the patient.

Lastly, one respondent mentions that the desire to lifelong learning is fundamental to their role as a physiotherapist, saying "It's that idea of trying to understand why something occurs that made me choose to take more courses, more extensive courses that were always spine-related, much less analytical, more holistic" (P3).

Physiotherapists' views on the general practitioner's role in treating low backpain

Some PTs summarize the role of a general practitioner using a more general term such as confidant or care manager. One PT describes the role of a GP as a confidant at every level, while a physiotherapist acts more as a confidant for a specific issue, saying "I think the GP is a person of trust for many patients in all areas and that they can come to us, PTs, for the complaints they have" (P1). A different interviewee describes this role as more of a coordinating function, whereby the GP should address different health care providers to provide care coming from different angles and as such provide more holistic care (P4). According to another PT, a GP has a greater impact on a patient than a PT, partially because they think they know the patient a little longer, and thus better, and partially due to their ability and duty to provide a certificate of absence in deciding a patients' inability to work. As a result, they state that in general, GPs should function as care managers while handling patients.

> P1 - I think mostly the technical, practical part, deciding if it is better to do something else, to refer the patient to the right person, like being the manager of the problem. [...] I think GPs do have more of an impact on a patient, though. If you say something, they will accept it more quickly, also because they often know you a bit better. Surely you can guide patients better than we can, in trying to get them back to work. We can say that, but if they don't go to work, that's how it is. On that level, we have no impact on our patients at all.

In Flanders, general practitioners are usually the first health care provider to evaluate a patient with low back pain and as a result, a major task for them is to exclude red flags, i.e. excluding potentially serious underlying illnesses as a cause of the low back pain the patient is experiencing, as it is reported by all the interviewed physiotherapists as a part of the general practitioners' role. The presence of red flags suggests the need for further investigation or possible referral to a specialist and therefore, all physiotherapists regard evaluating the possible need for imaging or referral to a specialist as a vital part of the general practitioner's task in treating low back pain.

> P2 - You mainly have to look for red flags, I think, and evaluate what still needs to go to imaging and what doesn't, evaluate whether there are things, like hernias, loss of strength, etc., that still need to be investigated further before we do something about it, because we can't really judge that.

Drug treatment is another responsibility of the physicians and is mentioned by all the physiotherapists as an essential part of their role. Only one physiotherapist reports giving some advice about drugs, but since this is based on experience and they haven't had a formal pharmacology training, this is limited, and they are cautious with it to prevent problems. More than half of the physiotherapist respondents (P2, P3 & P5) believe it's crucial for GPs to educate their patients when treating low back pain.

> P2 - I think education is something both parties should do. The advantage is that we have more time to explain it, I think, than you do. [...] So I think we're just in a better position to explain things than you are, but the idea is that you should do the same, of course.

For one PT, this also means creating trust in the treatment process and they emphasize the importance of positive reinforcement in doing so and in treating patients in general.

> P3 - The GP's role is mainly to create confidence that it can improve. We need to stop talking about back patients and neck patients, that doesn't exist. You're just a patient and you happen to have had back pain once but that doesn't make you a back patient. So, it's very important that GPs create more confidence, that it will be fine, it will be all right, so that they might have less fear.

For some other PTs (P4 & P5) this implies trying to activate patients by motivating them to move more, saying for example "I do think that, as a doctor, it is also important to encourage exercise" (P4). Regarding prevention, as part of education, which only on PT mentions as a task for a GP, this PT thinks that physicians should be more critical about their patients' health in general, by saying "We really need to focus more on the patient's health and stop the mindset of not paying attention to the patient if they're not sick" (P3). Lastly, the same respondent who mentions her desire to lifelong learning feels it's fundamental in the role of a physician treating patients as well.

General practitioners' views on their role in treating low backpain

One physician describes their role as a caregiver as a care manager, whose task it is to get the patient the right treatment and understanding of the issue with the right caregiver. According to them, a physician's assessment stems from a wider medical perspective focusing on excluding potentially serious underlying problems, while a physiotherapist's assessment concentrates more on exactly locating the problem.

> G2 - My job is mainly to be a bit of a manager, to get patients in the right place and get them the right help and insights handed to them. I think PTs are better at figuring out exactly where the problem is and I think GPs are better trained to rule out other serious diagnoses, we maybe look at it a bit more holistically than a PT. E.g. in a patient with breast cancer, wondering if it's not metastases or an indentation fracture in an 80-year-old lady. I think that comes from us more often, and it should be because we are more broadly trained in that area.

Another GP, while talking on this subject, explained that they thought a physiotherapist mainly focuses on the physical aspect of the issue, while GPs focus more on psychosocial factors too, saying "I think a PT assesses psychosomatic factors less than us, I think they use more of a biomedical model and a GP more of a biopsychosocial model" (G1). They also think that physiotherapists possess more anatomical knowledge and are more competent in assessing patients with low back pain. A typical consultation, according to the focus group, regarding low back pain with a physician includes diagnosing the patient and giving advice on drug treatment, rest, motion, and physical exercise. General practitioners consider diagnosing the patient and excluding potentially serious underlying diseases, or red flags as a major part of their role as a caregiver in treating patients with low back pain since they all mentioned this in their interviews, e.g. by saying "[...] because a large part of my job is to diagnose, to rule out that there is no serious underlying condition we need to treat" (G2). The general practitioners interviewed in the focus group viewed diagnosing patients as a physician's task and they expect physiotherapists to refer the patient to a general practitioner if no diagnosis has been made yet. Since you only can buy a limited range of pain medication in a Belgian pharmacy without a physician's prescription, another essential element of a general practitioner treating a patient with low back pain, since they all name it, is advice about drug treatment, saying for example "In terms of treatment I give advice on drugs, but the rest is with the physiotherapist." (G2). Only one GP (G1) explicitly mentions assessing the need for imaging as a part of her task in treating patients, it is however implied by the physicians in the focus group when saying "I also appreciate it if PTs motivate why they want an extension or extra imaging if they refer patients back for an extension of the treatment" (G6). The same GP also notes that referring patients to physiotherapists or a specialist is essential to their profession as well by saying "[...] depending on the severity of symptoms, I refer patients to a PT, imaging, or a specialist. [...]" (G1). Lastly, one other crucial responsibility GPs feel they have is calming, motivating, and activating patients and physiotherapists, as well as educating patients and explaining everything necessary to promote recovery.

> G2 - For me, the patient's health skills, the sense they can influence the trajectory of their pain themselves, are the biggest stumbling block. I would love it if I had better ways to achieve that so I could motivate and convince people better.

A patient's health literacy and the awareness about their own role in treating their back pain are crucial in the treatment as per one respondent.

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The respondents in the focus group experience a lack of motivation in patients for preventive measures and exercise as an important barrier in improving caregiving.

General practitioners' views on the physiotherapist's role in treating low backpain

Regarding a physiotherapist's responsibilities, in her interview one physician (G1) explains her vision on the tasks and role of a physiotherapist is based on her own experiences as a professional and as a patient, as well as the interaction with patients on this subject. The same is implied by most other physicians as well. All physicians consider therapy a fundamental element of the physiotherapist's role as a caregiver. To all GPs, this means physical therapy, although some mention manual therapy as a part as well.

> G3 - For me, exercise therapy is especially important. I always tell patients the physiotherapist can loosen it up but it's also important they teach patients certain exercises they can continue on their own. It's important for patients to have character and that they don't just count on the physiotherapist for treatment.

One GP in the focus group states they think there's a lot of variation in how physiotherapists work, "some work really manually, others put some kind of machine on the patient and that's something you hear from those patients" (G13). One other respondent feels that physiotherapists have the freedom to determine the full course of the treatment they offer patients.

> G2 - I know our physiotherapists and I trust them in terms of treatment, they always do an intake interview, and they adjust their treatment accordingly. Sometimes I give some instructions, for example what goals I work towards, and I have faith that the physiotherapists will work on that. And I'm not going to check what exercises they gave exactly because I also feel I don't have enough expertise on that topic.

Some physicians in the focus group (G5, G7 & G8) explicitly agree that they are free to determine which exercises they give to patients when performing physical therapy, saying "a physiotherapist does have more freedom towards which particular exercises they're going to use [...] they do have some freedom to decide how they would approach the issue" (G7). All but one (G1) of the respondents regard repetitively providing explanations and education on the issue by physiotherapists vital in treating patients with low back pain. As mentioned before, one GP (G2) feels a patient's health literacy and the awareness about their own role in treating their back pain are crucial in the treatment. As part of educating patients, some doctors in the focus group and one other respondent (G2) feel motivating patients in their treatment and motivating them to move more is important for physiotherapists to do as well, by saying for example "I do hope to put some of the treatment itself, motivating the patient, explaining what it's about, and relieving the symptoms with the PTs" (G2). An extra role ascribed to PTs is providing a second opinion to GPs. One interviewee deems them competent enough to exclude red flags (potentially serious underlying diseases), although they usually don't have to because of the legal framework in place, hence why they don't start treatment without a physician's prescription.

> G1 - Of course, they can exclude red flags too. It would be handy if we wouldn't have to write a prescription for once so the patient would go to a PT for exercises first. If it was legal, of course, because the legal framework now states that you need a GP's prescription first. But if it was my decision, they would be allowed to go directly to the physiotherapist.

Most GPs in the focus group expect support from physiotherapists in diagnosing patients, and some encourage them to make suggestions as well if necessary. They do think that the greater the physiotherapist's role in diagnosing patients, the greater the need for adequate feedback and communication. The respondents in the focus group also expect physiotherapists to refer patients back when the treatment isn't evolving as expected or when it takes too long to improve. They also notice that they work more closely with other caregivers with which they had positive experiences regarding feedback and communication.

> G3 - I like working with PTs who refer patients back if they deem it necessary, if it doesn't evolve the way they expect. I also quickly tend to refer patients to PTs I enjoy working with. That's not really an answer to the question, but it is something that plays a role in this cooperation. In the long run you make a selection and if there's good communication, you work more easily with them.

Considering communication and time

Communication is one more common theme reoccurring in every interview, which isn't really a role to fulfill, although every party involved should do it at some level. Only 2 interviewees are satisfied with the way both parties communicate (G2 & P5), and they both work together in a community health centre. Each emphasizes the importance of uniform communication and likemindedness while treating patients. Almost all other interviewees advocate for more uniformity in means of communication, such as software, as well as the message all health care providers convey.

> P2 - It could certainly be better, e.g. in terms of uniformity, there should be a platform where we can share information with physicians, a platform where both us and them can see the same things, but that doesn't exist yet. Of course that would be the most ideal, but I don't think that's realistic, if that's possible

There are, however, many different views on how this should be achieved. No participants but two, those working in the same health centre, have scheduled contact or meetings with the other professionals, so consultation only happens when deemed necessary. This is mostly done by mail or telephone, varies interindividually, according to their preference, and can change depending on urgency if they want to confer more quickly. Interindividual preferences of communication methods, as well as varying availability and accessibility all contribute to the difficulties in communication the subjects experience. For example, one PT (P3) doesn't like to call because she doesn't like to interrupt someone or be interrupted herself at an inconvenient time, and as such she prefers communicating by email, but she doesn't have all email addresses and people sometimes take longer to respond as well.

> P3 - I can't afford to do that during or between my consultations. I always have things to do and thus communicating about progress with anyone is not often a priority. And mainly because you don't want to bother anyone at a time when it's not convenient for that person either. So, I want to be able to send an e-mail, so that I get to choose when I send that e-mail at a time when I have time for that, and that person can reply at the time when they have time for that.

Some PTs (P1 & P2) also advocate for more mutual understanding with better insight in each other's practices and theoretical knowledge, to avoid unnecessary and outdated treatment proposals.

> P2 – […] because I think some doctors really don't know that well when I look at some of the prescriptions of some older GPs suggesting older treatments. But then those patients are also a bit confused the doctor prescribed that and I don't want to perform that treatment. And then I think the physicians should be better informed.

To illustrate, in the focus group, they believe that interaction and communication between health care providers is essential, although they too have a sensation that's absent in many other professionals. Many perceive a lack of time and the workload they have as barriers to improving this issue in the future.

> G4 - Time, yes, I think if you can spend more time explaining things, regarding normal duration of symptoms, regarding back hygiene for example, then maybe patients could also be a bit more patient. Also, towards prevention, in the broadest sense of the word. Losing weight, exercise, those are also things that take time and patients don't always want to hear but are important as well.

Discussion

The aim of this study was to explore the perceptions and misconceptions of Flemish general practitioners and physiotherapists regarding their interprofessional collaboration in treating low back pain. This was done by semi-structured one-on-one interviews and a focus group in a sample of GP's and physiotherapists in the East Flanders region. The major themes in this study were opinions on role distribution and communication. Physicians thought their main responsibilities were diagnosing patients, excluding red flags, offering advice on drug treatment, and evaluating the need for referring patients to imaging, physiotherapists or specialists. According to them a physiotherapist should mainly provide therapy, education, and ample explanation on the issue. Physiotherapists, however, consider treatment and symptom reduction, as well as education, prevention, and patient empowerment essential to their job, including motivating and activating patients. They feel physicians should primarily focus on diagnostics, excluding red flags, referring patients if needed, education and medicinal advice.

Overall, we saw GPs and PTs knew each other too little personally and professionally. Hence, we saw a discrepancy in perception on role distribution, whereby it struck us how most, though not all, physicians attribute less responsibilities to physiotherapists than they take up in reality. By contrast, in our study the physiotherapists had a more comprehensive understanding of what a physician does and should do, although there were gaps in their understanding as well. One possible explanation for this lack of knowledge is the limited exchanges during health care professionals' mostly separate education which emphasizes uniprofessionalism despite the frequent need for collaboration in practice (Karam et al, 2022; Paz Lourido & Kuisma, 2013; Seaton et al, 2024). The predominance of mono-professional practices and a lack of time, space and funding impede organizing strategies for interprofessional dialogue as well (Karam et al, 2022) These findings relate to the suboptimal interprofessional collaboration between GPs and RNs in Belgium (Karam et al, 2022), where a lack of clarity around RN's scope of practice is also known as one barrier for effective interprofessional collaboration (McInnes et al, 2015). The scope of the roles in a team is unprecise and depends on the

amount of trust and integration of the professional into the team (Groenewegen, 2006). Trust is known to relate to understanding the other's role in patient care (Bradley et al, 2012), image of the profession (Mior et al, 2010) and knowing each other (D'Amour et al, 2008). Role perception with most of our participants stemmed from experience during practice, which, in turn, can result in mistrust (Akeroyd et al, 2009) and feeling undervalued, as reported by two PTs in our study who advocate for more mutual understanding.

The other major theme in this study, which is closely tied with role distribution and perception, is the subjects' views on communication which most perceived as poor. Increased complexity of care is related to an increase in the number of caregivers providing care (Jansen et al, 2015), which can result in inadequate or conflicting information as well as communication issues among health care providers (Adeniji et al, 2015; Boeckxstaens et al, 2020). Perceived lack of knowledge about the other profession has been considered a contributing factor in poor communication between GPs and PTs (Paz-Lourido & Kuisma, 2013). Other possible explanations for insufficient communication are heavy workload, socialization difficulties, unsupportive environment and infrastructure, and poor management and lack of human resources (Paz Lourido & Kuisma, 2013). Both parties want to improve this but often they either don't see how or don't have time to achieve it. In addition, physicians have been described to sometimes lack interest in working closely with other professionals (Hultberg et al, 2003) and experience a feeling of ambiguity when taking up a role as an equal member of a team (Hansson et al, 2008) stemming partly from the prestige and status associated with their traditional role (Hansson et al, 2008; MacMillan, 2012). This, however, is also related to the payment system, paid on capitation versus fee-for-service (FFS), as Belgian primary care is very heterogenous in types of practices and payment systems, varying from solo private practices to community health care centers (Karam et al, 2022). In the private system, a fee-for-service arrangement and not sharing patients' medical records regularly results in some caregivers being reluctant to delegate remunerated services (Karam et al, 2022). FFS has been shown to be a barrier for collaboration and integration (Gilles et al, 2020; Tsiachristas 2016), as professionals paid on capitation, like in health care centers, report allowing themselves more time for meetings and coordination activities (Karam et al, 2022).

Proceeding from these findings, we have a couple of suggestions to enhance professionals' perceptions on role distribution, interprofessional communication and ultimately provided care. First, we should spend more time on interprofessional training and internships during health care providers' education including a more in-depth view about the roles, responsibilities, strengths, and limitations of the other profession. This helps develop one's professional role and facilitates students to explore similarities and differences between them, and thus be more conscious of the barriers to effective communication and collaboration (Paz-Lourido & Kuisma, 2013). To ensure equity in the health system, prevent power relationships developing and caregivers protecting their jurisdiction later on, individual and interprofessional training should focus on patients' needs and views, as demonstrated with GPs and nurses (Price et al, 2006). Due to ever changing practices and guidelines, we should also implement more interprofessional training for practicing professionals to improve collaboration, including time dedicated to communication, building shared views, and overcoming prejudices (Supper et al, 2015). Improving interprofessional care and bridging professional gaps should coincide with bridging social gaps, and this requires active participation to get familiar with other's backgrounds, competencies, values, and norms (Schot et al, 2020), as well as frequent interactions, social get-togethers, and informal talks to improve personal relations (Schot et al,

2020). This process also implies a need for more adequate resources and organization to support interprofessional learning and collaboration (Paz-Lourido & Kuisma, 2013). Earlier research has shown caregivers working near each other have more regular interprofessional interactions than those working separately (Seaton et al, 2021). Co-location intensifies informal and formal communication (Bonciani et al, 2018), whereas having separate buildings can result in team members being less integrated (Karam et al, 2022). Knowledge and communication have been shown to be connected and could diminish the effect of insufficient previous training (Paz-Lourido & Kuisma, 2013). Apart from shared facilities dedicated to collaboration, other structural facilitating factors are needed, such as the development of shared communication tools adapted to the different parties involved (Supper et al, 2015), because the use of connected electronic health records, as reported by two subjects in our study, can improve team communication (Denomme et al, 2011). In other words, using the rainbow model of integrated care by Valentijn et al., we should strive for more integration on a functional, e.g. funding and software, and normative level, i.e. developing and maintaining a common frame of reference concerning mission, vision, values and culture between professional groups and individuals (Valentijn et al, 2013).

Finally, we want to report some limitations of our study. Our thematic analysis was performed inductively, although we could have opted for a more deductive approach using the IPEC framework of core competencies (IPEC, 2023) to improve communication and role distribution, which also includes communication and roles and responsibilities. We thought this approach would allow for more flexibility in interpreting data and investigating meanings and underlying assumptions. The number of participants and the fact they all came from one province in Flanders, which was due to mostly practical reasons, means we should be careful not to generalize all our findings. Even more because a lot of physician respondents participated in a focus group whereby the opinions of the people who answered more could become more highlighted, even though we tried to minimize this while conducting the focus group. Another limitation is a potential volunteer bias, meaning subjects who were included expressed interest to participate prior, maybe because they were interested in the subject or because they held strong opinions on collaborating with the other profession. One more limitation is that we didn't include the patient's perspective, earlier research indicates they lack opportunities to provide feedback on their needs and preferences in primary (Soklaridis et al, 2017). This should be explored more in-depth in future research to improve the quality of interprofessional care.

Conclusion

This study aimed to explore the perceptions and misconceptions of Flemish general practitioners and physiotherapists regarding their interprofessional collaboration in treating low back pain. We found a discrepancy in perceptions on role distribution as well as prominent communication challenges, enhanced by factors like workload and separate educations. To enhance collaboration, we suggest including more comprehensive interprofessional training during education and throughout practitioners' careers, promoting more formal and informal interactions to bridge social gaps, and structural changes like the opportunity for co-location and shared communication tools. Future studies should address the absence of the patient's perspective on this issue and focus on developing interventions to promote IPC in the management of LBP and evaluate their effectiveness in improving patient outcomes. In conclusion, addressing perceptions and misconceptions regarding the interprofessional collaboration between general practitioners and physiotherapists will require

interventions at individual and structural levels. Starting with fostering mutual understanding and improving interprofessional communication during education, as well as implementing some structural changes, we could enhance the quality of care and improve patient outcomes in managing LBP.

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