

RESEARCH ARTICLE



Barriers and potential solutions for collaboration between primary and secondary care in patients with persistent somatic symptoms and functional disorders: A nominal group technique study

Nick Mamo^{a,b}, Judith G.M Rosmalen^{a,b,c}, Denise J.C Hanssen^a, Lineke M. Tak^b and Tim C. olde Hartman^d

^aDepartment of Psychiatry, University of Groningen, University Medical Center Groningen, Groningen, Netherlands; ^bDimence Institute for Specialized Mental Health Care, Alkura Specialist Center Persistent Somatic Symptoms, Deventer, Netherlands; ^cDepartment of Internal Medicine, University of Groningen, University Medical Center Groningen, Groningen, Netherlands; ^dDepartment of Primary and Community Care, Radboud University Medical Center, Nijmegen, Netherlands

KEY MESSAGES

- Professionals reported that differences in expectations and lack of clarity about who does what are the main barriers to collaboration.
- Most of the top barriers to collaboration are related to communication and clarity of vision.
- Professionals believe that using electronic consultations before referral, and all professionals using the same terminology will improve collaboration.

ABSTRACT

Background: Persistent somatic symptoms and functional disorders (PSS/FD) are complex conditions requiring collaboration between healthcare professionals. This is especially true at the interface between primary and secondary care interface. The current fragmentation of care is a major barrier to this, leading to poor experiences and outcomes and high costs for healthcare and society.

Objectives: The aim is to identify barriers and possible solutions for collaboration between primary and secondary care in patients with PSS/FD.

Methods: In two sessions, using the nominal group technique, a mix of primary and secondary care professionals identified barriers and possible solutions to collaboration between primary and secondary care in PSS/FD care. Barriers to collaboration were identified during session one, with potential solutions identified during session two in response to the top eight barriers. Each session ended with a voting round ranking the barriers and solutions.

Results: A total of 102 healthcare professionals participated in two sessions. In the first session, 55 participants provided a list of 22 barriers, while in the second session, 47 participants provided 18 possible solutions. The top barriers related to shared language and protocols, referral quality, expectations and responsibilities between healthcare professionals and patients, and time pressure. The top solutions identified related to general practitioners using electronic consultations with specialists and shared terminology with patients.

Conclusion: The identified barriers and possible solutions for collaboration between primary and secondary care need attention when considering collaboration in PSS/FD care and related settings, both in new and ongoing collaborations.

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Introduction

Functional disorders (FD) are complex conditions characterised by clusters of persistent somatic symptoms (PSS) [1]. Multiple biopsychosocial factors likely play a role in PSS/FD, whether in predisposing, precipitating or perpetuating these conditions. These conditions cause limitations on overall functioning, significantly

impacting daily life and limiting activities [2] also resulting in loss of productivity from workforce absences [3]. The factors influencing the development and perpetuation of PSS/FD, as well as the functional impacts are different for each individual. Therefore, a personalised, whole-person approach (by which we mean a comprehensive consideration of an individual's

CONTACT Nick Mamo nick.mamo@gmail.com

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physical, mental, and social well-being) is needed. This must be in combination with multidisciplinary involvement to meet the needs of people suffering from these conditions [4].

The importance of interprofessional collaboration is especially true when looking at the interface between primary and secondary care [5, 6]. In the last few years, in the Netherlands, the workload in both primary and secondary care has been increasing, with an inevitable need for more collaboration between the two [7]. Within the context of PSS/FD, the need for a whole-person approach leads to the need for multiple healthcare professionals to be involved - across primary and secondary care, from somatic to mental health care. Especially in the case of PSS/FD care, such involvement benefits from frequent back-and-forth communication between all involved.

The importance of improved collaboration between primary and secondary care is shown in a recent study on quality indicators for collaborative care networks (CCNs) in PSS/FD care [8]. Here, the need for better collaboration with somatic specialists is prioritised. It is also shown, most importantly, in the experiences of patients [9–12]. Patients have to deal with circuitous and often failed trajectories, seeing multiple professionals, with poor communication and misalignment between professionals. At times, they fail to reach a diagnosis with one set of professionals and have to start over elsewhere [9]. All this leads to poor experiences as well as delays in diagnosis and treatment, and inappropriate investigations and referrals. The importance of improved collaboration is also shown in the cost to the health service [13]. Improving collaboration between primary and secondary care improves the quality of care for patients with PSS/FD and also reduces costs [14]. This may be through improved service provision in primary care and more appropriate referrals to, and improved experiences in, secondary care. The improvements in collaboration may also potentially shorten the duration of diagnosis and appropriate treatment.

Much work has been done on identifying barriers, as well as facilitators, to collaboration in healthcare settings in general [15], as well as in the field of PSS/FD [16, 17]. The barriers and relevant solutions in the collaboration between primary and secondary PSS/FD care have not been explored before. When talking about barriers, these can be considered as due to systemic, organisational or interactional determinants in relation to interprofessional collaboration [18]. Interactional determinants refer to the willingness to collaborate, trust and communicate. Organisational determinants refer to an organisation's structure, philosophy, administrative

support and resources. Systemic determinants refer to social and cultural systems, educational and professional factors. By considering the determinants of the barriers, we may be able to better identify potential routes to resolving them.

The aim of this study is, therefore, to identify barriers and relevant solutions for collaboration between primary and secondary care for patients with PSS/FD. This can guide improvements in interprofessional collaboration across the primary/secondary care interface, as well as guiding implementation of new services.

Methods

This study is part of the innovative training network ETUDE (Encompassing Training in fUnctional Disorders across Europe), ultimately aiming to improve the understanding of mechanisms, diagnosis, treatment and stigmatisation of FD [1].

Study design

As a means to identify barriers to collaboration between primary and secondary care and relevant solutions, a nominal group technique process was undertaken across two workshops. Workshops were part of two 3-day residential events bringing together healthcare professionals working in primary and secondary care in the area of Heerenveen in the Netherlands. In the nominal group technique, participants are brought together for discussion and voting across four stages: idea generation, idea recording, clarification, and priority voting [19]. This method encourages equal participation and shared contributions using a structured and transparent approach [20].

Setting

This study was undertaken in the Netherlands, where the healthcare system is based on an insurance model, and primary care (especially general practitioners – GPs) act as gatekeepers, providing referrals when needed for access to secondary care [21]. There are significant limitations to the integration of care services, though more attention is now being paid to care integration. Electronic patient records are widespread, including use by all GPs. PSS/FD care is available; however, availability and specific services vary across provinces. Specialist units, either led by mental health services or rehabilitation, with outpatient care can be found in some provinces (and in one centre also inpatient care). There is often the possibility of

referral to these services even from outside the province depending on capacity. So far, there is no cover for multidisciplinary consultations. Services tend to be focused on PSS care more broadly, however, some more specific services do exist, for example for FND or chronic pain. Beyond multidisciplinary services, most PSS and FD are managed by GPs, and in other cases by the specialties related to the main symptoms (for example, irritable bowel syndrome in gastroenterology and fibromyalgia in rheumatology).

Participants

Participants in the nominal group technique process were made up primarily of doctors, as well as other allied professionals (including pharmacists, psychologists, and managers) across both primary and secondary care. The profession, work setting, age and sex of each participant were recorded. The participants came from across multiple departments and were not specifically involved in care for PSS/FD. There were 102 participants in total, of which 55 participated in session one and 47 in session two. There is a wide variation in the number of participants in the nominal group technique studies, with no standard size. This partly reflects the variation in nominal group technique study design. Studies have been reported to have as many as 341 participants in the process, with anywhere between two and 30 participants per nominal group [22]. The number of participants in this study provides a balance of having manageable group discussions, and a high number of voting participants to assist in ranking the results.

Procedure

The first session identified barriers to collaboration between primary and secondary care for patients with PSS/FD. Once the results of this session were ranked, the top eight barriers were grouped into barrier-themes. The second session identified solutions based on these barrier themes.

Session one

Following an introductory lecture about PSS/FD, the central workshop question was introduced and the participants were divided into four groups. Groups were pre-selected to have a mix of disciplines. Spaces were set up with chairs, markers, flip-charts and a stand. After a brief round of participants introducing themselves within the group, the four groups proceeded to brainstorm barriers to collaboration between

primary and secondary care for PSS/FD. Each group created a shortlist of the ten barriers they felt were most important. Following the group sessions, a review of all barriers was held in plenary, with time to clarify any unclear points, and to combine any barriers which were the same or had significant overlap. A final list of barriers was compiled. The barriers were then displayed on flipcharts. Participants were assigned five votes on coloured paper, with each colour representing a different number of points from one to five. On these, they wrote their discipline and/or specialty, age, and gender. The participants then had time to walk around and assign votes to their top five barriers - five points to the barrier they felt was most important, through to one point for the fifth most important. Once the votes were completed, participants were provided with a visual representation of the results through their own voting patterns.

Following session one, the barriers were ranked according to the nominal voting round. The top eight barriers were then organised by an expert panel (JM, LT and NM) into four themes based on the barriers. The choice of the top eight barriers was primarily made for practical reasons: as the barriers grouped into four discrete themes, this allowed us to divide the participants in session two into four groups, similar to session one.

Session two

Session two followed a similar procedure. However, the subject changed from barriers to potential solutions. The results of the first session were reviewed with the participants of the second session. Again, the participants were split into four groups. This time, each of the groups was assigned one of the four barrier themes based on the results of session one. The groups then proceeded to brainstorm and select solutions for the barriers described in the barrier theme. Plenary review of solutions proceeded similarly to session one. Voting proceeded similarly to session one, with participants voting from the overall solutions list.

Data analysis

Following each session, the votes were counted, and all the results ranked. Identical scores were given the same ranking number; barriers and solutions with a higher number of individual votes were listed higher.

The results of both session one - barriers - and session two - solutions - were organised according to the voting ranking. Furthermore, the barriers were grouped based on the determinants of interprofessional

collaboration - i.e. interactional, organisational and systemic [18].

Results

Participant characteristics

There were in total 102 participants across the two sessions – 55 participating in session one and 47 in session two (see Table 1). The results of three voters were excluded from the voting rounds in session one

Table 1. Participant characteristics.

		Total: 102	
		Session 1 N=52	Session 2 N=45
Female	N (%)	35 (63.6)	24 (51.1)
Male	N (%)	20 (36.4)	23 (48.9)
Age (years)	Range	31-67	36-65
	Mean (SD)	48.7 (8.62)	48.3 (8.59)
Professional discipline	N (%)		
General Practitioner		19 (34.5)	21 (44.7)
Medical specialist		29 (52.7)	20 (42.6)
Pharmacist		2 (3.6)	2 (4.3)
Psychologist		2 (3.6)	2 (4.3)
Healthcare Manager		2 (3.6)	- (-)
Unknown		1 (1.8)	2 (4.3)

and two in session two, due to double voting for the same barrier or solution, respectively. Therefore, 52 participants were counted in voting for session one, and 45 participants in session two. Amongst the medical specialists, at least 17 different specialties were represented including six internal medicine specialties (such as cardiology and gastroenterology), five surgical specialties (including urology and orthopaedics), gynaecology, paediatrics and others.

Most important barriers

Session one resulted in the identification of 22 unique barriers – shown with ranking in Table 2. The top-ranking barrier is 'differing expectations between patients, GP and specialist', reflecting the differing expectations about suitable management options between patients, GP and specialist when referring patients from primary to secondary care. This barrier also received the highest number of individual votes, having been selected by 77% ($n=40$) of the participants. The second-ranked barrier, 'lack of clarity over responsibility of care when both primary and

Table 2. Barriers to primary and secondary care collaboration in PSS/FD care.

Ranking	Points (Number of individual votes)			Barriers	Determinants
	Total	GPs	Medical Specialists		
01	144 (40)	54 (15)	68 (19)	Different expectations between patients, GP and specialist	Interactional
02	110 (34)	36 (10)	52 (17)	Lack of clarity with responsibility of care when multiple professionals are involved	Organisational
03	107 (31)	27 (8)	54 (16)	No shared language between primary and secondary care professionals	Systemic
04	76 (23)	36 (10)	36 (10)	Time pressure - too little time for collaboration	Organisational
05	60 (16)	19 (6)	32 (8)	Insufficient or too much information in referral letter	Interactional
06	42 (13)	13 (3)	26 (8)	No unified protocol and associated tools across levels of care	Organisational
07	39 (14)	5 (3)	32 (10)	Too leading or unclear question in the referral letter	Interactional
08	38 (16)	18 (7)	17 (7)	Lack of a generalistic doctor with an overview of the whole care trajectory	Organisational
09	25 (10)	7 (4)	18 (6)	Anxiety of the professional over missed diagnoses	Systemic
10	21 (11)	11 (6)	9 (4)	Insufficient knowledge about treatment options across services	Organisational
10	21 (10)	2 (1)	14 (8)	Stigma and negative loadings associated with terms used around functional/medically unexplained symptoms	Systemic
12	17 (5)	5 (2)	12 (3)	Discomfort in dealing with uncertainty by doctors, patients and society	Systemic
13	16 (5)	11 (3)	5 (2)	Difficulties in utilising the preferred means of communication	Organisational
14	12 (7)	1 (1)	8 (5)	Insufficient treatment capacity in either level of care	Organisational
15	11 (7)	3 (3)	3 (2)	Lack of continuity of care across different services and levels of care	Organisational
15	11 (6)	0 (0)	11 (6)	IT-systems not communicating	Organisational
17	10 (5)	2 (1)	8 (4)	The need for a diagnosis to receive sickness benefits	Systemic
18	6 (2)	3 (1)	3 (1)	Access to referral letter by patients may restrict what information GPs provide because of presumed negative reactions by patients	Systemic
19	5 (2)	2 (1)	3 (1)	Referral as a means of exchange or based on patient's wish instead of for a medical reason	Interactional
19	5 (2)	0 (0)	5 (2)	Referrals to wrong places or unclear where to refer to due to lack of specialised outpatient facilities	Organisational
21	4 (1)	0 (0)	4 (1)	Lack of communication across the different levels of care	Organisational
22	0 (0)	0 (0)	0 (0)	Lack of mutual trust because GP and specialist do not know each other personally	Interactional

FD: Functional disorders; GP: General practitioner; IT: Information technology; PSS: Persistent somatic symptoms.

secondary care are involved' was selected by 65% ($n=34$) of the participants.

The barriers were grouped according to the determinants of interprofessional collaboration. The majority of barriers identified relate to organisational determinants (11 – 50%); five (23%) relate to interactional determinants; and six (27%) to systemic ones.

The top interactional barriers relate to unclear roles and as well as referral quality. The top organisational barriers relate to issues of unclear responsibilities, time pressure and lack of unified protocols (referring to the need for agreed plans for how and when to refer and manage patients with PSS/FD). The top systemic barriers relate to a lack of uniform language and anxiety over missed diagnoses.

The separate votes of GPs and medical specialists can also be seen. These are generally similar, though a few differences can be seen. For example, GPs do not think that IT systems not communicating, or anxiety by the professional over missed diagnoses, are barriers. They are, therefore, much less likely to think that the referral question is not specific.

Box 1 shows the top eight barriers alongside their assigned barrier themes, upon which the solutions in session two were based. These four themes bring together overlapping barriers. In this case, the theme 'Referrals' refers to two barriers that discuss problems in referrals including issues of poor information quality and poor specificity of the referral question, where in both cases it is difficult for the specialists involved to appropriately answer the referral question. 'Expectations and responsibilities' refers to three barriers focused on issues of unclear expectations and responsibilities between healthcare professionals (both primary and secondary care) and patients. These barriers include

Box 1 Top eight barriers to collaboration between primary and secondary care organised into themes.

Referrals

- Insufficient or too much information in referral letter
- Too leading or unclear question in the referral letter

Expectations and responsibilities

- Different expectations between patients, GP and specialist
- Lack of clarity with responsibility of care when multiple professionals are involved
- Lack of generalist doctor with an overview of the whole care trajectory

Shared language and protocols

- No unified protocol and related tools across levels of care
- No shared language between professionals

Time

- Time pressure - too little time for collaboration

differing expectations, lack of clarity over care responsibility and lack of a generalist doctor with care overview. The theme 'Shared language and protocols' refers to two barriers that focus on the importance of having unified protocols, tools and language when treating patients with FSS/FD. 'Time' represents one barrier to the issue of time pressure that health care professionals experience.

Most important solutions

Session two identified 18 solutions based on the four barrier themes described above. These solutions are shown ranked in Table 3. The top-ranking solution, 'GPs should make use of electronic consultations with secondary care (between GP and specialist) before referral, and should inform the patient of this' was selected by 74% ($n=32$) of respondents. The second-ranked, 'use shared terminology as found on the nationally-used patient information webpages and refer patients to this information' was also selected by 74% ($n=32$) of respondents. Both of these solutions deal with issues of a lack of shared language and protocols. The third-ranked solution deals with referral issues, and the fourth- and fifth-ranked solutions deal with barriers of expectations and responsibility between doctors (both primary and second care) and patients. The highest-ranked solution dealing time was seventh – 'schedule extra time for new complex patients'. As with the barriers, the votes of GPs and medical specialists separately can be seen. There is a lot of agreement, though some differences can be seen, for example on solutions targeting time limitations. In one solution, it is suggested that extra time should be scheduled for complex patients, which GPs voted for less than medical specialists. In another solution, joint education for primary and secondary care is suggested, for which specialists voted less than GPs.

Discussion

Main findings

The results of this study provide a ranked list of barriers to collaboration between primary and secondary care and possible solutions from the perspective of the same healthcare professionals who need to collaborate. Without prompting or direction, the main results focus on the diagnostic phase, likely suggesting that this is a bigger challenge than the treatment phase. The top-ranked barriers are both related to expectations and responsibilities, including different

Table 3. Solutions relevant for barriers to collaboration between primary and secondary care in PSS/FD care.

Rank	Points (Number of individual votes)			Barrier theme	Solution
	Total	GPs	Medical Specialists		
1	116 (32)	51 (15)	54 (14)	Shared language and protocols	GPs should make use of electronic consultations with secondary care (between GP and specialist) before referral, and should inform the patient of this
2	108 (32)	63 (17)	38 (12)	Shared language and protocols	Use shared terminology as found on the nationally-used patient information webpages and refer patients to this information
3	82 (27)	32 (12)	38 (11)	Referral	Describe expectations of both GP and patient in referral letter to secondary care
4	55 (18)	20 (6)	29 (10)	Expectations and responsibilities	Coordination of case should be by the GP (only in exceptions should this be by secondary care)
5	51 (20)	25 (10)	21 (8)	Expectations and responsibilities	Have a low threshold for consulting the care coordinator
6	50 (18)	16 (6)	20 (7)	Expectations and responsibilities	Use the same, unambiguous, terminology as used by other professionals previously across all levels of care
7	46 (18)	11 (4)	26 (11)	Time	Schedule extra time for new complex patients
8	45 (14)	22 (7)	13 (4)	Expectations and responsibilities	As a GP, discuss the possibility of finding 'no diagnosis' with the patient before referral to secondary care
9	32 (13)	19 (8)	8 (3)	Time	Organise joint education for primary and secondary care
10	28 (9)	13 (4)	11 (4)	Referral	Describe applied pharmacological and non-pharmacological interventions in referral letter to secondary care
11	18 (6)	9 (3)	9 (3)	Expectations and responsibilities	Implement advice of outpatients clinic and letters from secondary care in electronic patient file.
12	8 (5)	2 (2)	6 (3)	Referral	Include information on relevant other factors such as context, impact of symptoms, and family history in letters between primary and secondary care
13	8 (3)	3 (1)	5 (2)	Referral	Include medical history in one clear overview in electronic referral system
14	8 (2)	8 (2)	0 (0)	Referral	Mention complexity in referral letter to secondary care
15	7 (3)	5 (2)	0 (0)	Shared language and protocols	Create a path of care and supervisor in electronic patient file that is the same across different levels of care
16	7 (3)	1 (1)	6 (2)	Shared language and protocols	Familiarise yourself with multidisciplinary standards of care and/or GP-standards for persistent somatic symptoms
17	5 (5)	0 (0)	0 (0)	Referral	Write referral letters to secondary care together with the patient
18	1 (1)	0 (0)	1 (1)	Time	As a specialist, write a letter to the GP and send a copy to other healthcare providers involved with the patient's consent

FD: Functional disorders; GP: General practitioner; PSS: Persistent somatic symptoms.

expectations between professionals, and lack of role clarity. The top solutions are both related to shared language and protocols, including the use of electronic consultation before referral, and the use of shared terminology from patient information webpages.

Strengths and limitations

This study has some strength worth mentioning. Firstly, methodologically, the use of the nominal group technique allows for qualitative input from a large number of experienced professionals, with a plenary review of results and nominal voting. Secondly, this study had a large number of respondents providing a significant representation of healthcare in the region. The converse limitation is the regional and professional specificity. All participants were from one specific area in the Netherlands, limiting applicability of these results elsewhere. Secondly, the vast majority of the respondents were doctors (89 of 102). Relevant health care providers in PSS/FD care, including psychiatrists, are missing. Participants were also not specifically involved with PSS/FD care, therefore having limited experience

in this field. These issues likely limit the identification of barriers, and most relevant solutions. However, this study does provide a good insight into the experience and views of GPs and medical specialists in general care. Alongside this, as the professionals involved represent a broad view of less-specialised practice, who are likely to deal with a large number of persons suffering from PSS/FD, the barriers and solutions provided may be more generalisable and realistic, especially when specialist services may not be (easily) available.

Comparison with the literature

Several studies present similar findings to this study. Some are from the fields of PSS/FD or psychosomatic medicine, [23–26]. However, most relevant studies look at interprofessional collaboration more broadly [5, 11, 12, 15, 27], finding barriers related to our themes of expectations and responsibilities, and shared language and protocols [23]. The barriers probably start with inconsistencies in the language and explanations used by professionals [25, 26], resulting in different professionals providing contradictory information or simply

not communicating sufficiently [11, 12]. There are also issues with team roles being clear both within the team and beyond it [5, 15, 27], with a lack of awareness of what each person does. All of this, and problems with continuity of care, result in issues with the patient journey and the patient experience [11, 12].

A lot of these issues are primarily a factor of the professionals working directly with patients. However, studies also document barriers from other areas. Lack of leadership and administrative support can really impact on services [12, 15, 27]. These can be both cause and effect of financial issues – a barrier impacting all aspects of care [24]. The larger, systemic barriers recognised in the literature are fragmentation of care and separation of departments [24, 27]. These reflect our findings, in particular the focus on referrals, and responsibility of care, which are acutely important when care is fragmented.

Only the patient perspective studies suggest specific solutions. Patient focus groups highlighted primary and secondary care doctors maintaining informal contact, and using shared medical information systems [12]. Like the present study, these focus groups also suggested joint courses. The solution of GPs coordinating cases - the fourth-ranked solution in this study - is directly reflected in a review of patient perspectives on the primary-secondary care interface [11]. This review also suggests that a GP who is perceived to be an effective gatekeeper will be trusted to make the right referrals to specialists. It repeats the importance of informal communication to overcome fragmentation, a finding hinted at in many of the solutions we identified.

Implications for practice and future research

On a general level, the results of this study partially fulfil important steps in the process of implementation of change [28] by providing a problem analysis and relevant solutions.

Looking at the specific results, seven of the top eight barriers relate to communication and clarity of vision, both of which are important quality indicators in PSS/FD care [8]. These can be added tools alongside the proposed solutions. Conversely, the barriers and solutions identified in this study can be of assistance when considering developing quality indicators for CCNs. For example, GPs can coordinate care, reflecting patient preference [9], and providing overview from a generalist. Another area is the use of a shared terminology, an important aspect of a shared vision of care. Considering the different diagnostic terms and

explanations for these conditions, agreement on terminology is even more important. The issues of terminology and poor experiences are intrinsically linked to the issues of care fragmentation, and the solutions lie in improving the shared vision. This has been suggested here and in a study on quality indicators for CCNs in PSS/FD before [8]. More work, however, needs to be done to move towards a shared vision, preferably through practice-based research.

Next steps to be taken should aim at testing these solutions through implementation, for example through action research. Repeating this study with a different group of healthcare professionals and with patients would make the results more generalisable, influencing implementation of collaborative care in PSS/FD in the Netherlands and elsewhere. It is also important to highlight the often-complex implementation process [16]. Strategies, however, can be found for dealing with implementation barriers [29]. Comparing such barriers and solutions in settings with a different healthcare system, such as the impact of not having gatekeeping, on referrals and communication is needed. As [30] barriers to better care differ between countries, either having access-related issues versus care implementation issues as the main barriers.

The barriers and solutions presented are likely also applicable in areas beyond PSS/FD. The need for multidisciplinary care and dealing with the challenges of care fragmentation is also important in multimorbidity and elderly care, where a whole-person approach is also important.

Conclusion

This study provides us with a list of 22 barriers and 18 related solutions for improving collaboration between primary and second care in PSS/FD care. The results reflect the main areas where barriers arise, and the areas where clinicians see the potential for solutions. The findings are in line with studies of patients' opinions on interprofessional collaboration. Allowing for local differences, these barriers and solutions can guide the implementation of new, improvements in active, interprofessional collaborations for the care of PSS/FD and in other fields.

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Ethical approval

As this Nominal Group Technique study did not involve patients, seeking only anonymous opinions of healthcare professionals on care service, there were no specific ethical issues to be considered. By law, this study does not fall under the Medical Research Involving Human Subjects Act in the Netherlands.

Disclosure statement

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