

The role of the care sport connector in the Netherlands

K.E.F. Leenaars^{1,*}, E. Smit,² A. Wagemakers¹, G.R.M. Molleman² and M.A. Koelen¹

¹Department of Social Sciences, Health and Society Group, Wageningen University & Research Centre, EW Wageningen, The Netherlands and ²Academic Collaborative Centre AMPHI, Primary Health Care, Radboud university medical Center, Nijmegen, The Netherlands

*Corresponding author. Email: Karlijn.leenaars@wur.nl

Summary

Introduction: To stimulate physical activity and guide primary care patients towards local sport facilities, Care Sport Connectors (CSC), to whom a broker role has been ascribed, were introduced in 2012 in the Netherlands. The aim of this study was to explore CSCs' role in connecting the primary care sector and the PA sector.

Method: Fifteen CSCs were selected to participate in this study and were followed in their work of connecting both sectors. Over the course of one year, three rounds of interviews were held with these CSCs on the topics of their role and the connection between the primary care and the PA sector. Both top-down and bottom-up codes were used to analyse the interviews.

Results: CSCs fulfilled three roles: 1) broker, 2) referral, 3) organiser. The extent to which CSCs fulfilled these roles was influenced by the way municipalities implemented the CSC funding. CSCs set up two forms of collaboration structures: 1) project basis and 2) referral scheme. CSCs perceived the following barriers to connecting the primary care and the PA sector: lack of knowledge and time, primary care professionals' own interests, and lack of suitable sport activities for the target group.

Conclusion: The CSC role seems to hold the promise of improving collaboration between the primary care and the PA sector, especially, because the roles that CSCs perceive themselves as having seem to be directed at eliminating barriers in this connection. Future research is needed to study whether CSCs are capable of establishing a connection over time.

Key words: physical activity promotion, primary healthcare, PA sector, intersectoral collaboration, broker role

INTRODUCTION

Regular physical activity (PA) is associated with enhanced health and reduced risk of all-cause mortality, and has many health benefits (Kahn *et al.*, 2002). Therefore, regular PA is deemed to contribute to the primary and secondary prevention of several chronic diseases, like diabetes

mellitus, cancer, cardiovascular diseases, and osteoporosis (Warburton *et al.*, 2006). Although the health benefits are clear, rates of PA promotion by primary care professionals are far from optimal (in Huijig *et al.*, 2015).

About 40% of Dutch adults do not meet the Dutch recommendation about being moderately active for

30 min at least 5 days per week (Hildebrandt *et al.*, 2013). In order to stimulate PA, in 2012 the Dutch Ministry of Health, Welfare, and Sport introduced neighbourhood sport coaches (*Buurtsportcoach*), ascribing to them a broker role. These coaches are 40% funded by the state and the 60% funded by the municipality or other local organisations. Some of these coaches, so-called Care Sport Connectors (CSCs), are employed specifically to connect the primary care sector and the PA sector in order to guide primary care patients towards local sport facilities. This connection is desirable because primary care-based PA interventions are effective in reaching physically inactive adults (Eakin *et al.*, 2000). However, patients prefer to stick in the known and secure environment of the primary care sport facilities instead of participating in unknown or untried local facilities (den Hartog *et al.*, 2013; Meijer *et al.*, 2012). The general idea is that CSCs facilitate the connection between the primary care and the PA sector; professionals in these sectors collaborate; activities to promote PA are implemented; these activities reach certain target groups; target groups will become more physically active; and health outcomes will improve. A blueprint for the CSC implementation was deliberately not presented, allowing municipalities to deploy CSCs in line with local needs and contexts.

This new CSC function is challenging because previous studies have shown that differences between the primary care and the PA sector can hinder their mutual collaboration. For example, research on networks to promote PA within the community identified differences in shared interests and cultures as barriers thereto (Casey *et al.*, 2009; Casey, Payne, and Eime, 2009; den Hartog *et al.*, 2013). In the referral of primary care patients towards local sport facilities, it became apparent that sport professionals' lack of medical knowledge and their failure to provide feedback to health professionals, and health professionals' lack of time, were seen as barriers in the collaboration between the sectors (Cashman *et al.*, 2012; Foley *et al.*, 2000; Thrinh *et al.*, 2012; Wiles *et al.*, 2008).

Although a broker role seems promising for improving intersectoral collaboration (Harting *et al.*, 2008), our recent review study found only one initiative between the primary care and the PA sector which made use of a broker role to establish a connection between both sectors (Leenaars *et al.*, 2015). The review also showed that most publications reported on the effects of PA promotion on patients' health status or PA behaviour and that the performances of collaborative initiatives were still unexplored (Leenaars *et al.*, 2015). To our knowledge, no study has yet explored a broker role

and its impact on improving intersectoral collaboration between the primary care and the PA sector.

The CSC funding provides an excellent opportunity to explore the impact of a broker role on improving intersectoral collaboration. A first step towards exploring the impact of CSCs in connecting the primary care and the PA sector is to gain an insight into their role in this connection, especially as the CSC function is new and not much is known about how CSCs will fulfil their role. Therefore, the aim of this study was to explore CSCs' role in connecting the two sectors. Research questions addressed were: 1) how do CSCs perceive their role in connecting the primary care and the PA sector and 2) how do CSCs establish a connection between the primary care and the PA sector, and what factors are perceived as barriers and facilitators in this connection?

METHODS

This study is part of a larger project in which a multiple case study is being conducted in nine municipalities spread over the Netherlands from 2014 to the end of 2016 to study the role and impact of the CSC in connecting the primary care and the PA sector, and the participation of the target group (Smit *et al.*, 2015).

Setting and study population

The nine municipalities were selected through convenience sampling based on project partners' contacts. The main criterion for municipalities was that the municipalities were implementing the CSC funding for four years (until 2017). In addition, the region, the size of the municipality, and the way the municipality implemented the CSC funding were taken into account in choosing the municipalities. In consultation with the representative policymaker in each municipality, CSCs were selected to participate in this study. Inclusion criteria were: the CSC 1) aims to connect the primary care and the PA sector and 2) is working with the target group of adults, preferably adults who could benefit from PA (primary care patients, the elderly). The total number of CSCs in the study is 15. This is approximately 15% of the CSCs employed to connect primary care and sport for adults in the Netherlands (for more detailed information see Smit *et al.*, 2015).

The nine selected municipalities were spread over the Netherlands, and differed in size ($\geq 300,000$ inhabitants [$n = 2$], 100,000–300,000 inhabitants [$n = 4$], $\leq 100,000$ inhabitants [$n = 3$]). The CSC funding was implemented differently in the nine municipalities. Three CSCs in the same municipality were part of a different partnership

between primary care, welfare, and sport professionals organised by the municipality and were working for a care organisation ($n=1$) or a welfare organisation ($n=2$). Three CSCs were working for the municipal sport department, one was working for a welfare organisation, and six were working for a sport organisation. Two CSCs were being paid from CSC funding, but one was a health broker working for the Municipal Health Service and the other was a representative of a community health centre. All CSCs had the task (sometimes mandated by the municipality) to stimulate PA and/or a healthy lifestyle among the target group. One CSC had the task of facilitating collaboration between professionals in order to create an integrated approach to stimulate a healthy lifestyle.

The average age of the 15 CSCs (5 men, 10 women) was 38 years (min 27 years, max 57 years). Eleven CSCs had a bachelor's degree, two had a master's degree, and two had a vocational education diploma. At the time of the first interview, seven CSCs had been in position for 0–6 months, five CSCs were working for 6–12 months, and three for longer than a year.

Data collection

To study how CSCs perceive their role and how CSCs establish a connection between the primary care and the PA sector, the selected CSCs were interviewed every six months. The topics addressed in the interviews and the number of interviews with each CSC varied, depending on CSC availability (Table 1). A first interview was held with all 15 CSCs. Seven CSCs were interviewed three times, six CSCs were interviewed twice, and two CSCs were interviewed once. At the start of this study, not all CSCs ($n=5$) in the nine selected municipalities, had started their function. Therefore, these five CSCs were only interviewed twice. In their second interview, we combined the topics for interviews 2 and 3. In consultation with one CSC (the community health centre), it was decided not to conduct the third interview because the operations of the community health centre remained the same and this had already been outlined in the first two interviews. During the project, one CSC resigned and another temporarily ceased functioning. With those two CSCs, only one interview was conducted. In total, 35 interviews were held with the CSCs selected for this study. The interviews took place at the CSCs' workplace and lasted between 1 to 1.5 h. The first two interview rounds were conducted by KL and ES, the third interview round was conducted by KL.

The interview topic list (Table 1) for the first and third rounds were initially based on Koelen *et al.*'s

(2012) HALL framework. The main topics were how CSCs perceive their role and the structure and the organisation of each CSC's network, to study how CSCs establish a connection between the primary care and the PA sector. To study the CSCs' network, two existing, validated collaboration assessment tools were used: Frey *et al.*'s (2006) levels of collaboration survey and Zaalmink *et al.*'s (2008) network analysis tool. Both tools provided an insight into the CSCs' network and professionals' role in connecting the primary care and the PA sector, and this was used as a starting point for questions about the organisation of each CSCs' network (Table 1).

Data analysis

The interviews were audiotaped and transcribed (intelligent verbatim style). The data analysis was based on Creswell's (2009) six steps for qualitative data analysis. So, after the data were organised and prepared for analysis (step 1), the transcripts were read (step 2). In the third step, the transcripts were coded and analysed using software for qualitative analysis (Atlas.ti, version 7.1.8). The data were coded top-down with predefined codes based on factors from the HALL framework. However, after the first round of interviews it appeared that some of these top-down topics, especially those relating to the organisation of alliances, were less relevant because of the lack of structured collaboration in the CSC network. Consequently, thereafter we included more bottom-up codes, themes that emerged in the interviews, on the code list: topics relating to collaboration in connecting the primary care and the PA sector (Table 2). In the fourth step, the codes were clustered into the following themes: the CSC role, establishing a connection between the primary care and the PA sector, and perceived barriers and facilitating factors in the connection between the primary care and the PA sector. In steps 5 and 6, more bottom-up codes were assigned to the various themes; for example, the new codes identified in the theme 'CSC role' were: broker, referral, organiser (Table 2). In addition, because we followed the CSCs in their work of establishing a connection between the two sectors over time, we examined a shift in perceptions towards their role and their role in connecting the two sectors. For two CSCs this was not possible, because we interviewed them only once.

Step 1 to 4 of the data analysis process were performed by one researcher (KL). Thirty percent of the transcripts were also examined by other researchers (ES, AW and GM) in order to check the way of coding. Steps 5 and 6 were performed independently by two

Table 1: Participants and topic list used in the three interview rounds

Participants of the interview rounds		Topic list of the interview rounds			Example of questions	Round 1	Round 2	Round 3			
Municipality	CSC	Round 1	Round 2	Round 3					Themes	Topic	
1.		X	X	X	CSC Role	Attitude and beliefs		X			
2.		X	X	X		Goals, obligations, tasks		X			
3.		X	X	X							
4.		X	X	X	Network organisation	Roles and responsibilities		X			
5.		X	X	X		Communication		X			
6.		X	X	X		Management		X			
7.		X	X	X		Shared mission/support		X			
8.		X	X	X		Relationships		X			
9.		X	X	X	Network results	Results (visibility)		X			
10.		X	X	X		Added value of the collaboration		X			
8.			X*	X**	Connection primary care and the PA sector	Attitude and beliefs					X
12.			X*	X**							
13.			X*	X**							
14.			X*	X**							
15.			X*	X**							
Total		10	13	12							

*In this interview round with these CSCs, round 1 topics were asked.

**In this interview round with these CSCs, round 2 and round 3 topics were combined.

Table 2: Code list used in the data analysis

First code list		Second code list			
Themes	Top-down codes	Bottom-up codes	Themes	Top-down codes	Bottom-up codes
CSC characteristics	<ul style="list-style-type: none"> • Personal • Working area/target group • Organisation • CSC funding 		CSC characteristics	<ul style="list-style-type: none"> • Personal • Working area/target group • Organisation • CSC funding 	
CSC role	<ul style="list-style-type: none"> • Role • Tasks • Attitude • Mandate • Review 	<ul style="list-style-type: none"> • Aspiration 	CSC role	<ul style="list-style-type: none"> • Task • Attitude 	<ul style="list-style-type: none"> • Broker • Referral • Organiser
CSC network	<ul style="list-style-type: none"> • Structure • Roles and responsibilities • Management • Mission • Communication • Attitude • Involving partners • Review of the collaboration • Status • Results (visibility) • Added value 	<ul style="list-style-type: none"> • Aspiration about the collaboration • Attitude towards primary care professionals in the network 	Collaboration in the connection between the primary care and the PA sector	<ul style="list-style-type: none"> • Attitude • Structure • Added value • Results 	<ul style="list-style-type: none"> • Partnership • Project basis • Referral
Attitude towards the primary care and the PA sector		<ul style="list-style-type: none"> • Attitude primary care • Attitude PA sector 	Perceived barriers and facilitating factors in the connection between the primary care and the PA sector	<ul style="list-style-type: none"> • Barriers • Facilitating factors to involve primary care and PA professionals 	<ul style="list-style-type: none"> • Lack of time • Lack of knowledge • Apprehensiveness • Own interest • Suitable sport activities • Willingness to participate

researchers (KL and AW). The interpretation of the data was discussed to reach consensus between the two researchers. After the data analysis was completed, the results were discussed within the research team.

RESULTS

Care Sport Connector role

CSCs perceived themselves as having three roles: 1) a broker between professionals from the primary care and the PA sector, 2) a CSC referral function whereby they guide patients or residents after referral by primary healthcare or welfare professionals towards suitable sport activities, 3) organiser of activities to promote PA. Eleven CSCs fulfilled all three roles, but to different extents. Four CSCs fulfilled only one or two roles: three CSCs fulfilled the broker role and the organiser role, and one fulfilled the referral and the organiser role (Table 3).

Broker role

Fourteen CSCs described their role as broker to connect the primary care and the PA sector. One CSC, the community health centre representative, did not describe her role as that of broker, because in the partnership organised by the municipality different sectors were already connected.

For 13 CSCs, it was important to create a network of primary care, welfare, and sport professionals in order to connect both sectors. Contact with those professionals was mostly sought to carry out the other two roles: the referral function and organiser of activities. In these networks, CSCs saw themselves as the linchpin in the network.

Networking was an important feature of this broker role, thereby exploiting existing collaboration structures or activities. Most CSCs networked to make themselves known and inform professionals about the CSC role and the opportunities for them if the sectors were connected. Some CSCs compared themselves with marketers, because they had to sell themselves and their activities.

"I am marketing myself, who am I, why am I here, what do I want, what do you expect of others, and what can you expect from me. What I usually do is introduce myself. You should briefly get to know one another and see what you can do for one another. That is how I usually approach it." (CSC 11)

One CSC fulfilled the broker role differently than the other CSCs. This CSC focused on establishing more sustainable collaboration between primary care professionals, and supported and encouraged professionals to

develop an integrated approach to stimulating health and PA. Being independent and being supportive of the professionals were mentioned as important features of this role.

Referral function

Twelve CSCs mentioned the referral function as part of their work. Three CSCs did not fulfil this function. The 12 CSCs saw it as their role to guide the target group towards local sport facilities. These CSCs used contacts with the professionals to guide patients or residents after referral towards suitable sport activities.

"Very simple, a patient visits their GP [general practitioner] or physiotherapist, the GP says, you have to exercise more. Just a matter of sending me an email and I will contact them. It couldn't be simpler." (CSC 6)

According to CSCs, the target group was often apprehensive of PA, and therefore it was important to be accessible and approachable in guiding the target group towards local sport facilities. Motivating these people was mentioned as an important feature of the CSCs' work.

Organiser of activities

All CSCs, sometimes in collaboration with other professionals, organised activities to promote PA, like fitness tests or a fall prevention course. Four CSCs also organised and carried out sport activities themselves. Some CSCs mentioned supporting sport clubs and sport instructors as part of their CSC role: for example, helping with applying for grants. Therefore, facilitating was also frequently mentioned as a CSC role.

"Initiator of new ideas, you could say I also am, and a bit of facilitating facilitator, setting up new ideas that find their way to me from the neighbourhood. I can pick these up and then I can adopt and activate them with others." (CSC 1)

According to the CSCs, an important feature of the organiser role was to be demand driven to ensure that activities align with the needs of the target group. In addition, embedding activities in local organisations to create a sustainable approach was mentioned as an important feature. Some CSCs mentioned that in most cases they were the drivers of activities.

Fulfilling the roles

The extent to which a CSCs focused on one of the three roles was strongly intertwined with how their network functioned, the municipality mandate, and their own preferences. Some CSCs had difficulty receiving referrals

Table 3: CSC characteristics and role in connecting the primary care and the PA sector

Municipality	CSC	Main roles	Activities	Collaboration structure
1.	<ul style="list-style-type: none"> Personal: woman, 28 years, higher education, municipal sport department In position: 6 – 12 months Mandate: increase the sport offer for the elderly, guide primary care patients towards local sport facilities. 	<ul style="list-style-type: none"> Organiser Referral Broker 	<ul style="list-style-type: none"> Organisation of fitness tests Guiding residents or primary care patients towards local sport facilities. Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> Project basis Referral
2.	<ul style="list-style-type: none"> Personal: woman, 57 years, community college, municipal sport department In position: 6–12 months Addition: stopped temporarily due to illness in 2014–2015 Mandate: make existing sport group profitable, support sport clubs 	<ul style="list-style-type: none"> Organiser Referral Broker 	<ul style="list-style-type: none"> Organisation of fitness test Guiding residents towards local sport facilities. Supporting sport clubs Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> Project basis Referral
3.	<ul style="list-style-type: none"> Personal: man, 27 years, higher education, sport organisation In position: 6–12 months Mandate: not mentioned 	<ul style="list-style-type: none"> Organiser, also carries out own activities Broker Referral 	<ul style="list-style-type: none"> Organisation of fitness tests Guiding residents or primary care patients towards local sport facilities Connecting the primary care and the PA sector Organisation of network meeting for primary care, welfare, and sport professionals. 	<ul style="list-style-type: none"> Project basis Referral
4.	<ul style="list-style-type: none"> Personal: woman, 30 years, university, sport organisation In position: 6–12 months Mandate: not mentioned 	<ul style="list-style-type: none"> Referral Broker Organiser 	<ul style="list-style-type: none"> Guiding residents or primary care patients towards local sport facilities Connecting the primary care and the PA sector <ul style="list-style-type: none"> Organisation of network meeting for primary care, welfare, and sport professionals. Supporting sport clubs 	<ul style="list-style-type: none"> Project basis Referral
4.	<ul style="list-style-type: none"> 5. Personal: woman, 29 years, higher education, sport organisation In position: 0 – 6 months Mandate: make 75% of the residents physically active 	<ul style="list-style-type: none"> Referral Organiser Broker 	<ul style="list-style-type: none"> Guiding residents or primary care patients towards local sport facilities Supporting sport instructors Connecting the primary care and the PA sector Organisation of fitness tests and sport activities 	<ul style="list-style-type: none"> Project basis Referral
4.	<ul style="list-style-type: none"> 6. Personal: man, 44 years, community college, sport organisation In position: 6 – 12 months Mandate: make 75% of the residents physically active 	<ul style="list-style-type: none"> Organiser Broker Referral 	<ul style="list-style-type: none"> Guiding residents or primary care patients towards local sport facilities Supporting sport instructors Connecting the primary care and the PA sector Organisation of fitness tests and sport activities 	<ul style="list-style-type: none"> Partnership organised by a sport organisation Referral Project basis

(continued)

Table 3: Continued

Municipality	CSC	Main roles	Activities	Collaboration structure
5.	7.	<ul style="list-style-type: none"> • Broker • Organiser 	<ul style="list-style-type: none"> • Stimulating and facilitating collaboration between primary care and welfare professionals to develop and implement an integral approach to stimulate a healthy lifestyle • Coordinating activities 	<ul style="list-style-type: none"> • Partnership organised by the municipality • Project basis
	8.	<ul style="list-style-type: none"> • Broker • Organiser 	<ul style="list-style-type: none"> • Organising activities • Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> • Project basis
6.	9.	<ul style="list-style-type: none"> • Referral • Organiser 	<ul style="list-style-type: none"> • An exercise programme for primary care patients with certain chronic diseases • Guiding patients towards a healthy lifestyle • Organisation of activities 	<ul style="list-style-type: none"> • Partnership organised by the municipality • Project basis • Referral
7.	10.	<ul style="list-style-type: none"> • Organiser • Broker 	<ul style="list-style-type: none"> • Organisation of fitness test • Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> • Project basis
8.	11.	<ul style="list-style-type: none"> • Organiser, also carries out own activities • Referral • Broker 	<ul style="list-style-type: none"> • Inventing, organising, and carrying out sport activities for the target group • Sporadically guiding residents towards local sport facilities • Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> • Partnership organised by the municipality • Project basis • Referral
	12.	<ul style="list-style-type: none"> • Organiser, also carries out own activities • Referral • Broker 	<ul style="list-style-type: none"> • Inventing, organising, and carrying out sport activities for the target group • Referral scheme for community centre • Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> • Partnership organised by the municipality • Project basis • Structural referral: lifestyle coach had a consultation hour at the community health centre
	13.	<ul style="list-style-type: none"> • Referral • Broker • Organiser 	<ul style="list-style-type: none"> • Guiding residents or primary care patients towards local sport facilities • Supporting sport instructors 	<ul style="list-style-type: none"> • Partnership organised by the municipality

(continued)

Table 3: Continued

Municipality	CSC	Main roles	Activities	Collaboration structure	
9.	14.	<ul style="list-style-type: none"> • Mandate: stimulate more than 100 adults to become physically active • Personal: woman, 27 years, higher education, sport organisation • In position: 0 – 6 months • Mandate: with a qualitative good sport offer, stimulate residents to become physically active, preferably at a sport club. 	<ul style="list-style-type: none"> • Organiser, also carries out own activities • Broker • Referral 	<ul style="list-style-type: none"> • Connecting the primary care and the PA sector • Organising sport activities • Guiding residents or primary care patients towards local sport facilities • Supporting sport clubs • Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> • Structural referral: online referral scheme • Project basis • Project basis • Referral
	15.	<ul style="list-style-type: none"> • Personal: woman, 31 years, higher education, welfare organisation • In position: 0 – 6 months • Mandate: with a qualitative good sport offer, stimulate residents to become physically active, preferably at a sport club. 	<ul style="list-style-type: none"> • Referral • Broker • Organiser 	<ul style="list-style-type: none"> • Guiding primary care patients towards local sport facilities • Organising sport activities • Connecting the primary care and the PA sector 	<ul style="list-style-type: none"> • Structural referral: exercise program • Project basis

from primary care professionals, or had less affinity with the primary care sector than with the PA sector. Therefore, these CSCs focused more on the organisation and coordination of activities in order to recruit residents and to promote PA.

“I have 20 hours and try to set up as many activities as possible so as to encourage inactive seniors, but I do not put a great deal of time into actually drumming up those GPs and physiotherapists to have them finally refer those people.” (CSC 2)

Over time, the CSCs' role remained broadly the same, and CSCs performed the same roles. In one case, the focus changed due to funding for a project to promote PA among the elderly. Consequently, the CSC had to organise project activities and focused less on connecting professionals from different sectors.

Establishing a connection between the primary care and the PA sector

To connect both sectors, CSCs created a network in which the following professionals were engaged: physiotherapists ($n = 12$), welfare professionals ($n = 11$), sport instructors ($n = 7$), sport clubs ($n = 12$), GPs ($n = 7$), practice nurses ($n = 6$), and community centres ($n = 4$). Therefore, the CSCs' networks looked similar, but the level of collaboration with these professionals differed.

In the networks, three types of collaboration could be distinguished: 1) partnership, 2) project basis to organise activities, and 3) referral (Table 3).

Partnership

Six CSCs were part of a partnership between primary care, welfare, and/or sport professionals. Four partnerships were organised by the municipality as part of the CSC funding. The added value of this partnership was sharing information, developing a plan of action, and using the professionals in the partnership to reach other primary care, welfare, or sport professionals.

“That has its advantages; before I had to hold the first steering group meeting anyway, the partners were also known and I began emailing, asking can we talk and meet sometime.” (CSC 13)

Two CSCs were part of an existing partnership in the neighbourhood. One partnership was organised by a sport organisation, and the other was organised by the municipality. The goal of these partnerships was to collaboratively organise activities to promote PA among residents, or to develop a mutual approach to stimulate a healthy lifestyle.

Project basis

All CSCs worked on a project basis together with the professionals in their network. They sought collaboration with professionals when they wanted to organise an activity. Most CSCs organised fitness tests as a way to reach the target group and to promote PA. The added value of such collaboration was that CSCs could use the professionals' expertise, (medical) knowledge, and networks.

“And, like, he [physiotherapist] also takes care of a bit of education. If [during a project] people drop out with injuries at any time, we have someone at hand who can deal with it, so to speak.” (CSC 3)

Referral

Collaboration with professionals in the referral of primary care patients or residents towards local sport facilities could be seen as a chain. Primary care and welfare professionals referred patients to the CSC, and the CSC guided them towards local sport activities. The added value of collaboration with especially the primary care and the welfare professionals was reaching the target group.

Although 12 CSCs collaborated with the professionals in their network around the referral of primary care patients or residents, only four of them had a structured form of referral: referral scheme, exercise programme ($n=2$), sport consultation at a health centre. Those four CSCs were part of a partnership ($n=2$) or working for a care ($n=1$) or welfare ($n=1$) organisation. CSCs without a structured form of referral by primary care professionals were working for a sport organisation or a sport department ($n=7$), and a welfare organisation ($n=1$).

“We have referred someone or another. But that is precisely what I mean – it's in dribs and drabs, there should be a structural flow coming on and that is what I am constantly working on.” (CSC 6)

Two of the four CSCs with a structured form of referral were part of a partnership in which primary care professionals were represented. The other two were working for a welfare organisation or represented a community health centre.

One year after the first interviews with the CSCs, not many changes had occurred in most CSC networks. The networks of five had expanded considerably after six months; however, at the time of the first interview, those CSCs had just started working and still had to build a network of professionals.

In general, CSCs were satisfied with the contact and collaboration with the professionals in their network. However, all CSCs would like to see a more structured and intensified form of collaboration. CSCs who were working for a sport organisation or the municipal sport department in particular mentioned that they wanted primary care professionals to be more involved in their work. They often had to push and spend a lot of time to involve them in their network and to reach the desired target group through referrals by primary care professionals. Those CSCs often organised their own activities to reach the target group, like fitness tests. CSCs who were working for a care or welfare organisation or who belonged to a partnership had easier access to, and better and more contact with, primary care professionals.

Perceived barriers and facilitating factors in the connection between the primary care and the PA sector

In their work to establish a connection between the primary care and the sport sector, CSCs mentioned perceived factors that could hinder or facilitate the connection between the both sectors.

Perceived barriers

Professionals' lack of time and knowledge

According to CSCs, primary care professionals were busy and did not have time to discuss PA with patients and to refer them towards CSCs. In addition, they did not know what kind of sport activities were suitable for their patients and did not consider PA as important and gave little priority to it.

“On his advice, she needed to exercise and then the GP says, like, I don't know, you have to find out for yourself. That's when I think, like, you can't be serious! I am there, and I have also let the GPs know, but then they don't follow up on it. That is another reason for me to focus on the fitness tests.” (CSC 1)

Lack of time was also a perceived barrier to contact with the PA sector, because sport clubs are often run by volunteers. Therefore, they often did not have an active role in the collaboration and the CSCs needed to take the initiative. Another barrier mentioned by CSCs was volunteers' lack of knowledge and experience of working with the target group. According to CSCs, primary care professionals' apprehensiveness about sport clubs was a reason for the lack of referral. In addition, CSCs shared this apprehensiveness and had a preference for qualified sport instructors.

“So I also find it a bit scary myself, if I, if I refer someone with diabetes or heart problems to wherever a volunteer is leading the group, who may be lucky enough to have passed his first aid course.” (CSC 1)

Lack of suitable PA activities

Another perceived barrier was the lack of suitable sport activities for the target group. The sport clubs' level was too high for this group, and therefore some CSCs were supporting sport clubs to adapt their sport offer for other target groups.

“Everyone should join a sports club, but now we believe, the sports clubs are not ready for it and these people are certainly not ready for it. (CSC 14)

Primary care professionals' own interests

Another perceived barrier was primary care professionals' own interests, because, according to CSCs, GPs and physiotherapists were often working in the same health centre and a referral towards a physiotherapist was easier and better for their own interests. In addition, some physiotherapists had their own exercise lessons for their patients and preferred to refer their patients towards their own sport offer instead of to a CSC.

“But I believe that, for physiotherapists, they might also be a bit scared to, er, are you not taking our place, are you not taking work away from us?” (CSC 13)

Perceived facilitating factors

Willingness to participate

Professionals' willingness to participate in the connection between the primary care and the PA sector or with CSC activities were mentioned by CSCs as a facilitating factor. This willingness to participate was mostly mentioned in relation to the PA sector. In general, most CSCs were more positive about the PA sector than about the primary care sector. It was easier for CSCs to involve sport professionals in their work than primary care professionals. Sport clubs were often enthusiastic about collaborating, because CSC activities contributed to increasing the number of sport club members.

“The gymnastics club is of course thrilled, because they get 44 new members handed to them on a silver platter, and the instructor has been arranged, and the room, and they basically do not have to do anything.” (CSC 2)

However, some CSCs with more and better contacts with primary care professionals mentioned that primary

care professionals were enthusiastic about CSC initiatives and collaboration.

“Primary care is where your energy can be found. You can achieve really nice things there. So that is a great development. (CSC 8)

Factors facilitating the involvement of primary care professionals

CSCs mentioned that it took time and trust to increase the involvement of the primary care professionals. In addition, showing the result after referral and having regular contact with primary care professionals about their role increased their involvement. Other facilitating factors were making use of ambassadors as a way to get in contact with primary care professionals, opting for an easily accessible form of collaboration, for example an online referral form, and inviting physiotherapists to attend a sport lesson.

Factors facilitating the involvement of PA professionals

With regard to the PA sector, it was important for CSCs not to have high expectations of the sport clubs because the volunteers lacked time and knowledge.

General facilitating factors

According to CSCs, a shared goal and a concrete plan of action were general facilitating factors in establishing a connection between the primary care and the PA sector.

DISCUSSION

The aim of this study was to explore CSCs' role in connecting the primary care and the PA sector. CSCs in our study perceived themselves as having three roles: broker role, referral function, and organiser of activities. The extent to which these roles were fulfilled and how the CSC could establish a (structured) collaboration between the primary care and the PA sector depended on the way municipalities implemented the CSC funding, and to a certain extent on the involvement of primary care professionals.

Most CSCs had a mandate from the municipality to stimulate residents to become more physically active. Therefore, these CSCs focused mainly on organising activities or guiding residents towards local sport facilities (often in collaboration with primary care, welfare, and sport professionals) as a way to stimulate PA among residents rather than stimulating collaboration between professionals.

The way municipalities appointed CSCs and organised partnerships influenced the extent to which sectors were involved in collaboration structures and the ease with which the CSC could establish these collaboration structures. Most CSCs found difficult to involve primary care professionals in their work. The involvement of primary care professionals influenced the role that CSCs performed: CSCs with a lack of involvement by primary care professionals fulfilled mostly the organiser role rather than the referral function. However, CSCs working for a care or a welfare organisation had easier access to primary care professionals than CSCs working for a sport organisation or the municipal sport department, and could therefore better fulfil the referral function and guide primary care patients towards local sport facilities. Also, as part of the CSC funding, some municipalities organised a partnership between primary care, welfare and sport professionals. These partnerships supported the CSCs in their work and made it easier for them to connect both sectors.

CSCs in our study set up collaboration structures centred on patient referral or the organisation of activities to connect the primary care and the PA sector. In the referral of primary care patients, CSCs worked in a multidisciplinary manner, whereby different disciplines worked independently on different aspects of a project (Choi and Pak, 2006). In the organisation of activities, CSCs worked in an interdisciplinary manner, whereby different disciplines work together on the same project (Choi and Pak, 2006). These different collaboration structures were also identified in a systematic literature review on collaborative initiatives between the primary care and the PA sector (Leenaars *et al.*, 2015).

CSCs in this study mentioned several barriers to connecting the primary care and the PA sector, such as the lack of suitable sport activities for the target groups at sport clubs and the capabilities of volunteers working for sport clubs. This was also identified in a study by Ooms *et al.* (2015), which showed that sport activities at sport clubs were not suitable for the target group. According to the CSCs, barriers relating to the primary care sector were primary care professionals' lack of time to participate or to refer patients, their lack of knowledge about PA, and their own interests. These barriers were also identified in other studies on barriers to PA promotion by primary care professionals (Huijg *et al.*, 2015; Leemrijse *et al.*, 2015; Hébert *et al.*, 2012). Given the roles that CSCs perceived themselves as having, CSCs should be able to eliminate some of the perceived barriers and further improve the connection between both sectors. For example, as part of their organiser role, they could support sport clubs in offering PA

activities for the target group, or they could provide an insight for primary care professionals into the PA offer in the neighbourhood. The CSC role could also be of interest to other countries, because studies on initiatives to promote PA among primary care patients in the USA, the UK, and Australia (Cashman *et al.*, 2012; Foley *et al.*, 2000; Thrinh *et al.*, 2012; Wiles *et al.*, 2008) identified the same barriers to collaboration between the primary care and the PA sector. However, further studies will be required to show whether CSCs are actually capable of eliminating these barriers and improving collaboration between both sectors.

By following CSCs for a year and conducting multiple interviews, we have been able to convey a first impression of their role and to identify perceived barriers and facilitating factors in connecting both sectors. This first impression of how CSCs perceive their role is necessary to enable study of the CSCs' impact on connecting these two sectors and to further improve the CSC function. The CSC is a new function and, although the broker role was ascribed to the function by the Dutch Ministry of Health, Welfare, and Sport, a blueprint for the municipalities with regard to its implementation has not been developed. As a consequence, municipalities and CSCs are still searching for the best way to implement and fulfil the CSC role and connect the primary care and the PA sector. The results of this study are therefore relevant for municipalities, organisations, and professionals implementing a CSC function. Insight into barriers and facilitating factors for the connection between both sectors may be helpful to further improve the connection, especially because most CSCs found structured collaboration difficult to establish.

As the CSC function is new, CSCs were still exploring their own function at the time of the interviews. Initially, we expected structured forms of collaboration between the CSC, primary care, and the PA sector. However, these structured forms of collaboration have not yet been developed. Therefore, Koelen *et al.*'s (2012) HALL framework preselected to study the CSC role in connecting the primary care and the PA sector appears to be less relevant, especially the factors relating to the organisation of the alliance. Institutional (municipality mandate) and personal factors (attitudes and beliefs) do seem to influence the CSC role in connecting these sectors. Various studies have shown that it takes time to build relationships and collaboration structures (Baker *et al.*, 2012; den Hartog *et al.*, 2013; Casey *et al.*, 2009). More time is therefore needed for the CSCs to establish a more structured and sustainable connection between the primary care and the PA sector. This could mean that the CSC role will change over time. Therefore, a

study will be needed to further assess CSCs' impact on improving intersectoral collaboration between the primary care and the PA sector. In addition, future studies, which are a planned part of the larger project, will be required to show the effectiveness of the CSC role in stimulating PA among the target group.

CONCLUSION

This study has shown that the CSC role seems to hold the promise of improving collaboration between the primary care and the PA sector, especially because the roles that CSCs perceived themselves as having seem to be directed at eliminating barriers in this connection. Future research is needed to study whether CSCs are really capable of establishing collaboration between both sectors over time. In addition, this study has shown that the way municipalities implement the CSC funding seems to influence the CSCs' impact on establishing this connection. The insights from this study can be used to improve policy and preconditions for the CSC role and the connection between the primary care and the PA sector.

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