The broker role in the connection between the primary care sector and the sport sector

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MSc Thesis Health & Society

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Preface

Proudly represented to you is my master thesis. This thesis is written in the context of my graduation from the master specialisation Health & Society. I never would have imagined that I could be so enthusiastic about my thesis as I am right now. The main reason for this is that I am really excited about the connection between the primary care sector and the sport sector, and the work of the CSCs in this connection. Being able to interact with the professionals from the different sectors increased my passion for the subject and my expertise in collaborating with professionals from different sectors.

Before I started, writing a thesis always scared me. The main reason for this is that I do not like to work on a project alone. I am really interested and enthusiastic about working together with others. This is also clear in the subject of my thesis since it focuses on intersectoral collaboration. However, I can honestly say that I did not feel alone during the process at all. For this I have to thank some people.

At first, I would like to thank Karlijn Leenaars, PhD student in the subject ‘connecting primary care and sport’, for all her support. Thank you that you were always there to support me and provide feedback, even on Sundays! Besides all the support and feedback did I really enjoy all our talks and laughter during the last months.

As for sure would I like to thank my supervisor Annemarie Wagemakers, who was always willing help me and to provide my work of feedback. I really appreciated the constructive way of providing feedback and the compliments about my progress.

At last, I really would like to thank my family and friends for always listening and helping me. Especially the ‘coffee crew’ for all the hours of coffee breaks to distract us from our theses.

Personally, I am really excited and proud of my thesis. Enjoy reading!

Summary

Introduction

Intersectoral collaboration is an upcoming health promoting strategy in which different sectors collaborate to tackle health challenges. Since sectors perceive barriers to collaborate, a broker role is helpful. A broker role is a party that connects sectors that are hindered to collaborate for a shared purpose. Since such a broker role seems promising to connect different sectors, the Dutch Ministry of Health, Welfare and Sport introduced care sport connectors (CSCs) in 2012. These CSCs were assigned to connect the primary care sector to the sport sector in order to guide primary care patients towards local sport facilities.

Aim and research questions

The aim of this thesis is to identify the professional's perspective on the role of CSCs, as brokers in the connection between the primary care sector and the sport sector. Included in this aim is the contribution of the CSC role to the sustainability of the connection. The research questions are as follows:

1. What constitutes the broker role in intersectoral collaboration in literature?
2. What is the professional's perspective towards a broker role in the connection between the primary care sector and the sport sector?
3. What is the professional perspective on the contribution of the CSC to a sustainable connection between the primary care sector and the sport sector?

Methods

The research design of this thesis is qualitative. The first research question is answered by a systematic literature review whereby multiple research areas are included. Scopus and Ebsco are used as databases to find information. A total of 13 publications are included in the review. Furthermore, the second and third research questions are answered by five focus groups in three different municipalities. Participants are professionals that collaborate with CSCs, either in a structural partnership or on project base. Focus groups were analysed based on Creswell 's six steps of qualitative data analysis.

Results

Brokers appear to have a specific purpose in intersectoral collaboration. Two main purposes and three corresponding types of brokers are identified. The first purpose is to facilitate and manage networks with an internal focus. These brokers are identified as type A and have the responsibilities to organise and manage the network and to facilitate collaboration. Purpose 2

is to function as a point of contact between different sectors and to create benefits for a third party (e.g. population groups, patients). Two types of brokers (B and C) with this purpose were identified based on their position in the network. Type B brokers are positioned between the sectors and have the responsibilities to facilitate the connection between sectors to achieve the common goal and to coordinate the delivery of services. Type C brokers function as the representative of the third party. Responsibilities of type C brokers are to facilitate the connection between the represented population and services and to act as a gatekeeper for the third party.

Professionals state that CSCs are assigned to connect the primary care sector to the sport sector. They state that CSCs have a central position in the network and aim to create benefits for the target population by guiding them through the network. Identified responsibilities are: organise and manage the network, facilitate collaboration, facilitate the achievement of the common goal, coordinate the delivery of services/programmes, facilitate a connection between the represented population and services and act as a gatekeeper.

Professionals of focus groups focusing on networks organised as structural partnerships state that the sustainability of the connection was highly dependent on the CSCs. Professionals of the focus group collaborating on a project base state that they did not perceive the connection as sustainable yet. Prerequisites for a sustainable connection, mentioned by all professionals, are: an independent initiator, an attitude change among professionals, sufficient resources and facilities and a structural partnership to support CSCs.

Discussion and conclusion

The professional's perceptions identify that CSCs function as type B brokers due to their purpose to connect the primary care sector to the sport sector from a central position. Besides, this central position also enabled them to act as the connecting link to the target population.

Both professionals active in structural partnerships and professionals collaborating on project base assign an important role to CSCs in the sustainability of the connection. Especially the central position of this broker role was stated to be crucial. This implied that the connection between the primary care sector and the sport sector can be sustainable but that it always needs a broker role.

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1. Introduction

This thesis is a part of the bigger research of the Wageningen University and the Radboudumc, financed by ZonMw: the role of Care Sport Connectors in connecting primary care, sport, and physical activity, and residents' participation in the Netherlands. The aim of this research is to identify the impact of CSCs in the connection between sectors and to contribute to health promotion in the Netherlands (Smit, Leenaars, Wagemakers, Molleman, & van de Velden, 2015). In this research, fourteen Care Sport Connectors (CSCs) are participating and followed between 2014 and 2016. All of these CSCs focused on adults as their target population. The research of Wageningen University focusses on identifying the role of the CSC in connecting sectors such as the primary care sector and the sport sector. This MSc thesis is part of this research by identifying the professional's perspective on the role of CSCs in the connection between the primary care sector and the sport sector. Hereby included is the professional's perspectives on the contribution of this role to the sustainability of the connection.

This chapter describes the background and the context of this thesis by providing the definition and purpose of intersectoral collaboration. Also, the role and the perceived barriers of CSCs in intersectoral collaboration are presented. Based on this, the aim and the research questions are formulated. In chapter 2 the methods of this thesis are discussed. In chapter 3 elaborates the findings of the literature review. In addition, chapter 4 presents the findings of the focus groups. Finally in chapter 5, the discussion and conclusion are described.

1.1 Background and context

1.1.1 Intersectoral collaboration

Intersectoral collaboration is an upcoming health promoting strategy in which different sectors collaborate to tackle health challenges, for example the increasing number of chronic diseases such as diabetes mellitus (Roussos & Fawsett, 2000). As no sector has all the resources, access and trust relationships to tackle all aspects of such health challenges, there is a need to join forces between sectors (Granner & Sharpe, 2004; Green, Daniel & Novick; 2001; Koelen, Vaandrager & Wagemakers, 2012). However, this appears to be challenging due to factors like different perspectives and backgrounds between organizations or sectors

(Granner & Sharpe, 2004; Koelen, Vaandrager & Wagemakers, 2012; Lasker, Weiss & Miller, 2001).

A promising form of intersectoral collaboration to tackle health challenges is collaboration between the primary care sector and the sport sector. The sport sector hereby includes all local physical activity services, sport clubs, fitness centres and physical activity lessons at community centres (Leenaars et al., 2015a). Collaboration between these two sectors is promising since it enables the improvement of health determinants of individuals or populations (Green et al., 2001). For example, health care-based physical activity interventions appear to be effective in reaching physically inactive adults (Eakin, Glasgow and Riley, 2000). However, these sectors also experience challenges to collaborate. First, challenges relate to differences in general interests and cultures between both sectors (Casey, Payne, Brown, and Eime, 2009a; Casey, Payne, and Eime, 2009b). also, professionals working in the sport sector lack medical knowledge to offer suitable sport offer and provide feedback to primary care professionals. The privacy of patients is also a hampering challenge why this feedback to primary care professionals is lacking. On the other hand, primary care professionals experience challenges such as a lack time to invest in the connection and a lack of knowledge about available local sport offer (Cashman, Flanagan, Silva, & Candib, 2012; Foley, Frew, McPherson, & Reid, 2000; Leenaar, Smit, Wagemakers, Mollema, & Koelen, 2015a; Thrinh, Wilson, Williams, Sum, & Naylor, 2012; Wiles et al., 2008). These challenges need to be tackled in order to facilitate intersectoral collaboration between these sectors.

1.1.2 Broker role

In order to address the challenges of intersectoral collaboration, a broker role seems promising (Long et al., 2013; Harting et al., 2010). The broker role is introduced as a concept in the social network theory (Borgatti & Halgin, 2011). Specifically in the structural holes theory of social capital of Burt (1992). Burt (1992) states that brokers are parties that are able to reach across a structural hole (figure 1). Such a structural hole manifests between actors/networks which are not

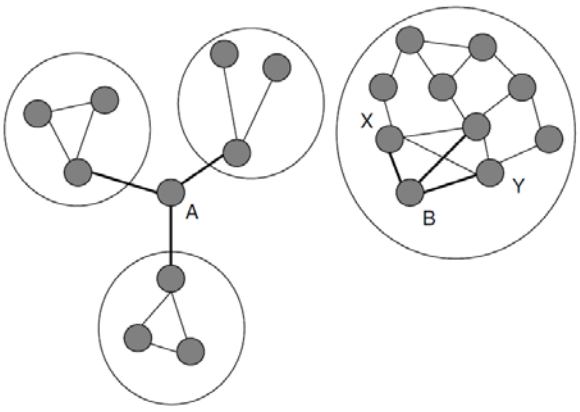

Figure 1: structural hole theory of social capital (Burt, 1992).

connected (Burt, 1992). From this position, brokers are expected to connect unique information, useful ideas, generate innovative ideas and increase understanding and co-operation between different sectors. Because of this, brokers are expected to connect sectors and support professionals from different sectors (Long et al., 2013; Harting, Kunst, Kwan & Stronks. 2011).

The broker role can be addressed differently since the role is acknowledged and implemented in multiple research areas. Table 1 illustrates an overview of the operationalisations of the broker role in different studies.

Table 1: Overview of definitions for the concept 'broker' from previous research

Reference	Operationalisation
Williams (2002)	A health broker is an entrepreneurial innovator in the area of health promotion who acts as a broker between stakeholders of different sectors
Long et al. (2013)	Bridges, brokers and boundary spanners facilitate the flow of information between stakeholders that are hindered to communicate by some gap or barrier. This can either be a physical gap, cognitive or cultural gap like different disciplines or professions.
Burt (1992)	Brokers refer to a position in a network. They reach across a structural hole. Such a hole manifests between two actors who themselves are not connected.
Craig (2004)	Boundary spanners or strategic brokers facilitate a connection between different entities.
Steadman (1992)	Boundary spanners are parties who have to interact with both people inside their own institute as well as people from other organizations.
Miles (1980)	The role of a broker is to connect two or more systems whose goals and expectations are at least partially conflicting.
Burt (2004)	The health broker may be expected to connect sectors or networks to improve the integration and translation of information. They contribute to the social capital that is required to improve health.

Source: Long et al. (2013)

The broker role, which is addressed in this thesis, has been operationalised by a combination of the operationalisations of Long et al. (2013) and Burt (2004). The operationalisation of Long et al. (2013) is included since it uses the concept 'broker' in a corresponding context. The operationalisation of Burt (2004) is included since it focuses on a broker role in the research area of health promotion. Based on this, the broker role in this thesis is operationalised as: 'a party that connects sectors or networks that are hindered to

communicate due to barriers (either physical-, cognitive- or cultural barriers), for a shared purpose. Hereby the broker facilitates the flow and integration of information and resources'.

1.1.3 Care Sport Connectors

Since such a broker role is promising to connect different sectors, the Dutch Ministry of Health, Welfare and Sport introduced neighbourhood sport coaches in 2012. These coaches are for 40% funded by the national government and 60% funded by municipalities and local organisations. The aim of these coaches was to connect the sport sector to other sectors and thereby overcome the challenges of intersectoral collaboration. Some of these coaches were especially assigned to connect the primary care sector to the sport sector in order to guide primary care patients towards local sport facilities. These coaches are called Care Sport Connectors (CSC) (Leenaars, Smit, Wagemakers, Molleman & Koelen, 2015a). General guidelines on how the CSC role should be implemented is available. However, specific guidelines on how CSCs should establish the connection between the primary care sector and the sport sector, nor what their actual role is in this connection are lacking. Municipalities are allowed to organise the function of CSCs to local needs and context. Therefore CSCs appear to implement their role differently due to different expertise and backgrounds (Leenaars et al., 2015a). Due to lacking specific guidelines, CSCs experience difficulties in establishing a structural collaboration between the primary care sector and the sport sector (Leenaars, Smit, Wagemakers, Mollema & Koelen, 2015b). Examples of barriers identified by CSCs are difficulties regarding the referral of primary care patients towards local sport facilities, the lack of suitable sport offer for the target population and the amount of time to establish and facilitate the connection between the sectors This last barrier may be caused by the lack of time of professionals to invest in the connection (Leenaars, Florisson, Smit, Wagemakers, Molleman & Koelen, 2016b).

1.2 Problem statement

As stated before, the CSC role is new in the connection between the primary care sector and the sport sector. Due to the lack of guidelines and the differences in backgrounds between CSCs, there is no specific job description for CSCs. As a consequence, it is unknown how CSCs should facilitate the connection between the different sectors and increase the number of physically active people. As far as can be ascertained, in-depth studies focusing on such a broker role and corresponding job descriptions in intersectoral collaboration are lacking. Only one study, identified by Leenaars et al. (2015a), encountered a broker role in intersectoral collaboration between sectors (Cheadle, Egger, LoGerfo, Walwick & Schwartz, 2010). Yet

this study focused on the collaboration as a whole and did not focus on the role of the broker specifically (Leenaars et al., 2015a). The literature review of Long et al. (2013) did focus on a broker role in the connection between the health care sector and other sectors. Yet this review focused on the position of the broker in the connection, rather than on the job description of this broker role. The lack of adequate scientific research implies that there is limited knowledge about the broker role in intersectoral collaboration between the primary care sector and the sport sector. Since literature on the broker role in the connection between these specific sectors is lacking, other research areas are included in this thesis to identify the broker role in intersectoral collaboration.

Besides, the perception of CSCs themselves towards their role as broker in the connection between the primary care sector and the sport sector is already identified (Leenaars et al., 2015a; Leenaars et al., 2016b). However, the perceptions of the professionals regarding the specific broker role of CSCs and the contribution of this role regarding the sustainability of the connection is still unknown. This is crucial to identify since it determines how CSCs should implement their role as broker according to professionals. Moreover, it identifies how the CSC role can contribute to the sustainability of the connection between the primary care sector and the sport sector.

1.3 Aim and research questions

The aim of this thesis is to identify the professional's perspective on the role of CSCs, as brokers in the connection between the primary care sector and the sport sector. This includes the contribution of this role to a sustainable connection between sectors.

Based on the aim, the research questions are as follows:

1. What constitutes the broker role in intersectoral collaboration in literature?
2. What is the professional's perspective towards a broker role in the connection between the primary care sector and the sport sector?
3. What is the professional's perspective on the contribution of the CSC to a sustainable connection between the primary care sector and the sport sector?

2. Methods

A qualitative research design was used since the aim of this thesis was explorative (Bowling & Ebrahim, 2005). To answer the first research question, 'what constitutes the broker role in intersectoral collaboration in literature', a literature review was used. The second and the third research questions focused on the professional perspective on the CSC role as broker, and the contribution of this role to the sustainability of the connection between the primary care sector and the sport sector. Both research questions were answered by focus groups with professionals from different sectors, who collaborated with CSCs.

2.1 Literature review

2.1.1 Databases

Two databases were used to find literature about what constituted the broker role in intersectoral collaboration. Scopus was used since it is a large database that covered a great variety of research areas. This enabled the inclusion of different research areas, which was relevant for this review since broker roles was assessed from a variety of research areas. Besides, most research that focused on a broker role was not conducted in the health sector but in other sectors such as the business sector (Long et al., 2013). Ebsco was a database that covered different smaller databases, including socINDEX and Medline. SocINDEX was useful since it covered sociological research specifically. Besides, Medline was useful since it covered medical research specifically and was therefore likely to contain information about the broker role in intersectoral collaboration between primary care care and sport (J. Webbink WUR library, personal communication, September 16 2016).

2.1.2 Concepts

Concepts for the search were identified based on the research question. Two concepts were identified to find literature on what constituted the broker role, namely: 'broker' and 'intersectoral collaboration'.

2.1.2.1 Broker

The concept 'broker' was addressed and operationalised differently in previous research (table 2). All operationalisations included in table 2 were used to address the concept 'broker' in the literature review.

Table 2: Synonyms for the concept 'broker' based on Long et al. (2013)

Term	Features	Reference
Boundary spanner	Bridges the structural hole between two different clusters that are separate from each other	Trushman (1977); Cross & Prusak (2002)
Bridge	Bridges the structural holes between two actors	Burt (1992); Valente & Fuijmoto (2010)
Broker	Actor that links two clusters that are not directly linked, either overlapping clusters or separate clusters.	Cross & Prusak (2002); Marsden (1982); Gould & Fernandez (1989); Shi, Markoczy, & Dess (2009)
Go-between	Offers services like access information between two unlinked actors	Cummings & Cross (2003); Luo (2005)
Liaison	Bridges between two different outside clusters without having prior allegiance to either	Gould & Fernandez (1989); Shi, Markoczy, & Dess (2009)
Tetrius iugens (the third who joins)	A brokerage strategy to join alters together	Lingo & O'Mahony (2010); Obstfeld (2005)

2.1.2.2 Intersectoral collaboration

The concept 'intersectoral collaboration' addressed multiple strategies of collaboration. Himmelman (2002) categorised these strategies as: collaboration, coordination, cooperation, and partnership. Besides these strategies, the synonyms for intersectoral collaboration were also included in the search, these were: inter-sectoral collaboration, alliance, multisectoral collaboration, and multi-sectoral collaboration,

2.1.3 Search strategy

The complete search strategy was formulated based on the operationalisations of the concepts. All different operationalisations were included in the complete search strategy, visual in table 3. Boolean operators were used to specify the concepts and to separate/link different concepts. The complete search strategy was as follows: (boundary spanner* OR bridge* OR broker* OR go-between OR liaison* OR tetrius iugens* OR entrepreneur*) AND (collaborat* OR intersector* OR inter-sector* OR partnership* OR alliance* OR multisector* OR multi-sector*).

Table 3: Complete search strategy

Concept	Search
Broker	(boundary spanner* OR bridge* OR broker* OR go-between OR liaison* OR tetrius iugens*
Intersectoral collaboration	(intersector* OR inter-sector* OR partnership* OR alliance* OR cooperat* OR coordinat* OR multisector* OR multi-sector*)
Other	Other AND Language = (English OR Dutch) AND Document Type = NOT(review OR editorial OR conference abstracts OR book OR theoretical arguments) AND NOT(developing countries)

Mentioned before was that multiple research areas would be included in the search. Initially was decided to include all research areas that Scopus and Ebsco covered to get a comprehensive insight in the broker role. However, the concept 'broker' appeared to have a complete different meaning in some research areas. For instance, engineering research used the concept 'bridge' to refer to an actual bridge, and biochemistry research used the concept to refer to chemical connections. Therefore included research areas were: social science, business, management and accounting, medicine, psychology, nursing, health professions, and multidisciplinary. Excluded research areas were: computer science, arts and humanities, environmental science, decision sciences, economics, econometrics and finance, engineering, agricultural and biological sciences, biochemistry, genetics and molecular biology, earth and planetary sciences, pharmacology, toxicology and pharmaceutics, immunology and microbiology, materials science, energy, mathematics, chemical engineering, physics and astronomy, neuroscience, chemistry, and veterinary. Also, excluding these research areas made the amount of literature for the review manageable in the planned amount of time. Excluding relevant research areas was prevented by reading publications from all different research areas. This made it possible to decide which research areas addressed the concepts as intended.

2.1.4 Study selection

Databases were systematically searched for relevant, original literature published between 2000 and 2016. Literature published before 2000 was excluded since intersectoral

collaboration only became a popular topic in health promotion in the 21th century (Roussos & Fawcett, 2000). Also, only literature that was written in English or Dutch was included. Literature had to focus on Western countries as geographical area to increase the applicability to the context of this thesis. Besides, literature should focus on adults as the target population to increase the applicability to the context of the CSCs. Literature also had to contain empirical data to be included. Finally, literature had to focus on the job description of the broker role. Job descriptions included the purpose of the broker role, responsibilities and corresponding duties (Nederlandse encyclopedie, 2016).

The search strategy resulted in 694 publications in Scopus and 768 publications in Ebsco. These 1462 publications were assessed on duplicates, after which 95 duplicates were excluded. 1367 publications were assessed by reading tittle and abstract in the first stage of selection. Most publications were excluded based on the subject of the study (N=991), which meant that these publications did not describe the job description of the broker role. Other reasons for exclusion were: language and geographical area that the study was conducted (N=105), duplicates that were not identified during the assessment for duplicates (N=27), and type of study (not including empirical data) (N=31). After this assessment, 213 publications were still included in the search.

In the second stage of selection, the 213 publications were assessed on full texts by two researchers separately (KL and NW). Both researchers compared and discussed their selections. 37 publications were doubtful and discussed by the researchers to determine whether they were suitable. The main reason for discussion was whether publications provided an actual job description of the broker. In this stage, most publications were excluded because they did not fit the scope of the research (N=158), for example when one of the concepts was interpreted differently. Besides, publications were excluded based on the type of study (N=24) if they did not contain empirical data. One publication was excluded since it focused on children as its target population. One study was excluded since it was written by Leenaars et al. (2016a), who also conducted the greater research about the CSCs and supervised this thesis. At last, 16 publications were excluded since full texts of these publications were not available. After this last stage of assessment, thirteen studies were still included in the literature review.

Eight additional publications were identified via forward and backward citation tracking. Seven of these were excluded based on type of study. The last one was excluded since it did

not describe a job description of the broker. The final literature sample consisted of thirteen publications that focused on the broker role in intersectoral collaboration. The complete selection process is visualised in the flowchart in figure 2.

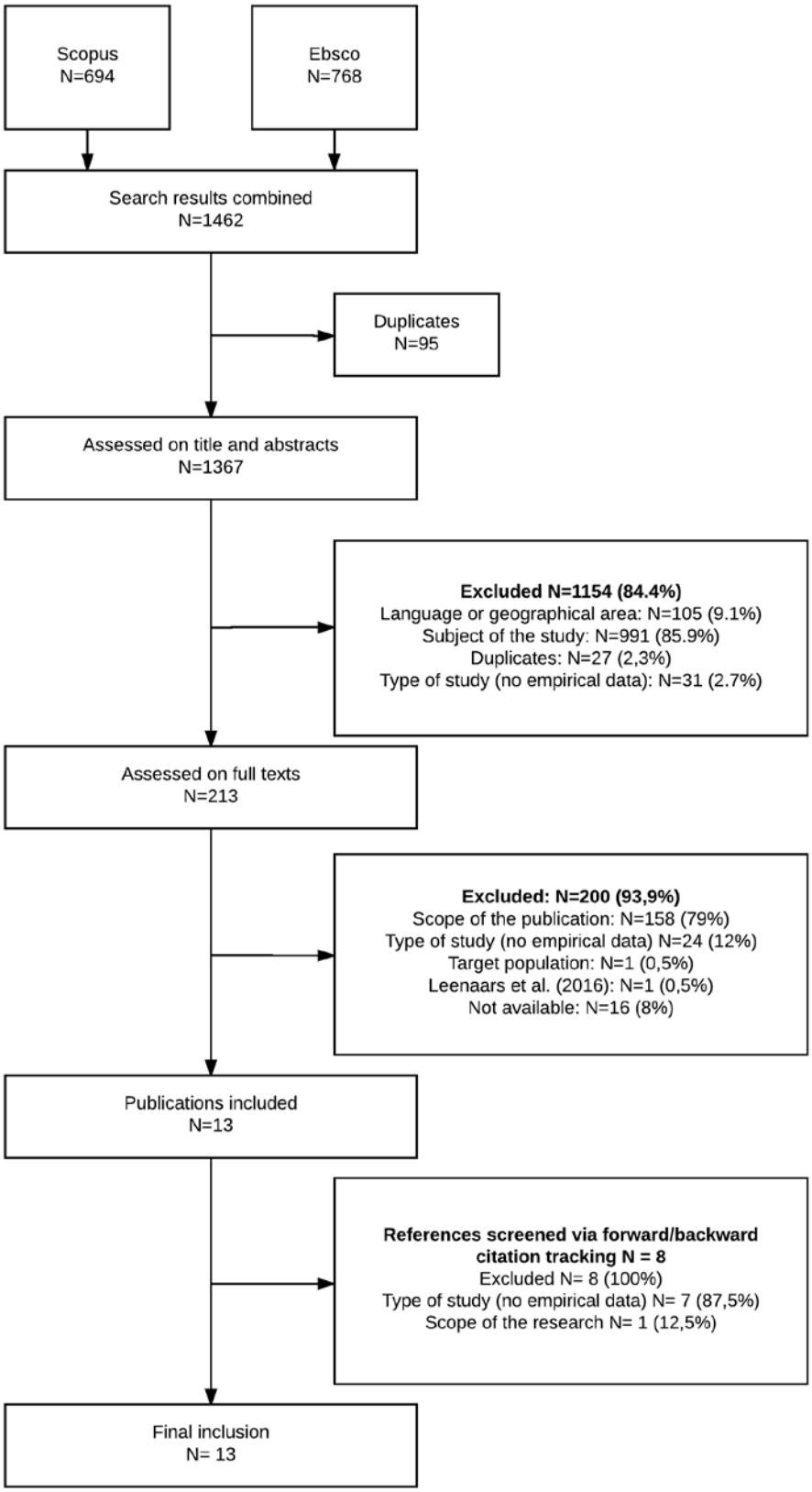

Figure 2: Flowchart literature selection.

2.1.5 Data analysis

An overview of the following characteristics of the included studies are illustrated in appendix A:

- Author(s), publication year, and geographical area
- Aim, study design, methods
- Context of the study
- Main findings/results. Including: type of broker, purpose, responsibilities and duties

Corresponding characteristics such as context and sectors included in intersectoral collaboration provided information about the position and the implementation of the broker role. Corresponding characteristics regarding job descriptions of broker were divided into the following categories: purpose, responsibilities and duties (Nederlandse encyclopedie, 2016). These characteristics enabled the identification of what constituted the broker role.

2.1.6 Quality assessment

The quality of included studies was assessed by one researcher (NW) based on Boulton et al.'s criteria (Boulton et al., 1996), as illustrated in Appendix B. These criteria focused on the quality of the sampling strategy, data collection, and analysis of qualitative studies. In total, studies were assessed on 18 quality criteria. Studies which scored on fewer than seven criteria were assessed as low quality. Studies which scored on seven to twelve quality criteria were assessed as medium quality. Studies which scored on more than twelve criteria's were assessed as high quality. Studies included in the literature review were all assessed as either medium quality (N=4) or high quality (N=9).

2.2 Focus groups

A qualitative design in the form of focus groups was used to identify the professional's perspective on the CSC role as broker, and the contribution of this role to the sustainability of the connection between the primary care sector and the sport sector. Focus groups were suitable for this aim since similarities and differences in opinions among professionals could be identified (Carter & Henderson, 2005).

2.2.1 Selection and characteristics of the study population

All thirteen CSCs participating in the research of Wageningen University were approached to participate in focus groups. After consultation with five CSCs was decided not to organise a focus group in their network. Three of these CSCs stated that there was a lack of support from them or professionals in the network. Two CSCs were not working at the time of the

focus groups due to pregnancies. As a consequence, eight CSCs were approached to participate in the focus groups, two of which active in the same network. All professionals in the networks of these CSCs were approached using convenience sampling (Bowling & Ebrahim, 2005). However, since networks were organised differently, professionals were approached in different ways. Some CSCs collaborated with professionals in a structural partnership. These partnerships collaborated to promote and increase physical activity within municipalities. Included in such partnerships were representatives of the municipalities, CSCs and professionals from the primary care, welfare and sport sectors. In these networks, all professionals in the partnerships were invited to participate in a focus group during a regular meeting of the partnership. Other CSCs collaborated with professionals on a project base. Since these networks did not have regular meetings, CSCs provided names of professionals who they collaborated with. All these professionals were contacted via email and invited to participate in the focus groups.

Eventually five focus groups were conducted within the network of 6 CSCs. Two focus groups that were originally planned were not conducted due to a lack of participants. Characteristics of the executed focus groups and participants are illustrated in table 4. The focus groups took place in three different municipalities. Focus group 1, 2 and 3 were conducted in the same municipality.

Four of the focus groups were conducted among networks organised as structural partnerships. In three of these partnerships, professionals from the primary care, welfare and sport sector collaborated with CSCs (focus groups 1, 2 and 3). They supported CSCs in their function. Focus group 4 was also conducted in such a structural partnership. However, this structural partnership did not include an actual CSCs function. Primary care, welfare and sport professionals in this partnership received CSC funding themselves. However, this network was still useful sine one professional acted as the initiator of the partnership and therefore fulfilled the role the CSC would have had. Also, this municipality was currently merging with the structural partnership of another municipality that did encounter a CSC role. Only one professional active in such a structural partnership did not participate in the focus groups due to a lack of time.

One focus group (5) was conducted in a municipality where two CSCs collaborated with professionals from the primary care, welfare and sport organisations on a project base. CSCs in this network provided thirteen names of professionals who could participate in the focus group. Six of these primary care, welfare and sport professionals were willing to participate.

Eventually, a total of 31 professionals participated in the five focus groups. Eight professionals were active in the primary care sector, of which two physiotherapist, two representatives of health care organisations (one of which was present at two focus groups), one exercise therapist and two general practitioners. Six professionals were active in the sport sector, of which four representatives of sport clubs, one representative of a sport foundation and one representative of a fitness centre. Six professionals were representatives of welfare organisations, of which three provided sport activities themselves and three did not provide sport activities themselves. Seven participants were representatives of the municipalities.

Table 4: Overview of the participants of focus groups.

Focus group	Municipality	Primary care	Physical activity	Welfare	CSC	Other	Total number present	Structural partnership/project base
1	A	2	0	1	1	2	6	Structural partnership
2	A	2	1	2	1	2	7	Structural partnership
3	A	2	0	1	1	2	6	Structural partnership
4	B	1	2	2	0	1	6	Structural partnership
5	C	1	3	0	2	0	6	Project base
Total		**8**	**6**	**6**	**5**	**7**	**31**	

2.2.2 Procedure

All five focus groups were conducted between October and December 2016 and took place at the workplace of CSCs. Focus groups lasted between 1 hour and 1,5 hour. Four focus groups were conducted by two researchers (KL and NW), one focus group was conducted by one researcher (KL). At the beginning of every focus group, professionals were asked whether they understood and agreed to the procedure of the focus groups, which included the recording of the focus groups. Professionals all agreed and had already signed an official informed consent during previous focus groups.

The focus groups consisted of two separate parts. The first part of the focus group consisted a presentation about general results of the greater study, funded by ZonMw. Included were results on how target populations were addressed by CSCs and results on the current connection between the primary care sector and the sport sector. This first part of the focus groups was more informative for professionals, rather than data collection for this thesis.

The second part of the focus groups was used to collect data. This part focused on the professional's perspective on the broker role of CSCs and the contribution of this role to the sustainability of connection between the primary care sector and the sport sector. Pre-proposed propositions (table 5) were inspired by the Coordinated Action Checklist of Wagemakers, Koelen, Lezwijn, and Vaandrager (2010). These propositions were used to open the discussion with and between professionals to identify their perspectives. Follow-up questions were used to elaborate professional's argumentations or to focus the discussion. Chosen was to use a limited number of open follow-up questions to be able to let professionals share their opinions, rather than just answering questions.

Table 5: Pre-proposed propositions and follow-up questions.

Pre-proposed proposition	**Follow-up questions**
The contribution of the CSC' role is crucial for the connection between primary care and physical activity.	What was the added value of the CSCs in the connection between primary care and physical activity? ➔ What was important for this added value?
The connection between primary care and physical activity will still exist when the role of the CSC stops.	Why is the CSC role crucial/not crucial in the connection between primary care and physical activity? ➔ If you agree, do you feel like there is a structural connection between primary care and physical activity and what was the role of the CSC in achieving this structural connection? ➔ If no structural connection, what should happen so that a structural connection between primary care and physical activity can be achieved? What would be the role of the CSC in this?
De connection between primary care and physical activity stays on the agenda of your own organization.	When looking a year forward from now, what do you want the connection between primary care and physical activity to look like? What is the role of the CSC in this connection?

Professionals all got a green and a red paper at the start of the focus groups. After hearing a proposition, professionals were asked to either show the red paper if they disagreed with the

statement or show the green paper if they agreed with the statement. In addition, they were asked to explain why they agreed or disagreed. After professionals explained their opinions, professionals were asked to respond to each other's explanations.

2.2.3 Data analysis

Focus groups were audiotaped and transcribed afterwards. Data collected during the focus groups was analysed using the analysing steps of Creswell (2013) (Appendix C). In order to analyse the data, transcripts were processed in the software program Atlas. Ti. Transcripts were carefully read after they were divided in two groups, structural partnership or project base (step 1 and 2). Focus groups were divided in these two groups since the difference in organisation structure was possible to evoke different perceptions among professionals. Transcripts were coded and analysed in the third step. Top-down codes were based on findings of the literature review (Bevc, Markiewicz, Hegle, Horney, & MacDonald, 2012; Hanna & Walsh, 2008; Hogan & Stylianou, 2016; Jones & Noble, 2008; Kilpatrick, Fulton, & Johns, 2007; Kousgaard, Joensen, & Thorsen, 2015; Kubiak, 2009; Lindsay & Dutton, 2012; McKenna, Fernbacher, Furness, & Hannon, 2015; Nissen, 2010; Rugkåsa, Shortt, & Boydell, 2007; Stadtler & Probst, 2012 Williams, 2002). These codes focused on the broker role of the CSC and the corresponding responsibilities. Step four encountered the clustering of codes in themes. These themes were: 1) CSC role: broker role, 2) responsibilities and duties of the CSC role and 3) the sustainability of the connection between sectors. During steps five and six, bottom-up codes were identified and assigned to themes. Examples of bottom-up codes in the theme 'the sustainability of the connection between sectors' were: 'independent initiator' and 'change attitude' (Appendix D). After these six steps, results from the focus groups were presented according to themes and corresponding codes. This enabled the identification of the CSCs role as the broker in the connection, and the contribution of this role to the sustainability of the connection.

The process of data analysis was performed independently by the two researchers (KL and NW) to prevent interpretation errors. After the process of analysing and coding the data, transcripts were discussed by the researchers till consensus was reached. Mostly, researchers shared interpretations so no discussion was needed to reach consensus. However, some discussion was held about responsibilities of the CSC role since these responsibilities could be interpreted in multiple ways.

2.3 Aggregation of literature review and focus groups

After the literature review and the focus groups were completed, it was possible to answer the research question. Findings on the first two research questions were interpreted and compared. The strategy that was used for this comparison was the side-by-side comparison for data analysis, described by Creswell and Clark (2007). This strategy was originally used to compare quantitative data to qualitative data. Yet this thesis used the strategy to compare the two qualitative parts. This strategy allowed comparison of data based on codes. Codes used in this strategy were the categorisation of job description: purpose, responsibilities and duties. This enabled identification whether the CSCs role, as the broker role in the connection between the sectors was corresponding to a broker type identified in literature.

3. Results: Literature review

Thirteen studies were identified that focused on a broker role in intersectoral collaboration. Appendix A provides an overview of the aim, design/methods, setting and job description of the brokers in all thirteen studies.

3.1 Study characteristics

Due to different research areas that were included in the review, general characteristics such as geographical area, research methods and the aim differed between studies.

3.1.1 Geographical area

Ten studies were conducted in one country in particular. One study was conducted in Northern Ireland (Rugkåsa et al., 2007). Three were conducted in Australia (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; McKenna et al., 2015). Two studies were conducted in the United States (US) (Bevc et al., 2012; Nissen, 2010), of which one specifically in the state North Carolina (Bevc et al., 2012). At last, one study was conducted in Denmark (Kousgaard et al., 2015).

Three studies were conducted in more than one country. One study was conducted in the UK, Europe and the US (Hanna & Walsh, 2008). One study was conducted in the UK and Australia (Jones & Noble, 2008). At last, one study was conducted in multiple countries but did not mention which countries (Stadtler & Probst, 2012).

3.1.2 Research methods

Studies differed in research methods that were used to collect data. Data was obtained by either qualitative methods (n=9) (Hanna & Walsh, 2008; Hogan & Stylianou, 2016; Jones & Noble, 2008; Kousgaard et al., 2015; Kubiak, 2009; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007; Stadtler & Probst, 2012) or mixed methods (n=4) including both qualitative and quantitative methods (Bevc et al., 2012; Kilpatrick et al., 2007; McKenna et al., 2015; Williams, 2002). All studies used interviews as (one of) the qualitative method(s) to obtain data. Besides, surveys (Bevc et al., 2012; Kilpatrick et al., 2007; Williams, 2002), observations (Jones & Noble, 2008; Kubiak, 2009), focus groups (Kilpatrick et al., 2007; Nissen, 2010; Rugkåsa et al., 2007), analysis of secondary data from organisational reports (Hanna & Walsh, 2008; Jones & Noble, 2008; Stadtler & Probst, 2012), social network analysis (Hogan & Stylianou, 2016), and personal data of brokers such as referral numbers

(Kubiak, 2009; McKenna et al., 2015; Nissen, 2010; Rugkåsa et al., 2007) were other methods that were used.

3.1.3 Aim

Studies also differed in aims. Based on the formulated aims, it was possible to identify two different main aims among studies. Nine studies aimed to identify the roles of actors in a network, such as the role of member organisations. Specifically, these studies aimed to identify the role of the broker in these networks (Bevc et al., 2012; Hanna & Walsh, 2008; Jones & Noble, 2008; Kousgaard et al., 2015; Kubiak, 2009; McKenna et al., 2015; Nissen, 2010; Stadtler & Probst, 2012; Williams, 2002). One of these nine studies had an additional aim to identify stakeholders' perspective on the effectivity of the role of the broker in the network (McKenna et al., 2015). Meanwhile, four studies aimed to describe the contribution of the broker role in the success of a programme or initiative (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Rugkåsa et al., 2007).

3.1.4 Content

All studies focused on the role of the broker in intersectoral collaboration. The following paragraphs describe this role according to included studies. At first, the general purposes of the broker role in intersectoral collaboration and the corresponding types of brokers were explained and illustrated in table 5. After this, the different purposes and the corresponding types of brokers were described elaborately. Hereby included were the setting in which the broker functioned and the implementation of the broker role in the network.

3.2 Purpose and broker types

Brokers appeared to have a specific purpose in intersectoral collaboration. Based on the included studies, two main purposes could be identified. Brokers with these purposes corresponded to three different types of brokers. Table 5 provides an overview of the two purposes and the three corresponding types of brokers. Also included are the responsibilities and duties that were identified for types of brokers.

The first purpose of the broker role in intersectoral collaboration was to facilitate and manage networks of actors to collaborate. Brokers with this purpose were internally focused and not actively involved in achieving the common goal of the collaboration. Brokers with this purpose were identified as type A brokers (figure 3).

The second purpose of the broker role in intersectoral collaboration was to function as a point of contact between different sectors. The goal of these collaborations was to create benefits for a third party (e.g. population groups, professionals etc.). Regarding this purpose, two different types of brokers could be identified based on their position in the collaboration. Type B brokers were positioned between the sectors in the collaboration. They aimed to create benefit for the third party from this position, together with the collaborating sectors. Meanwhile, type C brokers functioned as the representative of the third party. From their position as representative, they aimed to connect the third party to sectors in order to create benefits for the third party (figure 3).

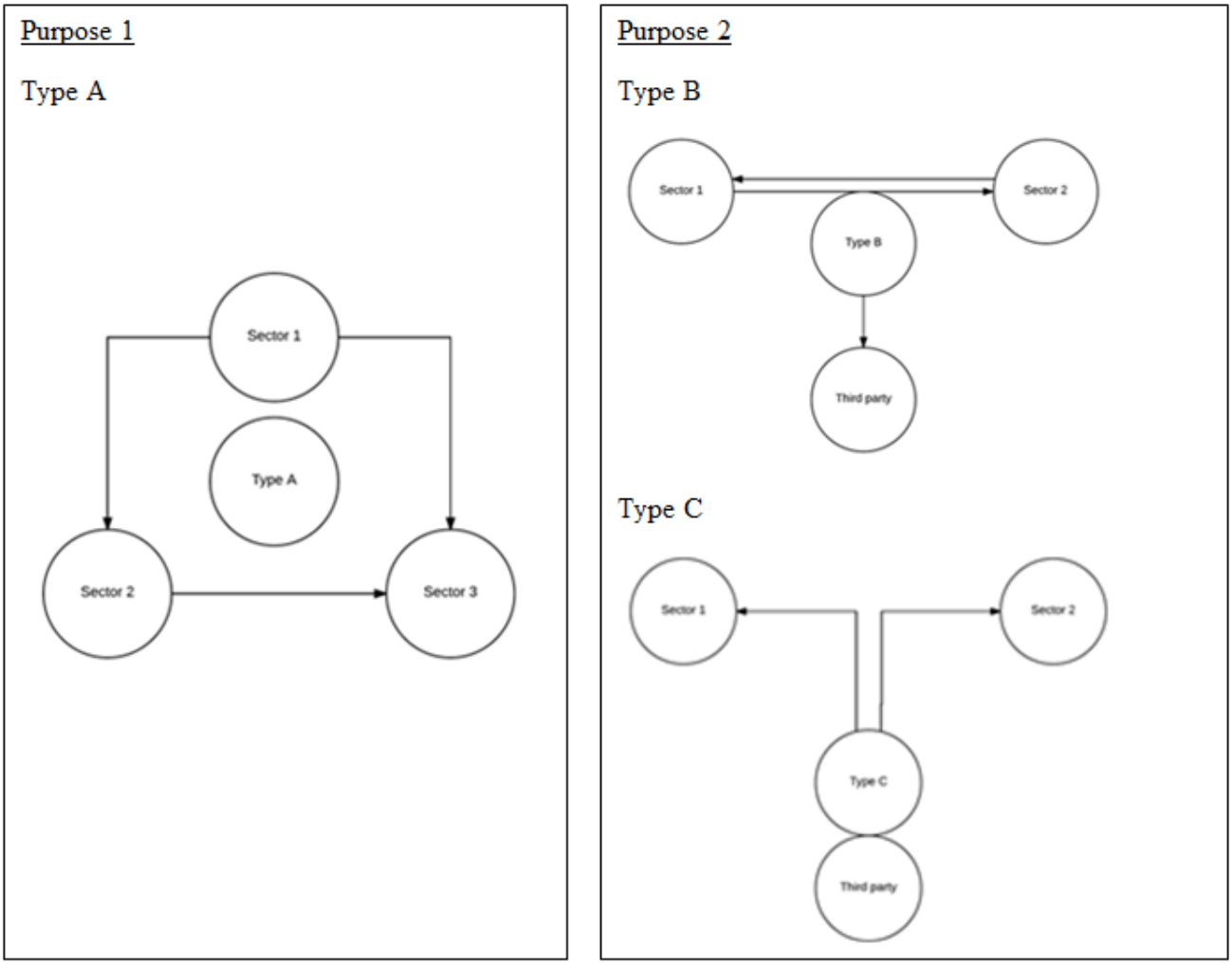

Figure 3: visualisation of the purposes and different types of brokers.

Table 6: Broker types

Type	Purpose	Description	Studies
A	Facilitate and manage networks of actors to collaborate and achieve a common goal. The broker is internally focused on the network and the relationships between members. The broker is hereby not actively involved in achieving the goal itself.	This type of broker can mostly be found in corporate collaborations or public-private partnerships (PPP). The broker can either be employed by one of the organisations in the network, funded by the government or act as an independent third party in the network. Responsibilities and duties: - Organise and manage the network (1, 2, 3, 4, 5, 6). o Encounter the variety of organisational, professional and social backgrounds (2, 3, 4, 5, 6). o Assess competencies of all actors and identify potential members (2, 3, 4, 5, 6). o Provide templates and tools (1, 4, 6). o Managing time schedules of the network (3, 4, 5). - Facilitate collaboration (1, 2, 3, 4, 5, 6). o Locate information and opportunities (1, 2, 4, 5, 6). o Having agreement, knowledge, and co-operation of members to enable joint decisions (1, 3, 4, 5, 6). o Understand, empathise and being able to manage conflict and criticism within the network (2, 3, 4, 5, 6). o Being able to influence, bargain, negotiate, mediate and broker (2, 3, 4, 5, 6). o Remain neutral in the network-building process in order to build trust among members (2, 3, 4, 5, 6).	1. Bevc, et al (2012) 2. Hanna & Walsh. (2016) 3. Jones & Noble. (2008) 4. Kubiak. (2009) 5. Stadtler & Probst (2012) 6. Williams (2002)
B	Point of contact between different networks or sectors and a third party. The common goal of the collaboration between networks is to create benefits for this third party. Brokers are actively involved in achieving this goal by for	This type of broker can be found in the health care sector. These brokers are independent brokers and are positioned between the sectors in the collaboration. Most of these brokers are active in an existing initiative or programme to create benefits for a third party. Responsibilities and duties: - Facilitate the connection between different organisations/sectors to achieve a common goal (7, 8, 9, 10,	7. Hogan & Stylianou (2016) 8. Kilpatrick et al. (2007) 9. Lindsay et al. (2012) 10. Nissen (2010) 11. Rugkåsa (2007)

	example referring appropriate services to the third party.	11). o Implement policy and government directives (7, 8, 9, 11). o Identify needs and opportunities and offer appropriate resources (7, 8, 9, 10, 11). o Address ideological, procedural or administrative barriers (9, 10). o Generate and/or ally for new funding for the programme/network (10). o Keeping/communicating/expanding the vision of the network or programme (7, 8, 9, 10, 11). o Application of new initiatives to achieve the common goal (7, 8, 10, 11). - Coordinate delivery of services and/or programmes to meet the third party's needs and opportunities (7, 8, 9, 10, 11). o Make the network/programme appealing to engage with for a third party (7, 8, 9, 10, 11). o develop an integrated system out of a fragmented assortment of services (7, 8, 9, 10). o Negotiate content and/or delivery of services to meet the standards of all parties (7, 8, 9, 10, 11). o Refer people from the third party to the appropriate services (7, 8, 9, 10).	
C		This type of broker can be found in the health care sector. These brokers are positioned as a representative of one particular group of people that functioned as the third party in the network. They are responsible to create benefit for this group of people. Responsibilities and duties: - Facilitating collaboration/connection between the represented population and services (12, 13). o Identify problems and search for common solutions (12,	12. Kousgaard, et al. (2015) 13. McKenna, et al. (2015)

		13). o React to initiatives from government agencies or other organisations (12). o Create understanding between the represented population and the service providers (13). o Develop continuity in the collaboration/connection (13). - Act as gatekeeper for the third party (12, 13). o Ensure that the represented population is provided with relevant information (12, 13). o Contribute to the development of formal pathways or tools (12, 13). o Initiating access to the services or programme (13).	

3.3 Purpose 1

The first identified purpose of the broker role was to facilitate and manage networks of actors to collaborate and achieve a common goal. Brokers with this purpose were internally focused on the network and the collaboration between members. The broker was hereby not actively involved in achieving the goal of the network itself. This purpose of the broker role was identified in six studies (Bevc, Markiewicz, Hegle, Horney, & MacDonald, 2012; Hanna & Walsh, 2008; Jones & Noble, 2008; Kubiak, 2009; Stadtler & Probst, 2012; Williams, 2002). All broker roles in the six studies were identified as type A brokers.

3.3.1 Type A

All studies that focused on a broker with this purpose, focused on type A brokers. Although all studies focused on a type A broker, they differed in settings and positions in which the brokers were implemented.

3.3.1.1 Setting

This type of broker was identified in either a setting of corporate collaborations (Hanna & Walsh, 2008; Kubiak, 2009), public-private partnerships (PPPs) (Jones & Noble, 2008; Stadtler & Probst, 2012), or the public sector (Bevc et al., 2012; Williams, 2002).

Two studies focused on intersectoral collaboration in a corporate setting (Hanna & Walsh, 2008; Kubiak, 2009). Hanna and Walsh (2008) focused on the collaboration between small firms, all active in capital-intensive manufacturing industries. The aim of these collaborations was to improve activities such as marketing and procurement. Included networks differed from 2 firms in the smallest collaboration to 28 firms in the largest (Hanna & Walsh, 2008). Kubiak (2009) focused on a collaborating network whereby the broker brought together professionals from different educational organisations. The common goal of these networks was to generate and transfer knowledge in order to improve schools (Kubiak, 2009).

Two studies focused on the role of the broker in the setting of PPPs (Jones & Noble, 2008; Stadtler & Probst, 2012). Jones and Noble (2008) focused on PPPs in Australia and the UK. Due to different geographical areas, actors had different motivations, roles and governance mechanisms etc. (Jones & Noble, 2008). The study of Stadtler and Probst (2012) particularly focused on the role of the broker in the different development stages of PPPs. Included PPPs were active in the education sector (Stadtler & Probst, 2012).

Two studies focused on brokers who were active in the public sector (Bevc et al., 2012; Williams, 2002). Bevc et al. (2012) described how the brokers were implemented by the North Carolina Division of Public Health. The brokers aimed to improve the communication and transfer of information between health care organisations and the public health sector. Health care organisations were hospitals and local health departments (Bevc et al., 2012). Williams (2002) focused on intersectoral collaboration in the public policy sector in the UK. The broker function was implemented in three types of networks, namely: networks for environmental & local agenda 21 co-ordinators, crime & community safety co-ordinators, and health promotion specialists (Williams, 2002).

3.3.1.2 Implementation broker

Although all six studies focused on a type A broker, they were implemented differently. Hereby corresponding settings such as corporate collaborations, PPPs or the public sector appeared not to determine the implementation of the broker role. Brokers were either employed by a governmental agency or sector (Bevc et al., 2012; Kubiak, 2009), functioned as an independent actor from the organisations in the network (Stadtler & Probst, 2012), or were employees of network member organisations (Jones & Noble, 2008). One study did not focus on a specific method of implementation (Williams, 2002). Williams (2002) stated that the method of implementation depended on the context of the network. Most important was that brokers did not have a conventional career profile as organisations in the network. This prevented network members to perceive the broker as a threat (Williams, 2002).

The broker was implemented by a governmental agency or sector in two studies (Bevc et al., 2012; Kubiak, 2009). Brokers in the study of Bevc et al. (2012) were all employed and funded by the North Carolina Division of Public Health. Brokers were public health epidemiologists with a completed postgraduate degree. They were positioned within health care organisations such as local health departments (Bevc et al., 2012). Kubiak (2009) focused on groups of network facilitators who were employed by the UK education sector. Most of these facilitators, who functioned as brokers, had a background in educational leadership in schools (Kubiak, 2009).

The broker acted as an independent actor from the network member organisations in two studies (Hanna & Walsh, 2008; Stadtler & Probst, 2012). Hanna and Walsh (2008) included different collaborating networks in their study. Only some of these collaborating networks were facilitated by a broker. Others were facilitated by the small firms in the network

themselves. The brokers that were included were independent brokers and thus not employed by one of the organisations in the network. These brokers were either funded by the government or paid by the network members (Hanna & Walsh, 2008). Stadtler and Probst (2012) acknowledged the implementation of independent broker organisations to tackle the barriers, such as different backgrounds and experiences, in the development stages of PPPs. Broker organisations were defined as organisations that have specific experience and capacity to facilitate PPPs. These broker organisations were independent from the organisations that collaborated in the PPPs (Stadtler & Probst, 2012).

The broker was employed by a network member organisations in one study (Jones & Noble, 2008). Member organisations employed one of their employees as broker. Assigned brokers of different organisations had to work together to facilitate the PPP. Although the brokers had to be neutral in the PPP, brokers perceived that their regular job in the organisation was dependent on the success of the PPP (Jones & Noble, 2008).

3.3.1.3 Responsibilities and duties

All six studies described responsibilities and duties of the broker role in intersectoral collaborations (Bevc et al., 2012; Hanna & Walsh, 2008; Jones & Noble, 2008; Kubiak, 2009; Stadtler & Probst, 2012; Williams, 2002). Studies in which the brokers were implemented similarly appeared to have (some) corresponding responsibilities and duties. Therefore it was possible to identify general responsibilities and duties for type A brokers. Also responsibilities and duties that focused on a particular setting were identified. These were identified as specific responsibilities and duties.

General responsibilities and duties

Responsibilities and duties that were mentioned by all six studies and/or were applicable in different settings were identified as the general responsibilities and duties for type A brokers (Bevc et al., 2012; Hanna & Walsh, 2008; Jones & Noble, 2008; Kubiak, 2009; Stadtler & Probst, 2012; Williams, 2002). These responsibilities and duties were identified as essential to facilitate and manage networks with an internal focus. An example of a general responsibility of type A brokers was: ‘organising and managing of networks’ (Bevc et al., 2012; Hanna & Walsh, 2008; Jones & Noble, 2008; Kubiak, 2009; Stadtler & Probst, 2012; Williams, 2002). Examples of corresponding duties were: ‘assess competencies of all actors and identify potential members’ (Hanna & Walsh, 2008; Jones & Noble, 2008; Kubiak, 2009; Stadtler & Probst, 2012; Williams, 2002), and ‘provide templates and tools’ (Bevc et al.,

2012; Kubiak, 2009; Williams, 2002). All general responsibilities and corresponding duties are visual in table 6.

Specific responsibilities and duties

Some responsibilities and duties were only applicable in a particular setting that the broker functioned in. Examples of such specific duties were: 'educating clinicians regarding diseases of public health importance' (Bevc et al., 2012) and 'focus on monetary savings by negotiating improved prices for the purchase of utilities, materials, or equipment' (Hanna & Walsh, 2008). The complete overview of all specific responsibilities and duties is illustrated in Appendix A.

Sustainability of the broker role

Only Stadtler and Probst (2012) considered the sustainability of the broker role in the responsibilities of the broker. They included 'training of key individuals in convening and brokering' (Stadtler & Probst, 2012) as a responsibility. The purpose of this responsibility was that the network would be able to function with a broker role on the long term. When the broker would leave the network, the trained individual was able to take over the role of the broker (Stadtler & Probst, 2012).

3.4 Purpose 2

The second identified purpose of the broker role was to function as a point of contact between different networks or sectors. The common goal of these collaborations between networks/sectors was to create benefits for a third party. Brokers were actively involved in achieving this goal by for example referring appropriate care or services to the third party. Seven studies focused on a broker with this purpose (Hogan & Stylianou, 2016; Kilpatrick, Fulton, & Johns, 2007; Kousgaard, Joensen, & Thorsen, 2015; Lindsay & Dutton, 2012; McKenna, Fernbacher, Furness, & Hannon, 2015; Nissen, 2010; Rugkåsa, Shortt, & Boydell, 2007).

Two types of brokers were identified that had this purpose, type B and type C. These two different types of brokers had corresponding purposes but differed but had different positions in the network. Type B brokers were positioned between the different networks/sectors in the collaboration. Together with the actors of the collaboration, they aimed to create benefits for the third party (e.g. population groups). Type C brokers functioned from a different position in the collaboration. These brokers acted as the representative of the third party (e.g.

professionals or population groups). From this position, they aimed to create benefit for this party by connecting this party to networks/sectors.

3.4.1 Type B

Five studies focused on a type B broker (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). As mentioned before, all the brokers in these studies had corresponding purposes and positions in the collaborations between networks/sectors and the third party. Nevertheless, they differed in the focus of the broker role and implementation of the broker.

3.4.1.1 Setting

All five studies focused on a health promoting setting and aimed to improve the health of people (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). Although all studies had a corresponding setting, they differed in the focus they used in this setting to create benefits for the third party. Brokers either focused directly on the health of the third party (Hogan & Stylianou, 2016; Nissen, 2010), or indirectly on empowering one aspect of people from the third party with the consequence of improving health (Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Rugkåsa et al., 2007).

Two studies focused directly on improving the health of people from the third party (Hogan & Stylianou, 2016; Nissen, 2010). Hogan and Stylianou (2016) focused directly on the health of the third party by focusing on the sporting school initiative that was launched by the Australian government. The aim was to increase physical activity levels and sport participation of school children (Hogan & Stylianou, 2016). The brokers in the study of Nissen (2010) focused on programmes with the aim to promote best practices in substance abuse treatment. Included in this programme were organisations that identified the needs of the community, organisations that offered treatment services, and community organisations such as schools, and the project directors as brokers (Nissen, 2010).

Three studies focused on empowering one aspect of people from the third party with health benefits as result (Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Rugkåsa et al., 2007). Kilpatrick et al. (2007) described brokers that organised lifelong learning and matched the needs of the potential learners to the learning opportunities. Lifelong learning was associated with economic and social wellbeing (Kilpatrick et al., 2007). Lindsay and Dutton (2012) focused on the Pathways to Work (PtW) initiative, implemented by the UK government. The broker aimed to offer services to target health-related, personal and external barriers for

unemployed people to stimulate the return to work (Lindsay & Dutton, 2012). Rugkåsa et al. (2007) focused on a fuel poverty intervention. Fuel poverty appeared to have negative impacts on people's health. Brokers aimed to make properties more energy efficient and increase household income by encouraging uptake of social security benefits (Rugkåsa et al., 2007).

3.4.1.2 Implementation broker

Type B brokers were identified based on their position in the network of actors. From this position, all brokers functioned as an independent party from the organisations in the collaboration (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). Despite this position, the broker role was implemented differently in the studies. Also the focus of the broker within the corresponding setting, which was described before, appeared not to determine the implementation of the broker. The broker role was implemented to either focus on facilitating a network of services/actors and connecting this network to the third party (Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007), or to refer services and the third party directly to each other (Hogan & Stylianou, 2016; Kilpatrick et al., 2007).

The implementation of the broker role which focused on facilitating a network and connecting this network to the third party was implemented in three studies (Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). Lindsay and Dutton (2012) described that small teams of condition management workers from the NHS were implemented as brokers. These teams were assigned to facilitate a network of professionals within the health care sector. These teams required professionals to adopt a new generic role so that the networks covered a holistic approach. This holistic approach enabled teams to provide suitable and holistic services to the third party (Lindsay & Dutton, 2012). Brokers in the study of Nissen (2010) were implemented to coordinate joint community efforts and manage services within the communities. Brokers referred people, in need of treatment, to appropriate services in the coordinated efforts (Nissen, 2010). At last, the broker role in the study of Rugkåsa et al. (2007) was implemented by two different persons. The health action zone manager facilitated and managed the network of organisations and sought support for the network by organisations such as local government departments. This broker connected the network to local- and regional policy making. The other broker, the community energy advisor, ensured that the programme liaised closely with the communities. This broker supported the participants of the programme (Rugkåsa et al., 2007).

A broker role which was implemented to focus on referring people from the third party and services directly to each other was implemented in two studies (Hogan & Stylianou, 2016; Kilpatrick et al., 2007). At first, the broker in the study of Kilpatrick et al. (2007) connected organisations that offered learning opportunities to the target population. Hereby, the broker had an active role in identifying the needs of this target population (Kilpatrick et al., 2007). The broker role in the study of Hogan and Stylianou (2016) was implemented by national sporting organisations (NSOs). These organisations referred sport offers to schools and structured processes that increased the transfer of children to local sport clubs. These NSOs were funded by the sporting school initiative (Hogan & Stylianou, 2016).

3.4.1.3 Responsibilities and duties

All five studies described responsibilities and duties of the broker role in intersectoral collaboration (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). General responsibilities and duties for type B brokers were identified based on the studies. Besides, specific responsibilities and duties that focused on a particular context were identified.

General Responsibilities and duties

Responsibilities and duties that were mentioned by all five studies and were applicable in different contexts were identified as the general responsibilities and duties for type B brokers (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). An example of a general responsibility was: ‘facilitate the connection between different organisations/sectors to achieve a common goal’ (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). Examples of corresponding duties were: ‘implement policy and government directives’ (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Rugkåsa et al., 2007) and ‘identify needs and opportunities and offer appropriate resources’ (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). All general responsibilities and corresponding duties are visual in table 6.

Specific responsibilities and duties

Some of the responsibilities and duties were specific for a particular context. Examples of such specific responsibilities were: ‘creating community partnerships to reclaim youth after formal treatment was concluded’ (Nissen, 2010) and ‘encourage a learning culture among people in the agricultural and natural resource sector’ (Kilpatrick et al., 2007). All specific responsibilities and duties were visual in Appendix A.

Sustainability of the broker role

Only the study of Lindsay and Dutton (2012) actively involved the sustainability of the broker role in the responsibilities and duties. Lindsay and Dutton (2012) described that different health professional such as physiotherapists should be trained in the new, generic role of condition management practitioner. This role would be able to function as the broker role on the long term (Lindsay & Dutton, 2012).

3.4.2 Type C

Two studies focused on a type C broker (Kousgaard et al., 2015; McKenna et al., 2015). Although brokers had corresponding purposes and positions in intersectoral collaboration, they differed in the focus of the broker role and implementation of the role.

3.4.2.1 Setting

Brokers in both studies focused on a health care setting and aimed to improve the health of the represented third party. The represented third party differed in both studies. Kousgaard et al. (2015) focused on the structural reforms of the health care sector in Denmark. Due to these structural reforms, the need for local governments and GPs to collaborate became more important. Therefore the broker acted as the representative of local GPs (Kousgaard et al., 2015). McKenna et al. (2015) described great disparities in the health status between Aboriginals and other population groups in Australia. The use of mental health services by Aboriginal people appeared to be far from optimal due to barriers such as the language. The broker acted as a representative of the Aboriginal population to improve this population's accessibility to health care (McKenna et al., 2015).

3.4.2.2 Implementation broker

Although both studies described a broker role that represented a third party, the implementation of this broker role appeared to be determined by the third party that they represented. Brokers in the study of Kousgaard et al. (2015) were part of the represented population. These brokers, who acted as the connecting link between the local government and GPs, were local GPs themselves. In their broker role as representative, they transferred information from the local government to the GPs. Besides their function as broker, they also had their regular work as GP (Kousgaard et al., 2015). Brokers in the study of McKenna et al. (2015) were not part of the represented population themselves and acted as the independent connecting link between the Aboriginal community and the health care sector.

3.4.2.3 Responsibilities and duties

Both studies described responsibilities and duties of the broker role in intersectoral collaboration (Kousgaard et al., 2015; McKenna et al., 2015). Responsibilities and duties that were mentioned by both studies were identified as general responsibilities and duties. Responsibilities and duties which were mentioned specifically for the particular context of the study were identified as specific responsibilities and duties.

General responsibilities and duties

General responsibilities of type C brokers were applicable in different contexts (Kousgaard et al., 2015; McKenna et al., 2015). An example of a general responsibilities was: 'facilitate collaboration between the represented population and services' (Kousgaard et al., 2015; McKenna et al., 2015). Examples of corresponding duties were: 'identify problems and search for common solutions' (Kousgaard et al., 2015; McKenna et al., 2015) and 'create understanding between the represented population and the service providers' (McKenna et al., 2015). All general responsibilities and duties are visual in table 6.

Specific responsibilities and duties

An example of a specific responsibility which was only applicable in a particular context, was: 'act as information gatekeepers to ensure that GPs are only provided with the information that is relevant for them' (Kousgaard et al., 2015). All specific responsibilities and duties are visual in Appendix A.

Sustainability of the broker role

Only the study of McKenna et al. (2015) actively involved the sustainability of the broker role in the responsibilities and duties. These brokers were involved in creating long term results so that the broker role would be fulfilled on the long term. They did this by creating continuity frames so that once the connection was established, it could be maintained on the long term without the broker role needed (McKenna et al., 2015).

4. Results: Focus groups

4.1 Introduction

Five focus groups were conducted in different municipalities to identify the role of CSCs, as brokers, in the connection between primary care sector and the sport sector. Focus groups were also used to identify the professional's perspective on the contribution of the CSC to the sustainability of this connection.

The CSC role and corresponding responsibilities were intertwined with the way networks were organised. Findings were therefore structured based on the structure of the network (table 7). As stated before, the networks of focus groups 1, 2 and 3 were organised as structural partnerships including CSCs and professionals from the health, welfare and sport sector. The network of focus group 4 was also organised as a structural partnership but did not encounter an actual CSC role in the partnership. The network of focus group 5 was organised based on collaboration on project base, which meant that CSCs and professionals of the health, welfare and sport sector collaborated in projects.

Table 7: Overview of how networks were organised and the purpose and positions of CSCs.

Focus group	Network	CSC function	Purpose CSCs	Position CSCs
1, 2, 3	Structural partnership	+	Connect primary care sector to sport sector	Central position
4	Structural partnership	-	Connect primary care sector to sport sector	Central position
5	Project base	+	Connect primary care sector to sport sector	Central position

4.2 CSC role: broker role

The purpose and position of the broker role of CSCs, according to professionals, is visual in table 7.

4.2.1 Purpose and position

CSCs appeared to have corresponding purposes. Professionals of all focus groups acknowledged that CSCs were assigned to connect the primary care sector to the sport sector in order to guide people towards local sport facilities.

> *Focus group 1: The CSC has a connecting role. He brings together professionals from the different sectors. That is also what he is meant to do. That's why we implemented such a role.*

To fulfil this purpose, professionals from all focus groups including an actual CSC role (focus group 1, 2, 3, 5) identified that the CSC had a central position between organisations from the health care, welfare and sport sectors. This central position meant that the network of organisations was positioned surrounding the CSC. Hereby the CSC acted as the visual chain of the network. Professionals stated that CSCs facilitated communication, trust and accessibility so that professionals felt secure to collaborate with CSCs and other organisations.

> *Focus group 5: The CSC is the central point that connects organisations from the health care, welfare and sport sector. From this position, CSCs are able to identify opportunities and possibilities that organisations on its own are not able to see. So we, as organisations, do not have the knowledge that the CSC has.*

According to professionals from focus group 1, 2 and 3, such a purpose and central position was crucial since the facilitation of the connection was a full time job. Professionals were not able to invest the time and effort themselves outside of their regular working hours.

> *Focus group 2: The connection has to be facilitated by one person. The connection needs to be organised around that person. Because, do not get me wrong, but if he does not initiate the connection, I have to do it again and I do not have time to do that. Meaning, someone has to facilitate it.*

Professionals from focus group 1, 2 and 3 also stated that this purpose and position was important for the target populations. These people needed support to reach the local sport facilities.

> *Focus group 3: The CSC is the visual chain in the connection between the people of the community and the collaborating organisations. It is hard to refer people directly to sport facilities because they do not reach the facility. The step is just too big to take, especially for this target population. And also the feedback is not adequate. So we need an easy accessible transfer and that is the CSC. That is someone you can transfer people to.*

The main reason for professionals from focus group 5 to assign this purpose and central position was that this enabled CSCs to support all organisations and identify opportunities for organisations.

> *Focus group 5: We do not see the CSC role only as the connecting role, but even more as a supporting role. I think that when you face a problem, the CSCs should be able to support your organisation by providing feedback and identifying opportunities.*

Despite that the structural partnership of focus group 4 did not encounter a actual CSC function, one professional in the partnership acted as this role. However facilitating such a connection required time and effort. Therefore, professionals recognised that this role should be someone's main job purpose rather than a professional in the partnership. Professionals stated that this role would also have made the facilitation of the connection more efficient.

> *Focus group 4: We, as professionals, have questions about organising activities and the protocols that come with it. Since we do not have the time to initiate a activity and elaborate this plan, we miss someone that functions as a central point who could support us, as professionals, with this.*

Professionals from focus group 4 stated that a CSC should have had a central position in the network to have the overview and to motivate professionals to collaborate.

> *Focus group 4: It would have been way harder to facilitate collaboration between all these different organisations without the partnership. It would have been even easier if there was someone that functioned as a central point to who we had the overview and to who could go to with questions about protocols and the connection.*

4.2.2 Broker type

The purpose and position of CSCs, as stated by professionals, corresponded to a type B broker as identified in the literature review. Just like type B brokers did CSCs have the purpose to connect sectors/networks. Also, this connection of sectors was used to create benefits for a target population. Professionals stated that CSCs had an active role in the achievement of this aim. In order to achieve this aim, CSCs had a central position between organisations from different sectors and the target population. CSCs hereby acted as the point of contact between professionals/organisations.

4.2.3 Responsibilities and duties

Based on the purpose and position, professionals were able to identify responsibilities of the CSC role, as broker in the connection between the primary care sector and the sport sector. Table 8 visualises the responsibilities of CSCs, stated by professionals in different focus groups. Responsibilities identified in focus group 4 were based on the responsibilities of the professional that acted as the CSC. Professionals from this focus group identified that these responsibilities would also have been important for an actual CSC in the partnership.

Table 8: Responsibilities of the CSC role in different networks.

	§	FG 1	FG 2	FG 3	FG 4	FG 5
Organise and manage the network	4.2.4.1	X	X	X	X	
Facilitate collaboration	4.2.4.2	X	X	X	X	X
Facilitate the achievement of the common goal	4.3.4.3	X	X	X		
Coordinate the delivery of services/programmes	4.3.4.4	X	X	X		X
Facilitate a connection between the represented population and services	4.3.4.5	X	X	X		
Act as a gatekeeper	4.3.4.6	X	X	X	X	X

4.2.3.1 Organise and manage the network

CSCs appeared to have the responsibility to organise and manage the network of professionals in all focus groups organised as a structural partnerships (1, 2, 3 and 4). Hereby, CSCs actively motivated all professionals and facilitated communication between organisations. CSCs acted as the initiators to manage and maintain the network.

> *Focus group 1: Professionals do not have the time to facilitate and organise a network. Now they have a person that can facilitate and manage such a network for them. It would be a waste of time and resources if we would organise our own network when we have the CSC who facilitates and manages the network for all of us. The CSC is the connecting chain in the network.*

Professionals stated that an important part of this responsibility was to facilitate regular meetings. During these meetings, the developments of the network and new initiatives were discussed. These meetings were important for professionals since these helped them to be aware of the state of the connection and of suitable sport offer.

> *Focus group 2: At this moment, we have regular meetings which the CSC initiates. Without the CSC, we would not have these regular meetings, no one would initiate those.*

4.2.3.2 Facilitate collaboration

CSCs from focus groups 1, 2, 3, and 4 were responsible to approach other organisations and involve them in the network. involving other organisations strengthened the expertise and support of the network. Professionals stated that CSCs were able to identify gaps in the networks since they had the overview of the network and the sport offer.

> *Focus group 1: Professionals do not have the time to identify opportunities for collaboration. For example, professionals would stop trying to facilitate a connection after one conversation. Now with the CSC, they have someone that can facilitate these connections for them. The CSC can facilitate and expand collaborations.*

Professionals from focus group 4 stated that the professional acting as the CSC approached other organisations to expand the structural partnership and its expertise. Other professionals stated that this responsibility was important due to the lack of time to identify possible partners themselves.

> *Focus group 4: It would have been harder if you have to find new partners for an initiative yourself. Now, possible partners are approached and are included in the partnership. This creates opportunities.*

Professionals from focus group 5 stated that CSCs had the responsibility to facilitate collaboration for two reasons. First, organisations did not have the overview and the abilities to identify such opportunities themselves. Second, CSCs created trust among organisations so they were more likely to collaborate.

> *Focus group 5: CSCs regularly visit organisations in the network to show them what they can do for them. They identify opportunities and project in which organisations can collaborate.*

Professionals from all focus groups mentioned that CSCs should especially approach primary care professionals, such as nutritionists or physiotherapists, since it appeared to be difficult to involve these professionals in the network. Multiple primary care professionals supported this by stating that they did not have time to invest in such a connection. Also, professionals such

as physiotherapists perceived the sport offer of the CSCs as competition for their own sport offer.

> *Focus group 2: Physiotherapists are somewhat suspicious since they perceive CSCs as direct competition. For example, people go CSCs for advice on physical activity, but that is also a reason why people come to a physiotherapist. Though with a medical reason but still, they are afraid that CSCs take away those people. However, we would like to collaborate when CSCs show us that their sport offer complements our own.*

4.2.3.3 Facilitate the achievement of the common goal

Professionals in focus group 1, 2, 3 and 4 mentioned that their structural partnerships had the common goal to improve the health status of people in the community by increasing physical activity. CSCs were, together with the professionals, responsible to achieve this goal. Since CSCs acted as the connecting link to the people in the communities, professionals stated that they were able to identify the needs of the people and opportunities for the network.

> *Focus group 3: I perceive the CSC to be the visual chain in the community. Like the spider in the web of the community and the organisations in the network. You need such a role in a community like this. It is crucial to achieve anything.*

Professionals in these focus groups stated that CSCs also facilitated the achievement of the common goal by guiding people to appropriate sport activities. At last, professionals stated that CSCs were crucial in the achievement of the goal by increasing the publicity of sport activities.

> *Focus group 4: I notice that it really helps that we talk about the sport initiatives during structural meetings. Since you know more about the different activities, you are more likely to refer people to activities that are suitable for them.*

4.2.3.4 Coordinate delivery of services/programmes

Professionals from focus groups 1, 2, 3 and 5 stated that CSCs had the responsibility to coordinate the delivery of services/programmes. This was a responsibility of CSCs since they were able to identify the needs of the people in the community. Examples of needs, mentioned by professionals, were the need for easy accessible sport activities and affordable/free activities. CSCs were responsible alter and coordinate sport activities based on these needs.

> *Focus group 1: The goal is to create sport offer, that actually fits the target population. The CSC has to facilitate sport offer which is easy accessible and suitable to people with multiple problems.*

Professionals of focus groups 1, 2 and 3 stated that CSCs were also responsible to alter and coordinate the services/programmes in a way which was easy accessible for professionals. An example of such an easy accessible service were referral schemes.

> *Focus group 2: The CSC needs to provide activities and services which make it easy for professionals like me to collaborate. We are not going to do it on our own. The CSC needs to provide us with small steps to be able to collaborate.*

Professionals of focus group 5 also assigned the responsibility to coordinate the delivery of services/programmes to CSCs. However, they stated that this responsibility should not only be implemented by supporting professionals, but also by initiating activities and projects themselves.

> *Focus group 5: Together with the CSC, we are identifying what kind of sport activities we can develop and facilitate. Hereby, the CSC is important to investigate the opportunities and other organisations that are willing to collaborate.*

Professionals from focus group 4 stated that they missed a person, as the broker, to fulfil this responsibility. Especially, they missed someone that had the overview of all the appropriate sport offer and who mastered all protocols and methods to organise and facilitate activities.

> *Focus group 4: Essentially, we miss a person that you can go to when you need a particular activity or anything. That could be a CSC. Just someone that knows how to facilitate and organise such an activity.*

4.2.3.5 Facilitate a connection between the represented population and services

Facilitate a connection between the people in the community and the organisations was identified as a responsibility of CSCs by professionals from focus groups 1, 2 and 3. Professionals even stated that CSCs were crucial to facilitate this connection.

> *Focus group 1: We really need a person that facilitates the connection between the network and the people in the community. The primary care professionals are not going to do that because the workload of their regular work is too great. So it should be another person. We need someone that facilitates that connection for us!*

Professionals from these focus group stated that this responsibility enabled CSCs to act as the visual chain of the network within the community.

> *Focus group 1: The CSC makes the network approachable and easy accessible for different levels. He is able to either address a general practitioner or the people in the community. This is because he is really a part of this community. He understands the community.*

4.2.3.6 Acts as a gatekeeper

The responsibility of CSCs to act as a gatekeeper towards organisations from different sectors was identified by professionals from all focus groups. Professionals stated that this responsibility was important since CSCs contacted and facilitated collaboration with organisations/professionals that were hard to approach. Either because they did not want to collaborate with professionals in the network or because they facilitated activities themselves.

> *Focus group 5: My sport organisation is a commercial organisation. Often when I go to health care facilities to talk about what I can do for them, they do not take me seriously and say that I am just at commercial organisation. The CSC does have access to those organisations. They can facilitate a connection with those organisations for me.*

Moreover, Professionals from focus groups 1, 2 and 3 also acknowledged a gatekeeping role towards people in the community. CSCs acted as a mentor and guided people from health care organisations towards local sport activities.

> *Focus group 3: There are a lot of vulnerable people in this target population that really benefit from personal contact. The CSC is easy approachable for them and really provides them the tools to participate in local sport activities.*

4.3 Sustainability of the broker role and the connection

Focus groups also enabled to professional's perspective on the contribution of the CSC role to the sustainability of the connection between the primary care sector and the sport sector.

4.3.1 Sustainability of the connection

Professionals from focus groups 1, 2 and 3 stated that the sustainability of the connection between the primary care sector and the sport sector was highly dependent on the CSC role. They perceived the connection as a chain with the CSC as the connecting link between the different sectors. Therefore they stated that when this connecting link would be taken away,

the connection would diminish after a short amount of time. The main reason was that facilitating and managing the connection between sectors required a lot of time and effort.

> *Focus group 2: Until now, the CSC is the most successful in facilitating the connection between health care and sport. Simply because the connection is within a person. Because, do not get me wrong, but if the CSC stops facilitating the connection, someone else has to do it. And then I, as a professional, needs to facilitate meetings with professionals of all sectors again. Then still someone is doing the work to facilitate the connection.*

Professionals of these focus groups also stated that this initiator had to keep professionals motivated and keep guiding people through the sectors. Although professionals mentioned that anyone could be such an initiator, the CSCs was the most successful one.

> *Focus group 3: We think the connection between primary care and sport is important and we see the added value but we are not going to act as the initiator ourselves. It's is not that I want to be negative but that is just how it is. Someone should be the initiator and then we will participate. But we, as health care professionals, are not going to be the initiator ourselves when the CSC would stop.*

Professionals from focus group 4 professionals also stated that the connection needed an initiator to invest the time and effort, in order for the connection to be sustainable.

> *Focus group 4: We perceive the connection between the different sectors as important. However, we need an initiator who invests time and effort to facilitate collaboration. Otherwise we will go back to our core business instead of collaborating.*

Professionals from focus group 5 assigned an important role to CSCs to sustain the connection. However, they did not perceive the collaboration with the CSCs as a structural connection yet. They stated that connections with other organisations would not be influenced when the CSC function would stop.

> *Focus group 5: At this moment, I feel like we facilitate the collaborations ourselves. The CSC does not have a role in that process yet. What I do think is that it would be a good thing when the CSC can sustain the connection and make oneself unnecessary in the connection. Then, he and she did a good job.*

4.3.2 Prerequisites for a sustainable connection

Professionals identified prerequisites that were important in order to make the connection between the primary care sector and the sport sector sustainable.

4.3.2.1 Independent initiator

Professionals from all focus groups stated that they needed a person to initiate the connection. Even the professionals from focus group 4 acknowledged that they needed such an initiator role in the connection.

> *Focus group 2: You can facilitate and safeguard everything in a structural partnership but someone needs to do the extra work in the end. Now, we do not care whoever that is or where that person is positioned but please realise that we need such a person. Someone to guide people through the chain of health care and sport.*

Also, professionals acknowledged that this initiator had to be linked to the people of the community too. This was crucial to identify the needs of the people in the community.

> *Focus group 1: I can also imagine a different form which is almost similar to the CSC. As long as this persons works as close to the people in the community as possible, that is the only way it could be a success.*

4.3.2.2 Attitude change

Professionals also mentioned as a prerequisite was an attitude change among professionals. Professionals tend to focus only on their own expertise and sector. An example are physiotherapists who mentioned that they perceived the sport offer of the CSC as competition for their own sport offer. This prevented them from referring people to CSCs. In order to make the connection between the primary care sector and the sport sector sustainable, professionals should focus on what people from the communities need. Professionals mentioned that CSCs were important in facilitating this attitude change.

> *Focus group 1: We need to perceive 'health' as much more than just people's physical wellbeing. Therefore, professionals need to look beyond their own expertise. We really have to start identifying what someone needs without the boundaries of sectors. And that is where the CSCs step in. they cross those boundaries.*

4.3.2.3 Resources and facilities

Professionals also mentioned that they needed sufficient resources and facilities to be able to facilitate suitable sport offer on the long term. Examples of resources and facilities mentioned

by professionals were: accommodations, trainers with experience, funding for activities and a greater number of people referred by primary care professionals.

> *Focus group 2: We want to offer more sport activities but we need the facilities and resources to do so. We need professionals who have experience with the target population but we also need to keep the activities affordable for all people.*

Especially the professionals from focus group 4 stated that funding for organisations was an important prerequisite to make the connection sustainable.

> *Focus group 4: Yes, the funding is necessary to make the connection sustainable. Otherwise we do not benefit from the connection as an organisations. The partnership takes us a lot of time and when it does not benefit for us, we will go back to facilitating and organising activities for our own organisation.*

4.3.2.4 Structural partnerships

Professionals who were active in a structural partnership (1, 2, 3 and 4) stated that the connection could only be sustainable and successful when CSCs were supported by organisations from different sectors.

> *Focus group 1: It is important that CSCs have a structural partnership with professionals of the different sectors to support them. If you put CSCs in the communities all by themselves, it is going to be hard. So I think we have to support them in order to make it a success.*

4.3.3 Future plans

Based on connection as it is now, professionals stated future plans for their organisations and the connection. Future plans were mostly depended on national and local policy. However, two concrete plans were mentioned by professionals from all five focus groups.

4.3.2.1 Increase number of participants

Professionals stated that they wanted to include more people from the target populations in the connection. Together with other organisations, they were willing to facilitate both more sport activities as well as a greater variety of sport activities. To achieve this, professionals stated that CSCs should expand their role so that they could refer more people to sport offer and have a more supporting role for organisations which facilitate sport activities.

> *Focus group 5: We should try to include as many people as possible. They can decide for themselves if they want to stay physically active after they participated in the activities. However, I really think that we should focus on including as many people as possible.*

4.3.2.2 Expand network

Professionals also stated that they wanted to expand the network of organisations. Therefore, professionals and CSCs planned meetings with organisations to explain how they could benefit from the connection. The more organisations involved in the connection and adopted the attitude of crossing sectors, the more organisations recognise the importance of managing such a connection.

> *Focus group 1: We are still developing. We do not stop here but we have to expand what we have now. We are trying to include more professionals in our network to expand the expertise and support. We actually just planned a meeting with nutritionists and physiotherapists.*

5. Discussion

The aim of this thesis was to identify the professional's perspective on the role and the corresponding responsibilities of CSCs, as brokers in the connection between the primary care sector and the sport sector. This aim included the contribution of this role to the sustainability of this connection. Based on this aim, three research questions were identified. These were answered in this discussion based on the findings of this thesis. In addition, findings were reflected upon based on previous research and theory. This discussion also elaborated the strengths/limitations of the thesis and the implications for practice and research. The discussion was finalised with the conclusion of the thesis.

5.1 Answer research questions

The first research question, which aimed to identify what constituted a broker role in intersectoral collaboration, was answered by a literature review. Two main purposes of brokers roles in intersectoral collaboration were identified. Brokers with these purposes corresponded to three different types of brokers. The first purpose was to facilitate and manage networks with an internal focus. Brokers with this purpose were identified as type A brokers. Responsibilities identified for this broker were to organise and manage the network and to facilitate collaboration (Bevc, Markiewicz, Hegle, Horney, & MacDonald, 2012; Hanna & Walsh, 2008; Jones & Noble, 2008; Kubiak, 2009; Stadtler & Probst, 2012; Williams, 2002). The second purpose of a broker role in intersectoral collaboration was to function as a point of contact between different sectors and to create benefits for a third party (e.g. population groups, professionals). Two types of brokers (type B and C) with this purpose were identified based on their position in the network. Type B brokers were positioned between the sectors and aimed to create benefit for the third party (e.g. population groups, patients) together with the collaborating sectors. Responsibilities of this type of broker were to facilitate the connection between sectors to achieve the common goal and to coordinate the delivery of services/programmes (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). Type C brokers functioned as the representative of the third party. They aimed to connect the third party to sectors. Responsibilities of this type of broker were to facilitate the connection between the represented population and services, and to act as a gatekeeper for the third party (Kousgaard et al., 2015; McKenna et al., 2015).

The second and third research questions were answered by focus groups with professionals collaborating with CSCs.

The second research question aimed to identify the professional's perspective towards the CSC role as the broker in the connection between the primary care sector and the sport sector. Professionals of all focus group identified that CSCs were assigned to connect the primary care sector to the sport sector. To achieve this, CSCs were positioned centrally to be able to act as the main point of contact for all professionals and as the visual chain of the network. The implementation and reasoning for this CSC role was perceived differently by professionals from different focus groups. Professionals active in a structural partnership stated that CSCs implemented their broker role in the connection as a 'referral role' whereby they guided people from the target population through the sectors. They assigned this role to CSCs since the time and effort to facilitate such a connection was a full time job. Therefore they needed someone with the connection as their main focus. Also, these professionals assigned a central position to CSCs since this enabled them to function as the connecting link to the target population. Professionals collaborating on project base stated that CSCs implemented their broker role in the connection between the primary care sector and the sport sector as a 'facilitator role'. They assigned this role to CSCs since it enabled CSCs to support all organisations in the network by identifying opportunities to collaborate/organise activities. Responsibilities of CSCs that were identified by all professionals were: organise and manage the network, facilitate collaboration, facilitate the achievement of the common goal, coordinate the delivery of services/programmes, facilitate a connection between the represented population and services and act as a gatekeeper.

The third research question identified the professional's perspective regarding the contribution of the CSC role to a sustainable connection between the sectors. Professionals active in a structural partnership stated that whether the connection could be sustainable was highly dependent on the CSCs, as brokers in the connection. Professionals collaborating on project base stated that CSCs have an important role in sustaining and safeguarding the connection. However, they did not perceive the current connection as sustainable yet. Prerequisites to make the connection sustainable, stated by professionals from all focus groups, were: an independent initiator, an attitude change among professionals, and the sufficient resources/facilities. A prerequisite stated by professionals in a structural partnership was that the CSCs should be supported by a structural partnership of professionals in order for the CSC role to be successful and supported.

5.2 Reflection on main findings

Based on the findings of the literature review and the focus groups, it can be concluded that the job description of CSCs (including purpose, position and responsibilities), as brokers in the connection, corresponded to a type B broker.

5.2.1 Broker type B

Previous research which identified a broker role corresponding to type B brokers, all focused on a public health setting (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). Brokers in these studies all had the corresponding purpose to connect sectors improve the health status of specific target populations (third party). To achieve this, brokers were positioned between the sectors that they connected, just as CSCs were positioned between the primary care sector and the sport sector. In addition, brokers in these studies were also expected to function as the connecting link to the target population (Hogan & Stylianou, 2016; Kilpatrick et al., 2007; Lindsay & Dutton, 2012; Nissen, 2010; Rugkåsa et al., 2007). This purpose and position clarified that brokers in an public health setting are mainly focused on creating benefits for the target population (third party), rather than on organising and managing (e.g. setting goals, managing conflicts, building trust) networks with an internal focus as identified for brokers in other settings such as PPPs (Bevc, Markiewicz, Hegle, Horney, & MacDonald, 2012; Hanna & Walsh, 2008; Jones & Noble, 2008; Kubiak, 2009; Stadtler & Probst, 2012; Williams, 2002).

The CSC role, as a type B broker, was crucial encountering the barriers of the connection stated by both the professionals in the focus groups and previous research of Leenaars et al. (2015a). One of these barriers was that professionals (especially primary care professionals) lacked time to invest in the connection. They needed a party acting as a broker, to facilitate collaboration and to organise/manage the network of professionals. This was also supported by previous research of Huijg, van der Zouwe, Crone, Verheijden, Middelkoop and Gebhardt (2015) who stated that primary care professionals lacked time. Therefore, they needed a connecting party to involve them in the connection and to keep them motivated (Huijg et al., 2015). Also, professionals stated that this connecting party had to be responsible for the achievement of the common goal to increase the number of physically active people by coordinating the delivery of services (such as sport activities). This was not only crucial since professionals lacked time but also since they lacked knowledge of suitable and available sport offer (Leenaars et al., 2015b). Another barrier mentioned by professionals in the focus groups was that the target populations needed an connecting link to guide them through the sectors in

order to reach sport facilities. This barrier was tackled by the responsibilities of CSCs to facilitate a connection between the sectors and the target population, and to act as a gatekeeper of the connection. This reasoning for the CSC role and its responsibilities appeared to include responsibilities of all types of brokers identified by literature. This implied that broker types were determined based on the purpose and the position of the broker, rather than on responsibilities. This implication was supported by Long et al. (2013) who stated that a brokers had the same responsibilities and tasks in any network. They stated that the position of the broker determined how the broker implemented its responsibilities and duties (Long et al., 2013).

Also, the reasoning for the broker role (including purpose, position and responsibilities) as identified for CSCs was supported by the structural holes theory of social capital of Burt (2002). This theory stated that brokers cover structural holes between different networks and thereby cross boundaries of the networks. By crossing these boundaries, brokers are able to facilitate communication and the transfer of information between otherwise separate networks. This role stated by Burt (2002) corresponded to the CSC role in the connection between the primary care sector and the sport sector. CSCs connect the otherwise separate sectors by fulfilling the structural hole, and thereby enable collaboration and the transfer of information.

Previous research also showed that the professional's perceptions regarding the CSC role corresponded to the perceptions of CSCs themselves (Leenaars, Florisson, Smit, Wagemakers, Molleman & Koelen, 2016b; Leenaars, unpublished results). CSCs identified that they implemented their broker role by a referral role and an organiser role, as identified by professionals in the focus groups. CSCs stated that the referral role focused on guiding people from the target population through the connection towards appropriate sport activities. The organiser role focused on organising sport activities to promote physical activity among the target population. CSCs implemented this role by either organising sport activities themselves or support sport professionals to facilitate activities. Although all CSCs included both roles in their role as broker, they tend to focus on one of the roles. The extent to which CSCs focused on one of the roles depended on how the CSC network was organised by municipalities (Leenaars et al., 2016b). This explained the differences in professional's perceptions between the focus groups. Professionals active in a structural partnership stated that CSCs focused mainly on the referral role. This was due to the involvement of primary care professionals in the partnership, who were responsible to refer patients to CSCs

(Leenaars et al., 2016b). Meanwhile, professionals collaborating on project base stated that CSCs were mainly focused on the organiser role since they focused on organising activities and supporting sport professionals to facilitate activities.

5.2.2 Sustainability

Both professionals active in structural partnerships and professionals collaborating on project base stated that the broker role of CSCs was important for the sustainability of the connection. Especially the central position of this broker role appeared to be crucial. This implied that the connection between the primary care sector and the sport sector can be sustainable but that it always needs a broker role. This implication was supported by the structural holes theory of social capital of Burt (2002) who stated that as long as there is a structural hole between the sectors, the broker is crucial to connect those.

Implications on the sustainability of the connection were also supported by previous research of Vermeer, van Assema, Hesdahl, Harting & de Vries, (2013), who assessed different intersectoral community-based health programs in the Netherlands. They concluded that sustaining such programs appeared to be complicated due to barriers such as communication barriers. Prerequisites for sustaining such a program were for example a supportive political policy, supportive administrative and community environment and a goal-oriented program leader (Vermeer et al., 2013). These prerequisites for sustainable intersectoral collaboration related to the prerequisites identified by professionals in the focus groups. The main prerequisite, according to Vermeer et al. (2013) and Scheirer (2013), was a goal-oriented program leader. This goal-oriented program leader was crucial to support the internal dynamics e.g. by motivating professionals to participate and organise collaboration. Also, this role ensured that collaborations were incorporated into routines of organisations/professionals. Intersectoral collaborations without such a role diminished (Vermeer et al., 2013; Scheirer 2013). These findings corresponded and supported the perceptions of professionals that the connection between primary care and sport needed an independent initiator who had the connection as their main focus, in order to be sustainable.

5.3 Strengths and limitations

Strengths and limitations of both the literature review and the focus groups were identified. A strength of the literature review was that it provided a broad overview of the broker role in intersectoral collaboration. This was enabled by including different geographical areas in the review. Nevertheless the main reason that enabled the broad overview was the inclusion of a

great variety of research areas. This provided a great variety of contexts and settings of broker roles. However, this was a limitation as well since some research areas were excluded based on operationalisations of the concept and time management. Excluding these research areas may have caused that some relevant publications were excluded. As far as known, this did not happen since publications of excluded research areas were assessed on relevance.

Another strength of the literature review was that it was carried out systematically. Publications were assessed using an pre-proposed assessment scheme. Such a systematic method provided literature that focused specifically on the job descriptions of brokers and were therefore comparable to each other. However, a limitation was that some publications were excluded from the review since full texts of these publications were not available.

The systematic assessment of publications was executed by two researchers independently (KL and NW). This increased the reliability of the included sample of publications. Also, all included publications were assessed on the quality of the sampling strategy, data collection and analysis methods that were used. Therefore, all studies included in the review were of sufficient quality.

Also strengths and limitations of the focus groups could be identified. A strength of the focus groups was that professionals from all relevant sectors, collaborating in the CSC networks, participated in the focus groups. This increased the reliability of the findings since these professionals were able to identify the realistic CSC role in the connection. The inclusion of professionals from all relevant sectors was not only helpful for the findings of this thesis, but also for professionals themselves. Especially professionals of focus group 5 identified new possibilities to collaborate during the focus group since they did not have regular meetings.

Another strength of the focus groups was that both networks of professionals and CSCs organised as a structural partnership and organised on project base were included. This enabled the identification of differences and similarities between professionals from different networks. This provided a broad and realistic overview. However a limitation was that only one focus group focused on a network that was organised on project base, while four focus groups focused on networks that were organised as a structural partnership. Therefore unknown is whether findings of the network on project base can be generalised. Although the generalisability is unknown, it was still relevant to include this focus group since it identified the CSC role and the contribution of the role to the sustainability of the connection, in such a network.

Also a strength of the focus groups was the inclusion of focus group 4. Prior to the focus groups was discussed whether focus group 4 would be included in the thesis since this network did not encounter an actual CSC function. Findings of this focus group about the CSC role might therefore be biased. However, this focus group appeared to be helpful for the thesis since professionals in this network stated that one professional in the partnership functioned as the broker in the connection. Therefore, professionals in this focus group supported the findings that intersectoral collaboration needed an independent initiator and a structural partnership to support this initiator.

A possible limitation was that all CSCs were present during the focus groups. This might have influenced the perceptions of the professionals since CSCs were allowed to share their perceptions as well. This limitation was reduced by the green and red papers. Since professionals and CSCs were asked to show one of these papers before explaining their argumentation, they were influenced by the perceptions of others as little as possible.

5.4 Implications for practice and research

The results of this thesis were relevant for both practice and research. Results were relevant for practice since they provided insights in the specific job description of the CSC role, as broker in the connection. These insights specified the existing guidelines on how the CSC role and funding should be implemented. This was useful for policy since this implied that the CSC role and funding should be maintained in order to maintain and develop the connection between the primary care sector and the sport sector. Specification of guidelines was also relevant for CSCs themselves since this enabled them to alter and/or maintain their role as broker in the connection. At last, these finding were relevant for professionals since guidelines specified in what manner they should collaborate with CSCs.

The results were also relevant for practice since the three types of brokers, as identified by this thesis, can be used as a framework to develop new broker roles in practice. Based on the purpose of a new broker role can be determined which position and responsibilities are crucial for that broker to be successful.

The results were also relevant for research since they expanded scientific knowledge about the broker role in intersectoral collaboration. Future research should focus on expanding the knowledge on the three types of brokers even further by testing the characteristics of the types in different settings. this enables the specification of the three broker types. Also, further research can focus on identifying whether these three types of brokers are all possible

broker types or that more broker types can be identified. This can be done by addressing brokers in research areas that were not included in this thesis. Possible other types of brokers can be compared to the three identified types to identify differences and similarities.

The results of this thesis were also relevant for research since they expanded the scientific knowledge on the CSC role in the connection between the primary care sector and the sport sector. Future research can expand this scientific knowledge even further by conducting focus groups in networks of other CSCs, not included in this this thesis. This can especially be done by addressing networks of CSCs organised on project base. This increases the generalisability of the identified CSC role in these networks. Increasing the generalisability can also be done by addressing the role of neighbourhood sport connectors, as brokers in the connections between other sectors. This can identify whether the CSC role corresponds to the role of neighbourhood sport connectors.

At last, findings of the thesis were relevant for practice and research since it expanded the knowledge on the contribution of the CSC role in the sustainability of the connection between the primary care sector and the sport sector. Currently, the CSC role appeared to be crucial in order to sustain the connection. However, all professionals stated that facilitating the connection required time and effort. This implied that the situation might be changed in some years. Further research should therefore focus on the sustainability of the connection and the contribution of the CSC role on a long term. This can provide information on how the CSC role changed over the years and whether the CSC role is crucial on the long term.

5.5 Conclusion

The role professionals assigned to CSCs, as brokers in the connection between the primary care sector and the sport sector, corresponded to a type B broker. Professionals assigned CSCs the purpose to connect the primary care sector to the sport sector. To achieve this, CSCs had a central position between the different sectors. This position enabled them to act as the connecting link to the target population. Responsibilities of the CSC role were focused on the referral of people from the target population through the sectors, and to support professionals in the network by facilitating activities.

Based on the CSC role in the connection between the primary care sector and the sport sector can be concluded that this role is crucial for the sustainability of the connection. This role was crucial in both networks organised as structural partnerships and organised on project base. The reasoning why this role was crucial was that the CSC role was able to tackle the

barriers of the connection and acted as an independent initiator by involving and motivating professionals.

Both further research to the CSC role, as broker in the connection, and further research to the contribution of this role in the sustainability of the connection should specify whether the CSC role is crucial in the connection between the primary care sector and the sport sector on the long term.

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Appendix A

Author, year, geographical area	Aim, study design, methods	Context	Findings/results: type of broker, purpose, responsibilities, duties
Bevc, Markiewicz, Hegle, Horney, and MacDonald (2012) **US (North Carolina)**	Aim: use the social network analysis to assess how the public health epidemiologists (PHE) program in North Carolina facilitates inter-organisational relationships. Besides, identify network-based roles associated with facilitating information and communication between hospitals and local public health departments (LHDs). Design/method: - PHEs completed an electronic survey and 10 PHEs participated in semi-structured interviews. - 119 LHD nurses completed an electronic survey. These nurses were either communicable disease (CD) or tuberculosis (TB) nurses. - Semi-structured interviews with 11 hospital supervisors of the PHEs. Functions of supervisors were director, assistant director, manager of infection control, infectious disease	The North Carolina Division of Public Health established an innovative program in 2003 that placed PHEs in hospitals around the state. The aim was to improve communication between hospitals and local public health departments (LHDs) and support public health surveillance and response. The PHE programme serves to develop a communications infrastructure to facilitate and ensure the timely dissemination and transfer of information between the health care and public health sector. In this, the PHE serves as the main point of contact for LHDs and hospitals.	Type of broker: The PHEs serve as a liaison type of broker. PHEs serve as a go-between for hospitals and LHDs. The average tenure of PHEs was 49 months. 9 out of 10 PHEs completed a postgraduate degree (either master's and/or PHD). The CD and TB nurses were the primary contact for the PHEs on the local health departments. Purpose: the PHE serves as a main point of contact to facilitate and ensure the timely dissemination and transfer of information between the health care and public health sector. Responsibilities: providing a dedicated point of contact within hospitals to increase the efficiency of surveillance, detection, and monitoring of community-acquired infections and potential bioterrorism events. Duties: - Surveillance of practices among LHDs and the public health system. - Assisting LHDs with public health investigations. - Educating clinicians regarding diseases of public health importance. - Enhancing communication among clinicians, hospitals, and the public health system. - Conducting special studies to possible community-acquired infections and potential bioterrorism events.

	physician, hospital epidemiologist, and chief medical officer. The survey and the interviews were based on the roles and responsibilities of the PHEs.		
Hanna and Walsh (2008) Europe, UK, US	Aim: improve the understanding of the dynamics in a collaboration between small firms. Design: qualitative multiple case (5) study. Method: data was collected over a 12-month period. - 14 in-depth interviews with owners and senior managers of small firms engaged in interfirm collaboration. - Nine independent brokers were interviewed. - Also secondary data was collected such as: press reports, marketing material, and policy documents of local government agencies	Networks of small firms collaborate on numerous activities such as marketing, procurement, or manufacturing. It is possible for small firms to improve their position in the market using these networks. Not all firms have equal opportunities to find partners since not all firms have similar goals and equivalent level of commitment. The use of network brokers can be helpful to make interfirm cooperation successful. Therefore, some partnerships consist of only small firms while others have a broker (either funded by the government, or paid by network members) to organise the partnership.	Type of broker: network brokers facilitate cooperation among small firms and have a unique perspective on the cooperation process. They emphasize the need for neutrality when facilitating the cooperation process and concentrate on building trust and confidence among network members. The performance of brokers was often measured by their impact on the financial situation of the firms; as a consequence they focused on monetary savings. Most successful brokers not only focused on coaching the network but also worked on locating information and opportunities for firms, such public funding opportunities. Participants were small firms that engage themselves in interfirm cooperation. The majority of firms employed between 150 and 175 people (smallest: 9; largest: 330). All of the firms were from capital-intensive manufacturing industries. The smallest cooperation was between 2 firms, the largest between 28 firms. Purpose: bring interested parties together and develop the relationships between them. Some brokers also mediate any disputes and can act as single point of contact for outside partners. Responsibilities: - Organising networks and preclude opportunistic and suspicious behaviour of firms. - Assess competencies of all firms in the network and

			other potential network members and exclude firms that might antagonise existing members of the network. - Creating procurement or subcontracting arrangements among firms. Duties: - Focus on monetary savings by for example negotiate improved prices for the purchase of utilities, materials, or equipment. - Mediate any disputes between firms in the network. - Act as a single point of contact for external parties. - Remain neutral in the network-building process in order to build trust and confidence among firms in the cooperation. - Locate information and opportunities so that firms can make profit. - Suggest appropriate goals for the network. - Use public agency connections as a source of information and funding. - Understand what successful cooperation requires and being able to articulate the types of arrangements that firms could potentially benefit from.
Hogan and Stylianou (2016) **Australia**	Aim: determine the work and the perspectives of national sporting organisations (NSO) as boundary spanners in the *Sporting Schools* policy networks. Design: network ethnography approach: interrelated activities, including internet searches, construction of network diagrams, and interviews with key network	Sporting Schools is an intervention, launched by the Australian federal government in 2015. Its aim is to increase physical activity levels and sport participation among children under the broader umbrella of health promotion. By the end of 2015, more than 4000 schools were registered in the initiative. After registration the school	Type of broker: NSOs were responsible for offering appropriate sports offer to primary schools. The initiative provided flexibility that NSOs could use to improve the quality of the programme for example by making it attractive for schools to include in the curriculum. Purpose: make themselves attractive for schools/teachers to engage in and being able to structure programmes and employ processes that are likely to increase participation of young people in sport and facilitate the transition to community sport clubs.

	actors. Method: data was collected over two phases: - Web audit and social network analysis; data collected through Twitter over a two month period. Collected and analysed tweets that mentioned the hashtag #sportingschools. This identified organisations involved in the initiative. Also identified NSOs that could be approached for interviews. - Semi-structured interviews over Skype or telephone with key network agents. Six representatives of NSOs were interviewed (out of 12 that were involved).	receives funding. Schools can make arrangements with relevant NSOs or NSO-endorsed coaching providers. NSOs act as boundary spanners between the programme and the schools. The initiative is based on the approach of 'shared responsibility' between schools, sporting organisations (NSOs) and community groups.	Responsibilities: - Enacting government directives and implement these in the programme. Thereby have a critical role in the success of the policy initiative like *Sporting Schools.* - Responsibility that the programme meets all the set standards for sport among children. - Reduce the disconnect between schools and sport clubs by maximising the access for children. Duties: - Manage opportunistic behaviour by external providers and non-accredited coaches by having greater jurisdiction and influence over the relationship. - Application of new ideas, creativity, lateral thinking' and so on. - Assisting and supporting teachers and offering resources to ensure the quality of the programme. This could be seen as 'professional learning' for the school teachers, which made the programme more attractive for schools. - Underpin the programme with educational pedagogies and facilitation of sustainability. This makes the programme more appealing for schools to involve in. - Actively encouraging students to engage in sports besides the initiative. NSOs encouraged children in different ways, for example by encouraging the transition to local sport clubs and providing equipment to sport at home. - Expose parents to their children's commitment to the sports in the programme. This makes it more likely that the parents will facilitate the transition towards local sports clubs etc.

Jones and Noble (2008) UK, Australia	Aim: examine the challenges and behaviour of individual managers whose work involves bridging the organizational boundaries of public-private partnerships (PPPs): so-called boundary spanners. Design: multiple case study, seven different PPPs, all involving private sector organisations and local or regional councils. All the PPPs reached and substantially progressed through its implementation stage before participating in this study. Method: data was collected over two years using different methods. - Personal interviews with 47 managers (some were interviewed more than once) - Non-participant observation at regular meetings. - Organizational and publicly available documentation.	PPPs are an important component for the government of for example the UK for delivering public services and infrastructure. Despite the decline in number of PPPs in the UK, this number is increasing in other parts of the world. Therefore, understanding PPPs continues to be important. Although institutional, societal, and financial aspects of PPP have been elaborately researched, this does not contribute to understanding the role of individual actors in the PPPs. More specific, they overlook the contribution of boundary spanners. This study focuses on the contribution of boundary spanners in PPPs.	Type of broker: boundary spanners serve as a bridge between different organisations. Boundary spanners are working in organisations that participate in PPPs. Therefore, different boundary spanners from multiple organisations have to work together to organise the PPP. In most cases, the brokers did not assign for the job but were assigned by their supervisors. They perceived it as a temporary job. They felt like their job in the organisation was dependent of the success of the PPP they were involved in. Included PPPs contrasting contexts whereby actors in the partnership have different motivations, roles in economy, governance mechanisms etc. Purpose: Creating and managing successful PPPs in different sectors. They constantly maintain the forward momentum of the PPP so as to prevent is it slowing down or stalling. Responsibilities: - Responsible for managing the time schedule of the PPP to prevent adverse consequences like financial penalties. - Close contact with partner organisations. Creating emotional bonds based on trust, commitment, and respect. - Managing the tension between adopting a largely formal and bureaucratic approach, or else resolving issues themselves through informal mechanisms. Duties: - Having agreement, knowledge, and co-operation of partner organisations to be able to make joint decisions when authority is lacking. - Working collaboratively with equal partners. - Achieve win-win situations by keeping strict time

			deadlines. - Successfully adopt, and adapt to, environmental tension from the organisation and the PPP.
Kilpatrick, Fulton, and Johns (2007) **Australia**	Aim: identify and promote effective brokerage arrangements and models for lifelong learning in the Australian agriculture and natural resource management sector. Design: multi-method. Method: - Telephone survey with 100 broker organisations. Organisations were identified by a list of contacts from previous research. More organisations were identified through snowball sampling. - Six case studies with organisations that also participated in the survey. Data collected by interviews with brokers, clients, and other stakeholders. - Three interactive workshops and reference groups for stakeholders.	Lifelong learning is associated to economic and social wellbeing. Therefore, people should be able to educate themselves their whole life. This is recognized by policy makers. In order to better accommodate lifelong learning, a broker, as a facilitator, is implemented who acts to match the needs of potential learners with appropriate learning opportunities. This study focuses on the Australian agricultural and natural resources sector.	Type of broker: a training broker has an active and purposeful role in identifying training needs of people from the agricultural and natural resource sector. A training broker considers the whole suite of present and potential opportunities and actively matches needs to training, acting in the best interest of the clients. Successful brokers need to be able to promote connections within a single industry and or groups of industries across the country. They also have been found to build trust by displaying a good understanding of the different contexts and cultures of stakeholders. Participants are people from the agricultural and national resource sector since this sector is associated with low levels of participation in education and training. Purpose: work together with different parties to identify training needs and engage participants. Besides, identify, negotiate, and plan appropriate trainings for participants. Responsibilities: - Selection of the right training provider to assist in planning and developing the programme. - Have links to, and build relationships of trust with training providers. - Encourage a learning culture among people in the agricultural and natural resource sector. - Develop and maintain a wide network of stakeholders to identify emerging needs and awareness of training opportunities. - Have appropriate professional standards.

			- Assure the quality of the training provided. Evaluate trainings and alter them where needed. - Coordinate delivery of programmes to meet participant need, in terms of location, time, and timing. Duties: - Inform providers and potential clients about needs and opportunities. - Refer clients and providers to each other. - Negotiate content and/or delivery between potential clients and providers to meet the standards of all parties. - Develop training programs to fill gaps that are identified by clients or providers. - Invest financial and human resources in training brokerage. - Selection of the right trainers who were credible, well respected, and able to connect with farmers and have knowledge of the topic. - Creating the institutional and policy environment for effective brokering.
Kousgaard, Joensen, and Thorsen (2015) Denmark	Aim: explore the challenges encountered by the general practitioners (GPs) in their new role as municipal practice consultant (MPC) (a.k.a. boundary spanner). Design: ten semi-structured interviews with MPCs from the Capital Region of Denmark Method: Selection of MPCs through surveys in municipalities	Structural reforms in the health care sector changed the division of work between national, regional, and local levels of government in Denmark. One objective of these reforms was to improve coordination in and among different health care sectors in order to improve conditions for coordinated patient pathways. Local municipalities were given increased responsibilities for	Type of broker: MPCs act as brokers. These MPCs are local GPs hired by the municipality to improving collaboration between general practice and the municipal health agencies. Besides this job, they have their regular work as GP. Purpose: to act as the connecting link between the municipality (that are responsible for local health services) and the local GPs – from the viewpoint of the GPs. Responsibilities: - Shaping the foundations of collaborations between health services and GPs. - Act as information gatekeepers to ensure that GPs are

	to achieve maximum variation sampling. Sampled on characteristics such as: number of MPCs, date of employment, number of consultancy hours per month, number of local GPs etc. Interviews contained topics like task definition, types of tasks performed, the role of the MPC in the existing structures of collaboration etc.	providing general and patient specific health prevention. These new responsibilities amplified the need for collaboration between the municipalities and general practice. Because of this need, the function of municipal practice consultant (MPC) was created. Actors in the network: municipalities, local institutions like the local medical guilds and the municipal-practice-committees.	only provided with information directly relevant for them. - Catching problems and searching for common solutions, together with local organisations in the municipalities. - Contributing to the development of formal patient pathways and/or IT-communication tools. Duties: - Reacting to municipal initiatives and participating in municipal meetings to organizing and summarizing meetings attended by local GPs. - Writing newsletters to local GPs to inform them about changes and decisions of local municipalities. - Actively seeking to implement joint decisions made in the municipal-practice-committee.
Kubiak (2009) **UK**	Aim: contribute to the knowledge base on network development by describing the work and challenges faced in school-to-school networks. Design: multi-methods. Method: - Semi-structured interviews with 16 facilitators. - Three months of participation observation in three newly formed regional groups of facilitators. In these meetings, facilitators discussed the activities,	School-to-school networks bring practitioners together from different education organisations to learn by sharing ideas and critiquing each other's ideas. General issues can be addressed which one organisation on its own cannot tackle.	Type of broker: a group of facilitators that is employed to facilitate the network development act as brokers. Many of these facilitators had a background in educational leadership in schools. They develop network members' capacity by coaching and connecting parties to each other. Purpose: fostering network learning. Capturing and passing knowledge, generated within networks, to other networks and policy makers. Responsibilities: - Develop and facilitate networks between different parties. - Networking by connecting parties that can learn from each other. - Capture and transfer knowledge form the networks so that both networks participants and policy makers can learn from the networks.

	philosophies and challenges of facilitation. - Three case studies in networks that differed in development status and geographical area. facilitators. - Documents provided by the facilitators were analysed.		- Outside-in (ex. Facilitate annual reviews to release further funding) and inside-out (ex. Holding networks to their own aspirations and values) accountability. - Responsible that activities and goals, set by policy makers, are met or done. Duties: - Coaching network members - Facilitating reflection like exploring values. - Bringing people together for learning - Support those who facilitate network activity. - Create credibility and status in the network. - Intensive guidance and support for new networks.
Lindsay and Dutton (2012) UK	Aim: explore the role of National Health Service (NHS) professionals as boundary spanners in the Pathways to Work (PtW) initiative. Design: semi-structured, qualitative interview approach. Method: - Semi-structured interviews with 52 NHS staff employees that were involved in the delivery of PtW condition management services across five different districts in England, Scotland, and Wales. All participants were selected through purposive	In recent years, many developed countries have faced the problem of large numbers of people of working age claiming disability benefits. To tackle this problem, the PtW initiative was developed in the UK. The PtW initiative is implemented in 18 different districts. The initiative sought to offer services to target a number of health-related, personal and external barriers for people that are out of work to stimulate the return to work. This initiative was a partnership between Jobcentre Plus (the main government agency assisting people to move towards work) and the NHS. This initiative achieves health benefits for participants. NHS	Type of broker: small teams of condition management workers with the function of bringing together professionals from a range of disciplines. In most districts, these professionals adopted the role of condition management program practitioner. Purpose: offer a holistic approach to tackle health barriers and provide intensive support for people who are unemployed. Responsibilities: - Linking with different stakeholders within a complex, multi-agency and inter-professional policy agenda. Hereby, practitioners recognised that their own expertise could be complemented by other professionals or organisations. - Responsible for communication between the NHS and Jobcentre Plus so that the organisations know one another's goals and purpose. - Bring together occupational therapists, physiotherapists, nurses, and other health professionals and require them to adopt the new, generic role of

	sampling. - Interviews conducted with senior managers who was responsible for the PtW delivery in three different districts in Scotland.	staff engaged in new generic roles to offer a holistic approach.	condition management practitioner (CMP). - Connect communities to create a bridge between mainstream public services and potentially excluded groups. Duties: - Accommodate differences of working practices, cultures, and terminology. Hereby recognise the different motivations between the different organisations (ex. Jobcentre Plus is way more target-oriented than the NHS). - Create trust, credibility, and integrity by making clear that the initiative was supported by the NHS. - Offer empathy, listening skills and the ability to provide tailored support to different parties. - Understanding the service user's perspective and provide holistic support (ex. knowing the household situation of service users). - Create willingness to challenge traditional ways of working, in reflection of new generic roles. - Transfer people to facilities or care that they need (CMP practitioners were formally not certified to transfer people to, but often did).
McKenna, Fernbacher, Furness, and Hannon (2015) **Australia**	Aim: describe the development of the role of Aboriginal Mental Health Liaison Officer (AMHLO) in urban settings and identify stakeholder perceptions on how the role impacts the typical journey of Aboriginal consumers engaging in mental health services. Design: case study using both qualitative and quantitative data. Data was collected on the journey	There exists a disparity between the health status of Aboriginals and other Australians. Prior to the age of 65, the mortality rate of Aboriginals is three times higher than the mortality rate of other population groups. Despite this, a suboptimal use of mental health services by Aboriginal people exists due to barriers such as communication. By this initiative, the use of mental health services by Aboriginals is	Type of broker: the AMHLO was the broker between the Aboriginal community in Australia (mostly in urban settings) and the mental health services. The AMHLO aim to make the mental health services more accessible for the Aboriginal. Purpose: Improve Aboriginal people's transition through mental health services. Refer people to the services they need. Responsibilities and corresponding duties: 1. The initiator: initiating access to the services. - Consultation by entry of the mental health services.

	of consumers through the services and the actual role of the AMHLO. Method: - Written accounts of workload and role kept by the AMHLO. - Semi-structured interviews with stakeholders including the AMHLO, managers, and clinicians. - Quantitative data on number of referrals.	aimed to be improved.	- Establish relationships with mental health staff to build trust. - Consultation in the community to prevent mental health emergencies. - Being able to bring a cultural dimension and understanding. 2. The translator: brokering understanding among consumers and clinicians. - Developing trust with consumers to facilitate engagement and to provide support of consumers and their families. - Supporting the clinical team to create a holistic approach. - Supporting the consumer and the family in active involvement in the decision making process. 3. The networker: discharging to the community. - Arranging discharge pathways and coordinating referrals and follow-ups. - Having in-depth knowledge of referral opportunities in the community so that consumers are referred to appropriate initiatives after discharge. 4. The facilitator: providing cyclic continuity of care. - Creating time frames so that once the cultural link was established, engagement was maintained even when consumers were formally discharged from the service.
Nissen (2010) **US**	Aim: explore the experiences and characteristics of boundary spanners engaged in a multi-year, multi-system demonstration and reform effort. Design: explorative multi-method	Over the last decade, the identification and promotion of best practices in adolescent substance abuse treatment has grown substantially. To make the programmes even more	Type of broker: The boundary spanners coordinate joint community efforts to implement improved services in social networks within communities. A successful boundary spanner has the following characteristics: - Patience, flexibility, sense of humour and ability to

	study Method: - Reading initial documents on the boundary spanner role and the documents that the project directors (PDs) of the initiatives wrote on their role. - Semi-structured interviews with nine PDs. - Three focus groups with the same PDs. Sine some were transitioned by the time of the last focus group, a total of 13 different PDs participated in the focus groups. - Ongoing dialogue with the PDs	effective, it is necessary to evaluate the roles and experiences of system agents. In particular, it is important to evaluate the roles and experiences of the boundary spanners that facilitate the network and make it possible for parties to work together on a common purpose.	keep things in perspective. - Energy for a job that is so demanding. - Commitment to learning and expanding knowledge. - Dedication to the challenge and a positive attitude. - Taking initiative. Not waiting for someone else to provide guidance and direction. - Diplomacy and mediation skills. Participants in the study were PDs within the project: 'reclaiming futures: communities helping teens overcome drugs, alcohol and crime'. This initiative focussed on teens in the US. Purpose: coordinate joint community efforts to implement improved services in a living social networks and social movements. Responsibilities: - Cultivating excitement and momentum for new treatment approaches. - Generating and/or allying for new funding for such approaches. - Building cross-organisational partnerships (among schools, family etc.) to better identify adolescents in need of treatment. - Addressing ideological, procedural or administrative barriers to coordinate care for young people. - Assuring and monitoring that appropriate care was received. - Creating successful community partnerships to reclaim youth after formal treatment was concluded. Duties: - Leading efforts to create a integrated care system out

			of a fragmented and gap-ridden assortment of services. - Creating readiness and momentum to introduce evidence-based treatment approaches. - Monitoring, identifying and negotiating agency-based or cross-agency communication challenges or conflicts that could impede integrated care. - Constructing and coordinating cross-agency strategic plans. - Facilitate system change by working creatively and find solutions. - Keeping/communicating/expanding the vision of the initiative. - Tracking the changes by being responsible to stay in time and that the right people are involved.
Rugkåsa, Shortt, and Boydell (2007) Northern Ireland	Aim: explore mechanisms that secured the project's perceived success. The focus here is on the role of key individuals who acted as boundary spanners. Design: multiple case study (two different areas in Northern Ireland) with a multi-method design. Method: - Four focus groups involving 27 members of the partnership and the community associations. - Interviews with 12 partners of the project. These partners were from different sectors or local	The study is an evaluation of the fuel poverty intervention project 'home is where the heat is'. This intervention is developed since fuel poverty has negative impacts on health. The project was set out to tackle fuel poverty through a twin process of making properties more energy efficient and increasing household income by encouraging higher uptake of social security benefits. This project was implemented by a partnership of 21 organisations from different sectors.	Type of broker: The boundary spanning role was conducted by two persons. The health action zone (HAZ) manager and a full-time community energy advisor (CEA). Successful boundary spanners have the following characteristics: - Positive attitude - Enthusiasm - Interest in people - Energy - Mediation skills - Ability to build trust - Ability to cajole - Leadership ability - Strategic thinking - Non-intrusive, yet persuasive communication skills Purpose: - CEA: facilitating communication with the communities and the various organisations involved at a local level, as well as supporting project participants. - HAZ: securing support from organisations ranging

	elected political representatives. - Background information and reflections were obtained through a number of visits to the project areas that included informal conversations with members of community associations the CEA, the HAZ, and other partnership members.		from the local community associations to government departments, and on connecting the project to local and regional policy-making. Responsibilities: - Creating trust in the project among different parties and the people from the communities. - Building and maintaining relationships. - Ability to find solutions. - Sharing information with different parties and the communities. - Facilitating communication/commitment/involvement/activity Duties: - Trying to link the project to policy making processes (especially HAZ). - Keeping everyone from different sectors working to the same agenda. - Ensuring benefits for all, both for the parties in the partnership and the people from the communities. - Linking the project to other processes.
Stadtler and Probst (2012) PPPs in different countries.	Aim: explore how broker organisations facilitate the partnering process and develop a framework for the roles they play in this process. Method: - Analysed two PPPs in the area of education. For each PPP, both internal and published materials were studied. Also,	Public-private partnerships (PPPs) have the potential benefit to bring together different sector-specific resources, expertise, capacities and reduce one-sided solutions. However, there are also challenges that hamper the partnering process for example the cross-sectoral nature of the collaboration. Broker organisations have specific experience and capacity	Type of broker: brokers are organisations that have specific experience and capacity to build and/or facilitate PPPs. These organisations act in the roles of convener, mediator, and learning catalyst. Purpose: being a third party that facilitates negotiation on and the development of PPP arrangements and help research, maintain, monitor, review, and evaluate PPPs over time. Responsibilities:/duties: 1. As convener - Broaden the understanding of the public problem in all its complexity by facilitating

	interviews with broker organisations' staff members, corporate partners, public partners, and community members were conducted. At last, a field visit to a school that was the focus of one PPP. - Further analysis of PPPs identified 29 broker organisations that facilitate PPPs. Information from websites, published documents, program overviews, reports, and partnership guidelines were collected. - Semi-structured interviews with 25 key informants from 19 brokering organisations. - Control interviews with partners involved in the brokered PPPs to avoid bias. Finally, 33 partner interviews from 18 partner organisations were realised.	to facilitate collaboration. Research has not addressed how this facilitation is achieved.	interaction between the global and local level. - Motivate stakeholders to get involved in the PPP. - Organising systematic solutions by organising structured brainstorm sessions. - Connect partners in favour of a common goal by using their professional reputation, norms, and goals. - Create partnership legitimacy in order to promote external support for the collaborative approach and reinforcing partners' commitment. - Organise small events such as lunches to motivate partners to commit to achieving the milestones of the PPP. - Connect with other initiatives, programs, experts, and links of problems occur. This is essential to reduce the fragmentation of activities. - Scale up results of a specific PPP to a national or global level. - Help partners prepare a sustainable exit strategy ones the goal of the PPP is achieved. 2. As mediator - Talk to the stakeholders to understand their positions and figure out how and where an overlapping interest might emerge. - Help partners build relationships and seek transparency in designing the PPPs by facilitating the initial meetings. - Encourage partners to formulate a joint vision, anticipate potential problems, and develop a strategic plan. Hereby brokers convince partners to clarify roles, responsibilities, and

			timelines. - Key contact when problems or conflicts arise between partners of the PPPs by either providing support capacity or by building an environment to address problems. - In case of possible new partners in the PPPs, the broker helps prepare the newcomers and facilitate their integration in the partnership. - Encourage partners to adapt the PPPs to changing environments in order to achieve goals. 3. As learning catalyst - Provide stakeholders problem-related knowledge based on research, expertise, and experience with PPPs. - Provide partners very specific suggestions on partnership design, partnership tools and templates. - Provision of concrete suggestions, tools, benchmarking, and training in partnership management. - Encourage the formation of topic-related national steering committees that provide PPPs with strategic support, legitimacy, and access to other networks. - Train individuals in key positions in convening and brokering. Also introducing this individual to the broker network. The purpose of this is that when the broker leaves the PPP, a trained broker will still be present in the partnership. - Create monitoring or progress reports for the PPPs.
Williams (2002) **UK**	Aim: identify and understand the bundle of skills, abilities and	Within the UK public policy, a number of complex problems	Type of broker: boundary spanners create relationships and cross-sectoral collaboration between different actors. In order

	personal characteristics of boundary spanners that contribute to effective inter-organisational behaviour. Design/methods: the data collection consists of two inter-connected phases. (1) Identification and categorisation of boundary spanning competencies together with a short attitudinal investigation. This was investigated by surveys among boundary spanners. (2) Phase 2 exploration and understanding of the potential determinants of effective boundary spanning within a particular geographic area. This was achieved by different in-depth and semi-structured interviews. Method: (1) Participants for this phase were selected through personal contact. Boundary spanners were operating in three different policy areas. These boundary spanners were health promotion specialists, crime and community safety co-ordinators, or environmental and local agenda 21 co-ordinators. (2) The sample of boundary spanners to participate in phase 2	are being tackled through partnerships and collaborative interventions. In order to establish and facilitate these partnerships and interventions, competent boundary spanners are needed. Therefore, this study explores a range of perspectives, themes, concepts and models to identify behaviour patterns and competency profiles of practising boundary spanners.	to form effective collaborations, boundary spanners use particular skills, abilities, and experience and personal characteristics. Personal characteristics that are associated with successful boundary spanners are: - Respect - Honesty - Openness - Tolerance - Approachability - Reliability - Sensitivity - Trustful It is suggested that the best boundary spanners do not have a conventional professional or career profile, are less constrained by the attendant baggage, and are not perceived as direct threats to the status of the actors of the collaboration. Purpose: establish and facilitate cross-sectoral and cross-organisational boundaries to resolute complex societal problems. Responsibilities: - Building sustainable relations. Hereby encounter the differences between people from a variety of organisational, professional and social backgrounds. - Manage collaborations through influencing and negotiation. - Dealing with the structure and processes of collaboration. This demands an appreciation of connections and interrelationships. - Managing roles, accountabilities and motivations between agencies within an existing or emerging inter-organisational domain.

	was contacted through personal contact. Topics for the interviews were determined by the surveys of phase 1. Topics included motivations for partnership working, the management of boundary spanning roles personal skills and competencies for collaborative working.		Duties: - Communication and listening. This includes effective oral, written and presentational communication skills. - Understand, empathise and being able to manage conflict and criticism in order to build relationships between different actors. - Build trust in the relationships. Both trust among actors in the relationship and trust in the boundary spanner. - Being able to influence, bargain, negotiate, mediate and broker the relation in order to receive authority over actors in the network and make decisions. - Being able to broker solutions or deals between different parties. - Networking. Both at and around formal meetings. Due to networking, boundary spanners are aware of information of all sorts, for example about emerging resource opportunities, changing government priorities, impending changes, and potential scandals. - Structure the collaboration by defining roles and responsibilities; develop agendas, agreements, protocols etc. - Being creative, innovative and entrepreneurial to effectively find solutions to complex problems.

Appendix B

Introduction

1. Is the aim of the study clear?
(i.e. cleady formulated at the beginning and consistent with the way data were collected and analysed)
2. Is a qualitative approach appropriate to the aim?
(i.e. aim conceived in terms of investigating 'what' or 'how')

Sample and generalizability

3. Are the criteria for selecting the sample clearly described?
(i.e. exclusion and inclusion criteria specified)
4. Is the method of recruitment clear?
(i.e. an account of from where, by whom and how those potentially included in the sample were contacted)
5. Are the characteristics of the sample adequately described?
(i.e. age, gender, ethnicity, social class and other relevant demographic characteristics)
6. Is the final sample adequate and appropriate?
***(I.** e. large and diverse enough for the aims of the study to be fulfilled)*

Methods of data collection

7. Is the fieldwork adequately described?
(i.e. an account of where data were collected, by whom, in what context)
8. Are methods of data collection adequately described?
(i.e. an account of ways the data were elicited, and the type and range of questions)
9. Are the data collected systematically?
(i.e. evidence of consistent use of interview guide or rationale for ceasing questioning)
10. Are the data collected sensitively?
***(i.** e. evidence of flexible approach, responsiveness to participants' agendas, following up questions and*
adequate time given)
11. Are careful records of data kept?
(i.e. audio/video recordings and fieldnotes which can be independently inspected)

Data analysis

12. Are the processes of data analysis adequately described?
(i.e. an account of how data were processed and interpreted; of how concepts, themes or categories were developed)
13. *Is* evidence provided in support of the analysis?
(i.e. excerpts from original data, summaries of examples, or numerical data presented as evidence for
interpretation made)
14. *Is* sufficient original material presented?
(i.e. original material not just a token illustration)
15. *Is* there evidence that supporting material is representative? (n= 49)
(i. e. excerpts are named or numbered and sources given)
16. Is there evidence of efforts to establish validity?

Source: Boulton et al. (1996).

Quality assessment of included studies

Study	Quality points
Bevc et al. (2012).	14
Hanna, V., & Walsh, K. (2008).	15
Hogan, A., & Stylianou, M. (2016).	14
Jones, R., & Noble, G. (2008).	12
Kilpatrick, S., Fulton, A., & Johns, S. (2007).	10
Kousgaard, M. B., Joensen, A. S. K., & Thorsen, T. (2015).	15
Kubiak, C. (2009).	12
Lindsay, C., & Dutton, M. (2012).	13
McKenna, B., Fernbacher, S., Furness, T., & Hannon, M. (2015).	14
Nissen, L. B. (2010).	16
Rugkåsa, J., Shortt, N. K., & Boydell, L. (2007).	17
Stadtler, L., & Probst, G. (2012).	15
Williams, P. (2002).	10

Appendix C

Step 1
Organise and prepare the data for analysis

Step 2
Read carefully through all the data

Step 3
Detailed analysis with a coding process

3.1 Get a sense of the whole. Read all the transcriptions carefully. Evoked global thoughts and possible themes of codes.

3.2 Try to identify the underlying meaning instead of the actual data.

3.3 Make a list of topics. Cluster together similar topics. Form these topics into columns that might be used as major topics to structure data.

3.4 Use these topics to structure data. Abbreviate the topic as codes and write the codes next to appropriate segments of text. This structure process is used to see whether new topics and codes emerge.

3.5 Find the most descriptive wording for your topics and turn them into categories. Look for ways of reducing your total list of categories by grouping topics that relate to each other.

3.6 Make a final decision on the abbreviation of all codes and create an overview.

3.7 Assemble data corresponding to each category in and perform a preliminary analysis.

3.8 Recode your data when necessary.

Step 4
Organise and structure data using the different codes. These descriptions per code enables the analysing process.

Step 5
Determine and elaborate data from different codes and themes is be represented in qualitative narrative.

Step 6
A final step in data analysis involves interpreting the data.

Appendix D

Themes	Top-down codes	Bottom-up codes
CSC role: broker role	Purpose	
	Position	
Responsibilities and duties of the CSC role	Organise and manage the network	
	Facilitate collaboration	
	Facilitate the achievement of the common goal	
	Coordinate delivery of services/programmes	
	Facilitate a connection between the represented population and services	
	Act as gatekeeper	
Sustainability of the connection between sectors	Sustainability	Safeguarding
	Requisite	Independent initiator Attitude change Resources and facilities Structural partnership
	Future plans	Increase number of participants Expand network
Target population	Target population	