The effectiveness of youth care networks in Dutch municipalities

By

Thom Roozenbeek
1876295

Master thesis
University of Twente
MSc Public Administration
23-01-2018

Supervisors:
1st: Dr. Pieter Jan Klok
2nd: Prof. dr. Ariana Need

Abstract

For several decades, networks have been a prominent area of research within the field of public administration. The question why some networks perform better and are more effective than others however remains underexposed, and network effectiveness is rarely studied as a dependent variable. This thesis does so, and it studies the effect of two independent variables (governance mode and the need for network level competencies) on network effectiveness in the context of Dutch youth care, which has been decentralized in 2015 by means of a new law called the 'Jeugdwet'. Both direct and interaction effects of these independent variables are analyzed. The research questions are: (a) to which extent are youth care networks of neighborhood teams, primary schools and welfare organizations in Dutch municipalities effective and (b) to which extent can governance form and the need for network level competencies explain differences in network effectiveness? Moreover, elements of the oft-cited theory of Provan and Kenis (2008) regarding conditions for network effectiveness are tested, which is rarely done throughout the literature.

Youth care is often provided by neighborhood teams, which form organizational networks with both primary schools and welfare organizations to achieve the stated goals within the Jeugdwet. These networks are the unit of analysis of this thesis. However, it is unclear in which ways these organizations are in fact working together and to which extent the organizational networks are effective, which underlines the context-specific relevance of this thesis. To do so, two indicators for network effectiveness are used: the strength of relationships and the use of outcome measurements. Measuring these two indicators also gives an indication of how neighborhood teams collaborate with primary schools and welfare organizations in a Dutch youth care context, as well as which and to which extent outcome measurements are used in practice.

The 'diverse case method' was used to study the influence of the independent variables on network effectiveness, which means that cases were selected on the characteristics of the independent variables. Data was collected by conducting interviews and questionnaires. A total number of 33 networks were included in the study.

The results show no direct influence of governance structure on network effectiveness. However, the results do show that the need for network level competencies does affect network effectiveness, but in the opposite direction as expected; the lower the need for network level competencies, the higher the network effectiveness (in terms of the strength of relationships between network actors and the use of outcome measurements throughout the network). It should be mentioned that this concerns effectiveness on a *network* level and not effectiveness on a *client* level. The analysis of the interaction effects of the independent variables shows results that both confirm and contradict the theory of Provan and Kenis (2008). First, the results indicate that brokered networks are more effective when the need for network level competencies is *low,* and thereby contradict the theory. Second, it was found that one governance mode does not seem to be more effective than the other if the need for network level competencies is low, which also contradicts the theory. On the other hand, the results also show that governance mode does affect network effectiveness if the need for network level competencies is *high*; broker organized networks seem to be more effective than shared governance networks in case of a high need for network level competencies. This is in line with the theory of Kenis and Provan (2008). These findings suggest that the theory of Provan and Kenis (2008) needs refinement; scholars are urged to study the mechanisms more thoroughly and in different contexts. This thesis ends with a discussion of its limitations and policy recommendations for those interested in (Dutch) youth care policy.

Table of Contents

1. Introduction

1.1 Networks and deficiencies within the scientific literature

Ever since O1'Toole's (1997) call to "treat networks seriously", networks have been a prominent area of research within the field of public administration (Isett, Mergel, LeRoux, Mischen & Rethemeyer, 2011; Provan & Lemaire, 2012; Kenis & Provan, 2009). It is often stated that networks have the potential to be an answer to public sector problems, which have become increasingly complex and 'wicked' (Dal Molin & Masella, 2016). These so-called wicked problems are characterized by different preferences of different - and often many - stakeholders, overlap on different policy areas and the lack of a final solution or end point to a problem (Weber & Khademian, 2008). An important underlying thought behind the advantages of networks, is that not all the necessary knowledge and skills are present in (public) organizations. Hence, collaboration between the public sector and private, non-profit and other governmental organizations is necessary to address complex and wicked problems and to effectuate sound policy (Menahem & Stein, 2013; Turrini, Cristofoli, Frosini & Nasi, 2010; Kenis & Provan, 2009). Furthermore, resources such as budgets, goods, expertise and information are often spread among several actors (Provan & Milward, 2001; Marsh & Smith, 2000). And indeed, the occurrence of public sector networks has increased significantly in the last two decades (Isett et al., 2011), as has the role of non-governmental organizations in both the development and implementation of policies, as well as in carrying out public services (Keast & Brown, 2002).

However, few studies look into the question under which circumstances networks thrive and why some networks perform better and are more effective than others (Kenis & Provan, 2009). Some scholars use proxies for network performance such as the development of commitment and trust (Koppenjan & Klijn, 2004; Kickert et al, 1997), but as several authors have mentioned, network performance is rarely used as a dependent variable (Kenis & Provan, 2009; Provan & Lemaire, 2012; Turrini et al., 2010). This shortcoming has several reasons, for instance the difficulty with identifying relevant network goals and outcomes, the specific context in which networks organize themselves, and the absence of control groups. Nevertheless, several scholars attempted to grasp the concept of network effectiveness and have developed (some) tools to assess network effectiveness (Kenis & Provan, 2001; Turrini et al., 2010). Turrini and colleagues (2010) provide an overview of 37 variables that can be seen as, at least theoretically, aspects of network effectiveness, as well as a conceptual model that can be used to assess network effectiveness as such. However, these authors also note that their list of variables is by no means exclusive, and that many of these variables have not been empirically tested. In addition, the few variables that have been tested have only been tested once or maybe twice (Turrini et al., 2010).

This thesis aims to contribute to filling these knowledge gaps by studying network effectiveness as a dependent variable in order to better understand why certain networks are more effective than others. It focuses on youth care networks in Dutch municipalities. This thesis will also contribute to several knowledge gaps within the context of Dutch youth care. It is, for instance, unclear how effective existing organizational youth care networks are in practice, and whether certain networks are more effective than others. The context specific knowledge gaps will be discussed in more detail below and in chapter 2.

1.2 Study context: Dutch youth care policy

Dutch youth care has been decentralized since January 2015, via the so-called Jeugdwet. Through this legislation, youth care has come to fall under the responsibility of municipalities instead of the national government (Ministerie van VWS & Ministerie van V&J, 2013). This development can be seen in the lights of an ongoing trend in the Netherlands to decentralize responsibilities to a municipal level (Jans, 2015; Denters, 2005). The decentralization of youth care was accompanied by several other decentralizations, namely the 'social support law', the 'participation law' and the 'law of suitable education' (Respectively in Dutch: Wet maatschappelijke ondersteuning (Wmo), the Participatiewet and Wet passend onderwijs (Roozenbeek et al., 2015). The underlying goal of these decentralizations is to effectuate what is called a 'participation society'. In essence, this means that the self-reliance of citizens and their social network is to be facilitated and optimized before public

facilities and resources are used (Ministerie van VWS & Ministerie van VenJ, 2013). Hence, institutions strive for providing preventative youth care with a low threshold (De Vries & Wolbink, 2017). Specialized - and more expensive - care only comes into play when preventative institutions cannot sufficiently help the person in need of care. In other words, by emphasizing local and preventative care there is less need for specialized and more expensive care.

Before the Jeugdwet was implemented, youth care was organized through hierarchical, mostly top down governance; the national government granted subsidies to organizations that were responsible for youth care and there was no direct competition between organizations that provided youth care (Roozenbeek & Roozenbeek, in press). However, this way of (hierarchical) governance was seen as less and less sufficient, and a network governance approached was perceived to be able to tackle existing issues and improve policies (several arguments in favor of networks are mentioned in paragraph 1.1). This development can be seen in the lights of a broader context, namely in the government's increased dependency on societal actors to solve problems and effectuate sound policy, or what Hill (2005, pp. 273) calls the "*shift from government to governance*", which emerged in the 1990s. Since 2015, Dutch municipalities are free in the development and implementation of their youth care policy, as long as national conditions are met. A partial but prominent goal of the Jeugdwet was to make it possible for municipalities to customize youth care, to make their own choices based on their own policy and to be able to adapt to the local situation (Ministerie van VWS & Ministerie van V&J, 2013), which is a typical argument in favor of decentralizations, both domestically (Jans, 2015) and internationally (Pollitt, 2005). Even though such content-related arguments were put forward by the government, it is worth pointing out that the decentralization of the Jeugdwet, as well the other decentralizations, were developed and implemented in times of governmental austerity measures (Clarijs, 2015). In fact, due to these decentralizations municipalities gained a number of responsibilities but did not receive a whole lot of extra resources (Roozenbeek et al., 2015).

There are various ways for municipalities to shape and effectuate their youth care policy. According to a recent poll, 87% of the municipalities opted for effectuating some form of neighborhood teams, or 'wijkteams' in Dutch, which are responsible for providing youth care (Integraal Werken in de Wijk, 2017). Such teams may have specified tasks or may work in a more generalistic way, for instance by serving the entire so-called social domain people between age 0 and 100, depending on the policy of the municipality. Neighborhood teams are responsible for prevention and support, often provide light forms of (youth) care, and offer access to specialized care if needed. As mentioned, involved institutions aim to provide preventative care with a low threshold as much as possible. In order to optimize such aims, neighborhood teams often collaborate (and form organizational networks) with organizations that work with children on a daily basis, such as primary schools and welfare organizations (Clarijs, 2015). These networks are the unit of analysis of this study.

1.3 Added value of this thesis

In the above paragraphs, existing gaps in knowledge have been discussed regarding network performance, specifically the lack of published work on network effectiveness as a dependent variable. Within the context of Dutch youth care specifically, it is also unclear how effective existing organizational networks are in practice, and whether certain youth care networks are more effective than others. This thesis therefore poses the following research question: to which extent are youth care networks of neighborhood teams, primary schools and welfare organizations in Dutch municipalities effective? The independent variables that are used in this thesis that may explain differences in network effectiveness are governance mode and the need for network level competencies. These variables, as well as the definitive research questions will be discussed in more detail in chapter 2.

By studying network effectiveness as a dependent variable, this thesis will be of use for scholars, policy officials and (public) network managers, since it seeks to contribute to answering the question why and when networks thrive. This helps scholars and network practitioners understand how network performance can be improved. Moreover, elements of the oft-cited theory of Provan and Kenis (2008) regarding conditions for network effectiveness are tested, which is rarely done throughout the literature.

In a more practical sense, this thesis will also contribute to the questions to which extent and in what ways Dutch youth care networks are collaborating and how strong these organizational relationships are. As will become clear in the theoretical framework, these questions also relate to the concept of network effectiveness. In fact, the strength of relationships can be used as an indicator for network effectiveness (see theoretical framework). Hence, a context specific method will be developed in this thesis, which aims to measure the strength of relationships in Dutch youth care networks. By doing so, this thesis provides an overview of how neighborhood teams, primary schools and welfare organizations collaborate within the Dutch youth care context. Such information is not known, and the results will therefore also be of use for those who are concerned with Dutch youth care policy.

Moreover, even though it is obligatory for Dutch municipalities to use outcome measurements in their youth care policy, it is unclear to which extent outcome measurements are used throughout youth care networks, and which ones are used in practice (Van Yperen et al., 2015). Similarly to the strength of relationships, the use of outcome measurements can be used as an indicator for network effectiveness (see theoretical framework), which makes that these questions are relevant in both a practical and scholarly sense. This thesis also contributes to this rather context-specific knowledge gap, since it will provide an overview of the types of outcome measurements that are used within youth care networks in Dutch municipalities.

Finally, the evaluation of the Jeugdwet is to be expected in the beginning of 2018. This report includes no chapter with regard to the effectiveness of (organizational) youth care networks in municipalities (Nederlands Jeugdinstituut, 2016). This thesis, then, also complements the findings of the expected evaluation of the Jeugdwet.

2. Theoretical framework

2.1 Networks in public administration

Public sector networks have become more and more present in the last few decades, as has the role of non-governmental organizations in both the development and implementation of policies and in carrying out public services (Keast & Brown, 2002). It is important to distinguish network governance from the more classical hierarchical mode of governance, as well as from the market mode of governance (Van Heffen & Klok, 2000). These three forms of governance differ vastly from each other, and networks cannot be seen as 'in-between' versions of markets and hierarchies. Networks themselves can be distinguished in several ways. For instance, networks between public and private organizations exist, as well as combinations between these organizations (Van Kersbergen & Van Waarden, 2004). Non-profit organizations may also be part of networks. In contrast to hierarchical modes of governance, networks make their own decisions within the network and are in that sense also self-organizing. Networks can pursue the interests of the network community, the personal interests of actors and the interests of the network as a whole (Provan & Milward, 2001).

Strands of research

Within the field of public administration, plenty has been written about the network concept, as well as about the definition of it. Studies with regard to networks basically focus on three different areas, namely policy networks, network management and the governance of networks (Dal Molin & Masella, 2016; Klijn, Steijn & Edelenbos, 2010; Raab, 2002). Literature on policy networks focuses on decision-making processes with regard to dealing with problems that require public policies (Bevir & Richards, 2009). Within this strand of research, the interactions between engaged actors is yet another topic of interest (Henry, 2011). Network management literature focuses on the strategies, activities and skills that are used by network managers in order to pursue network goals (McGuire & Agranoff, 2011). Finally, literature on the governance of networks focuses on the way in which networks are governed and coordinated, as well as how network achievements can be improved (Sørensen & Torfing, 2009). The role of governmental organizations is often highlighted, since these organizations often play a central role in the development, implementation and coordination of policy networks (Ansell & Gash, 2008). The second and third research strand may seem quite similar, but the main difference is that the second one primarily focuses on the actions of network managers. This thesis falls within the third research strand, the governance of networks, since it mainly contributes to the question of how network achievements can be improved.

Definition

Different definitions of the network concept are used within the different strands of research mentioned above. Both broad and more narrow definitions are used, but even though definitions may differ, the core basically comes down to the same idea. Even though many more definitions of networks can be given, the definition of Agranoff (2006, pp. 56) will be used in this thesis: "*interorganizational (or: intergovernmental) entities that emerge from interactions among formal organizations [to tackle the most nettlesome of public problems and connect policies with their strategic and institutional context]*".

The reason for opting for this definition is that this definition fits within the idea that neighborhood teams, primary schools and welfare organizations (at least theoretically) form networks in order to pursue the goals of the Jeugdwet, as well as to effectuate circumstances in which these organizations, which work with children on a daily basis, utilize preventative care as much as possible (see introduction). Using a more broad definition would result in the inclusion of many more organizations within the study. Furthermore, Agranoff's definition includes the term 'formal organization', which is also important because this means that actors such as parents and/or families are excluded from the study. Since this thesis concerns the effectiveness of organizational networks in youth care, the 'formal organization' notion is therefore of crucial importance within the definition.

2.2 Network effectiveness

Several authors note that network performance is rarely studied as a dependent variable (Kenis & Provan, 2009; Turrini et al., 2010; Kenis & Provan, 2001). This means that the question why some networks perform better than others remains underexposed. Nevertheless, scholars have attempted to grasp aspects of network effectiveness as well as to develop methods to measure it. Provan and Milward (2001) came up with a framework to assess network effectiveness in the public sector. In essence, they argue that network effectiveness can be measured on three separate levels: the community level, the organizational level and the network level. Each level contains several criteria to measure effectiveness, such as membership growth (network level effectiveness), and public perceptions that the problem is being solved (community level effectiveness).

Turrini and colleagues (2010) developed a more detailed framework that expanded on the idea of network level effectiveness mentioned by Provan and Milward (2001). According to them, network level effectiveness can be measured on three separate levels: the ability to reach stated goals, the capacity for innovation and change, and finally sustainability and viability (see table 1). Each of these levels consist of several criteria and variables, which are aspects of the type of effectiveness in question.

Type of effectiveness
Client level effectiveness
Overall community level effectiveness
Network level effectiveness, specified to:
• Ability to reach stated goals
• Capacity of innovation and change
• Sustainability and viability

Table 1. Types of effectiveness according to Turrini et al. (2010).

The unit of analysis of this thesis concerns youth care networks of neighborhood teams, primary schools and welfare organizations in Dutch municipalities. In order for this thesis to be feasible and achievable within the available timespan, a selection will be made in type of effectiveness well as in the variables that will be studied. This thesis focuses on network level effectiveness, and the chosen variables are discussed below.

2.3 Conceptualization of network level effectiveness

Strength of relationships between network participants

There are many ways to conceive network level effectiveness, and scholars are by no means unified with regard to the question how to do so (Provan & Lemaire, 2012; Kenis & Provan, 2001; Turrini et al., 2010). The most simple way to do this is to evaluate the number of agencies joining and leaving a certain network, and another method is to look at the amount of services that is delivered by a network. These methods, however, do not seem suitable for the case of youth care networks in Dutch municipalities, because the amount of network members is mostly fixed, and measuring the amount of services seems too simplistic.

Provan & Milward (2001) provide another method to conceive network level effectiveness, namely to look at the strength of the relationships between and among network participants. That is, the strength of relationships can be used as an indicator for the amount of activities that actors do together. The key idea is that the stronger these relationships are, the higher the network level effectiveness. This also works the other way around: the weaker the relationships, the lower the network level effectiveness.

A concept that is particularly useful is 'multiplexity' (Provan & Milward, 2001), which refers to the strength of the ties between network participants (Scott, 1991). Organizational ties are 'multiplex' when two organizations are connected in two or more ways, for instance by being in contact about clients and sharing information. Even though there exists no theoretical optimum for the amount of connections between organizations, it can be stated that the more types of cooperation there

are, the stronger the relationship (Kenis & Provan, 2001). According to Turrini et al. (2010), the multiplexity concept is an aspect of all three types of network level effectiveness in table 1: 'the ability to reach stated goals', 'the capacity of innovation and change', 'sustainability and viability', and is hence particularly useful within this conceptualization[1].

Within the context of this thesis it is, however, unclear in what ways and to which extent Dutch neighborhood teams, primary schools and welfare organizations are collaborating. In other words, it is unknown what kind of ties these organizations have with each other and what the strength of relationships are. Therefore, a context specific method will be developed in this thesis to measure multiplexity in Dutch youth care networks (see paragraph 3.1). By doing so, this thesis also provides an overview of how neighborhood teams, primary schools and welfare organizations collaborate within the Dutch youth care context.

Use of outcome measurements

Another aspect of network level effectiveness is whether and to which extent networks make use of explicit and ongoing outcome measurements (Turrini et al., 2010; Conrad et al., 2003). More specific, these measurements are ongoing in the sense that the outcome measurements are used repeatedly over time and explicit in the sense that the outcome measurements are explicitly stated in documents or other forms of communication. The use of ongoing and explicit outcome measurements will hereafter be referred to as the (use of) outcome measurements.

According to Turrini et al. (2010), the use of outcome measurements is also an aspect of all three types of network level effectiveness mentioned in table 1 (Turrini et al., 2010)[2]. Even though a theoretical optimum for the amount of outcome measurements that is used within a network does not exist, to a certain extent the same logic can be applied with this variable as with the multiplexity variable; the more outcome measurements are used, the higher the network level effectiveness. It must be noted that this is not a linear relationship, because it seems unlikely that the use of twenty outcome measurements is twice as effective as the use of ten. A logarithmic relationship, where the rate of growth in effectiveness becomes smaller as the number of outcome measurements goes up, is more likely. Nevertheless, it certainly holds that the more types of outcome measurements are used, the higher the network level effectiveness.

However, the concept of the use of outcome measurements has not been operationalized within the existing literature. This is not surprising, since such outcome measurements are context-specific (outcome measurements that are used in network A are by no means also useful in network B). Hence, it is the researcher's task to specify this variable and also to apply it to the topic of research.

Within the context of this thesis, it is obligatory for Dutch municipalities to use outcome measurements in their youth care policy, but even though this obligation exists it is unclear to which extent outcome measurements are used throughout youth care networks, and which ones are used in practice (Van Yperen et al., 2015). Van Yperen and colleagues (2015) provide a guideline of possible examples of outcome measurements that could be used in practice, which will be used for operationalizing the outcome measurements concept in this thesis (see paragraph 3.1).

2.4 Determinants of network effectiveness

Network governance mode

Scholars distinguish three kinds of forms to govern networks. These are referred to as governance modes: shared governance, governance by a network administrative organization (NAO) and governance by a lead organization (Provan & Kenis, 2008; Kenis & Provan, 2009). The first point of distinction between modes is whether or not the governance mode is 'brokered'. That is, whether the governance of the network is administered collectively (non-brokered, shared governance), or whether

[1] Turrini et al. (2010) do not explain why the multiplexity concept is an aspect of all three levels of network effectiveness.

[2] Turrini et al. (2010) also do not explain why the use of outcome measurements is an aspect of these three levels.

the network is governed through a single organization (brokered, NAO and lead organization governance). Shared governance networks "*may be governed completely by the organizations that compromise the network*" (Provan & Kenis, 2008, pp. 233), as opposed to brokered governance modes. The second point of distinction is whether brokered networks are internally or externally governed. That is, whether the broker organization is in fact participating within the network (lead organization) or whether it is administered externally (NAO). In networks with a lead organization, all major decisions are taken within the lead organization, which also takes care of the coordination of the network as a whole (Provan & Kenis, 2008). In contrast, a NAO, in essence, is an external separate administrative entity which is established with the sole task to govern the network as such.

Provan and Milward (1995) argue that differences in network effectiveness can be explained by several variables, one of which is network structure. More specifically, they mention several reasons why networks that have a core agency (brokered networks) can be expected to be more effective than networks without such an agency (shared governance networks). This is because other network participants do not need to devote time and effort to coordinating the network as such, but can focus on their individual tasks. Moreover, brokered networks have a centralized coordination which allows for a closer monitoring of services, which in turn increases network effectiveness (Provan and Milward, 1995). It is, however, rarely empirically studied whether governance modes can in fact explain differences in network effectiveness as a dependent variable (Kenis & Provan, 2009; Provan & Lemaire, 2012).

Need for network level competencies

The expected differences in network effectiveness mentioned above can be specified by using a more specified theoretical framework, which will be done in the following paragraphs. Provan and Kenis (2008) argue that a mode of governance is likely to be effective as a result of an interaction between four structural contingencies: trust, number of network participants, goal consensus and finally the need for network level competencies. Because of the limited timeframe, this thesis will focus on one of these contingencies, namely the need for network level competencies.

Even though specific reasons may vary, organizations generally join networks because they want to achieve something that they could not achieve single-handedly (Provan & Kenis, 2008). In other words, organizations are interdependent to effectuate network tasks. If network tasks are complicated and interdependence among network members is high, need for task-specific competencies will be great as well. Differently put, the need for network level competencies is high when interdependency between network participants is high, but this also works the other way around; the need for network level competencies is low when interdependency between network actors is low.

However, it is unclear whether the need for network level competencies has a direct influence on network effectiveness as such. Specifying this to the context of Dutch youth care networks, several expectations can be pointed out. The Jeugdwet explicitly states that the goal is to prevent problems as much as possible, and hence youth care networks are ought to provide care with a low threshold for those in need of youth care (Ministerie van VWS & Ministerie van V&J, 2013). Youth care is often provided on a neighborhood level, and one can assume that there are neighborhoods in which there are more youth care related problems than others. Indeed, a Dutch study has shown that the lower the socio-economic status (SES) of a neighborhood, the more extensive and severe the youth care related problems (Van den Broek, Kleijnen & Bot, 2012). This implies that the amount of children in need of (preventative) youth care is higher in neighborhoods with a low SES. In order to prevent problems as much problems as possible, one can assume that such circumstances force organizations to collaborate more intensively and effectively.

It should be mentioned that this expectation concerns effectiveness on a *network* level, in terms of the strength of relationships and the use of outcome measurements, and not effectiveness on a *client* level (see table 1). The theory of Provan and Kenis (2008) holds that it is more difficult to attain effective results on a *client* level if the need for network level competencies is high. On a network level, however, there are reasons to expect that a high need for network level competencies increases network level effectiveness in the context of Dutch youth care (as mentioned above). The expected relationships of both independent variables are shown in figure 1.

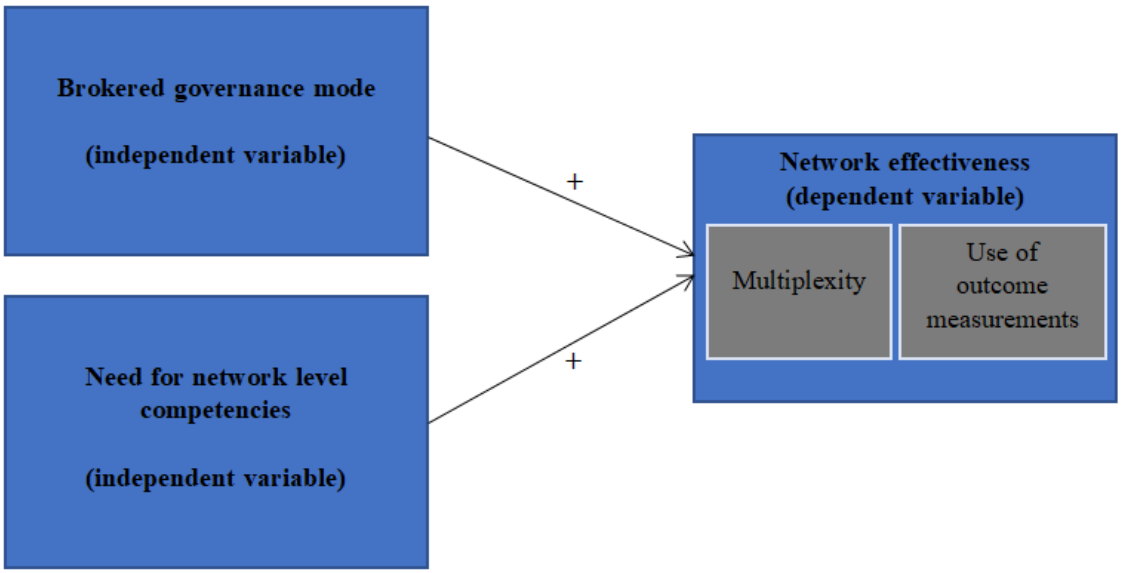


Figure 1: A conceptual model for network effectiveness

Interaction effects

Governance mode and the need for network level competencies, however, may also have an interaction effect. Provan and Kenis (2008) argue that each governance mode is effective under specific conditions: trust, the number of participants, goal consensus and the need for network level competencies. Their framework states that certain modes of network governance are likely to appear when these conditions favor the governance mode in question. For example, networks in which there is a high density of trust, a low number of network participants, high goal consensus and a low need for network level competencies are likely to be governed through shared governance, rather than through a broker organization. Similarly, these conditions make that shared governance is likely to be more effective than governance through a NAO or lead organization.

Moreover, Provan and Kenis (2008, pp. 240) state that when the need for network level competencies is high, shared governance is the governance mode that is least likely to be effective, because certain skill-related demands may be placed on network participants that may very well not possess these skills. In contrast, such conditions in fact favor brokered forms of governance, since the central organization (that is, lead organization or NAO) within the network is more likely to develop and/or possess skills that are needed on a network level (Provan & Kenis, 2008). They thus argue that shared governance networks are likely to be more effective when the need for network level competencies is low, whereas lead governance networks are more likely to be effective when this need is high[3]. The conceptual model of the interaction effects are shown in figure 2, and the corresponding hypotheses are discussed in paragraph 2.6.

[3] Provan and Kenis (2008) do not explicitly state why shared governance networks are expected to be *more* effective than brokered networks when the need for network level competencies is low, only why brokered networks are more effective than shared governance networks when this need is high.

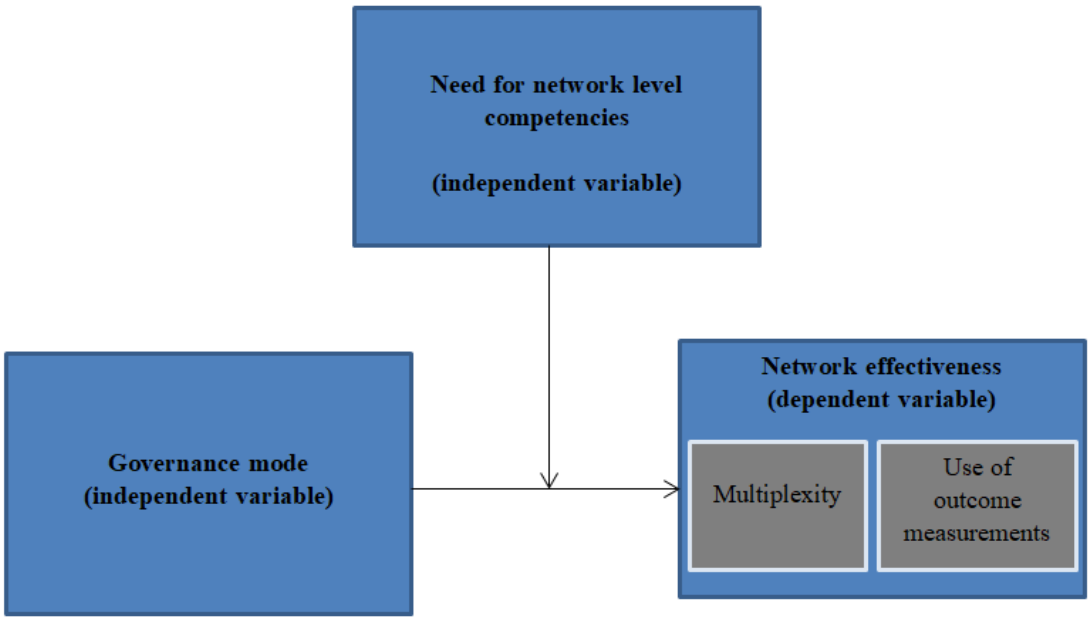


Figure 2. Conceptual model with interaction effects on network effectiveness.

2.5 Overview and research questions

This paragraph will briefly summarize everything that has been discussed so far, and will specify this thesis' research questions.

This thesis aims to contribute to the question why some networks perform better than others by studying network effectiveness as a dependent variable. Network effectiveness is measured by two underlying indicators (see chapter 3 for more detail), namely the strength of organizational ties and the use of outcome measurements. The unit of analysis is youth care networks made up of neighborhood teams, primary schools and welfare organizations. As discussed earlier, it is however unknown how and to which extent these organizations work together in practice, so this descriptive question will be discussed first. Moreover, it is also unclear which and to which extent outcome measurements are used within these networks, regardless of the fact that it is obligatory for municipalities to use outcome measurements (Van Yperen et al., 2015). This thesis well therefore also look into the types of outcome measurements that are used in practice, as well as into prevalence of each these outcome measurements, The results of this thesis will therefore also contribute to these context specific knowledge gaps, by providing an overview of how organizations are collaborating in youth care networks, as well as by outlining which (and to which extent) outcome measurements are used in practice. In addition, it is unknown to which extent Dutch youth care networks are in fact effective, perhaps because of the context specific knowledge gaps mentioned above. Given the recent decentralization of youth care in 2015, it seems highly relevant to analyze the effectiveness of youth care networks as such, especially in the lights of the forthcoming evaluation of the Jeugdwet, which is expected in the beginning of 2018 (Nederlands Jeugdinstituut, 2016).

Two independent variables that could contribute to differences in (youth care) network effectiveness have been discussed in this chapter, namely governance mode and the need for network level competencies. It will be analyzed whether differences in network effectiveness can be explained by these very variables. It will also be analyzed whether these independent variables have interaction effects. If the mechanisms mentioned in the conceptual model in figure 1 indeed exist, municipalities can use this information in several ways. For instance, they can choose for certain governance modes to shape their youth care policy in order to improve network effectiveness. All in all, this thesis contributes to scientific as well as context-specific gaps in knowledge.

In order to structure everything that has been discussed so far, the following research questions are formulated: (a) to which extent are youth care networks of neighborhood teams, primary schools and welfare organizations in Dutch municipalities effective and (b) to which extent can

governance form and the need for network level competencies explain differences in network effectiveness? Since there are also some context-specific questions that need to be explored before the research question can be answered, the above research questions are split up into three descriptive sub-questions (sub-questions 1, 2 and 3), and two analytical sub-questions (sub-question 4 and 5):

1. In what ways are neighborhood teams, primary schools and welfare organizations collaborating in Dutch municipalities?
2. What is the strength of the relationships between neighborhood teams, primary schools and welfare organizations in terms of multiplexity?
3. To which extent are outcome measurements used in youth care networks in Dutch municipalities?
4. To which extent can differences in network effectiveness be explained by the independent variables 'governance mode' and 'need for network level competencies'?
5. To which extent can interaction effects of the independent variables 'governance mode' governance mode' and 'need for network level competencies' explain differences in network effectiveness?

2.6 Hypotheses

Based on the above, a number of hypotheses will be formulated. First, this thesis distinguishes between brokered an non-brokered governance modes. Following Provan and Milward (1995), the following hypothesis is formulated:

H1: Youth care networks that are governed by a broker organization are more effective than youth care networks in which governance is shared.

As discussed in paragraph 2.3, this thesis used two indicators for network effectiveness, the strength of ties between organizations (multiplexity) and the use of outcome measurements. Therefore, *H1* will be split up in two more specific sub-hypotheses:

H1a: Youth care networks that are governed by a broker organization are more multiplex than youth care networks in which governance is shared.

H1b: Youth care networks that are governed by a broker organization make more extensive use of outcome measurements than youth care networks in which governance is shared.

Regarding the need for network-level competencies, the following hypothesis is formulated:

H2: Youth care networks with a high need for network level competencies are more effective than youth care networks with a low need for network level competencies.

Similarly as with *H1,* network effectiveness is measured with two dependent variables: multiplexity and the use of outcome measurements. Hence, *H2* is split up into two more specific hypotheses:

H2a: Youth care networks with a high need for level competencies are more multiplex than youth care networks with a low need for network level competencies.

H2b: Youth care networks with a high need for level competencies make more extensive use of outcome measurements than youth care networks with a low need for network level competencies.

As explained in paragraph 2.4, hypotheses 1 and 2 do not take interaction effects between governance mode and the need for network level competencies into account. In terms of measuring the effectiveness of different modes of governance, Provan and Kenis (2008, pp. 240) theorize that

brokered networks are more effective if the need for network level competencies is high, whereas shared governance networks are more effective when the need for network level competencies is low. In hypothesis form:

H3a: Networks that are governed by a broker organization are more effective when the need for network level competencies is high than when this need is low.

H3b: Shared governance networks are more effective when the need for network level competencies is low than when this need is high.

H3a and *H3b* look at differences within modes of governance. However, it is also useful to look at differences in effectiveness *between* these modes of governance. To test this, the following hypotheses are formulated:

H4a: Shared governance networks are more effective than networks that are governed by a broker organization if the need for network level competencies is low

H4b: Networks that are governed by a broker organization are more effective than shared governance networks if the need for network level competencies is high.

The next chapter will first discuss the how each variable is measured, and continues by describing the research design and data that has been collected to answer the research questions.

3. Data and method

3.1 Operationalization of the dependent variables

Multiplexity

As stated in the theoretical framework in chapter 2, the strength of the relationships between organizations is an indicator for network effectiveness. A particularly useful way to measure this strength is by measuring 'multiplexity', which refers to the types of cooperation between organizations (Provan & Milward, 2001; Scott, 1991). The higher the multiplexity, the stronger the relationship between organizations (Provan & Milward, 2001). Multiplexity can be measured by summing up the amount of types of cooperation between organizations. Moreover, multiplexity overlaps with all three types of network level effectiveness in table 1 'ability to reach stated goals', 'innovation and change, 'sustainability and viability' (Turrini et al., 2010). Since it is unknown how and to which extent neighborhood teams cooperate with primary schools and welfare organizations, a context-specific variable to measure multiplexity is developed.

Table 2 shows eight possible types of cooperation between neighborhood teams, primary schools and welfare organizations, specified to youth care. These types of cooperation can be expected to be present, at least to some extent, in the context in which these organizations collaborate. These types, however, are not necessarily exclusive, which makes it an imperfect indicator for collaboration. The lack of available literature has therefore prompted the author to propose this measurement. Thus, the results will give an indication of how neighborhood teams collaborate with primary schools and welfare organizations.

Each type of cooperation between the above mentioned network actors was scored with a 0 or 1, depending on whether the type of cooperation is present (0 means absent, 1 means present). The sum of the different types of cooperation with both primary schools and welfare organizations were combined in order to create the 'multiplexity' variable (see table 2). This means that the multiplexity variable was measured on an interval measurement level from 0 to 16. The sum of the types of cooperation forms a network-specific index that provides insight in the strength of the relationships within the network in question. The descriptive data of this variable will be discussed in chapter 4, since describing frequency distributions, means and other descriptive results is also part of sub-questions 1 and 2 (see paragraph 2.3).

Data table: Multiplexity variable	*Is the type of cooperation present with these types of organizations?*	
Type of cooperation	Primary schools (value = 0 or 1)	Welfare organizations (value = 0 or 1)
1.Have contact about children		
2.Share information on request		
3.Weekly exchange of information		
4.Discuss plans of action with regard to individual cases		
5.Make decisions together		
6.Develop plans together		
7. Cooperation with the other organization(s) is integrated within the policy of the neighborhood team		
8.Work together in the same building		
Multiplexity score* = *multiplexity primary schools + multiplexity welfare organizations*	*Sum of this column = multiplexity primary schools*	*Sum of this column = multiplexity welfare organizations*

Table 2. Data table multiplexity. *Note*: The (theoretical) minimum of the multiplexity score is 0 and the maximum is 16.*

Use of outcome measurements

The use of outcome measurements is the secondary indicator of network effectiveness, as discussed in chapter 2. The use of outcome measurements overlaps with all three types of network level effectiveness, as mentioned in table 1: 'ability to reach stated goals', 'innovation and change, 'sustainability and viability' (Turrini et al., 2010). It should be mentioned that this variable concerns the *use* of outcome measurements, rather than the outcomes as such. However, this variable has not yet been operationalized within the existing scientific literature. Hence, it is the researcher's task to specify this variable and also to apply it to the topic of research.

For the specific case of this thesis, guidelines can be found within the Dutch youth care literature. As mentioned in chapter 2, it is obligatory for municipalities to use some form of outcome measurements within their youth care policy. It is however unclear what and to which extent these outcome measurements are used throughout youth care networks in Dutch municipalities (Van Yperen et al., 2015). Van Yperen and colleagues (2015) provide a guideline of 7 possible examples of outcome measurements that can be used in practice. In total, these authors mention the following types of possible outcome measurements can be used in practice:

1: Client satisfaction questionnaires, specified to:
   - 1a: The *utility* of youth care (1)
   - 1b: The *use* of youth care (2)
2: Drop out of clients (3)
3: Goal realization, specified to:
   - 3a: The extent to which clients can function without youth care (4)
   - 3b: The extent of relapse of clients that no longer receive care (5)
   - 3c: The extent to which problems are reduced (6)
   - 3d: The extent to which self-reliance has increased (7)

There exists no such thing as an optimum for the amount of outcome measurements that is used throughout a network. However, the same logic will be applied as with the multiplexity variable: the more outcome measurements are used, the stronger the network effectiveness. As discussed in chapter 2, this relationship is unlikely to be entirely linear. Nevertheless, up to a certain point it certainly holds that the more types of outcome measurements are used, the higher the network level effectiveness. In this thesis, a linear relationship between the types of outcome measurements and network effectiveness is assumed, because the number of potential outcome measurements that can be used in youth care networks is rather small: 7 to be precise.

In each network that was included in the study, it was measured how much of the outcome measurements mentioned above were used throughout the network in question. Each type of outcome measurement was scored by a 0 or a 1, depending on whether or not the type of outcome measurement was used throughout the network (0 means not used, 1 means used). For each network the amount of outcome measurements that are used were added up. This variable, then, is measured on an interval measurement level from 0-7. Since it is obligatory for municipalities to use some form of outcome measurements, it is expected that a score of 0 on this variable will not be observed. It could however be the case that some networks make use of 0 outcome measurements, in the case that municipalities do not comply (completely) with the existing obligations.

Since describing frequency distributions, means and other descriptive results is also part of sub-question 3, 'to which extent are outcome measurements used in youth care networks in Dutch municipalities?', descriptive data will be discussed in chapter 4.

3.2 Operationalization of the independent variables

Governance mode

The first independent variable concerns governance mode. As discussed in chapter 2, one distinction between governance modes is whether the governance in the network is brokered or non-brokered (Provan & Milward, 2001): that is, whether the governance of the network is administered collectively (non-brokered), or whether the network is governed through a single organization (brokered).

Within the context of Dutch youth care, municipalities have different options for both the organization as well as the positioning of neighborhood teams (see appendix 1). These teams are often responsible for facilitating youth care, but could also serve broader tasks within the so-called social domain. There are four ways in which municipalities can position their neighborhood teams (Integraal Werken in de Wijk, 2017). The most important point of distinction is whether the neighborhood teams are positioned within the organizational structure of the municipality (see model 1 in appendix 1), or outside of it (see model 2, 3 and 4 in appendix 1). Even though some differences exist between models 2, 3 and 4, they are regarded as the same within this thesis, because their differences are primarily based on juridical structures of actors and have little do with the extent of coordination of the municipality. When the neighborhood team is positioned within the municipality's organizational structure, the employees are employed by the municipality and can therefore be coordinated to a high extent. This does not necessarily mean that governance is hierarchical rather than through networks, because neighborhood teams cannot achieve the goals stated in the Jeugdwet solely by themselves and have to collaborate with others to achieve (sound) results. The main point is that within this model, the municipality acts as a lead organization within the network. Conversely, if the teams are

positioned outside the organizational structure of the municipality (see model 2, 3 and 4 in Appendix 1), different youth care providers take care of the management, coordination and support of the neighborhood teams, governance is more shattered. In this case, the role of the municipality is not a leading but a facilitating one (Integraal Werken in de Wijk, 2017). Simply put, in municipalities in which the neighborhood team is positioned within the organizational structure of the municipality, the municipality fulfils the role of lead organization within the network. In contrast, in municipalities in which the neighborhood team is positioned outside the municipality's organizational structure, the municipality does not fulfil a 'broker' role, and the governance mode resembles the shared governance mode mentioned by Provan and Kenis (2008).

The positioning of the neighborhood teams within the municipality is used to distinguish between governance modes within networks. Neighborhood teams that are positioned within the municipality were labelled with a '1', whereas neighborhood teams that are positioned outside the municipality were labelled with a '0', which is a nominal distinction. As will be discussed in more detail in paragraph 3.3, cases were selected based on the characteristics of the independent variable. Because of this method, the occurrence of each type of network was almost equal (see table 3 in paragraph 3.3), 16 neighborhood teams were positioned within the organizational structure of the municipality and 16 outside of it.

Need for network level competencies

The second independent variable is the need for network level competencies. The indicator that is used for this variable is the level of the socio-economic status (SES) within the neighborhood in which the neighborhood team in question operates. SES is a variable that has an influence on many things, such health related issues (Marmot, Ryff, Bumpass, Shipley & Marks, 1997) and the level of education children receive (OECD, 2010). But also in the case of Dutch youth care it is known that SES influences the amount and severity of problems, or more specific: the lower the SES the more extensive and severe the problems (Van den Broek, Kleijnen & Bot, 2012). Hence, it can be expected that the amount of children in need of (preventative) youth care is higher in neighborhoods with a low SES and the opposite applies in neighborhoods with a high SES. In other words, in neighborhoods with a low SES network actors are to a higher extent interdependent to achieve good results. The Jeugdwet explicitly states that the goal is to prevent problems as much as possible, and hence neighborhood teams, primary schools and welfare organizations ought to provide integral care with a low threshold for those in need of youth care (Ministerie van VWS & Ministerie van V&J, 2013). Thus, it is more crucial for youth care networks in neighborhoods with a relatively low SES to be effective than in neighborhoods with a high SES. In a broader sense, such an increased interdependency between network actors relates to what Provan and Kenis (2008) call the 'need for network level competencies'.

In this thesis, neighborhoods with both a high and a low SES were included in order to create variance in the extent of the need of network level competencies within networks. Data of the 'Social Cultural Planning Bureau' (Sociaal Cultureel Planbureau) specifies what the socio-economic status of neighborhoods in the Netherlands is. This data has been updated in 2016. The label of socio-economic status that is used consists of 4 underlying variables which have been combined through a factor analysis: the average income in a neighborhood, the percentage of people with a low income, the percentage of people that are low educated, and the percentage of unemployed people (Sociaal Cultureel Planbureau, 2017). For each neighborhood a so-called 'statusscore' is calculated, which indicates the socio-economic status of a neighborhood in comparison with other neighborhoods in the Netherlands. One can compare the socio-economic status of a neighborhood with the average neighborhood (which has a statusscore of 0) relatively easily: the lower the statusscore, the lower the SES and the higher the score the higher the SES. In order to create variance with regard to the need for network level competencies the SES variable was dichotomized. That is, a distinction was made between neighborhood teams that operate in neighborhoods with a high SES and a low SES). For a low SES, neighborhoods that fall within the lowest 25 percent of SES-scores were selected, and neighborhoods that fall within the highest 25 percent were selected for a high SES (for more detail see paragraph 3.4). As will be discussed in more detail in paragraph 3.3, cases were selected based on the

characteristics of the independent variable. Because of this method, the occurrence of each type of network was almost equal (see table 3 in paragraph 3.3). Data was collected from 17 neighborhood teams that operate in neighborhoods with a low SES, and from 16 teams that operate in neighborhoods with a high SES.

3.3 Strategy and research design

In this thesis, the influence of two types of independent variables (governance mode and need for network level competencies) on youth care network effectiveness were studied by using the 'diverse case method' (Seawright & Gerring, 2008). This means that cases were selected based on the characteristics of the independent variables. Moreover, this method aims to achieve the maximum variance along all relevant dimensions, and the conditions for the case selection are that they represent the independent variables accordingly. According to Seawright and Gerring (2008), this method of case selection was suitable in this case, since the independent variables of interest are dichotomous (or dichotomized in the case of the need for network level competencies). In total, the results of 33 different neighborhoods were included in the study. With regard to the 'governance mode' variable, 17 of the neighborhood teams were positioned inside the municipality and 16 were positioned outside the municipality. The same distribution holds for the 'need for network level competencies' variable: data was collected from 17 neighborhood teams that operate in neighborhoods with a low SES, and from 16 teams that operate in neighborhoods with a high SES. The data that was collected is summarized is schematically represented in the crosstab in table 3 (for the raw data, see appendix 3).

Independent variable (specified)	High need for network level competencies (low SES, 17 cases)	Low need for network level competencies (high SES, 16 cases)
Lead organization governance (neighborhood team positioned within municipality, 17 cases)	Group 1: 11 cases	Group 2: 6 cases
Shared governance (neighborhood team positioned outside municipality, 16 cases)	Group 3: 6 cases	Group 4: 10 cases

Table 3. Crosstab of the cases that were included in the study.

3.4 Case selection

Data was collected by conducting interviews with and distributing questionnaires to professionals that work in neighborhood teams with insight into the ways in which their team cooperates with third parties in the neighborhood in question, as well as which youth care related outcome measurements are used throughout the network. This was covered by asking beforehand who the person with sufficient knowledge in the neighborhood team was. The selection of the neighborhood teams as such was done according to the 'diverse case method', that is, selection was done based on the characteristics of the independent variables. More specifically, it was checked beforehand how neighborhood teams are positioned within their municipality, by checking policy documents and websites of the municipality and neighborhood team in question. To confirm whether a certain team indeed was positioned either within or outside of the organizational structure of the municipality, this was additionally asked during the interviews or within the questionnaire (see appendix 2).

Moreover, to create variance with regard to the need for network level competencies, a distinction was made between neighborhood teams that operate in neighborhoods with a low SES and a high SES. The first step to do so was to select cases based on the statusscores of the neighborhood. As stated in paragraph 3.2, this was done by selecting neighborhoods that fall within both the lowest and highest quarter of the statusscores (respectively percentile 25 and 75). In order to select neighborhoods that meet data selection requirements of the type of SES variable, neighborhoods with

a statusscore of < -0.59 were used to indicate a low SES, and a statusscore of > 0.76 was used to indicate a high SES (with 0.00 being the average, as shown in table 4).

However, the boundaries in which neighborhood teams operate in practice are not necessarily precisely bound to the boundaries that are used by the 'Sociaal en Cultureel Planbureau' (Socio and cultural planning bureau, SCP). During the interviews and within the questionnaires, it was asked in which neighborhoods the neighborhood team in question operates. If a neighborhood team was operative in more than one neighborhood, the average statusscore of these neighborhoods combined was calculated (see appendix 4). The classification in what kind of neighborhood a team was operating was based on the 33th and the 66th percentile. That is, a neighborhood was classified as 'low SES' when the average statusscore was < -0.25, and classified as 'high SES' when the average statusscore was > 0.54. It should be mentioned that this method is arbitrary in the sense that many other methods to classify the SES of a neighborhood can be used, but is nevertheless usable (Sociaal en Cultureel Planbureau, 2017).

Descriptive statistics of statusscores (N = 3546)							
Mean	Sd.	Min.	Max.	25th percentile	33th percentile	66th percentile	75th percentile
0.00	1.18	-8.07	2.89	-0.59	-0.25	0.54	0.76

Table 4. Descriptive statistics of statusscores of Dutch neighborhoods in 2016. Source: Sociaal en Cultureel Planbureau, 2017.

3.5 Data collection

As discussed in chapters 1 and 2, neighborhood teams have a central role in providing and facilitating youth care. Because of this central role, it was possible to obtain information about the youth care network as a whole, including information how they collaborate with primary schools and welfare organizations, as well as what outcome measurements are used throughout the network. Initially, 30 employees of neighborhood teams that met the data selection criteria were approached to participate in an interview. A prerequisite for interviewees was that they had insight in the ways in which their teams cooperate with third parties, as well as which outcome measurements are used. This was covered by asking beforehand which employee within the neighborhood had such insights. The interviews were conducted according to the operationalization of each sub-question, namely according to questions that can be answered with a 'yes' or a 'no'. The topics of the interviews were only about factual behavior of the organization the interviewees work in, and were not subjective to opinions in that sense. Of course, the interviewee could expand on the topic in question, but this did not influence the scoring that was done according to the interviews.

However, the percentage of respondents that was willing to participate in these interviews was rather low (10 responses, 33%). In order to increase the amount of respondents, a questionnaire was developed and sent to employees of neighborhood teams that fit the data collection prerequisites. Similar as with the interviews, it was asked beforehand who within the organization had insights in ways in which their team cooperate with third parties, as well as which outcome measurements are used. Three measures were taken in order to ensure consistency and comparability between interview and survey results (see Harris & Brown, 2010). First, the questionnaire contains exactly the same questions as the interviews as well as an explanation how to fill in the questionnaire (see appendix 2). Second, the fact that the topics of the interviews and surveys solely concerned factual behavior of the organization the interviewees work in increased the quality of comparability between the different methods used. Third, the two types of data were collected within a minimal time gap (Harris & Brown, 2010). In the period of July 2017 to November 2017, this questionnaire was sent to 60 neighborhood teams that fit the inclusion criteria. The response rate on the questionnaires was 38% (23 responses). The results of the questionnaire were combined with the results of the interviews, resulting in a total of 33 cases that were included in the study (see table 3).

3.6 Data analysis

As mentioned in paragraph 3.1, the multiplexity index of each network was calculated by summing up the types of cooperation between neighborhood teams, primary schools and welfare organization within municipalities. The types of outcome measurements were also summed up for each network. Then, indices were calculated for each case, and averages for each group of networks representing the independent variables (see table 5). For example, the means and indices of the dependent variables in the networks of group 1 and 2 were compared with group 3 and 4 in order to see whether or not differences can be found as a result of the independent variable 'governance mode'. The same logic applies for the independent variable 'need for network level competencies': networks of group 1 and 3 were compared with networks of group 2 and 4.

Independent variables	High need for network level competencies (low SES, 17 cases)	Low need for network level competencies (High SES, 16 cases).
Lead organization governance (neighborhood team positioned within municipality, 17 cases)	Group 1: 11 cases *Variable: multiplexity* Calculation: Index + mean *Variable: use of outcome measurements* Calculation: Index + mean	Group 2: 6 cases *Variable: multiplexity* Calculation: Index + mean *Variable: use of outcome measurements* Calculation: Index + mean
Shared governance (neighborhood team positioned outside municipality, 16 cases).	Group 3: 6 cases *Variable: multiplexity* Calculation: Index + mean *Variable: use of outcome measurements* Calculation: Index + mean	Group 4: 10 cases *Variable: multiplexity* Calculation: Index + mean *Variable: use of outcome measurements* Calculation: Index + mean

Table 5. Calculations that are done for each group of networks.

The results of the calculations provide insight into what the values of the variables are in each type of network. If the hypotheses *H1* and *H2* are correct, the highest values of the dependent variables are expected to be found in networks in which neighborhood teams are positioned inside the municipality and with a low SES (group 1 in table 3). The lowest values will be found in networks in which neighborhood teams are positioned outside the municipality and with a high SES (group 4). If these hypotheses are correct, then group 2 and 3 will fall between the values for group 1 and group 4.

However, as pointed out in chapter 2, these independent variables may also have an interaction effect (see hypotheses *H3a/b* and *H4a/b*) The theory of Provan and Kenis (2008) allows one to predict when a certain governance mode is effective, as well as when one mode is more effective than the other. *H3a* and *H3b* pertain to the circumstances under which a mode of governance is effective. If *H3a* and *H3b* are correct, higher values for multiplexity and the use of outcome measurements are expected to be found in group 1 than in group 2. Similarly, higher values are expected in group 4 than in group 3.

H4a and *H4b* state that shared governance is expected to be more effective than brokered governance if the need for network level competencies is low. Conversely, lead organization governance is expected to be more effective if the need for network level competencies are high. This means that higher values for the dependent variables (multiplexity and the use of outcome

measurements) are expected in group 1 than in group 3. Similarly, higher values are expected in group 4 than in group 2.

Since the dependent variables multiplexity and outcome measurements are measured on an interval measurement level and the independent variables are measured on a nominal measurement level, analysis in differences for *H1* and *H2* were calculated by the independent sample T-test. A threshold value of $p < 0.05$ was used to indicate significance for both variables, which is often used in the social sciences (see for instance Hvidman & Andersen, 2013; Sun & Van Ryzin, 2014). The testing of *H3a/b* and *H4a/b,* however, could not be done with a T-test because the sample size was too small and did not comply with the prerequisites of a T-test. Instead, Cohen's d was calculated to measure the effect size. Differences in sample sizes were accounted for within the calculations (see appendix 5). Cohen's d is not a replacement for significance testing, but it can give a decent indication for the size of the measured effects. For interpretation purposes, Cohen's d values of < 0.20 were used to indicate small effect sizes, $0.20 < 0.80$ to indicate medium effect sizes and > 0.80 to indicate large effect sizes (Cohen, 1992). Cohen (1992) does not argue that small or medium effect sizes are insignificant; rather, he states that large effect sizes are usually observable 'with the naked eye', whereas small effect sizes usually are not (Sullivan & Feinn, 2012).

4. Results

The descriptive data of the multiplexity and the use of outcome measurements variables will be discussed in this chapter rather than in the method section, since describing frequency distributions, means and other descriptive results is also part of the descriptive sub-questions 1, 2 and 3. The chapter continues by discussing the analytical sub-questions 4 and 5.

4.1 Descriptive sub-questions regarding Dutch youth care policy

In what ways are neighborhood teams, primary schools and welfare organizations collaborating in Dutch municipalities?

Table 6 shows the prevalence of organizational ties neighborhood teams have with primary schools and welfare organizations. All respondents indicated that these organizations had contact with each other about individual children, and that they shared information with each other on request. This indicates that if these organizations have contact with each other about children they also share information if other actors within the network ask for it. There turned out to be one important condition. The respondents indicated that contact between neighborhood teams, schools and welfare organizations *only* takes place when the parents of children that receive youth care agree that such contact between organizations takes place. It differs to quite an extent whether this contact is weekly or not. As table 6 shows, this is the case in approximately half (17) of the networks. Moreover, in little more than half of the networks, plans of action with regard to individual cases were discussed. In the majority of the networks studied, decisions are taken together with primary schools (29) and welfare organizations (26). This is also the case in terms of whether plans are developed together. 25 neighborhood teams indicated to do so with primary schools, and 21 teams indicated to do so with welfare organizations. Another remarkable result was that even though neighborhood teams were collaborating with primary schools and welfare organizations, some of them did not yet integrate this cooperation within the policy documents of the neighborhood team. The most far-reaching way of collaboration, working together in the same building, did not seem to occur very often, although some instances were found in practice. For instance, in the Vensterschool in the neighborhood of Vinkhuizen in Groningen, the neighborhood team is working in the same building as the primary school. Another example was found in the Rosmolenwijk in Zaandam, in which the neighborhood team is working in the same building as the welfare organization.

Types of cooperation (n = 33)	Ties primary schools (%)	Ties welfare organizations(%)
1.Have contact about children	33 (100%)	33 (100%)
2.Share information on request	33 (100%)	33 (100%)
3.Weekly exchange of information	17 (52%)	17 (52%)
4.Discuss plans of action with regard to individual cases	19 (58%)	18 (55%)
5.Take decisions together	29 (88%)	26 (79%)
6.Develop plans together	25 (76%)	21 (64%)
7. Cooperation with the other organization(s) is integrated within the policy of the neighborhood team	23 (69%)	18 (55%)
8.Work together in the same building	4 (12%)	4 (12%)

Table 6. Prevalence of organizational ties with both primary schools and welfare organizations. *Note: neighborhood teams were asked whether the type of cooperation was present, both with primary schools and welfare organizations.*

What is the strength of Dutch youth care networks in terms of multiplexity?
This thesis measured 8 possible types of cooperation between neighborhood teams, primary schools and welfare organizations. As table 6 shows, the types of cooperation do not differ much between primary schools and welfare organizations. This indicates that once the neighborhood teams are networking within their local environment, they do this with both primary schools and welfare organizations. Table 7 shows the descriptive statistics of the multiplexity variable. The theoretical minimum of this variable was 0 and the maximum 16 (see paragraph 3.1), but as table 7 shows, the range that was found in practice differed from the theoretical range. The findings show that average network has a multiplexity score of 10.67, with a minimum of 5 and a maximum of 15.

Descriptive statistics of the multiplexity variable (n = 33)					
Mean	Mode	Min	Max	Sd.	Variance
10.67	11	5	15	2.99	8,98

Table 7. Descriptive statistics of the multiplexity variable.

To which extent are outcome measurements used in youth care networks in Dutch municipalities?
The types of outcome measurements mentioned by Van Yperen and colleagues (2015) that were specifically developed for Dutch youth care turned out to be a relevant tool for measuring this variable, since they could very well be recognized in practice. Table 9 shows how often each of the specific outcome measurements are used throughout the networks.

Type of outcome measurement (n = 33)	Prevalence (%)
1a. Client satisfaction questionnaires that measure the *utility* of youth care	21 (64%)
1b. Client satisfaction questionnaires that measure the *effect* of youth care	27 (81%)
2.Drop out of clients	10 (30%)
3. Goal-realization of youth care, specified to:	-
3a: The extent to which clients can function without youth care	25 (76%)
3b: The extent of relapse of clients that no longer receive care	13 (39%)
3c: The extent to which problems are reduced	23 (69%)
3d: The extent to which self-reliance has increased	21 (64%)

Table 9. Prevalence of the types of outcome measurements.

The most used outcome measurement are client satisfaction questionnaires that measure the effect of youth care. Questionnaires that measure the *utility* of the youth care as such are used slightly less across the networks included in the study (21 times). Goal realization, specified to the extent to which children can function without care, was used in roughly three-quarter of the cases (25 times). Goal realization, specified to the extent to which problems are reduced as well as the extent to which self-reliance has increased are used in approximately two-thirds of the networks included in the study. The drop-out of clients was the least used outcome measurement, followed by goal realization specified to the extent of relapse of clients that no longer receive care.
Table 8 shows the descriptive statistics of this variable.

Descriptive statistics of the outcome measurements variable (n = 33)					
Mean	Mode	Min	Max	Sd.	Variance
4.24	4	1	7	1.30	1.69

Table 8. Descriptive statistics of the multiplexity variable.

None of the respondents indicated that their neighborhood team did not use any of the potential outcome measurements (which can be seen at the minimum of 1 in table 8). This is perhaps not surprising, since it is obligatory for municipalities to use some form of outcome measurements. The average amount of outcome measurements that are used throughout youth care networks was 4. This indicates that there are substantial ways for municipalities to improve the effectiveness of youth care networks in this sense, since it was established that the higher the score on this variable the higher the effectiveness (see chapter 2).

4.2 Analytical sub-questions regarding differences in network effectiveness

To which extent can differences in network effectiveness be explained by the independent variables 'governance mode' and 'need for network level competencies'?

This sub-question aims to answer whether differences in network effectiveness can be explained by several independent variables. The first hypothesis relates to governance form:

H1: Youth care networks that are governed by a broker organization are more effective than youth care networks in which governance is shared.

Since network effectiveness was measured with two dependent variables, multiplexity and the use of outcome measurements, *H1* was split up into two more specific hypotheses:

H1a: Youth care networks that are governed by a broker organization are more multiplex than youth care networks in which governance is shared.

H1b: Youth care networks that are governed by a broker organization make more extensive use of outcome measurements than youth care networks in which governance is shared.

It was expected that youth care networks that are governed by a broker organization (in this case the municipality) are more effective than youth care networks in which governance is shared. However, the differences that were found were rather small (see table 10) and statistically insignificant (all p-values were much larger than 0.05). Hence, both *H1a* and *H1b* are rejected, which means that the more general hypothesis *H1* is rejected as well.

Independent variable	*Governance form* (n = 33)	Lead organization governance (n = 17)		Shared governance (n = 16)		
Dependent variable		Mean	Sd.	Mean	Sd.	Mean difference
Multiplexity		10.82	3.33	10.50	2.68	0.32 (p = 0.76)
Outcome measurements		4.29	1.36	4.19	1.28	0.10 (p = 0.82)

Table 10. Results of governance form on network effectiveness.

The second hypotheses relates to the 'need for network level competencies' variable. It was expected that networks in which the need for competencies was high, youth care network effectiveness would be higher than in networks in which this need was low. It should be mentioned that this expectation concerns network level effectiveness in terms of the strength of relationships and the use of outcome measurements, and not effectiveness on a *client* level (as discussed in chapter 2). This was formulated in the following hypothesis:

H2: Youth care networks with a high need for network level competencies are more effective than youth care networks with a low need for network level competencies.

Since network effectiveness was measured with two dependent variables, multiplexity and the use of outcome measurements, *H2* was split up in two more specific hypotheses:

H2a: Youth care networks with a high need for level competencies are more multiplex than youth care networks with a low need for network level competencies.

H2b: Youth care networks with a high need for level competencies make more extensive use of outcome measurements than youth care networks with a low need for network level competencies

The type of SES of a neighborhood was used as an indicator for the need for network level competencies. As shown in table 11, the mean amount of outcome measurements in neighborhoods with a low SES was 3.59, as opposed to 4.94 in neighborhoods with a high SES. This mean difference

of 1.35 was statistically significant (F = 1.928, df = 31, p = 0.002). This indicates that networks in neighborhoods with a high SES make more extensive use of outcome measurements than networks with a low SES. Therefore, hypothesis *H2b* is rejected, since the exact opposite was expected. The expected mechanism appears to work the other way around: in networks in which the need for network level competencies is low, there is made more extensive use of outcome measurements than in networks in which the need for network level competencies is high.

With regard to multiplexity, it was expected that multiplexity would be higher in neighborhoods in which the need for network level competencies is high. As shown in table 11, the opposite was the case. The average neighborhood team had a multiplexity score of 11.63 in neighborhoods with a high SES, compared to a multiplexity score of 9.76 in neighborhoods with a low SES. This mean difference of 1.86, however, was not statistically significant (p = 0.07) , although the p-value came close to the threshold for statistical significance (p = 0.05). Nevertheless, *H2a* was rejected; the mean difference was not significant and occurred in the opposite direction as expected. The results do not show that youth care networks with a high need for network level competencies are more multiplex than youth care networks with a low need for network level competencies.

Independent variable	*Need for network level competencies* (n = 33)	Low SES (n = 17)		High SES (n = 16)			
Dependent variable		Mean	Sd.	Mean	Sd.	Mean difference	Test score(F)
Multiplexity		9.76	3.63	11.63	1.78	1.86*	20.430
Outcome measurements		3.59	1.32	4.94	0.85	1.35**	1.928

Table 11. Results of need of network level competencies on network effectiveness. *Note: Test score is calculated with an independent sample T-test. *p = 0.07, **p = 0.002.*

The first two hypotheses (*H1* and *H2)* predicted that the highest values of the dependent variables should be found in networks in which neighborhood teams are positioned inside the organizational structure of the municipality and are located in neighborhoods with a low SES (group 1 in table 12). The lowest values were expected in networks in which neighborhood teams are positioned outside the municipality and with a high SES (group 4). Values in group 2 and 3, then, were expected to lie between the values of group 1 and group 4. These expectations, however, are not supported by the findings (see table 12). Networks seem to be the most multiplex in networks that are governed through shared governance, and in which the need for network level competencies is low. This is the opposite of what was expected: the results show that networks are the least multiplex in shared governance networks in which there is a high need for network level competencies. Moreover, similar results are found with regard to the use of outcome measurements. Shared governance networks in which the need for network level competencies is high make the least use of outcome measurements (mean = 3.0).

Independent variables	*High need for network level competencies* (low SES, 17 cases)	*Low need for network level competencies* (High SES, 16 cases).
Lead organization governance (neighborhood team positioned within municipality, 17 cases)	Group 1: 11 cases *Multiplexity* (Sd.) 10.55 (3.83) *Use of outcome measurements* (Sd.) 3.91 (1.38)	Group 2: 6 cases *Multiplexity* (Sd.) 11.33 (2.42) *Use of outcome measurements* (Sd.) 5.00 (1.09)
Shared governance (neighborhood team positioned outside municipality, 16 cases).	Group 3: 6 cases *Multiplexity* (Sd.) 8.33 (3.01) *Use of outcome measurements* (Sd.) 3.00 (1.09)	Group 4: 10 cases *Multiplexity* (Sd.) 11.80 (1.39) *Use of outcome measurements* (Sd.) 4.90 (0.74)

Table 12. Crosstab of independent variables' influence on network effectiveness.

To which extent can interaction effects of the independent variables 'governance mode' governance mode' and 'need for network level competencies' explain differences in network effectiveness?
Now that the independent influence of the independent variables on network effectiveness has been discussed, one can begin to analyze whether the independent variables strengthen or weaken their respective effects. As mentioned in paragraph 3.6, the testing of *H3a/b* and *H4a/b,* could not be done with a T-test because the sample size did not comply with the prerequisites of a T-test. Instead, Cohen's d was calculated to measure the effect size. First, the effectiveness of individual modes of governance was hypothesized as follows:

H3a: Networks that are governed by a broker organization are more effective when the need for network level competencies is high than when this need is low.

H3b: Shared governance networks are more effective when the need for network level competencies is low than when this need is high.

The results show no support for *H3a,* since lead organized networks seem to be more effective when the need for network level competencies is low (compare group 1 with group 2 in table 12). The values for multiplexity for lead network organizations are 10.55 with a high need for network level competencies, and 11.33 with a low need for network level competencies (mean difference = 0.78). If *H3a* were correct, one would expect this difference to occur in the opposite direction. The same goes for the use of outcome measurements: here, the mean difference is 1.09 (3.91 against 5.00) in the opposite direction. The Cohen's d-value for multiplexity organizations is -0.23 (see appendix 5 for calculations), when a positive value was expected according to Provan and Kenis (2008). For the use of outcome measurements, the Cohen's d-value is -0.84, where a positive value was also expected. Hence, hypothesis *H3a* is provisionally rejected.

The results do support *H3b*: the results indicate that shared governance networks are more effective when the need for network level competencies is low (compare group 3 with group 4 in table 12). The values for multiplexity in shared governance networks are 8.33 when the need for network level competencies is high against 11.80 when this need is low (mean difference = 3.47). For the use of outcome measurements, the value is 3.00 in case of a high need for network level competencies

against 4.90 when this need is low (mean difference = 1.90). The value of Cohen's d for multiplexity is 1.64, and 2.16 for the use of outcome measurements. Both results point to a large effect size for the need for network level competencies in shared network organizations. *H3b* is therefore provisionally accepted.

Next, the effectiveness of different modes of governance were set against each other. The following hypotheses were formulated:

H4a: Shared governance networks are more effective than networks that are governed by a broker organization if the need for network level competencies is low.

H4b: Networks that are governed by a broker organization are more effective than shared governance networks if the need for network level competencies is high.

With regard to *H4a,* the results point in the expected direction (compare group 2 with group 4 in table 12). The multiplexity value for shared governance networks in which the need for network level competencies is low is 11.80, against 11.33 for lead governance networks (mean difference = 0.47). For shared governance networks with a low need for network level competencies the use of outcome measurements value is 4.90, against 5.00 for lead governance networks (mean difference = 0.10). The effect sizes (Cohen's d), however are rather small: for multiplexity 0.27 and 0.11 for the use of outcome measurements (for the calculations, see appendix 5). These can be considered small effect sizes (Cohen, 1992), which indicates that shared governance networks are not necessarily more effective than networks that are governed by a broker organization if the need for network level competencies is low. Hence, *H4a* is provisionally rejected.

Results with regard to *H4b,* on the other hand, support the hypothesis; in cases with a high need for network level competencies, the multiplexity value for shared governance networks is 8.33 against 10.55 for lead governance networks (mean difference = 2.22). For shared governance networks, the value for the use of outcome measurements is 3.00, against 3.91 for lead governance networks (mean difference = 0.91). The Cohen's d for multiplexity is 0.62, and 0.72 for the use of outcome measurements. Both can be considered medium effect sizes (Cohen, 1992). Hence, *H4b* is provisionally accepted: brokered governance seems to be more effective than shared governance if the need for network level competencies is high.

5. Conclusion, limitations and recommendations for policy

5.1 Conclusion

The two research questions in this thesis were: (a) to which extent are youth care networks of neighborhood teams, primary schools and welfare organizations in Dutch municipalities effective and (b) to which extent can governance form and the need for network level competencies explain differences in network effectiveness? In order to assess the effectiveness of these networks, several context specific (sub-) questions had to be answered as well. These will be discussed first, before continuing with part b of the research question.

Strength of relationships

Dutch youth care has been decentralized through the Jeugwet since 2015, which means youth care policy has become the responsibility of municipalities rather than the national government. Municipalities have various options to shape their youth care policy, but the most commonly used form is through neighborhood teams. These teams often offer light forms (mostly preventative) of youth care, offer access to more specialized care and collaborate with primary schools and welfare organizations. It was, however, unclear in what ways these organizations are in fact working together. The results show that once neighborhood teams are networking within their local environment, they do this with both schools and welfare organizations. Moreover, throughout all cases included in this study, these organizations have contact with each other about children and share information on request. This indicates that once neighborhood teams start collaborating with schools and welfare organizations, they do so in order to have contact about children and to share information. This exchange of information is weekly in approximately half of the networks that were included in the study, indicating that networks differ in terms of how often information is shared between actors. Moreover, in roughly three quarters of the networks, decisions are made and plans are being developed together. Even though neighborhood teams were collaborating with primary schools and welfare organizations, some of these teams did not yet integrate this cooperation within the policy documents. This indicates that the policy documents 'lag behind' the practice of (some of) the neighborhood teams as such. In relatively few cases these organizations are working together within the same building. The small prevalence of this type of collaboration is perhaps no surprise, given the fact that working together in the same building is quite a recent trend in the Dutch social domain (Clarijs, 2015; Roozenbeek et al., 2015).

The strength of relationships between network actors was used as the first indicator for network effectiveness. That is, the stronger these relationships are, the higher the effectiveness. The strength of relationships seems to differ to quite an extent across networks. Some neighborhood teams had only five organizational ties with schools and welfare organizations, whereas others had fifteen (see table 7). The variance around the mean amount of organizational ties (10.67) was moreover relatively large (8.98), which suggests that some networks are more effective than others in terms of the strength of relationships within these networks.

The use of outcome measurements

It was also unknown which and to which extent outcome measurements are used throughout youth care networks, regardless of the fact that the use of (some) outcome measurements is obligatory for municipalities. The most used outcome measurements are client satisfaction questionnaires that measure the *effect* of youth care and goal realization of youth care, specified to the extent to which clients can function without care. Goal realization of youth care, specified to the extent to which problems are reduced and client satisfaction questionnaires that measure the *utility* of youth care were the third and fourth most used outcome measurements. Measuring client dropout was the least used outcome measurement, followed by the extent of relapse of clients that no longer receive care.

The extent to which outcome measurements are used throughout youth care networks was used as the secondary indicator for network effectiveness (that is, the more outcome measurements are used, the higher the effectiveness). On average, these networks use approximately four outcome

measurements (with a minimum of one and a maximum of seven). None of the respondents indicated that their neighborhood team did not use any form of outcome measurements, which is not surprising given the fact that it is obligatory for municipalities to use some form of such measurements.

Differences in network effectiveness

This thesis analyzed the influence of two independent variables, namely governance mode and the need for network level competencies on network effectiveness. Regarding the former, it was expected that network effectiveness would be higher in networks that are governed through a broker organization than in shared governance networks. The results do not support these expectations (see table 10). Differences in network effectiveness that could be contributed to governance mode were statistically negligible, indicating that the data shows no direct influence of governance mode on network effectiveness.

However, the results suggest that the need for network level competencies affects network effectiveness, but the mechanism seems to work the opposite way than was expected. It was expected that a high need for network level competencies would force network participants to collaborate more effectively in order to effectuate the stated goals in the Jeugdwet. In the context of this thesis, network actors are to higher extent interdependent to achieve sound results in neighborhoods with a low SES, in which there are more extensive and severe youth care related problems (Van den Broek, Kleijnen & Bot, 2012). This interdependency is an underlying factor of the need for network level competencies (Provan & Kenis, 2008). The results, however, contradicted these expectations: the use of outcome measurements is significantly higher in networks in which the need for competencies is low. In addition, the results points in the direction that the strength of relationships are stronger in networks in which the need for network level competencies is low, although this cannot be satistically proven by the results ($p = 0.07$). Given the fact that this value is close to but not quite at the significance threshold, combined with the fact that significant values are more difficult to obtain with low sample sizes (Figueiredo Filho et al., 2013), these findings urge scholars to study this mechanism with larger sample sizes and in different contexts. Given the results in table 10, it is not likely that these differences in network effectiveness are caused by differences in the need for network level competencies suffer from interference from the invisible variable governance mode. Hence, these results urge one to think why network effectiveness seems to be higher in networks in which the need for network level competencies is low.

A possible explanation could have to do with a phenomena what Cross, Rebele and Grant (2016) call ‘collaborative overload’. This term refers to a situation in which individual employees tasked with collaboration, whether it be with colleagues or with employees working for different organizations (as is the case with Dutch neighborhood teams), can find themselves in a situation where they are overburdened and undervalued. This can lead to a decrease in the effectiveness of networks, as collaborative undertakings become increasingly dependent on the efforts of a few individuals (called the ‘extra milers’ by Li, Zhao, Walter, Zhang & Yu, 2015), and employees experience stress due to excessive responsibility and expectations. Thus, collaborative overload can lead to a decrease in effectiveness of certain types of networks. It is possible that this is what has been observed in this thesis.

Another reason could be that network effectiveness, in terms of the strength of relationships in youth care networks and the extent to which outcome measurements are used throughout these networks, hinge on the priority that is given to network activities by network participants and/or managers. For instance, some managers of neighborhood teams might find it more important to collaborate intensively and effectively with schools and welfare organizations than others. In turn, this might influence the strength of relationships between network actors, as well as the extent to which outcome measurements are used throughout youth care networks. Indeed, scholars have shown positive effects of managerial networking on (public) agency performance (Akkerman & Torenvlied, 2011; O’Toole & Meier, 2004), and it could very well be that managerial quality, or the ‘willingness’ to network, influences network effectiveness as well.

Interaction effects

The theory of Provan and Kenis (2008) states that governance mode and the need for network level competencies have interaction effects on network effectiveness. This thesis tested several hypothesis that could be derived from their framework, and found both contradicting and confirming results. Even though none of the hypotheses could be definitively confirmed or rejected due to the low sample size, several findings are worth pointing out.

Provan and Kenis (2008, pp. 241) state that shared governance is less likely to be effective when the need for network level competencies is high, because "*demands will be placed on individual network members for skills they may not possess"*. Such circumstances favor brokered governance modes because broker organizations are "*more able develop specialty skills related to network-level needs*" (Provan & Kenis, 2008, pp. 241). The results show no support for the idea that networks that are governed by a broker organization are more effective when the need for network level competencies is high. In fact, the results indicate that brokered networks are more effective when the need for network level competencies is *low* (see table 12), and thereby contradict the theory. One explanation for this phenomenon may have to do with the fact that the theory of Provan and Kenis (2008) holds that networks that are governed by a broker organization are more effective because they are more *able* to develop network level skills. This theoretical assumption does not, however, include whether or not these organizations in fact *do* develop these skills. If broker organizations for whatever reason fail to develop such skills, it is not surprising that network effectiveness is lower in networks in which the need for network level competencies is high. Conversely, in networks in which the need for network level competencies is low, it may be easier for broker organizations to effectuate effective networks.

Next to differences in effectiveness *within* modes of governance, Provan and Kenis (2008) also discuss differences *between* modes of governance. They theorize that shared governance networks are more effective than networks that are governed by a broker organization if the need for network level competencies is *low*. The results pointed in this direction, but the effect sizes were small, indicating that there appears to be no real difference in effectiveness. In other words, one governance mode does not seem to be more effective than the other if the need for network level competencies is low. Unfortunately, Provan and Kenis (2008) do not discuss the mechanisms with regard to why they expect this to be true. The results nevertheless contradict their theoretical framework, since the results show that governance mode does not affect network effectiveness when the need for network level competencies is low. On the other hand, the results also show that governance mode *does* affect network effectiveness if the need for network level competencies is *high;* broker organized networks seem to be more effective than shared governance networks in case of a high need for network level competencies. This is in line with the theory of Provan and Kenis (2008).

All in all, the findings suggest that the oft-cited theory of Provan and Kenis (2008) needs refinement. Both contradicting and confirming results were found in the study, which urges scholars to study the mechanisms more thoroughly and in different contexts. Moreover, network effectiveness is rarely studied as dependent variable. Doing so can help establishing a grounded theory of when and why networks thrive, which is highly relevant for both scholars as network practitioners in general. This thesis conceptualized network effectiveness as the strength of the relationships between network actors and the extent to which outcome measurements are used throughout the network, specified to the context of Dutch youth care. These concepts concern effectiveness on a *network* level, and not on the *client* and the *community* level (see table 1). Future research can study other levels of network effectiveness (as a dependent variable) in order to see whether differences in network effectiveness on each level can be explained by independent variables, such as governance form and the need for network level competencies. Doing so will complement current theories about network effectiveness, since theoretical frameworks such as the one of Provan and Kenis (2008) do not specify to different levels of network effectiveness.

5.2 Limitations

This thesis studied network effectiveness as a dependent variable and found some noteworthy results that call for more research, and also contributed to context specific knowledge gaps in the context of Dutch youth care. However, it also had to cope with some limitations.

The first and most prominent limitation of this thesis relates to the low response rate and small sample size. Generally, small sample sizes make it difficult to conduct high quality statistical analysis (Figueiredo Filho et al., 2013). The quality of the results could be significantly improved by increasing the sample size.

Another limitation occurred as a result of the case selection method. Cases were selected based on the operationalized characteristics of the independent variables; whether the neighborhood team in question was positioned within or outside the organizational structure of the municipality (governance mode variable) and the level of SES of the neighborhood in which the neighborhood team operates (need for network level competencies variable). Even though the distribution for each of the independent variables was relatively equal, the distribution for calculating interaction effects was quite skewed (see table 3). Even though differences in sample sizes were accounted for in the effect size calculations (see appendix 5), the quality of the analysis would improve significantly if this distribution was more or less equal. The case selection method also brings about some limitations with regard to the generalizability of the results within the Dutch youth care policy context. The research design does not allow for the results to be generalized to Dutch municipalities in general. Since case selection was done according to the characteristics of the independent variables, the amount of neighborhood teams that were positioned within the organizational structure of the municipality was relatively equal to the amount of teams that were positioned outside of it (see table 3). It is, however, not known whether this distribution matches with the way in which municipalities position their neighborhood teams in practice; the percentage of municipalities that position their neighborhood teams within the organizational structure of the municipality is not known. Hence, it is not possible to generalize the findings with regard to the strength of relationships between youth care networks actors to anything other than the cases that were included in the study. Similarly, the research design does not allow for generalizing results with regard to which and to which extent outcome measurements are used throughout Dutch youth care networks. Hence, conclusions limit themselves to cases that were included in the study. Nevertheless, these results could be of use for municipalities that are (continually) shaping their youth care policy, as will be discussed in paragraph 5.3.

Another limitation relates to the merging of two types of data (interviews and surveys). As explained in chapter 3, however, three measures were taken in order to ensure consistency and comparability between interview and survey results (see: Harris & Brown, 2010), rendering this limitation less relevant than the ones above.

5.3 Policy recommendations

Aside from the scientific implications of this study for scholarly research, there are also some findings that could be used to improve youth care practice, as well as youth care policy on a local level, regardless of the generalizability issues mentioned in paragraph 5.1. First, in several networks included in the study, the use of outcome measurements was quite limited. Some networks made use of only one type of outcome measurement, whereas others used seven. Even though the exact difference across municipalities is unknown, it seems nevertheless likely that the extent to which these measurements are used in practice differs across municipalities. Those concerned with youth care policy are therefore recommended to use more of such measurements, because doing so seems a relative easy way to generate input that can be used to improve youth care policy on a local level. The outcome measurements mentioned by Van Yperen et al. (2015) can thereby serve as a guideline. For instance, if client dropout rates are high, youth care professionals can take measures to decrease this dropout.

Moreover, the results show that youth care networks in general could benefit from increasing the strength of relationships between youth care network participants. This could for instance be done by increasing the types of collaboration, and this thesis contains ideas to do so, for instance by starting

to develop plans of action *together* with network participants, rather than independently. The theory mentioned in this thesis allows one to expect that doing so also increases the quality of youth care as such as well, which is also in line with the goals of the Jeugdwet. Intensifying collaboration with primary schools welfare organizations and perhaps other actors in the social domain such as sport associations can contribute to the goal of preventing as much youth care related problems as possible. In turn, this is beneficial for those who receive youth care, as well as for those who are concerned with youth care policy in general.

Finally, the results show that youth care networks seem to be the least effective in neighborhoods with a low SES, combined with the positioning of these teams *outside* the organizational structure of the municipality. Given the fact that youth care related problems are more extensive and severe in neighborhoods with a low SES (Van den Broek, Kleijnen & Bot, 2012), it is undesirable for these networks to be ineffective. Thus, a solution to increase the effectiveness of youth care networks could be to position neighborhood teams *within* the organizational structure of the municipality if this is not the case. This is a particularly useful measure if the municipality in question contains a relatively high amount of neighborhoods with a low SES. Changing the positioning allows for a higher degree of coordination and steering processes of these neighborhood teams, which in turn could lead to an increase in the quality of youth care, as well as in the effectiveness of youth care networks. On the other hand, this logic does not necessarily seem to apply in neighborhoods with a high SES. In such neighborhoods it does not seem to matter very much whether the neighborhood team is positioned either within or outside the organizational structure of the municipality. This could perhaps be an incentive for municipalities to position some teams within the organizational structure of the municipality, and other ones outside of it.

References

Agranoff, R. (2006). Inside collaborative networks: Ten lessons for public managers. *Public administration review*, *66*(s1), 56-65. doi: 10.1111/j.1540-6210.2006.00666.x

Akkerman, A., & Torenvlied, R. (2011). Managing the environment: Effects of network ambition on agency performance. *Public Management Review*, 13(1), 159-174. Doi: 10.1080/14719037.2010.501618

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory, 18*(4), 543–571. doi:10.1093/jopart/mum032

Bevir, M., & Richards, D. (2009). Decentring policy networks: A theoretical agenda. *Public Administration, 87*(1), 3–14. doi: 10.1111/j.1467-9299.2008.01736.x

Clarijs, R. (2015). *Om de jeugd: perspectief voor beleid en praktijk*. Amsterdam: Uitgeverij SWP.

Cohen, J. (1992). A power primer. *Psychological Bulletin,* 112(1), 155-159. Doi: http://dx.doi.org/10.1037/0033-2909.112.1.155

Conrad, D. A., Cave, S. H., Lucas, M., Harville, J., Shortell, S. M., Bazzoli, G. J., . . . Margolin, F. (2003). Community care networks: linking vision to outcomes for community health improvement. *Medical Care Research and Review*, *60*(4), 95S-129S. doi: 10.1177/1077558703259096

Cross, R., Rebele, R., & Grant, A. (2016). Collaborative overload. *Harvard Business Review, 94*(1), 74-79.

Dal Molin, M., & Masella, C. (2016). Networks in policy, management and governance: a comparative literature review to stimulate future research avenues. *Journal of Management & Governance*, *20*(4), 823-849. doi: 10.1007/s10997-015-9329-x

Denters, B. (2005). Towards local governance? In B. Denters & L.E. Rose (Eds.), *Comparing local governance Trends and developments* (pp. 246 – 262). New York, NY: Palgrave Macmillan.

De Vries, M. S., & Wolbink, R. H. (2017). Kantelende sturing in de jeugdhulp?. *Jeugdbeleid, 11(4),* 1-15. doi: 10.1007/s12451-017-0163-9

Figueiredo Filho, D. B., Paranhos, R., Rocha, E. C. D., Batista, M., Silva Jr, J. A. D., Santos, M. L. W. D., & Marino, J. G. (2013). When is statistical significance not significant*?. Brazilian Political Science Review,* 7(1), 31-55. Doi: http://dx.doi.org/10.1590/S1981-38212013000100002

Harris, L.R., Brown, G.T.L. (2010). Mixing interview and questionnaire methods: Practical problems in aligning data. *Practical Assessment, Research & Evaluation*, *15(1).* Doi: http://hdl.handle.net/123456789/2867

Henry, A. D. (2011). Ideology, power, and structure of policy networks. *Policy Studies Journal, 39(*3), 361–383. doi: 10.1111/j.1541-0072.2011.00413.x

Hill, M. (2005). *The Public Policy Process, Essex.* UK: Pearson Education Limited.

Hvidman, U., & Andersen, S. C. (2013). Impact of performance management in public and private organizations. *Journal of Public Administration Research and Theory,* 24(1), 35-58. Doi: https://doi.org/10.1093/jopart/mut019

Integraal Werken in de Wijk. (2017). *Organisatievormen en positionering van (wijk)teams.* Utrecht: Movisie & Nederlands Jeugdinstituut.

Isett, K. R., Mergel, I. A., LeRoux, K., Mischen, P. A., & Rethemeyer, R. K. (2011). Networks in public administration scholarship: Understanding where we are and where we need to go. *Journal of Public Administration Research and Theory,* 21(1), 157-173. Doi: https://doi.org/10.1093/jopart/muq061

Jans, W. (2015). *Policy innovation in Dutch municipalities.* Enschede: Universiteit Twente. DOI: 10.3990/1.9789036539876

Keast, R., & Brown, K. (2002). The government service delivery project: A case study of the push and pull of central government coordination. *Public Management Review, 4*(4), 439–459. doi: http://dx.doi.org/10.1080/14616670210163015

Kenis, P., & Provan, K. G. (2009). Towards an exogenous theory of public network performance. *Public Administration*, *87*(3), 440-456. doi: 10.1111/j.1467-9299.2009.01775.x

Kickert, W. J., Klijn, E. H., & Koppenjan, J. F. (Eds.). (1997). *Managing complex networks: Strategies for the public sector.* London: Sage.

Klijn, E. H., Steijn, B., & Edelenbos, J. (2010). The impact of network management on outcomes in governance networks. *Public Administration, 88*(4), 1063–1082. doi: 10.1111/j.1467-9299.2010.01826.x

Koppenjan, J. F, & Klijn, E. H. (2004). *Managing uncertainties in networks*. London: Routledge.

Li, N., Zhao, H. H., Walter, S. L., Zhang, X.-a., & Yu, J. (2015). Achieving more with less: Extra milers' behavioral influences in teams. *Journal of Applied Psychology, 100*(4), 1025-1039. Doi: http://dx.doi.org/10.1037/apl0000010

Marsh, D., & Smith, M. (2000). Understanding policy networks: towards a dialectical approach. *Political studies*, *48*(1), 4-21. Doi: 10.1111/1467-9248.00247

Marmot, M., Ryff, C. D., Bumpass, L. L., Shipley, M., & Marks, N. F. (1997). Social inequalities in health: next questions and converging evidence. *Social science & medicine*, 44(6), 901-910. doi: https://doi.org/10.1016/S0277-9536(96)00194-3

McGuire, M., & Agranoff, R. (2011). The limitation of public management networks. Public Administration, 89(2), 265–284. 10.1111/j.1467-9299.2011.01917.x

Menahem, G., & Stein, R. (2013). High-capacity and low-capacity governance networks in welfare service delivery: A typology and empirical examination of the case of Israeli municipalities. *Public Administration,* 91(1), 211–213. doi: 0.1111/j.1467-9299.2012.02044.x

Ministerie van VWS., & Ministerie van VenJ (2013). *Jeugdwet memorie van toelichting*. Den Haag, Ministerie van Volksgezondheid, Welzijn en Sport en ministerie van Veiligheid en Justitie. Received 25 April 2017 from http://www.nji.nl/nl/Download-NJi/Jeugdwet-memorie-van-toelichting-27-juni-2013.pdf

Nederlands Jeugdinstituut. (2016). *Refaraat evaluatiekader Jeugdwet*. Utrecht: Nederlands Jeugdinstituut. Received from https://www.nji.nl/nl/Download-NJi/Publicatie-NJi/324599-Evaluatie-Jeugdwet-Meer-kwaliteit-en-minder-zorgen.pdf

O'Toole Jr, L. J., & Meier, K. J. (2004). Public management in intergovernmental networks: Matching structural networks and managerial networking. *Journal of public administration research and theory,* 14(4), 469-494. Doi: https://doi.org/10.1093/jopart/muh032

O'Toole Jr, L. J. (1997). Treating networks seriously: Practical and research-based agendas in public administration. *Public administration review*, 45-52. doi: 10.2307/976691

OECD. (2010). *PISA 2009 Results: Overcoming Social Background – Equity in Learning Opportunities and Outcomes (Volume II).* Organization for Economic Cooperation and Development. doi: http://dx.doi.org/10.1787/9789264091504-en

Politt, C. (2005). Decentralization. A central concept in contemporary public management. *The Oxford Handbook of Public Management,* 371- 397.

Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of public administration research and theory*, *18*(2), 229-252. doi: https://doi.org/10.1093/jopart/mum015

Provan, K. G., & Lemaire, R. H. (2012). Core concepts and key ideas for understanding public sector organizational networks: Using research to inform scholarship and practice. *Public Administration Review*, *72*(5), 638-648. doi: 10.1111/j.1540-6210.2012.02595.x

Provan, K. G., & Milward, H. B. (1995). A preliminary theory of interorganizational network effectiveness: A comparative study of four community mental health systems. *Administrative science quarterly*, 1-33. Doi: http://www.jstor.org/stable/2393698.

Provan, K. G., & Milward, H.B. (2001). Do networks really work?: a framework for evaluating public-sector organizational networks. *Public Administration Review,* 66(4). doi: 10.5465/APBPP.1999.27628083

Raab, J. (2002). Where do policy networks come from? *Journal of Public Administration Research and Theory,* 12(4), 581–622. doi: https://doi.org/10.1093/oxfordjournals.jpart.a003548

Roozenbeek, T., Roozenbeek, J., Derks, A., Derks, H., & Vereijken, P. (2015). *Pleidooi voor het kind: De ontwikkeling centraal.* Amsterdam: Uitgeverij SWP.

Roozenbeek, T., & Roozenbeek, J. (2018, in press). *Rolvermenging in het sociale domein*. Utrecht, Algemene Vereniging Schoolleiders (AVS).

Scott, J. (1991). *Social Network Analysis: A Handbook.* London: Sage Publications.

Seawright, J., & Gerring, J. (2008). Case selection techniques in case study research: A menu of qualitative and quantitative options. *Political Research Quarterly*, *61*(2), 294-308. doi: 10.1177/1065912907313077

Sørensen, E., & Torfing, J. (2009). Making governance network effective and democratic through metagovernance. *Public Administration,* 87(2), 234–258. doi: 10.1111/j.1467-9299.2009.01753.x

Sociaal Cultureel Planbureau (2017). *Statusscores.* Received at 28-11-2017 from https://www.scp.nl/Onderzoek/Lopend_onderzoek/A_Z_alle_lopende_onderzoeken/Statusscores

Sullivan, G. M., & Feinn, R. (2012). Using effect size—or why the P value is not enough. *Journal of graduate medical education,* 4(3), 279-282. Doi: 10.4300/JGME-D-12-00156.1

Sun, R., & Van Ryzin, G. G. (2014). Are performance management practices associated with better outcomes? Empirical evidence from New York public schools. *The American Review of Public Administration*, *44*(3), 324-338. doi: 10.1177/0275074012468058

Turrini, A., Cristofoli, D., Frosini, F., & Nasi, G. (2010). Networking literature about determinants on network effectiveness. *Public Administration*, 88(2), 528–550. doi: 10.1111/j.1467-9299.2009.01791.x

Van Arum, S., & Schoorl, R. (2015). *Sociale (wijk)teams in vogelvlucht State of the art najaar 2014.* Utrecht: Movisie

Van den Broek, A., Kleijnen, E., & Bot, S. (2012). *Ontzorgen en normaliseren: Naar een sterke eerstelijns jeugd- en gezinszorg*. Den Haag: Raad voor Maatschappelijke Ontwikkeling.

Van Heffen, O. & Klok, P.J., Institutionalism: state models and policy processes, in: Heffen, O. van, J.M. Kickert and J.J.A. Thomassen, *Governance in Modern Society: Effects, Change and Formation of Government Institutions* (pp. 153-177). Dordrecht: Kluwer Academic Publishers, 2000, ISBN 0-7923-6653-0.

Van Kersbergen, K., & Van Waarden, F. (2004). 'Governance' as a bridge between disciplines: Cross- disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy. *European journal of political research*, *43*(2), 143-171. doi: 10.1111/j.1475-6765.2004.00149.x

Van Yperen, T., De Wilde, E.J., De Wilschut, M., Keuzenkamp, S., De Jager, M. (2015). *Outcome sturing in de Jeugdhulp: 10 tips voor gemeenten en aanbieders.* Utrecht/Amsterdam: Nederlands Jeugdinstituut. Received from http://www.nji.nl/nl/Download-NJi/Publicatie-NJi/Outcoming-sturing-in-de-jeugdhulp.pdf

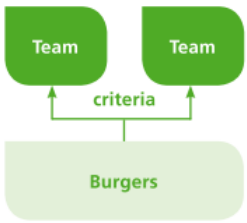
Weber, E. P., & Khademian, A. M. (2008). Wicked problems, knowledge challenges, and collaborative capacity builders in network settings. *Public Administration Review*, *68*(2), 334-349. doi: 10.1111/j.1540-6210.2007.00866.x

Appendix 1. Differences in organization and positioning forms of neighborhood teams

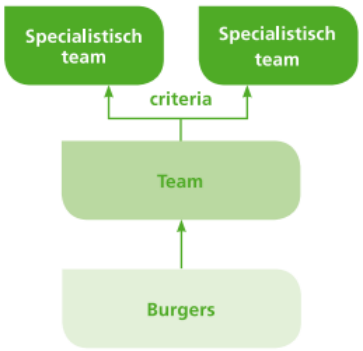
Source: Integraal Werken in de Wijk (2017).

1. **Distinction in terms of organization form**

Model B zijn domein- of doelgroepspecifieke teams. Meerdere teams functioneren naast elkaar op afgebakende domeinen of voor specifieke doelgroepen. Heldere werkafspraken voorkomen overlap. Soms werken de teams als voorpost.



Model C is een generalistisch team dat functioneert als voorpost voor de daarachter liggende, meer gespecialiseerde teams. Het generalistische team kan verwijzen naar een van de specialistische teams. Er zijn meerdere teams, maar voor de burger is er maar één toegangspunt.

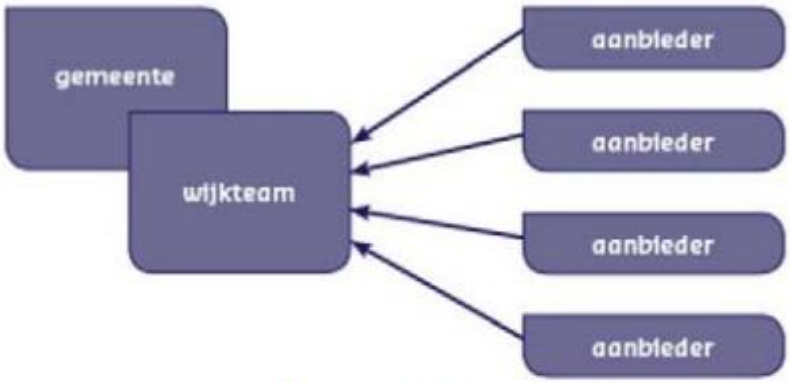


2. **Distinction in terms of positioning**

Positionering

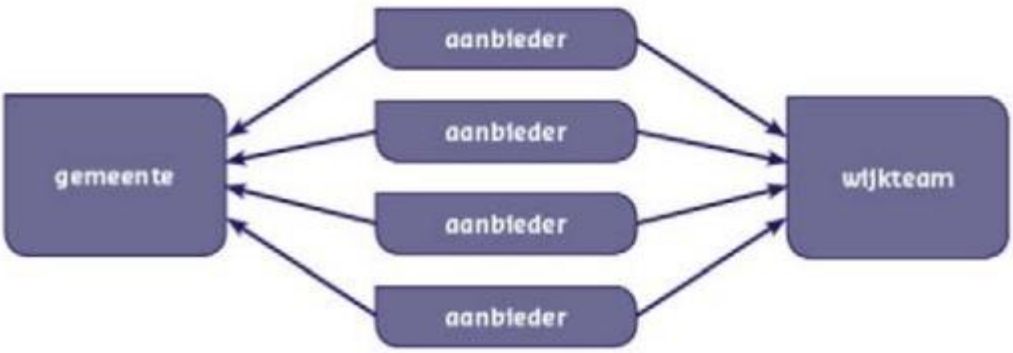
De tweede manier om (wijk)teams te categoriseren is op basis van hun positionering[5]. Grofweg zijn er daarbij vier modellen te onderscheiden.

In **Model 1** neemt de gemeente het (wijk)team in eigen beheer. Het team is dan gepositioneerd binnen de gemeente.

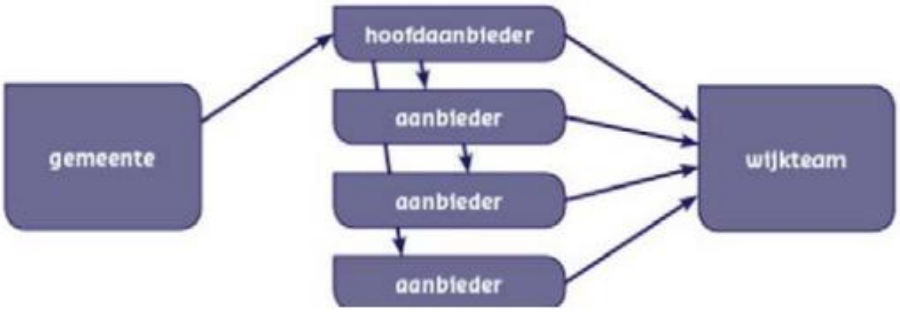


De gemeente kan het (wijk)team ook uitbesteden aan een of meer aanbieders of een speciaal opgerichte rechtspersoon. In dat geval zijn er drie varianten mogelijk: model 2, 3 of 4.

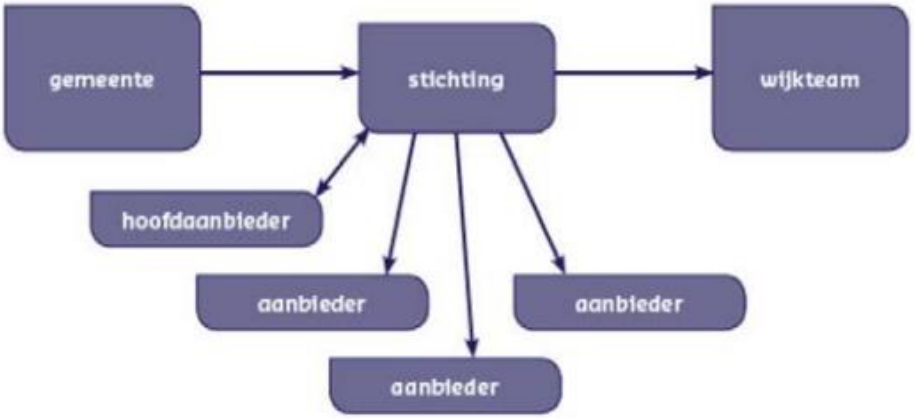
Model 2 is een samenwerking tussen de verschillende aanbieders. Er is dan een subsidie- of inkooprelatie tussen de gemeente en aanbieders met rechten en plichten.



In **Model 3** geeft de gemeente één hoofdaanbieder de opdracht een multidisciplinair (wijk)team op te zetten en daarbij andere aanbieders te betrekken.



In **Model 4** ten slotte richt de gemeente een rechtspersoon op. Deze rechtspersoon heeft als taak om een multidisciplinair team op te zetten, te coördineren en aan te sturen.



Appendix 2. Questions that are asked during the interviews and in the questionnaire

Onderzoek effectiviteit van jeugdhulpnetwerken in Nederlandse gemeenten

Introductie

Geachte heer/mevrouw,

Momenteel ben ik bezig met het afstuderen van de master Public Administration aan de Universiteit Twente. Mijn onderzoek gaat over de vraag in hoeverre er zich samenwerkingsrelaties hebben gevormd tussen basisscholen, welzijnsinstanties en (sociale) wijkteams als gevolg van de implementatie van de Jeugdwet. Daarnaast onderzoek ik welke typen uitkomstmetingen er worden gebruikt door sociale wijkteams, met betrekking tot de jeugdhulp.

In dit document staan twee tabellen met daarin een aantal vragen. De bedoeling is dat u antwoord geeft op de vragen met een '*Ja*' of een '*Nee*'. In de eerste tabel gaat om de vraag of uw wijkteam op de genoemde wijze – zoals vermeld in de linker kolom - samenwerkt met respectievelijk basisscholen en welzijnsinstanties. Het kan mogelijk zijn dat er geen sprake is van samenwerking tussen uw wijkteam en basisscholen en/of welzijnsinstanties. In dat geval vult u dus in ieder vakje een '*Nee*' in. De tweede tabel gaat over de vraag wat voor uitkomstmetingen (*outcome measurements)* er worden gebruikt binnen uw wijkteam. Ook hier is het mogelijk dat de genoemde uitkomstmetingen niet gebruikt worden in uw wijkteam. U vult dan dus in ieder hokje een '*Nee*' in.

Het beantwoorden van de vragen zal ongeveer 5 minuten in beslag nemen, en zal mij enorm met het afronden van mijn studie. De resultaten worden anoniem verwerkt. Eventuele vragen of opmerkingen kunt u sturen naar thomroozenbeek@gmail.com.

Vragen vooraf (deze worden anoniem verwerkt):

Naam:

Functie:

Gemeente:

Welke wijk valt / welke wijken vallen onder uw sociale wijkteam?

Heeft de gemeente het sociale wijkteam in eigen beheer? *Ja / Nee*

Tabel 1: samenwerkingsrelaties met scholen en welzijnsinstanties

Vraag	*Is het type samenwerking (zie linker kolom) met basisscholen en/ of welzijnsinstanties aanwezig?(ja/nee)*	
Manier van samenwerking	**Basisscholen**	**Welzijnsinstanties**
1. Heeft het wijkteam contact met basisscholen/welzijnsinstanties over kinderen?	*Ja / Nee*	*Ja / Nee*
2. Wordt er vanuit het wijkteam informatie gedeeld wanneer hier om gevraagd wordt door basisscholen/welzijnsinstanties?	*Ja / Nee*	*Ja / Nee*
3. Wordt er *wekelijks* informatie gedeeld over kinderen met basisscholen/welzijnsinstanties?	*Ja / Nee*	*Ja / Nee*
4. Bespreekt het wijkteam plannen van aanpak met basisscholen/welzijnsinstanties over kinderen?	*Ja / Nee*	*Ja / Nee*
5.Worden er beslissingen genomen in samenspraak met basisscholen/welzijnsinstanties?	*Ja / Nee*	*Ja / Nee*
6. Worden er plannen over kinderen gemaakt *samen* met basisscholen/welzijnsinstanties?	*Ja / Nee*	*Ja / Nee*
7. Is de netwerksamenwerking met basisscholen/welzijnsinstanties opgenomen in het beleid van het wijkteam?	*Ja / Nee*	*Ja / Nee*
8.Wordt er samengewerkt met basisscholen/welzijnsinstanties in hetzelfde gebouw?	*Ja / Nee*	*Ja / Nee*

Tabel 2: gebruik van uitkomstmetingen

Vraag	*Wordt het type uitkomstmeting(zie linker kolom) gebruikt in het wijkteam?*
Type uitkomstmeting	
1a. Wordt er binnen het wijkteam gebruik gemaakt van clienttevredenheidsonderzoeken over het *nut* van de jeugdhulp?	*Ja / Nee*
1b. Wordt er binnen het wijkteam gebruikt gemaakt van clieenttevredenheidsonderzoeken over het *effect* van de jeugdhulp?	*Ja / Nee*
2. Wordt de mate van uitval (voortijdig afhaken) van cliënten bijgehouden door het wijkteam?	*Ja / Nee*
3. Wordt doel-realisatie van de jeugdhulp binnen het wijkteam gemeten? Gespecificeerd naar:	*Ja / Nee*
3a: De mate waarin cliënten na afloop van de ondersteuning zonder hulp verder kunnen	*Ja / Nee*
3b: De mate waarin er na beëindiging geen nieuwe start van jeugdhulp plaatsvindt **(**het gaat hierbij dus om de vraag of de mate van terugval wordt bijgehouden)	*Ja / Nee*
3c: De mate waarin problemen bij kinderen zijn verminderd	*Ja / Nee*
3d: De mate waarin de zelfredzaamheid bij kinderen is verhoogd	*Ja / Nee*

Appendix 3. Raw data

	Eigen-beheer	**Type of SES**	**Multi-plexity Schools**	**Multi-plexity Welfare**	**Outcome measure-ments**	**Neighborhood team operative in**
#	*0 = Nee, 1 = ja*	*0 =high, 1 = low*	*Interval 1- 8*	*Interval 1-8*	*Interval 1-7*	
1	0	0	6	6	5	Steensel
2	0	0	7	7	4	Schelle zuid en oldeneel, Ittersumerbroek
3	1	1	6	7	6	Braakhuizen Zuid, Braakhuizen Noord
4	1	1	6	5	1	Zuiderenk
5	0	0	7	7	5	Voorsterallee-kwartier, Noordveen,
6	1	1	6	6	3	Oosterparkwijk
7	1	1	6	6	4	Kogerveld, Oude haven, Westzaan
8	1	0	8	6	5	Over-ouderkerk
9	0	1	7	7	4	Zaandijk, Oud Koog
10	1	1	8	7	4	Vinkhuizen
11	1	1	7	8	6	Rosmolenwijk, Zaandam Zuid (Poelenburg)
12	0	1	4	3	3	Duizel
13	0	0	7	6	5	Knegsel
14	1	0	5	6	5	Gijzenrooi, Gijzenrooi Noord,
15	1	0	6	7	4	Skandia
16	1	0	5	7	7	Epse
17	0	1	3	2	1	Holtenbroek
18	0	0	5	6	6	Langenholte
19	1	1	3	3	4	Zonderwijk
20	1	0	6	5	5	De Kelen
21	1	1	3	2	4	Lewenborg
22	1	1	4	3	3	Beijum West, Beijum Oost
23	0	1	4	4	3	Aalanden Noord, Aalanden Oost
24	0	0	6	4	5	Casteren
25	0	0	6	5	6	Netersel
26	0	0	6	5	4	Riethoven
27	0	0	5	6	4	Colmschate Noord, Colmschate
28	1	0	4	3	4	Meerveldhoven
29	0	0	6	5	5	Mastenbroek, Westenholte
30	0	1	5	3	3	Wipstrik, Wipstrik Zuid
31	0	1	4	4	4	Okkenbroek
32	1	1	8	6	4	Corpus den Hoorn, Corpus den Hoorn Zuid
33	1	1	3	3	4	Selwerd
Mean			5,5	5,2	4,2	

Appendix 4. Statusscores of neighborhood teams

Selected Neighborhood	Status-score	Neighb. team operative in:	Corresponding statusscores (respectively)	Average status-score*	High or low SES (0 = high, 1 = low)
Steensel	0.78	Steensel	0.78	0.78	0
Schelle zuid en oldeneel (Zwolle zuid)	0.82	Schelle zuid en oldeneel, Ittersumerbroek	0.82, 0.72	0.77	0
Braakhuizen Zuid	-1.47	Braakhuizen Zuid, Braakhuizen Noord	-1.47, -0.10	-0.79	1
Zuiderenk	-0.62	Zuiderenk	-0.62	-0.62	1
Voorsterallee-kwartier	1.12	Voorsterallee-kwartier, Noordveen,	1.12, 0.58	0.85	0
Oosterparkwijk	-2.58	Oosterparkwijk	-2.58	-2,58	1
Kogerveld	-0.65	Kogerveld, Oude haven, Westzaan	-0.65, missing, -0,42	-0.54	1
Over-Ouderkerk	1.83	Over-ouderkerk	1.83	1.83	0
Zaandijk	-0.38	Zaandijk, Oud Koog	-0.38, -0,18	-0.28	1
Vinkhuizen	-3.53	Vinkhuizen	-3,53	-3.53	1
Rosmolenwijk	-0.83	Rosmolenwijk, Zaandam Zuid (Poelenburg)	-0.83, -2.30	-1.55	1
Duizel	-0.90	Duizel	-0,90	-0.90	1
Knegsel	0.72	Knegsel	0.72	0,72	0
Gijzenrooi (Geldrop-Mierlo)	1.36	Gijzenrooi, Gijzenrooi Noord,	1.36, 1.04	1.20	0
Skandia	1.40	Skandia	1.40	1.40	0
Epse	1.58	Epse	1.58	1.58	0
Holtenbroek	-1.90	Holtenbroek	-1.90	-1,90	1
Langenholte	2.45	Langenholte	2.45	2.45	0
Zonderwijk	-1.04	Zonderwijk	-1.04	-1.04	1
De Kelen	1.17	De Kelen	1.17	1.17	0
Lewenborg	-1.36	Lewenborg	-1.36	-1.36	1
Beijum West	-3.52	Beijum West, Beijum Oost	-3.52, -1.36	-2.44	1
Aalanden	-0.75	Aalanden Noord, Aalanden Oost	-0,75, -0.05	-0.40	1
Casteren	1.20	Casteren	1.20	1.20	0
Netersel	0.80	Netersel	0.80	0.80	0
Riethoven	1.11	Riethoven	1.11	1.11	0
Colmschate Noord	1.29	Colmschate	1.29, 0.44	0.87	0

		Noord, Colmschate			
Meerveldhoven	1.59	Meerveldhoven	1.59	1.59	0
Mastenbroek	1.15	Mastenbroek, Westenholte	1.15, 0.24	0,69	0
Wipstrik	-0.76	Wipstrik, Wipstrik Zuid	-0.76, 0.24	-0.26	1
Okkenbroek	-1.25	Okkenbroek	-1.25	-1.25	1
Corpus den Hoorn	-0.61	Corpus den Hoorn, Corpus den Hoorn Zuid	-0.61, -0.81	-0.71	1
Selwerd	-3.39	Selwerd	-3,39	-3.39	1

Note. ** values of < -0.25 were labelled as a low SES, and values of > 0.54 were labelled as a high SES.

Appendix 5. Cohen's d calculations

$$Cohen's\ d = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}}}$$

H3a: multiplexity: (10.55 – 11.33) / √((10*3.83^2) + (5*2.42^2) / 15)) = -0.23

H3a use of outcome measurements (3.90 – 5.00) / √ ((10*1.38^2) + 5*1.09^2) / 15) = -0.84

H3b: multiplexity: (11.80 – 8.33) / √((9*1.39^2) + 5*3.01^2) / 14) = 1.64

H3b: use of outcome measurements: (4.90 – 3.00) / √((9*0.74^2 + 5*1.09^2) / 14) = 2.16

H4a: multiplexity: (11.80 – 11.33) / √ ((9*1.39^2) + (5*2.42^2) / 14) = 0.27

H4a: use of outcome measurements (5.00 – 4.90) / √ ((9*0.74^2) + (5*1.09^2) = 0.11

H4b: multiplexity: (10.55 – 8.33) / √ ((10*3.83^2 + (5 * 3.01^2) / 15) = 0.62

H4b: use of outcome measurements (3.91 – 3.00) / √ ((10*1.38^2) + (5*1.09^2) / 15) = 0.72