1. INTRODUCTION

‘If we begin with certainties, we will end in doubt,
but if we begin with doubts and bear them patiently,
we may end in certainty’.

Francis Bacon
THE PROBLEM

Humans are social, their lives are lived interdependently and social influences are expressed through a network of shared relationships. Through social discourse and action, as well as interactions and relations with others, an individual person becomes human through social experiences (Habermas, 1981; Vygotsky, 1978; Mead, 1934; Dewey, 1907). Opportunities which cross their paths, as well as aspirations and ambitions for the future are all defined by the social environments in which people live and work throughout their life cycle, which in effect, are composed of interactions with inspirational others who provide them with direction (Damon, 2008; Damon, 1997; Damon, 1990). Nonetheless, humans also require protection during specific moments throughout their lifetime from different threats. In order to live a fruitful and optimal life, resistant to the risk of disease, development problems and an early death, protection is highly necessary. Like problems at birth (bad conditions during feutal age, an early birth or neurological problems at birth), lifestyle problems during adulthood (drinking, eating, stress as main problems), and chronic problems during life’s final phase (dementia and other neurological problems), problem behaviours of youngsters (health risk behaviours) can have a strong negative influence on the development, health and wellbeing of the individual not only in their current phase of life, but also in the future. Problems that manifest during (early) adolescence affect later stages of development and also their direct network and environment, the latter of which causes concern in both public and political arenas as such problems can create large costs for society.

The phase of adolescence, which in this study includes youths between the ages of 12-18, is defined by opportunity and risk. In 2007, there were 1,204,964 youngsters between the ages of twelve and eighteen living in the Netherlands, which is 7.4% of the Dutch population. Between childhood and adulthood, adolescents develop their cognitive and social competencies, social identity and selfhood, which will direct and steer their lives later on in life. At the same time, however, it is during this phase of adolescence in which different emotional, mental and behavioural problems may arise, influence and endanger their health and social development.

In 2007, 79% of Dutch youngsters between the ages of 12 and 18 had ever drank alcohol (beer, spirits, wine), which is less than five years earlier when 85% of the youngsters had this experience. Since the end of the eighties, this percentage has fluctuated between 69 and 85%. In the same year (2007), around 51% of the
youngsters drank alcohol within the last month (between 45% and 58% in 1988-2007). There were hardly any
differences between boys and girls. Since a few years, a decrease has been witnessed in terms of ever and monthly
use, but this only applies to the younger group between the ages of 12 and 14 and not for the older group (15-18
year olds). 19% of the 12-14 year old drank five or more glasses on one occasion in the last month and in 2007,
57% amongst 15-18 year olds were binge drinkers (Trimbos Institute, 2010). From American research we know
that 45% of the adults who began drinking at age 14 became dependent on alcohol at some point in their lifetime
(Hingson et al., 2005).

Some of the adolescents already showed disruptive and rule breaking behaviour (antisocial behaviour)
when they were children. Rule breaking behaviour can manifest itself as violence against others or delinquency.
These types of children tend to have poor relations with peers and adults in their surroundings and they frequently
come into contact with the police. They show a chronically high level of physical aggression, opposition or
hyperactivity at an early age but also throughout adolescence. We know from other studies that there is a high
degree of continuity in terms of antisocial behaviour between the phases of childhood, adolescence and, later on,
adolescence (Tremblay, 1999). 7-10% of all males convey persistent antisocial behaviour throughout their whole
life (Lier, 2010; Lier, 2002; Moffit & Caspi, 2002; Moffit, 1993). Nevertheless, there is also a group of youngsters
who show antisocial behaviour during adolescence, which disappears when they enter adulthood. Both groups of
antisocial youngsters will likely display other problem behaviours during adolescence. For example, delinquency
often precedes drug use initiation in early adolescence (Hawkins et al., 2008; Hawkins et al., 2008; Junger-Tas,
2001). Violence, delinquency and anti-social behaviour of youngsters are important societal problems. It is
estimated that 5-7% of the Dutch children show serious problems and are in need of professional help (Loeber et
al., 2008). In the group of adolescents we see similar percentages (Junger-Tas et al., 2011; Junger-Tas et al., 2008;
Farrington, 2003). Boys show more anti-social problems than girls. Migrants are overrepresented in the juvenile
system and in the institutions for delinquents.

In the Netherlands, youth delinquency is a collective noun for different punishable acts by youngsters
(official till 25 years). This not only includes violent acts, but also crimes against property, arson and vandalism.
Although property crimes still account for the largest majority of delinquency, acts of violence increased in the
Netherlands. Antisocial behaviour is an important target for prevention.

19% of the Dutch youngsters in secondary schools have smoked in the last month, where girls smoked
just as much as boys. Smoking in the Netherlands is still one of the main causes of early death. In 2008, 19.300
people of 20 years and older died because of the direct causes of smoking. Smoking causes long cancer, COPD,
Coronary heart diseases, stroke, heart attack and different kinds of cancer. 14% of all deaths are caused by
smoking, and some 90.000 people from the age of 35 and up were hospitalized due to smoke related illnesses. That
number accounts for 7.5% of the total number of people who were hospitalized. The percentage of youngsters between 12 and 18 years of age, who ever smoked decreased from 55% in 1988 to 39% in 2007. Nearly one fifth of the youngsters said they smoked last month (19%). This percentage is more stable (between 30-19% since 1988) (Trimbos Institute, 2010). The use of soft drugs (hash and marihuana) of youngsters stabilizes the last years. When adolescents are 16 years old nearly one third has used soft drugs: More than 55% once or twice a month and 14% more than 10 times. A small number of youngsters use one or more hard drugs (like cocaine, amphetamine, ecstasy) (Laar, M. van; 2009; Vandenbroucke et al., 2011).

Depression is characterised by a change in mood over a long period of time, coincided by a loss of interest and pleasure (Smit, 2006). Incidences of depression among younger people increase when young people reach adolescence. International research shows that 5 percent of adolescents experience a clinical depression in a given year, and 20% experience such an episode during adolescence (IOM, 2009; Angold & Costello, 2001). For girls, the chances of the depression are twice as high in comparison to boys. In the Netherlands the prevalence of depressive disorders are 0.4-8.3% of the adolescents between the ages of 12 and 18 (Trimbos Institute, 2010). Nonetheless, it is clear that the percentage of depressive problem behaviour is far higher.

In the last ten years, ideas about sex and sexual behaviour became more liberal in the Netherlands, which shed a new light on sexual related problem behaviour during adolescence. Youngsters not only have more sexual experiences, but they also take place at an earlier age. Youngsters between 12-14 years old are more at risk of being persuaded to engage in sexual behaviour, especially girls. On a regular basis, the media bombards youngsters with sexual images, innuendos as well as information. Sexual behaviour puts youngsters at risk of teen pregnancy, sexually transmitted diseases (like Sexual transmitted disease and HIV) and promiscuity sexual behaviour (De Graaf et al., 2005; Brugmans et al., 1995).

The early development phase of problem behaviour is important for future human development. We know, for example, that half of all lifetime cases of diagnosable mental illnesses begin at the age of 14 (Kessler et al., 2005). Problem behaviours are linked, in that a change in one type of problem behaviour may increase the development of another problem behaviour (IOM, 2009). For example, the more behavioural problems a youngster has, the more likely they will fail at school. This will, in effect decrease their chances of obtaining employment, which will increase their dependence on the social welfare system, and increase their chances of coming into contact with the juvenile system.
Rather than waiting until early alcohol consumption turns into alcohol dependence, early tobacco use causes cancer, and adolescent antisocial behaviour turns into serious violence and depression, problem behaviour should be prevented at an early age (Hawkins et al., 2008). They are important health gains. It is crucial that youngsters who transform from being children to young adults, successfully pass the phase of adolescence: ‘Safe passage’ (Dryfoos, 1998).

In the last twenty years, people have sought for more individually based than socially oriented answers in regards to youth problem behaviour. More people have shown that youth problems are individually oriented, indicated and are given one of their many different labels. In recent times, authority has become professionalized. Practical answers are being provided more and more by doctors, lawyers and therapists, in comparison to parents, teachers and other important adults. This at a time when more and more youngsters are required to function in specific contexts away from their family, school and neighbourhood.

Nowadays, we live in a society with a lot of opportunities and risks (Boutellier, 2010). For children who grow up in strong families, attend good schools and are socially supported and controlled by the communities that they live in, this is maybe less of a problem. However, societies, which are defined by endless possibilities and an abundance of unexpected and unfamiliar social networks, can pose problems for children and youngsters who grew up in more chaotic and unstructured situations, without networks of structured relationships and social capital. The chance for them to develop problem behaviours during this time period is far more likely. These problem behaviours may not only have a negative influence on their lives at present, but they may also cause problems during their adult life. Not all the adolescents are successful and these problems (one and often in tandem) are part of their life story. With help, support and ‘nudges’ from people in their surroundings and thoughtful preventive interventions at the right time and in the right place, their lives can be more successful (Thaler & Sunstein, 2009).

It is clear that the incidence and prevalence of these behaviours commence and/or increase significantly during this passing phase of adolescence, from childhood to adulthood, and can lead to life long health related problems, diseases and disorders. As a society we have the responsibility to help all the youngsters become independent and successful. Yet the big question remains: what can we do together and how should this be organized?
INTRODUCTION

THEORY

The most crucial factor which determines human health and development is the social environment in which people live and work throughout their life course and how they cope with changing environments (Keating & Hertzman, 1999). Individual social competencies, family skills, school quality as well as community characteristics and resources are all important for the development of adolescents, as prevention science made clear in several studies (Weissberg & Kumpfer, 2003). Prevention science has emerged as an interdisciplinary science created by an integration of developmental science and longitudinal studies, social and community epidemiology and research of preventive and randomized trial (IOM, 2009; Mrazek & Haggerty, 1994; Coie et al., 1993; Kellam & Rebok, 1992). Prevention science can identify two different types of groups of predictors in terms of individuals and their social environments. One group identifies which factors increase the likelihood of problems (risk factors), whilst the other focuses on factors which moderate and mediate exposure to risk, which in effect will decrease the likelihood of problems (protective factors). Through a number of experimental studies, it was found that tested and effective prevention programs and policies could be developed, not only for individuals but also for families, schools and communities in order to support the social and healthy development of youngsters (Elliot, 1997; Sherman et al., 1996). In the Netherlands, some preventive interventions have also been developed and implemented during the last 15 years (see Chapter 3). These interventions aim to halt the development of problem behaviours and disorders, and prevent a full-blown manifestation of these behaviours and disorders and other associated outcomes. It is crucial that the intervention takes place at the right moment, in the right place and for the right reasons. Most preventive interventions are based on the idea that risk factors should be minimized and protective factors should be enhanced.

The aim of this thesis is to study the development of some of these problem behaviours during the phase of adolescence and the preventive possibilities available in the communities where the youngsters grow up and live over a longer period of time. Research questions have been derived from preventive and research activities that have been active in the last ten years in very diverse socio-cultural contexts, mainly in the Netherlands. From these activities, Communities that Care (a community based prevention program in which many of these preventive ideas since the 1994 IOM-report, are clustered together) played a central role.
Problem behaviours

Although different problem behaviours have been researched according to their own developmental patterns, there are similarities between these patterns of behaviour. Problem behaviours also tend to occur in tandem with one another (Dryfoos, 1998). Research focusing on how all of these problem behaviours are connected and interrelated has been done in the past, but rarely amongst youngsters in the Netherlands.

Using our own dataset, which consists of 17,961 youngsters and focused on more severe problem behaviours (see chapter X, Jonkman et al., 2012), we found that 6.2% of the Dutch youngsters scored on two or more of the eight indicators of antisocial behaviour, with nearly no differences between boys and girls. The study indicated that 10.9% of youngsters drank 10 or more glasses of alcohol in the last month, and 14.6% smoked 10 or more cigarettes on daily basis within the same time period, girls more than boys. 1.7% of the youngsters used soft drugs three times or more in the last month, whilst hard drugs are used by a relatively small group (0.8%). 25.5% of the youngsters showed depression, girls nearly twice as much as boys and about 6% of the youngsters showed sexual-related problem behaviour. Nevertheless, 55.1% of the 12-18 year olds did not show any of these problem behaviours at all. 30.6% of the youth showed two or more problem behaviours (we define them as ‘Risk Youth’) and 14.3% showed three or more problem behaviours (‘High Risk Youth’).

Table 1. Prevalence of Problem Behaviour in the Netherlands

<table>
<thead>
<tr>
<th>Problem behaviour</th>
<th>Total</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial behaviour</td>
<td>6.2</td>
<td>6.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Drink</td>
<td>10.9</td>
<td>13.8</td>
<td>8.3</td>
</tr>
<tr>
<td>Smoke</td>
<td>14.6</td>
<td>14.0</td>
<td>15.9</td>
</tr>
<tr>
<td>Hash</td>
<td>1.8</td>
<td>2.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Hard drugs</td>
<td>0.7</td>
<td>0.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Depression</td>
<td>25.5</td>
<td>17.0</td>
<td>32.8</td>
</tr>
<tr>
<td>Sexual-related PB</td>
<td>5.6</td>
<td>5.9</td>
<td>5.3</td>
</tr>
</tbody>
</table>

**Development**

Problem behaviours hardly ever spontaneously develop from one day to the other. Instead, these behaviour patterns generally develop over time with differences but also similarities between them in which genes, social experiences, life course as well as social circumstances play an interactive role. The social position is affected by what adolescents experienced in their earlier lives (conception, birth, early life and childhood), as is their social response to social circumstances (Marmot, 2000). Adolescents are affected by their childhood experiences where parts of their behaviour were already structured. Since Freud, some scientists have focused on the importance of the early life exposure (Keating & Hertzman, 1999; Tremblay, 1999). Now, we know that exposure in early childhood influences cognitive, social and mental development. It is in this early phase that our brain develops with its great plasticity (Goldberg, 2001; Bruner, 1990). Positive responses to critical early phases, for example, make individuals vulnerable or resistant to various diseases later on (Berkman and Kawachi, 2000). With the cognitive revolution and great strides in brain research we also now know the importance of the early phase in terms of the origins of different diseases. In this latency of sensitive period perspective early social life conditions and early life exposure have causal influence on later health outcomes.

But, it is not only the early phase which is important for human development. It is also the accumulation of exposures throughout childhood and adolescence and the cumulative disadvantages, which are evident at the end. Disadvantages are set in motion often as a result of a series of subsequent experiences that accumulate later on during adolescence, which for example, may be demonstrated through violence (Berkman & Kawachi, 2000; Keating & Hertzman, 1999; Sampson & Laub, 1993).

In this thesis, these different developmental perspectives are not researched. Instead this study focuses on the importance of development. In the end, problem behaviours are an integral part of an individuals’ life course, which takes place in the real world over a longer period of time in a place where lives are lived and where people follow different paths and experiences different stages and turning points of their personal development. Contemporary life is socially organized and the social context affects the way in which adolescents think, feel and act (Phelps et al., 2002; Elder & Conger, 2000; Furstenberg et al., 1999).

**Contexts**

Overall, youngsters mainly grow up in four contexts in which they interact with others on a daily basis over a longer period of time. These contexts include their family, school, peer group and neighbourhood. Most youngsters have a place or role in their family, which is the first social context in which they interact with others. In most cases, the family protects youngsters against risks and problems. Principles of love, protection and safety
are important and it is in this safe context in which children and youngsters learn social and cultural rules, norms and values. Within this secure context, youngsters can practice their behaviour, social and personal skills (Damon, 1997). In order to accomplish social and healthy maturity, the first years of development are crucial. Practices of monitoring and controlling are part of the parental role and are not only vital in this early phase, but also and perhaps especially, during adolescence when children’s lives broaden. During this time, the management qualities of parents are also important (Furstenberg et al., 1999).

The world of children expands once they begin attending school. Many young children have their first contacts within these structured institutions outside the family. Nearly every child attends primary school and begins when they are four. When they turn twelve years old, they may attend different types of secondary school. The school is the second, important context of socialisation for young people. Within this context they learn cognitive, social and creative knowledge and skills in a structured way. They spend thousands of hours in school during their lifetime. They meet similar and different peers and they interact daily with students who have been evaluated as having a similar academic ability. In addition, they are supervised by different teachers over the years. The organisational structure and climate of schools also influence the development of youngsters. In recent times, the role of education has become more important in our society and it has replaced the family in allocating and socializing youth (Gottfredson & Hirschi, 1990).

As for children, and especially for adolescents, the world broadens when they interact with peers. Activities with friends, especially during leisure time and informal, are important in terms of their individual and social development. Friends are important as they provide reference in regards to interests, perspectives and interaction with others. This time is often ‘experimental’. A child’s behaviour, thinking, norms as well as values are confronted and many receive new inputs during these years. These ‘experiments’ are important in terms of identity development in adolescents (Erikson, 1987). The position of the family and the school differ now that they interact more with friends.

The neighbourhood or community is the social, physical, geographical and organizational unit in which youngsters grow up and develop in (Kawachi & Berkman, 2003). Neighbourhoods can often be identified by roads and channels but the borders are not always that clear. They can be identified as the surrounding area where youngsters are born and live and, where they often, go to their first school. It is where they play with their friends on the street. When youngsters are twelve or older their world expands and they begin to attend schools outside their neighbourhood. The influence of the neighbourhood on the development of youngsters is complex and difficult and our knowledge is still in its infancy ( Sampson, Raudenbusch, & Earls, 1997). However, the social demographical position of the inhabitants and the social-cultural structure (poverty and socioeconomic differences) of the neighbourhood can directly influence child development. Nonetheless, this context also has mediating influences on other contexts in which children grow up, such as familial regimes. (Pinkster, 2009).
Social determinants

Overall levels of health, its distribution and other social determinants are essential for understanding the problem, monitoring development and progress, as well as assessing the effects of actions. Risk factors and protective factors are the best researched social determinants of problem behaviours we have at this moment and researched over a longer time in sciences like epidemiology, criminology, sociology and prevention.

Risk factors include those factors related to the child, family, school, peer group or neighbourhood, which are associated with an increased probability of different youth problem behaviours (Hawkins et al., 1998; Loeber & Farrington, 1998). Experimental, observational, longitudinal and etiological studies revealed these associations over and over again in different studies during the last decades (Dryfoos, 1998; Junger-Tas, 1998; Junger-Tas, 1997) (Loeber et al., 2008; Arthur et al., 2006; Loeber & Farrington, 1998). Studies show that several risks in different contexts can contribute to the development of minor or major problems (e.g. bullying, fighting to violence, drugs and alcohol (Farrington, 2004; Loeber & Farrington, 1998; Hawkins et al., 1998)). It is especially the accumulation of risk factors which are important. Those risk factors have to be detected and are important aspects of prevention. We see these associations also in the Netherlands. Table 2. shows the results of the relationships between Problem behaviours and Risk factors in our country.

### Table 2. Adjusted Odds Ratio’s Risk factors and Problem behaviours

<table>
<thead>
<tr>
<th>Family</th>
<th>Alcohol</th>
<th>Antisocial behaviour</th>
<th>Smoking</th>
<th>Soft drugs</th>
<th>Hard drugs</th>
<th>Sexual related PB</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family History of Problem behaviour</td>
<td>2.17 (1.91-2.49)</td>
<td>3.85 (3.37-4.39)</td>
<td>2.26 (2.03-2.52)</td>
<td>5.74 (4.53-7.36)</td>
<td>4.94 (3.42-7.13)</td>
<td>2.64 (2.28-3.07)</td>
<td>2.09 (1.91-2.29)</td>
</tr>
<tr>
<td>Poor Family Management</td>
<td>2.25 (2.01-2.51)</td>
<td>2.31 (2.03-2.63)</td>
<td>1.77 (1.62-1.93)</td>
<td>2.39 (1.85-3.08)</td>
<td>2.53 (1.70-3.76)</td>
<td>1.78 (1.55-2.05)</td>
<td>1.47 (1.36-1.57)</td>
</tr>
<tr>
<td>Family Conflict</td>
<td>1.56 (1.41-1.73)</td>
<td>2.21 (1.95-2.50)</td>
<td>1.66 (1.52-1.81)</td>
<td>2.29 (1.80-2.91)</td>
<td>2.32 (1.59-3.38)</td>
<td>1.61 (1.41-1.85)</td>
<td>2.48 (2.31-2.67)</td>
</tr>
<tr>
<td>Parental Attitudes Favourable toward Drug Use</td>
<td>5.21 (4.44-6.13)</td>
<td>2.37 (2.06-2.73)</td>
<td>2.56 (2.31-2.84)</td>
<td>3.45 (2.47-4.81)</td>
<td>2.42 (1.55-3.78)</td>
<td>2.31 (1.96-2.74)</td>
<td>1.35 (1.25-1.46)</td>
</tr>
<tr>
<td>Parental Attitudes Favourable to Antisocial Behaviour</td>
<td>1.58 (1.42-1.76)</td>
<td>3.60 (3.14-4.12)</td>
<td>1.61 (1.47-1.77)</td>
<td>3.29 (2.55-4.23)</td>
<td>2.79 (1.90-4.1)</td>
<td>1.76 (1.53-2.01)</td>
<td>1.56 (1.46-1.68)</td>
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<tr>
<td>School</td>
<td></td>
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<tr>
<td>Academic Failure</td>
<td>1.70 (1.53-1.91)</td>
<td>2.06 (1.82-2.34)</td>
<td>1.61 (1.47-1.77)</td>
<td>2.28 (1.81-2.86)</td>
<td>2.08 (1.45-2.98)</td>
<td>1.43 (1.25-1.65)</td>
<td>1.86 (1.72-2.01)</td>
</tr>
<tr>
<td>Low Commitment to School</td>
<td>2.69 (2.42-2.99)</td>
<td>4.06 (3.58-4.61)</td>
<td>2.06 (1.89-2.25)</td>
<td>5.48 (4.23-7.11)</td>
<td>4.30 (2.93-6.31)</td>
<td>2.25 (1.97-2.57)</td>
<td>2.55 (2.36-2.74)</td>
</tr>
<tr>
<td>Early Antisocial Behaviour</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Children/youngsters</td>
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<tr>
<td>Rebelliousness</td>
<td>2.65</td>
<td>4.56</td>
<td>2.11</td>
<td>4.55</td>
<td>3.89</td>
<td>2.15</td>
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<td></td>
<td>(2.38-2.95)</td>
<td>(3.97-5.23)</td>
<td>(1.93-2.30)</td>
<td>(3.49-5.94)</td>
<td>(2.59-5.84)</td>
<td>(1.88-2.46)</td>
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<td></td>
<td>(3.43-5.95)</td>
<td>(8.88-1.39)</td>
<td>(2.51-3.98)</td>
<td>(7.12-14.02)</td>
<td>(6.11-15.67)</td>
<td>(3.67-3.9)</td>
<td></td>
</tr>
<tr>
<td>Early Initiation of Antisocial Behaviour</td>
<td>3.05</td>
<td>15.38</td>
<td>3.10</td>
<td>8.18</td>
<td>7.35</td>
<td>3.77</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.69-3.45)</td>
<td>(13.35-7.7)</td>
<td>(2.78-3.44)</td>
<td>(6.36-10.52)</td>
<td>(4.98-10.86)</td>
<td>(3.25-4.37)</td>
<td></td>
</tr>
<tr>
<td>Early Initiation of Alcohol and Drug Use</td>
<td>4.87</td>
<td>6.10</td>
<td>21.43</td>
<td>39.59</td>
<td>10.33</td>
<td>5.76</td>
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<td></td>
<td>(4.32-5.50)</td>
<td>(5.25-7.10)</td>
<td>(18.42-24.91)</td>
<td>(20.32-7.11)</td>
<td>(5.78-18.49)</td>
<td>(4.86-6.82)</td>
<td></td>
</tr>
<tr>
<td>Favourable Attitudes towards Alcohol and Drug Use</td>
<td>5.49</td>
<td>4.45</td>
<td>4.74</td>
<td>23.68</td>
<td>5.89</td>
<td>4.20</td>
<td></td>
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<tr>
<td></td>
<td>(4.82-6.25)</td>
<td>(3.86-5.1)</td>
<td>(4.29-5.25)</td>
<td>(3.64-9.52)</td>
<td>(3.57-9.5)</td>
<td>(3.8-1.61)</td>
<td></td>
</tr>
<tr>
<td>Favourable Attitudes towards Antisocial Behaviour</td>
<td>2.68</td>
<td>4.89</td>
<td>2.39</td>
<td>5.04</td>
<td>3.83</td>
<td>2.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.40-3.00)</td>
<td>(4.21-5.68)</td>
<td>(2.18-2.61)</td>
<td>(3.74-6.80)</td>
<td>(2.47-5.92)</td>
<td>(2.05-2.71)</td>
<td></td>
</tr>
<tr>
<td>Friends Use of Drugs</td>
<td>13.61</td>
<td>5.72</td>
<td>6.34</td>
<td>18.88</td>
<td>4.23</td>
<td>5.47</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(10.72-17.26)</td>
<td>(4.85-6.73)</td>
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**Note.** Controlled for age, gender, ethnicity, school type, family structure, education parents, work parents, language. not significant. Data from sample of 17,961 youngsters in 123 communities in the Netherlands (see Chapter 7, Jonkman et al., 2012)

Although still less researched compared to risk factors, there is more interest and knowledge in public health and prevention science in the importance of protective factors: these factors not only protect against problem behaviour because they are associated with less problem behaviours. But they also increase positive outcomes (positive adjustment, positive mental health; (Catalano et al., 2004). Table 3 shows the results for Problem Behaviours and Protective Factors in the Netherlands.
Table 3. Adjusted Odds Ratio’s Protective Factors and Problem Behaviour

<table>
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<tr>
<th>Protective factors</th>
<th>Alcohol</th>
<th>Antisocial behaviour</th>
<th>Smoking</th>
<th>Soft drugs</th>
<th>Hard drugs</th>
<th>Sexual-related PB</th>
<th>Depression</th>
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**Note.** Controlled for age, gender, ethnicity, school type, family structure, education parents, work parents, language, * not significant. Data from sample of 17,961 youngsters in 123 communities in the Netherlands (see Chapter 7, Jonkman et al., 2012)
Levels of influence

Behaviours are not randomly distributed within the population, rather they are socially patterned and often clustered together. Poverty, socioeconomic status and low education are all factors that increase the likelihood of risk behaviours. Social position in which you are born, grow up and live place individuals at ‘risk of risks’ (Rose, 1992). That is the reason why individual development can be placed into an ecological context. Environments place constraints on individual behaviour as well as norms, social control, and opportunities can improve the quality of life (Berkman & Kawachi, 2000). There is an increasing interest and activity in promoting a more multilevel approach in behavioural, social and health sciences. Development should not only be researched on individual but on multi levels (‘from genetic up to socio-cultural and political level of analysis’). Individual outcomes are more and more researched by upstream mechanisms in which these outcomes operate (Viner et al., 2012; Galea, 2007; Luke, 2004).

Figure 1. Individual development in ecological framework

Given the fact that different problem behaviours of youngsters are connected and interrelated, these behaviours have their developmental patterns, the importance of four daily contexts in which they grow up in which risk and protective factors play an important role and taking into account an upstream perspective, what can be done? Would it be realistic to consider building or rebuilding environments that have a positive effect on a child’s healthy and social development, when development in itself is so complex? Is it possible to reduce this knowledge and complexity into workable steps and goals for practitioners and politicians?

Communities that Care (CtC) is an example of a preventive intervention system, which aims to support the healthy and social development of youngsters on a community level taking into account this complexity. It is a manualized system, which seeks to develop and transform prevention work within communities to address alcohol and drug use, delinquency and other problem behaviours (see also Chapters 2 and 4). CtC mobilizes and empowers coalitions of diverse community stakeholders to collaborate in community assessment, planning, and action to implement and institutionalize science-based prevention service systems. The premise of CtC is that a reduction in the prevalence of adolescent alcohol and drug use, delinquency and other problem behaviours in a community can be achieved through the identification of elevated risk factors and depressed protective factors. It addresses those risk factors found in scientific studies which have been known to increase the likelihood of adolescent substance abuse, including the consumption of alcohol, cigarettes, hash and hard drugs, violence and delinquency, sexually-related problem behaviour and depression. Yet, it also addresses protective factors which have helped reduce the likelihood of these outcomes. Based on this knowledge, the CtC process involves assessing the prevalence of the above-mentioned problem behaviours. But CtC also relates both risk – and protective factors within a particular community to the identified problem behaviours. Based on this local profile, communities can identify and in turn, implement tested and effective, preventive interventions to address the underlying factors. A strategic, community-specific process has been designed to increase communication, collaboration and ownership among service providers and community members. During this process, communities receive technical assistance and specific training courses by licensed CtC-experts. Although it remains a community intervention where different parties bear different responsibilities, one person will be assigned as the local project leader who has specific responsibilities during the three-year implementation period. After the implementation period, the community will be strong enough stand on its own legs, still using the CtC-prevention framework (Hawkins & Catalano, 1992; Ince, 2005; Jonkman et al., 2006).
The CtC prevention strategy can be summarized as follows:

- First, all residents of a particular city, community or neighbourhood, as well as all of those involved in the upbringing and development of the young will be mobilized.
- The second step aims to create a common vision and language, and to set-up a coherent planning structure, which combines all the different area-specific efforts in order to secure a safe future for the young.
- This is followed by a prioritization of efforts based on scientific research in regards to risk factors and protective factors.
- Next, clear and quantifiable results are analyzed and defined, which can be followed up over time.
- Subsequently, gaps and overlaps within the selection of programs for youngsters are identified.
- At the next stage effective and promising programs will be deployed.
- Finally, the development of the youth will be monitored and assessed.

The heart of the approach is the analysis of the situation and problems within a city or neighbourhood.

The CtC pupils survey enables cities and communities (municipalities and neighbourhoods) to chart the development of both young people and the quality of their living environment. With the help of these insights, municipalities and neighbourhoods can get a firm grip on the development of their young, and they will be able to follow this development over time. This local, epidemiological tool enables them to launch a systematic campaign for the improvement of the social and educational environment. Furthermore, these insights help clarify which communities are eligible for the deployment of effective programs. CtC is a community-orientated prevention strategy. In order to prevent something, you must have significant insight of its root causes. The CtC approach is based on a theoretically and empirically grounded model of risk and protective factors, related to the origins of young people’s problematic behaviour, as defined. This model provides the basis for the development of a precautionary approach.

Over a longer period of time, different parties will consistently cooperate to retard problem behaviour in a specific city or community. There are four core elements that characterize this intervention (see Chapter 4, Jonkman et al., 2008).
1. The use of similar implementation processes

The implementation of CTC is a process, which takes place over a longer period of time, where at specific moments, specific targets should be reached and necessary steps should be taken for the successful implementation of the CTC Prevention Support System on a local level. Special training sessions and technical assistance are delivered to the community, and specially developed tools and important scientific concepts of prevention are transferred to communities (Jonkman et al., 2006; Ince, 2005).

2. The use of epidemiological data

Actual research on the distribution and determinants of health and behaviour of youngsters is important for the improvement of their environment and lives. Analyses of prevalence, social contexts which they grow up in, their development over the years, and the use of risk- and protective factors are all important. The use of epidemiological data is essential for CTC.

3. The use of promising and effective programs

When the situation of a community has been mapped out and the risk- and protective factors have been prioritised, it is important to vigorously tackle them. Within Communities that Care, this is done by the implementation of tested and effective programs. CtC provides guidelines about which programs should be deployed where, when, and how, in order to support the healthy and social development of children and adolescents. A guide with tested and effective programs (Ince et al., 2005; www.Jeugdinterventies.nl) gives communities an overview identifying which program is suitable for each domain (family, school, individual/peer, community), different ages (0-4 years; 4-12 years and 12-18 years) and different risk – and protective factors (see chapter X, Prevention).

4. The use of ongoing evaluation of results

The effects of preventive interventions must be made clear over a longer period of time. Here, the epidemiological data of the youngster's survey are used as well. By routinely administering such tests (eg once in every three years) the development of problem behaviour, risk factors and protective factors are made visible. At the same time, the operation of individual programs and the total program supply in communities is made visible as well.
Politicians ask more and more which policy, program or intervention shows results, what are their conditions and what should be done to disseminate this on broader scale. Social policy and decision making is an important topic on different levels. On the local and city level politicians ask, for example, what is the level of anti social behaviour among youngsters about which inhabitants complain, which areas should we target and what are the results we can expect from prevention strategies? Since a few years politicians in the Netherlands are e.g. confronted with a high level of binge drinking among youngsters (as they were confronted with increasing violence ten years earlier). Binge drinking is highly prevalent among Dutch youngsters in rural areas. Is this a typical national problem when we compare it with other countries? How to explain this binge drinking and what can be done to decrease the problematic drinking behaviour of youngsters? Alcohol and hash use among youngsters is high in western, modern countries nowadays, especially in Europe.

European politicians, for example, ask themselves what are the similarities and differences between several countries, how to explain this high level of substance uses and what can be done internationally and in an early phase to reduce this behaviour? Evaluation of social programs is important, not only for local, national and international governments but also for international organisations and foundations (Murane & Willett, 2011; Rossi et al., 2004; Shadish, Cook & Campbell, 2002). Practitioners want to work with instruments and tools which improve their work. Their work has to be professionalized and they want to show that their work is important. For researchers program evaluation and impact research is also important because good research accumulates to the knowledge of social programs, informs social action, improves social condition and human development. Researchers have to define the problem, the seriousness of the problem and the location of the problem. They have to research if the policy, intervention and action target the right population. But also, what are the core elements of the intervention and is the policy, program or intervention implemented well. For researchers it is important to know the intermediate as well as the final outcomes and if the costs of the intervention are reasonable in relation to its benefits. Their work should be placed in ‘a tradition that has aspired to improve the quality of our physical and social environments and enhance our individual and collective well-being through the systematic creation and application of knowledge’ (Rossi et al., 2004, p 2).
Supporting families, schools and communities in upbringing children and adolescents in this timeframe is an important scientific topic, especially tackling this topic in the context of communities. Conceptualising, implementation and evaluation of co-ordinated prevention programming is seen as a promising perspective (Nation et al., 2003; Wandersman & Florin, 2003). The social experiment Communities that Care is such a co-ordinated community perspective developed interesting for politicians at different levels, practitioners as well as researchers.

Figure 2. Program outline

Communities that Care is allocated to communities which suffer with the burden of problem behaviours of youngsters, wants to prevent the development of problem behaviour of youngsters or to build up strategic youth policy in their area. Communities that Care is targeted on youth from 12-18 years, but also tackles this age group with earlier interventions set out on younger age. Communities that Care combines analyses of community problems and strengths, effective prevention programming, concerns for collaboration and monitoring of results. These elements can be seen as preventive input. With the use of the CtC-instruments, coaching and the local implementation plan communities themselves work out this community prevention strategy. Core elements show the output results. The output wants to decrease risk factors and increase protective factors in families, schools,
peer groups and communities. These factors can be seen as intermediate outcomes. Decreasing risk factors and increasing protective factors should, at the end, bring down alcohol (and other substance use) and antisocial behaviour, but also show their significant influence on school dropout, sexuality related problem behaviour and depression.

Application of impact research has grown rapidly as well as fruitfully by the development of new research methodology and the availability of fast computing software packages (Raudenbusch & Byrk, 2002; Twisk, 2006; Muthen & Muthen, 2008; Hox, 2010). Some of them are used in this thesis. But not only research techniques also designs elaborated over the years. Randomized trials (‘state of art’ and successful in the field of agriculture and health) to research the impact of policies, programs and interventions came up also in social science, used in clinical trials as well as in cluster trials. The social program is randomly allocated here across a sample of observations. Selection bias is avoided by selecting two similar groups equal on all dimensions and random assignment is the critical element. The impact of the program is detected by comparing the experimental group/area with the (counterfactual) control group/area (Bloom, 2005; Khandker et al., 2010). But there are also examples of new evaluation techniques (like Propensity Score Matching (PSM), Double Difference Method (DD), Instrumental Variables (IV) estimation) which are used in impact studies of social interventions. (Murane & Willett, 2011), (Khandker et al., 2010). (Guo & Fraser, 2010).
S

ocial intervention can be researched more and have to be researched just to learn more from what we do. This prevention study on Communities that Care wants to add to this tradition or to what Campbell wrote: “The United States and other modern nations should be ready for an experimental approach to social reform, an approach in which we try out new programs, designed to cure specific social problems, in which we learn whether or not these programs are effective, and in which we retain, imitate, or discard on the basis of apparent effectiveness on the multiple imperfect criteria available”. (Campbell, 1969), p. 409).

This thesis (see Overview study, Appendix 1) addresses a number of different issues concerning practice, research and impact of the prevention of problem behaviours of youngsters in communities. These issues have complementary goals and form the main parts of this thesis.

The FIRST PART (PRACTICE) provides answers for more practical questions concerning preventive interventions in the Netherlands. The main research question of this part is: What can we do?

Chapter 2 introduces (‘From behind Dikes and Dunes: Communities that Care in the Netherlands’) Communities that Care. It provides a general overview of this prevention strategy in the Netherlands during the first years. Although this paper is dated, after its completion I started to think about creating an effect research of this strategy in the Netherlands. It can be viewed as the beginning of all the work that follows.

Chapter 3 (‘Prevention’) is about effective preventive programs, which can be used for families, schools, peers and communities in the Netherlands, and the daily surroundings of children and youngsters. In the Netherlands, the appeal of preventive efforts has led to many flourishing projects and programmes. In the Netherlands, as elsewhere, a new practice has arisen in the last five years, which critically evaluates existing prevention programmes and searches for and implements effective, ‘evidence-based’ interventions.
Chapter 4 ("Communities that Care: Core elements and context. Research of implementation in two countries") describes the degree to which implementation of the Communities that Care (CTC) prevention operating system was reached in twenty-two communities in two countries: the United States (twelve communities) and the Netherlands (ten communities). Core elements of CTC and the results of two implementation measures conducted in both countries are reported here. Similarities and differences of the implementation process are also discussed.

The SECOND PART (Chapter 5, 6, and 7) explores the possibilities of how assessments of specific youth problem behaviours within units like communities, cities and countries can be worked out (‘ecometric analysis’, as Raudenbusch calls it, 2003). The general question in this part of the study is: Where do we have to start our preventive work? The assessments of these broader units are presented as a problem orientated approach in which a profile of the situation of youngsters in a specific area is made with specific social demographic backgrounds, problem behaviours, risk factors and protective factors on which the targets are based. The assessment clarifies which problems score the highest and what are the most important predictors of these problems in specific areas. A good assessment is also for comparative community research the starting point for the preventive activities that will follow. The aim of Communities that Care as a prevention system is to prevent adolescent problem behaviours (among them delinquency and violence, underage drinking and tobacco use by teens). This second part of this study is methodological and analytical based and concentrates on research of specific problem behaviourial outcomes (anti-social behaviour, violence/delinquency and alcohol use).

Chapter 5 ("Prevention of antisocial behaviour in an urban context") contains basis proposals about where to implement preventive activities for youngsters in a metropolitan city (areas with high prevalences of, in this case, antisocial behaviour), which underlying factors to target (risk factors) and what health gains these interventions may yield (attributable fractions).

Most research on the prevalence, determinants and variations of violence and delinquency among youngsters is conducted in Western societies. Chapter 6 ("Different worlds, common roots. A multilevel analysis of youth violence and delinquency in the Netherlands Antilles as a basis for crime prevention") is a multilevel study, which has been implemented in another part of the world: Netherlands Antilles (NA). It aims to build upon prognostic multilevel models as a basis for targeted crime prevention in a non-Western area.

‘Community variation in adolescent alcohol use in Australia and the Netherlands’ is Chapter 7 of this thesis. It is an investigation of the community context of youth alcohol behaviour in two different countries. This article compares community patterns of adolescent alcohol use and risk and protective influencing factors in Australia and the Netherlands.
The **THIRD PART** of this study (IMPACT) will answer the research question: Is Communities that Care effective or not in preventing adolescent behavioural health problems and why? In Chapter 8 (‘Prevention of problem behaviours among youngsters: the impact of the Community that Care-strategy in the Netherlands (2008-2011)’) is a quasi-experimental study of five experimental and five control communities to look for the impact of the CtC-intervention on the outcomes. In a four wave longitudinal study of youngsters of E- and C-communities the effects on initiation of drinking and smoking and on the prevalence of a broader range of problem behaviours, risk factors and protective factors are studied.

Chapter 9 (‘International translational research: Promise and caution’) is a discussion paper on the presented study in Chapter 8.

The final chapter 10 (‘Discussion’) presents the integrated results in the foregoing chapters, describes several limitations of this thesis and discusses the implications for practice, prevention science and future research.