Summary

Introduction
Children who grow up in families with low socioeconomic status combined with other risk factors are exposed to several negative environmental risk factors, like stress and substance abuse, that compromise fetal and early child development. Furthermore, these children are at increased risk of child maltreatment and witnessing intimate partner violence, itself a form of child maltreatment. Child maltreatment has many consequences on the mental and physical health of the young child with repercussions throughout the whole lifespan. Child maltreatment is, for example, an important determinant for risky health behavior, for criminal behavior and for intimate partner violence. The impact on society of growing up in a high risk family is high as the costs of child maltreatment are enormous, not only in healthcare and welfare costs, but also due to lower participation in school and paying jobs, and the (im)material costs of criminal behavior. The consequences of growing up in a high risk family also affects the next generations as risk factors are transmitted from generation to generation. Therefore, it is important to break this circle and to prevent these health risks and societal costs by intervening early.

The Nurse-Family Partnership (NFP) in the United States addresses risk factors among high risk pregnant women for the primary prevention of child maltreatment. As far as we know, NFP is the only effective intervention on the primary prevention of child maltreatment. The NFP is a home visiting program for pregnant high risk women by trained nurses. High risk women receive 40 to 60 home visits during pregnancy and the first two years of life of the child. These visits address six domains: 1) health status of the mother, 2) child’s health and safety, 3) personal development of the mother, 4) the mother as a role model, 5) relation of the mother with her partner, family and friends and 6) use of institutions. Visits are well-structured and described in two manuals, but nurses are able to improvise when needed. It is important that nurses develop and maintain a trusting relationship with the mother throughout the program.

Although NFP has been proven to be an evidence-based intervention for the primary prevention of child maltreatment, the program has not yet been studied outside the US. If the effectiveness of NFP in reducing child maltreatment could be proved outside the US this would further validate the program.

Because of the many positive results of the NFP in the US, we translated and culturally adapted this program in the Netherlands into VoorZorg. Before implementing this program in the Netherlands on a larger scale we evaluated it in a Randomized Controlled Trial from 2007 in ten (sub) urban regions in the Netherlands. This is the first study on the NFP outside the US. In this thesis we describe the effectiveness of the VoorZorg program among high risk pregnant women compared to the usual care in the Netherlands.
Main Findings

Chapter 2 of this thesis describes the design of VoorZorg. The evaluation of VoorZorg consisted of three (partly overlapping) phases: in phase 1, the NFP was translated and culturally adapted to accommodate the needs of pregnant women in the Netherlands and to address risk factors in the Dutch population. Additionally, a screening procedure was developed and evaluated to identify high risk women. Phase 2 aimed at assessing whether this intervention meets the needs of the at-risk mothers and their yet-to-be-born children. Phase 2 also aimed at assessing whether the nurses visiting the mothers are capable of conducting the intervention as described in their protocols. This phase included an assessment of treatment integrity, and of the feasibility and adequacy of the intervention. Phase 3 aimed at studying the effectiveness of VoorZorg in addressing risk factors during pregnancy and early childhood that compromise fetal and early child development through a Randomized Controlled Trial.

Chapter 3 describes the selection procedure developed to identify pregnant women with an increased risk of child maltreatment. This selection procedure consists of two stages with (1) formal criteria and (2) an interview with a VoorZorg nurse. We also assessed the feasibility of the two-stage selection procedure with validated questionnaires. This study revealed that 98% of the women in our study had more than three risk factors of child maltreatment. This indicates an increased risk of child maltreatment. We can conclude that the two-stage selection procedure identifies high risk pregnant women at an early stage of pregnancy.

Chapter 4 describes the first results of the effect study of VoorZorg. This study revealed that VoorZorg was effective on addressing cigarette smoking and also on smoking in the presence of the baby. Furthermore, the number of women that still breastfed their child at six months after birth was significantly higher among women receiving VoorZorg and comparable to the general population. VoorZorg showed no significant effect on (adverse) pregnancy outcomes.

Chapter 5 describes the results of VoorZorg on intimate partner violence (IPV) during pregnancy and 24 months after birth. IPV is a form of child maltreatment. This study revealed that women receiving VoorZorg reported significantly less IPV victimization compared to the usual care during pregnancy. Furthermore, these women reported significantly less IPV perpetration. At 24 months after birth, women receiving VoorZorg reported significantly less physical violence. In addition, they reported significantly less perpetration of sexual assault towards their partners. At 24 months, other forms of violence were not significantly lower for the VoorZorg group compared to the usual care.

Chapter 6 describes the effect of VoorZorg on child maltreatment, home environment and child behavior. This study showed that children of mothers receiving VoorZorg had significantly less child protective services reports (AMK) during pregnancy and the first three years of life of the child. This indicates that there is less child maltreatment in this group. VoorZorg had no short-term effects on the home environment of the child. However, at 24 months after birth, total HOME score was significantly higher for women
receiving VoorZorg, indicating a more enriched and more supportive home environment. Also, at 24 months after birth, children of women receiving VoorZorg exposed significantly less internalizing behavior compared to the usual care. However, no significant difference between both conditions was measured on externalizing behavior.

In chapter 7 the main findings from this thesis are described and discussed. Based on the results, we can firmly conclude that the VoorZorg program, an intensive nurse home visiting program lasting from pregnancy until the child’s second birthday, is effective at reducing child maltreatment and domestic violence. These results, together with results gained in the NFP study, reveal that nurse home visitations successfully address important risk factors prevalent in high risk families. Therefore, VoorZorg /NFP should be implemented not only in the Netherlands and the US, but should be extended to other countries as well.