The Leaping Hurdles Story Slide 1

Growing by leaps and bounds

Infant mental development is characterized by predictable, age-related regression periods that coincide with a new perceptual capability and are followed by a whole new set of skills.

This file: LeapingHurdles.pdf

This file adapted by Dag Forssell from Dr. Plooij's original 2007 PPT prestentation, including the text that accompanied each slide.

Where the manuscript is long, slides have been duplicated so text can continue on the next page at a legible size.

Page format, 8.5 x 15.1 inches designed for 16 x 9 ratio, typical of contemporany computer displays, such as 1920 x 1080 resolution.

In the U.S., this page can be printed on legal size paper, with a minor size adjustment to shrink from 15.1 inches to 14 inches.

The Leaping Hurdles Story Slide 2

Leaping Hurdles

In this second keynote address, Dr. Frans X. Plooij introduces *Leaping Hurdles*—a parental support, education, and abuse prevention program based on *The Wonder Weeks.*

In his first keynote address, Dr. Frans X. Plooij introduced *The Wonder Weeks*—the story, the research, and what the information means to parents and others working with infants.

The Leaping Hurdles Story Slide 3

FOUR WINDS乳幼児精神保健学会
FOR INFANT MENTAL HEALTH
www.fourwinds.jp

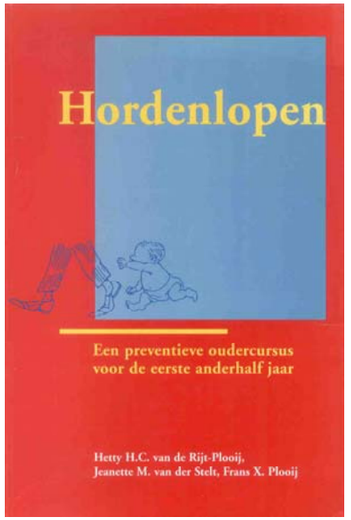
The FOUR WINDS Association for Infant Mental Health is made up of professionals involved with infants, such as pediatricians, infant psychiatrists, psychologists, nurses, teachers, and daycare center leaders. The association held its annual conference on November 24-25 2007, in Tochigi, Japan, with 841 participants.

Dr. Plooij was invited foreign lecturer and keynote speaker, presenting talks about *The Wonder Weeks* and *Leaping Hurdles*.

See also About FOUR WINDS in the last slide.

The Leaping Hurdles Story Slide 4

‘Leaping Hurdles’



- A primary prevention Parental support and education program

Ladies and gentlemen,

Before starting this presentation I would like to express my gratitude to the organisation “The Four Winds” in general and to the president Dr. Kei Sawada and to Dr. Hisako Watanabe in particular for inviting me to Japan to present these lectures. It is a great honor for me.

I am going to talk to you about the primary prevention, parental support and education program “Leaping Hurdles”.

An overview of what I am going to say is presented in the next two slides.

Overview: rationale and setup

- The need for parental training
- The idea behind ‘Leaping Hurdles’
- The setup of ‘Leaping Hurdles’
- The setup of the evaluation research

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Overview 2: Data and discussion

- Qualitative judgment by parents
- The effect of the training on parents
- The effect of the training on babies
- Qualitative findings and suggestions
- Comparison with other successful intervention programs

The Leaping Hurdles Story Slide 7

The need for parental training

- A great need for information and advice
- Not based on ideas and subjective opinions
- Grounded in scientific, direct observation
- Studies on regression periods provided this
- Training gives an eye for these processes
- Intuitive parenting in stress-free state
- Empowering parents fosters intuition
- Primary prevention and WHO's strategy HFA

So let's start with the first major point, the need for parental training.

Parents have a great need for information and advice on how to raise their kids in day to day life. This was shown by an extensive study in the south of the Netherlands.

The Leaping Hurdles Story Slide 8

The need for parental training

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However, such information and advice is often based on mere ideas and subjective opinions.

The Leaping Hurdles Story Slide 9

The need for parental training

- A great need for information and advice
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Instead, they should be grounded in scientific, direct observation of daily parent-infant interaction processes in their natural environment. These processes can change from week to week. So, longitudinal studies and frequent sampling are required.

The Leaping Hurdles Story Slide 10

The need for parental training

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The studies on regression periods have provided this solid, descriptive base, as we have seen yesterday. In addition, the parent-infant conflict that comes with the regression periods can escalate under suboptimal circumstances. This may lead to neglect and even abuse. Neglect may lead to more illness and/or aggression in the baby.

The Leaping Hurdles Story Slide 11

The need for parental training

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A training should give the parents an eye for these processes. A training that makes parents aware of these difficult periods, that such difficult periods are part of normal development, that neither the parents nor the baby are to blame, that explains why these periods are important for the baby's development, that explains that the baby's difficult behavior signals a readiness for learning new skills, and that explains how parents can facilitate this learning.

Such a training can support parents to get through these difficult periods and prevent abuse of and illness and aggression in the baby.

But there is more. Such a training helps parents to become good observers of their baby's behavior, to find the key to their baby's personality, to find his preferences and talents. All this leads to an optimal learning in the baby and it extends the parental skills: they feel more sure of themselves and start interacting without having to think about it.

The Leaping Hurdles Story Slide 12

The need for parental training

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The couple Hanus and Mechtild Papousek have called this 'intuitive parenting'. The explosion of frame-to-frame video analysis of parent-infant interaction over the last few decades has shown that the quick succession of these exchange episodes bear the characteristics of learning situations. Without being aware of it, the parents provide their babies with didactic support. This can only come to full fruition if the participants are in a stress-free mental state. Unfortunately, this is becoming increasingly rare in our Western world. Therefore, this stress-free mental state should be realized before talking about anything else.

The Leaping Hurdles Story Slide 13

The need for parental training

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Empowering parents fosters intuition. Some people think that intuitive parenting emerges automatically and that one does not need to do anything, and that giving a parental training is nonsense. Unfortunately, that is not true. There are conditions where the intuitive parenting is hampered. These are clinical reasons such as a handicapped child or a mismatch between the personalities of parent and baby. Apart from these rare clinical conditions there is one reason that applies to many people nowadays. Fewer and fewer people know how to care for a baby through the observational learning they did in their extended family when they were young. Many have not even lived in a house with a baby until they get one themselves. Then it is no shame to follow a parental support and education program. This program should not tell parents what to do. It should not give prescriptions. It should give the parents an eye for the processes going on, through information together with audiovisual means. This leaves the people the command over their own lives and strengthens their intuition. It is called 'empowering parents.'

The Leaping Hurdles Story Slide 14

The need for parental training

- A great need for information and advice
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This brings us to Primary prevention and the WHO's strategy HFA.

I don't know about the situation in Japan, but in the Netherlands there is a steady increase in children with behavioral disorders. These children are difficult to handle and need to be sent to special schools. Furthermore, more and more children enter primary school who are way behind normal development and have great difficulty catching up. Professionals involved in schools therefore argue that primary prevention should start as early as 2-3 years when a playful preparation for schools is concerned. Professionals involved in behavioral disorders, neglect and abuse are convinced that the age of 2-3 years is too late to start primary prevention. Then the evil has already happened according to them. Primary prevention should start at birth or even before. The costs for such an early primary prevention are only a fraction of the costs and misery society has to live with later if nothing is done. Such primary prevention is in line with the policy of the World Health Organisation called: 'Health for all 2000.'

The Leaping Hurdles Story Slide 15

The idea behind ‘Leaping Hurdles’

- Preliminary experience with parents
- The theory behind the parenting book
- The idea underlying a parental support and education program
- The aim of ‘Leaping Hurdles’

The idea behind the parental support and education program ‘Leaping Hurdles’ is the following major point in this presentation.

After our discovery of age-linked regression periods, we started to tell family, friends and connections about it whenever they complained about ‘more crying’, ‘cramps’, ‘not wanting to suck’ or anything that worried them about their baby. Those parents, in turn, gave us feedback about the end result, what they had done and how they had felt. This circle of people grew ever larger. We grew convinced that all parents had a right to know about the regression periods. So we wrote the parenting book “Oei, ik groei!” in Dutch.

As I told you yesterday, the book was translated in eleven languages under the title “The wonder weeks” from America to Japan. This book is not a reading book but a workbook. It grows with the baby, so to speak, and parents can write down their own observations in a kind of diary. As soon as we had written another regression period or ‘leap’ in the development of the baby, we gave it to the parents around us with babies of the right age. IN doing so, we found out that parents are deeply interested in the development of their baby (as long as the information is practical and taken from everyday life). They had many questions and came up with nice contributions of their own. It was then that we decided to design the parental support and education program ‘Leaping Hurdles’ alongside the parenting book.

The idea behind ‘Leaping Hurdles’

- Preliminary experience with parents
- The theory behind the parenting book
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- The aim of ‘Leaping Hurdles’

The theory behind the book is already familiar to you, so I will only briefly summarize it here. The mental development of infants in the first 20 months or the sensorimotor period does not proceed gradually, but in leaps and bounds. Each leap is age-linked and has three phases: first, the regression period; second, the phase in which new skills are learned and in which mother-infant conflict occurs more frequently; and third, the easy period. Unfortunately, the easy period is rather short.

The regression period is, so to speak, the visiting card signaling the next leap ahead. The baby enters a new perceptual world. This new world is unsettling and the baby retreats towards a safe base: back to mama.

The conflict period is a time of new learning and de-learning. Parents discover all of a sudden that their baby is doing or trying to do new things. That makes the parents proud and they are more prepared then ever to help and facilitate their baby’s learning. Simultaneously, the parents realize that their baby is developing a new grip on the new world and, consequently, their worries over their baby’s irritability turns into annoyance. They do not accept the increased dependence on them anymore and demand from their baby that he does the new skills himself that he is now able to do. These parental demands help the baby to learn new skills and de-learn old habits and privileges. This is a wonderful interplay between parent and infant.

The easy period is the silence before the next storm. For a little while, the baby is more independent, plays alone for longer stretches, and is more cheerful. Soon, however, the next regression period arrives and the whole process starts all over again.

The idea behind ‘Leaping Hurdles’

- Preliminary experience with parents
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- The aim of ‘Leaping Hurdles’

Continued…

Independent brain research has shown so far that brain-changes co-occur with seven out of the ten regression periods. This was measured through Electro Encephalo Grams (EEG’s), glucose metabolism in the brain, Evoked Response Potentials (ERP’s), head circumference, and tone of voice. These brain changes co-occur with or slightly precede the beginning of the regression periods.

The theory assumes that these brain changes are the cause of the drastic changes in the way in which the baby perceives the world around him and inside his body. This new type of perception is unsettling and creates chaos. The baby needs time to create order out of this chaos again. With this new type of perception the baby gets a new type of learning at his disposal. What actual skill he develops with this new type of learning differs from individual to individual and depends on individual differences, personal circumstances and society and culture at large.

The idea behind ‘Leaping Hurdles’

- Preliminary experience with parents
- The theory behind the parenting book
- The idea underlying the parental support and education program
- The aim of ‘Leaping Hurdles’

The idea behind the parental support and education program developed as follows.

In our research concerning the regression periods we collected data in several ways. On the one hand we studied the opinions of the mothers through interviews, questionnaires and weekbooks. On the other hand we observed mother-infant interactions in the home environment directly.

If mothers were child-following, the direct observation measures reflected the mother’s experience. This implies that we measured more time spent in physical contact when the mother reported the baby to be more clingy and cranky. And, the other way around, we actually measured less time spent in contact when the mother reported the baby to be easy.

If mothers were not child-following, operated on a four-hour feeding schedule and let their babies cry, then our direct observation measures would not reflect the baby’s need for proximity as reported by the mother. A small baby is still unable to restore bodily contact with the mother, if the mother refuses to come to him. It takes two to tango. From our questionnaire and interview data we could see that those mothers were well aware of the baby’s craving for contact, but they refused to respond to it, because they were afraid that would ‘spoil’ them.

Such a maternal attitude resulted in many short separations between mother and baby by letting it cry in its bed or leaving it alone too long in the playpen. This frustrated the baby’s need for body contact and attention. Such minor life events or daily hassles produce stress and such stress has been shown to have long- and short term consequences for the bodily and mental health of the baby. This idea is supported by experimental research on animals.

The Leaping Hurdles Story Slide 17 part 2 of 3

The idea behind ‘Leaping Hurdles’

- Preliminary experience with parents
- The theory behind the parenting book
- The idea underlying the parental support and education program
- The aim of ‘Leaping Hurdles’

Continued….

In the short and long term the vulnerability for diseases increases. Negative experiences in early infancy can lead to a dysregulation of physiological functions, which may last into adulthood and can result in a permanent vulnerability for illnesses and disease.

Negative long term changes in social behavior as a result of mother-infant separation have been shown experimentally in primates. In our own species severe disturbances of the mother-infant relationship results in excessive aggression in the child, later delinquency, and child abuse in the next generation. This is called the intergeneration cycle. This cycle comes into existence as follows. One year old babies can be quite aggressive already. When these children enter the day-care centre at the age of 1-3 years, they attack or threaten to attack their peers or even the caretakers. Such behavior in the day-care centre predicts behavioral problems in primary school. And their is a frightening continuity between behavioral problems in primary school and delinquency at an adult age.

The question remains how babies of one year have grown so aggressive and whether less severe forms of neglect and abuse can also result in such aggression. It is for sure that the contact- and distance regulation between mother and infant has something to do with it. For instance, it was shown that at the age of one year the babies of mothers who disliked bodily contact in the first three months, regularly showed rage while biting and slapping the mother. Main and Goldwyn discovered a continuum of intermediate forms between normal distancing between mother and infant and child abuse. Therefore they expected that a descriptive study of the normal, day to day distancing between mother and infant and the accompanying conflicts might give more insight into the escalation of such conflicts, which might lead to aggression and abuse.

The Leaping Hurdles Story Slide 17 part 3 of 3

The idea behind ‘Leaping Hurdles’

- Preliminary experience with parents
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- The aim of ‘Leaping Hurdles’

Continued…

Our fundamental studies have produced such insights, indeed. Every regression period is followed by a period of conflict. At first, mothers are worried when their babies are off balance and showing the three C’s: Crying, Clinging, and Cranky. But soon the mothers become annoyed, especially when the three C’s lasted too long. Mothers reported that they could not cope anymore, because they felt tired, exhausted, and sucked empty. Some mothers would admit that they had taken it out on their baby: for instance they had shouted at him, laid him down in bed more forcefully than necessary, or handled him more roughly during changing nappies. Those mothers felt guilty afterwards. One mother reported that before she had her baby she could not imagine that anybody would ever abuse her baby. But now she could if the circumstances would be bad.

Concluding, during the regression periods the dividing line between normal mother-infant conflict and child abuse is very thin. These regression periods are vulnerable periods and prone to escalation of mother-infant conflict. Therefore, it is only logical that a parental support and education program focuses on these difficult periods.

The Leaping Hurdles Story Slide 18

The idea behind ‘Leaping Hurdles’

- Preliminary experience with parents
- The theory behind the parenting book
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- The aim of ‘Leaping Hurdles’

The aim of the parental support and education program “Leaping Hurdles” is given in the name: to help every parent-baby pair leap over a number of hurdles without falling flat on their face. This aim is reached by attending to the following points:

Make sure parents have or develop ‘an eye for’ the natural processes in their interaction with and the behavior of their baby. Teach them how to observe and how to react in a child-following way. Make parents aware of the difficult periods, make them accept that their baby is Crying, Clingy and Cranky at times and that he cannot help himself. Teach them how they can comfort their baby and help him.

If they succeed, this results in a feeling state of safety in the baby and a relative stress-free state of mind. As a consequence, the baby should be less ill, among other things.

A stress-free state of mind gives the baby the opportunity to explore his world without any worries. Help the parents discover what new kind of things are interesting to their baby after each developmental leap and teach them how they can facilitate the resulting new type of learning. This gives parent and baby more fun which in itself is healthy. Furthermore, it gives the baby a maximum of time to occupy himself with the new things and learn more.

By taking control over all this themselves, parents start feeling more sure of themselves. It empowers them.

In the program the parenting book “The wonder weeks” is read together with the parents, one leap at the time. The additional value of the program on top of the value of the book is that it prevents a too one-sided focus on learning and performing of the baby, that mothers can check whether they have understood the book correctly by discussing the examples of their own baby’s behavior, and that they learn to understand that babies can be equally advanced in their development as compared with other babies, although they attend to and develop different skills first.

The Leaping Hurdles Story Slide 19

The setup of ‘Leaping Hurdles’

- Babies approximately the same age
- Groups of 4-8 babies
- The number of meetings per group
- The course of one meeting
  - 15 minutes for getting ready
  - The regression period: back to mama
  - Learning new skills: a leap forward to greater independence
  - How to integrate the weekbooks in the information transfer

This brings us to the next major point in this presentation: The setup of the parental support and education program ‘Leaping Hurdles’.

The name ‘Leaping Hurdles’ symbolizes that the runners leap over the hurdles at approximately the same time. The age difference (corrected for being born too early or too late) should not be more than 3 weeks, because initially the regression periods follow each other every 3 weeks. All babies should be busy with the same developmental leap. It might be confusing when more than one leap is explained to the parents. Furthermore, parents tend not to be interested in leaps that are yet to come or leaps that their baby has left behind him.

The Leaping Hurdles Story Slide 20

The setup of ‘Leaping Hurdles’

- Babies approximately the same age
- Groups of 4-8 babies
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- The course of one meeting
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  - The regression period: back to mama
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The groups in the program are composed of minimally 4 and maximally 8 babies. A collection of less than 4 babies does not deserve the name group and a group of more than 8 babies becomes too busy, since not only the mother, but also the father, the grandmother, the grandfather, the babysitter, a friend, or even the dog are welcome to attend.

The Leaping Hurdles Story Slide 21

The setup of ‘Leaping Hurdles’

- Babies approximately the same age
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- The number of meetings per group
- The course of one meeting
  - 15 minutes for getting ready
  - The regression period: back to mama
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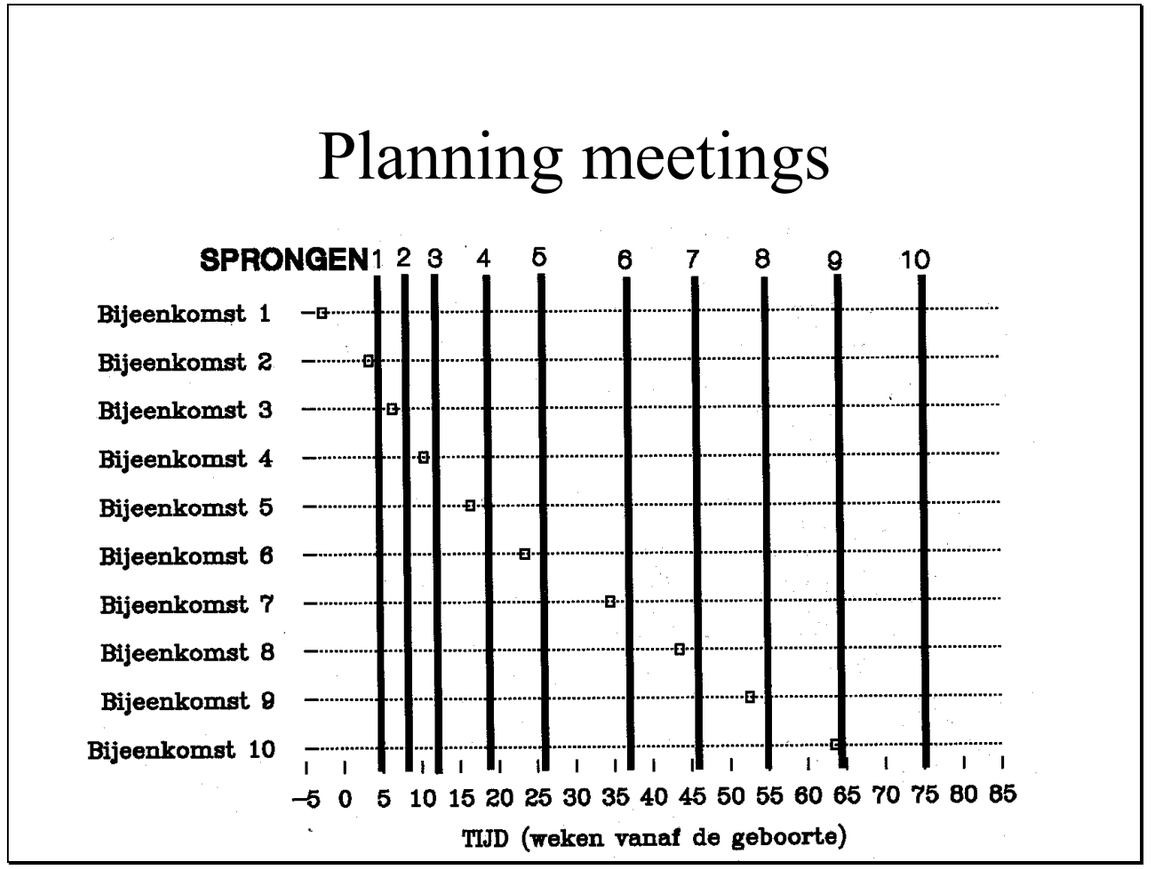
  - How to integrate the weekbooks in the information transfer

There are 11 meetings for each group. The way these meetings are Planned can be seen in the next slide.

The Leaping Hurdles Story Slide 22



SPRONGEN = LEAPS; Bijeenkomst = Meeting; TIJD = TIME

weken vanaf de geboorte = weeks from birth

One meeting during pregnancy, some 5 weeks before delivery. In this meeting the setup of the program is explained. The kind of information given in the program is described globally. Then the first 4 weeks after delivery are treated in more detail.

Eight meetings in the first year, shortly before the next regression periods starts. In between those meetings parents can call a helpline if they have problems or questions, or if they want to talk about something.

The last, unwinding meeting, shortly after the regression period around 15 months. This is done on purpose to give the parents the experience of going through a regression periods independently, and yet, to give them the opportunity to talk about it afterwards. In this meeting we discuss what the toddlers go through in the leaps around 15 and 17 months, but this time we do it more globally. The leap around 15 months receives more attention. Of the last leap around 17 months we only give some keywords. Finally, we pay special attention to speech- and language development. We assure the mothers that they can phone if they deem this necessary.

The farewell party is held to finish the program formally and tell the mothers that “they can go it alone by now”. All parents and toddlers of all groups get together simultaneously.

All meetings are held in a large room of at least 40 square meters. A cushion for changing nappies, a bottle warmer, toys and coffee and/or tea are available.

The Leaping Hurdles Story Slide 23

The setup of ‘Leaping Hurdles’

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The course of one of the eight regular meetings in the first year is as follows.

The Leaping Hurdles Story Slide 24

The setup of ‘Leaping Hurdles’

- Babies approximately the same age
- Groups of 4-8 babies
- The number of meetings per group
- The course of one meeting
  - 15 minutes for getting ready
  - The regression period: back to mama
  - Learning new skills: a leap forward to greater independence
  - How to integrate the weekbooks in the information transfer

15 minutes before the meeting starts the participants can enter the room. In this way they have time to put off their coats, unpack their bags, find a chair, admire each other’s baby and update the gossip. The meeting starts on time and lasts two hours.

During the meeting the attention is focused on the baby as much as possible. Sometimes a mother starts talking about her personal problems such as bad housing, problems with the social security, lack of free time, or a new lover. If that happens, we go into it shortly, only to return to what the meeting is about: the baby, their good start together, his perfection at that moment, his dependency on his mother and their wish to make the relationship with their baby into something beautiful that will last forever.

The Leaping Hurdles Story Slide 25

The setup of ‘Leaping Hurdles’

- Babies approximately the same age
- Groups of 4-8 babies
- The number of meetings per group
- The course of one meeting
  - 15 minutes for getting ready
  - The regression period: back to mama
  - Learning new skills: a leap forward to greater independence
  - How to integrate the weekbooks in the information transfer

The first hour is spent on recognizing the regression period that belongs to the developmental leap that is discussed that meeting. The following three topics are dealt with:

Learning to observe your baby and learning to feel what your baby needs

The regression period marks the beginning of another leap in the development of the baby. It is a difficult period for both mother and baby. Each mother gets her personalized “calendar” of the first year. In this calendar the weeks are colored in which their baby might start each regression period. We tell mothers how they can recognize that the regression period has started. The oldest babies in the group usually have started their regression period already and their mothers complement our examples with their own experiences and observations and usually their babies illustrate what their mothers mean there and then. The present regression behaviors are compared with those of earlier regression periods and babies are compared. Mothers find it very interesting how babies differ in the way they express their regression. We always stress that a regression period does not need to be all negative. It is the announcement of positive progression to come.

Being child-following implies providing a basic feeling state of safety

We explain that the child can’t help it that it is showing the three C’s: Crying, Clingy and Cranky. We explain that the baby’s problems are for real and that all it needs is being comforted. The baby needs time and comfort to pull himself back together, before he can start exploring the new world he just entered. We explain the mothers that repelling the baby or leaving him on his own when he is difficult has the opposite effect: the baby only becomes more difficult and for a longer time.

A stress-free state of mind optimizes learning

Then there is a short break.

The Leaping Hurdles Story Slide 26

The setup of ‘Leaping Hurdles’

- Babies approximately the same age
- Groups of 4-8 babies
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- The course of one meeting
  - 15 minutes for getting ready
  - The regression period: back to mama
  - Learning new skills: a leap forward to greater independence
  - How to integrate the weekbooks in the information transfer

The second hour is spent on the new type of perception and the new type of learning that emerges in each baby with the next leap. The following three topics are addressed:

Observing and finding out what your own baby’s preferences are: the key to his personality

Being child-following implies accepting your baby’s choices

Empowering parents

The Leaping Hurdles Story Slide 27

The setup of ‘Leaping Hurdles’

- Babies approximately the same age
- Groups of 4-8 babies
- The number of meetings per group
- The course of one meeting
  - 15 minutes for getting ready
  - The regression period: back to mama
  - Learning new skills: a leap forward to greater independence
  - How to integrate the weekbooks in the information transfer

How to integrate the weekbooks in the information transfer? We ask the mothers to fill out a weekbook every week and send it to us before the meeting. In this weekbook there are questions on whether the baby has been difficult that week and, if yes, what kind of feelings and reactions that triggered in the mothers. Furthermore, there are questions concerning new and/or changed skills shown by the baby. First of all, filling out these weekbooks is asked to make the mothers more alert in observing their own baby. In addition, by reading the weekbooks before the next meeting, we get a fair idea what is important to discuss for each mother. During the meeting we begin with discussing maternal feelings of annoyance and aggression ‘anonymously’. Often the mothers involved elaborate on that themselves, which opens the possibility for other mothers to speak about it freely.

The following three topics are given special attention:

Angry feelings

Annoyance at destructive play of boys

Illness and carrying

The Leaping Hurdles Story Slide 28

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

The next major point in this presentation is the Setup of the evaluation research. It is our strong conviction that intervention programs should be evidence based, just like medical treatments.

The Leaping Hurdles Story Slide 29

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

The only way we could finance this project was to try out the program on a risk group. The arguments of the grant organization were that parents who do not belong to a risk group have the parenting book and that should be enough. So we did work with a risk group. But it is my conviction that this parental support and education program would be beneficial for non-risk parents as well, in view of the fact that young parents are living a very hectic, stressful life nowadays and many of them never have had any real experience with babies.

The risk group we have chosen consisted of mothers who were the victim of a very difficult childhood, of a very bad relationship with their parent(s), of physical and/or emotional neglect and/or abuse. Mothers with that kind of a history tend to dislike physical contact with their baby in the first months of life. As a consequence their babies are very aggressive at the age of one year. The resulting mother-infant conflicts are bound to escalate during the regression periods. This is to be prevented.

The Leaping Hurdles Story Slide 30

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

The general research questions asked were: is such a parental support and education program useful with mothers who are likely to run into problems with raising their kids. If the answer is affirmative, what effects can the program be shown to have on mothers as well as babies, if any.

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
  - Do parents appreciate the program?
  - Are there measurable effects on the parents?
  - Are there measurable effects on the babies?
  - Are there sex differences?
  - Room for improvement?

The general research questions can be broken down into the following specific research questions:

Do parents appreciate the program and do they think they benefited from it, especially during the regression periods? If yes, in what way?

The Leaping Hurdles Story Slide 32

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
  - Do parents appreciate the program?
  - Are there measurable effects on the parents?
  - Are there measurable effects on the babies?
  - Are there sex differences?
  - Room for improvement?

2. Does the program have any measurable effect on the parents? This question can be broken down into the following sub-questions and the results of the parents attending the program were compared with the results of parents in a control group.

a) Does attending the program influence the parents' judgment of their baby's temperament? The following reasoning triggered this question: if the program gives the parents an eye for the difficult periods and if the parents start to accept more that their baby is difficult, then one would expect the parents' judgment of their baby's temperament to change as well. Lancaster and co-workers have shown that parental judgment of their child's temperament is not only dependent on child characteristics, but also on the attitude of the parent filling out the questionnaire.

b) Does attending the program strengthen the parents in their conviction that their behavior and actions can have favorable consequences for the development of their baby? Phrased in another way: does attending the program increase the confidence parents have in themselves (Internal 'Locus of control'), as opposed to the conviction that everything that happens in their lives can be blamed on the circumstances or other people (external 'Locus of control'). This follows from the fact that the program aims to empower the parents and make them more self-confident. With self-confident we mean that they stop doubting themselves. It has been shown that negative experiences of the parents (such as a low self-esteem and the idea that they have little grip on and pleasure in the interaction with their infant) go together with external locus of control. Some people have suggested that talk groups can be a means to increase their internal locus of control.

c) Has the program an effect on the tendency of parents to seek information on how to raise their kids? This question is added to our research design, because in the literature a connection has been shown between internal locus of control and seeking information if parents experience a shortage of information.

The Leaping Hurdles Story Slide 33

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
  - Do parents appreciate the program?
  - Are there measurable effects on the parents?
  - Are there measurable effects on the babies?
  - Are there sex differences?
  - Room for improvement?

3. Does the program have any measurable effect on the babies? This question can be broken down in the following sub-questions where the program children are compared with children from a control group.

a) Are the babies less ill, both in frequency and duration of the illnesses?

b) Are the babies less aggressive?

c) Are the babies more advanced in their development?

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
  - Do parents appreciate the program?
  - Are there measurable effects on the parents?
  - Are there measurable effects on the babies?
  - Are there sex differences?
  - Room for improvement?

Are there sex differences in the answers to all these questions?

Setup of the evaluation research

- Prevention programs should be evidence based
- Tryout of the program with a risk group
- General and specific research questions
  - Do parents appreciate the program?
  - Are there measurable effects on the parents?
  - Are there measurable effects on the babies?
  - Are there sex differences?
  - Room for improvement?

5. Is the program already in optimal shape or is there room for improvement in the way of presentation?

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

Now we move on from the specific research questions to the global research design that should enable us to answer these questions.

The global research design was as follows. Starting point was the notion that the baby's development and the mother-infant interaction not only influence each other, but are also influenced by a myriad of factors on several different levels such as the family, the community, or society at the higher levels, and intra-individual factors at the lower levels. This is stressed by authors from quite different disciplines such as Sameroff (1975) with his transactional model, Hinde (1983) with his integrated approach to primate social relationships, and Bronfenbrenner (1986) with his ecological model. Consequently, some 30 co-variables were included in the analysis in order the match the experimental group post-hoc with a control group. In this way it is possible to exclude the possibility that one of the co-variables could explain the results.

In a 'quasi-experimental non-equivalent control group design' (Cook & Campbell, 1979) a product evaluation was done to find out whether the mothers and babies in the innovative parental support and education program did better than the mothers and babies in a control group. To exclude the possibility of the so-called 'group effect' we made sure that the control parents attended meetings as well of another, already existing kind.

To be able to study any sex differences, a total of 64 babies had to participate, divided over 4 groups: 16 boys in a control group and 16 boys in the a program group, and the same for girls.

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

Continued…

The notion to have four groups of 16 infants arose in the following way: The analysis of variance design with four groups of 15 individuals and a level of significance of $\alpha=0.05$ has a power of 99%, where (at least) 30% of the variance can be explained in the dependent variables (Hays, 1988, p. 953). These parameter values are a generally accepted standard to be able to show any substantial effect. A surplus of one person per group was added to compensate for any dropouts.

Finally, the following was done to make sure that the groups were large enough to be able to compare and to enhance the ‘power’ as much as possible.

Only firstborns were selected in order to improve the homogeneity as much as possible.

We only used measuring instruments of proven validity and reliability. This implies that the chance for an error of the second kind is neglectably small.

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

Finding the participants was done as follows. We selected mothers who had a difficult childhood and expecting their first baby. The baby had to be born without any complications. No selection was done on socio-cultural background. The participants had to speak the Dutch language fluently. No drug-addicts were accepted. If there were still one or two places vacant, non-risk parents were accepted as well.

Initially we tried to find single mothers through two bureaus for single parents and by laying brochures in waiting rooms in hospitals, consultation bureaus (for parents with babies) and midwife practices. When this was not very successful, an interview in the weekly, door-to-door local newspaper brought in the number of parents needed.

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

The experimental group and the control group were matched by comparing 30 co-variables collected through a medical and social anamnesis. Only one statistically significant difference was found: in the experimental group there were more mothers with a ‘broken’ childhood. They were confronted with parental divorce, being placed out of the home in a children’s home, death of a parent or one parent being nursed in a psychiatric clinic. So, if we are going to find differences in favor of the experimental group, such results are all the more convincing.

The Leaping Hurdles Story Slide 39

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

There are handouts available for everybody to take home with a description of the quantitative measuring instruments used. It would be too boring now to go into all the details.

Overview 2: Data and discussion

- Qualitative judgment by parents
- The effect of the training on parents
- The effect of the training on babies
- Qualitative findings and suggestions
- Summary findings and discussion
- Comparison with other successful intervention programs

Now we get to the data. First the qualitative judgment by parents.

Qualitative judgment by parents

- Absenteeism in meetings
- Participation in tests
- Results questionnaire
  - What did the parents get out of the program?
  - Frequency and timing of the meetings
  - Duration of the total program
  - Financial contribution parents

The degree of participation was high. The average percentage of babies attending was 88,3%.

Qualitative judgment by parents

- Absenteeism in meetings
- Participation in tests
- Results questionnaire
  - What did the parents get out of the program?
  - Frequency and timing of the meetings
  - Duration of the total program
  - Financial contribution parents

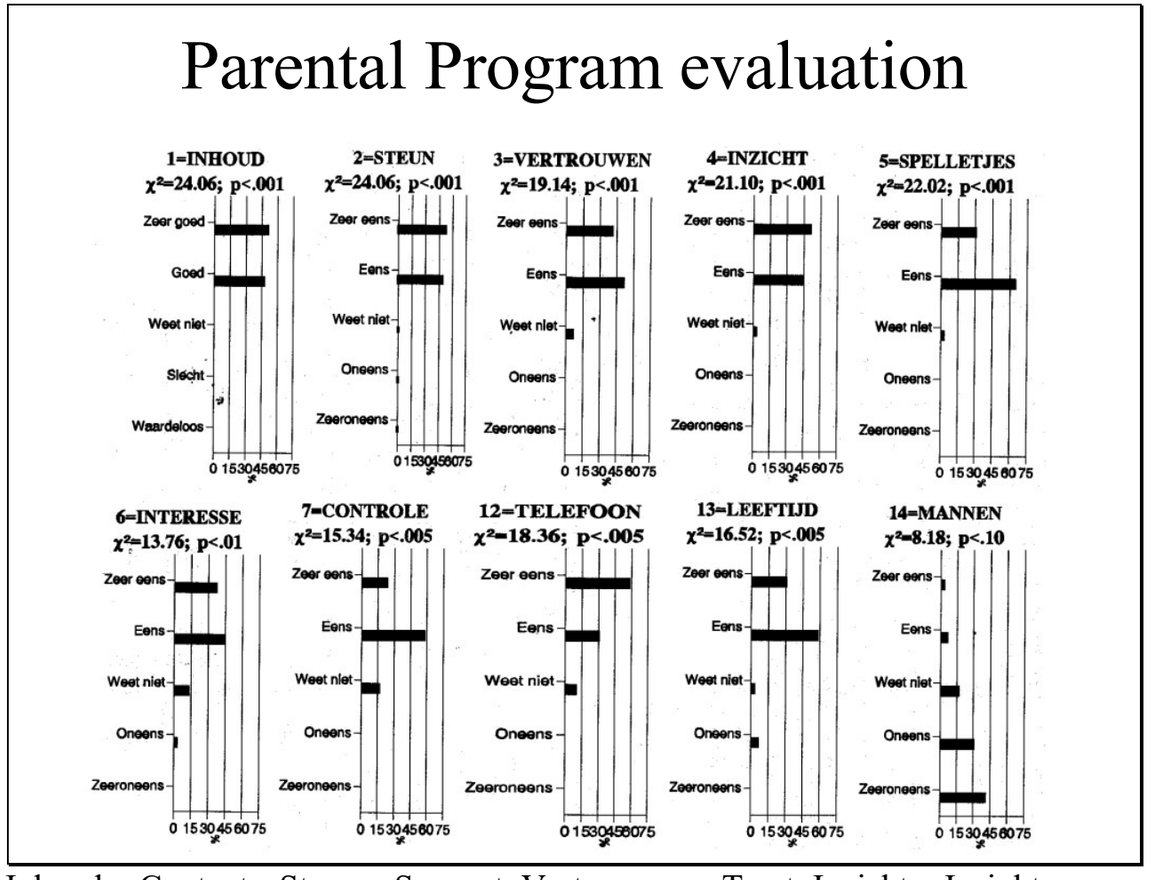
The participation of the mothers to the test was high as well. All mothers attended except for one mother who's baby was in hospital at the time. One other mother refused to participate in the ASS, because it was too stressful for her baby in her opinion.

Qualitative judgment by parents

- Absenteeism in meetings
- Participation in tests
- Results questionnaire
  - What did the parents get out of the program?
  - Frequency and timing of the meetings
  - Duration of the total program
  - Financial contribution parents

In a questionnaire we asked the parents what their opinion was about the program and the answers are summarized in the next two slides.

The Leaping Hurdles Story Slide 44



Inhoud = Contents; Steun = Support; Vertrouwen = Trust; Inzicht = Insight; Spelletjes = Games; Interesse = Interest; Controle = Control; Telefoon = Phone Leeftijd = Age; Mannen = Men.

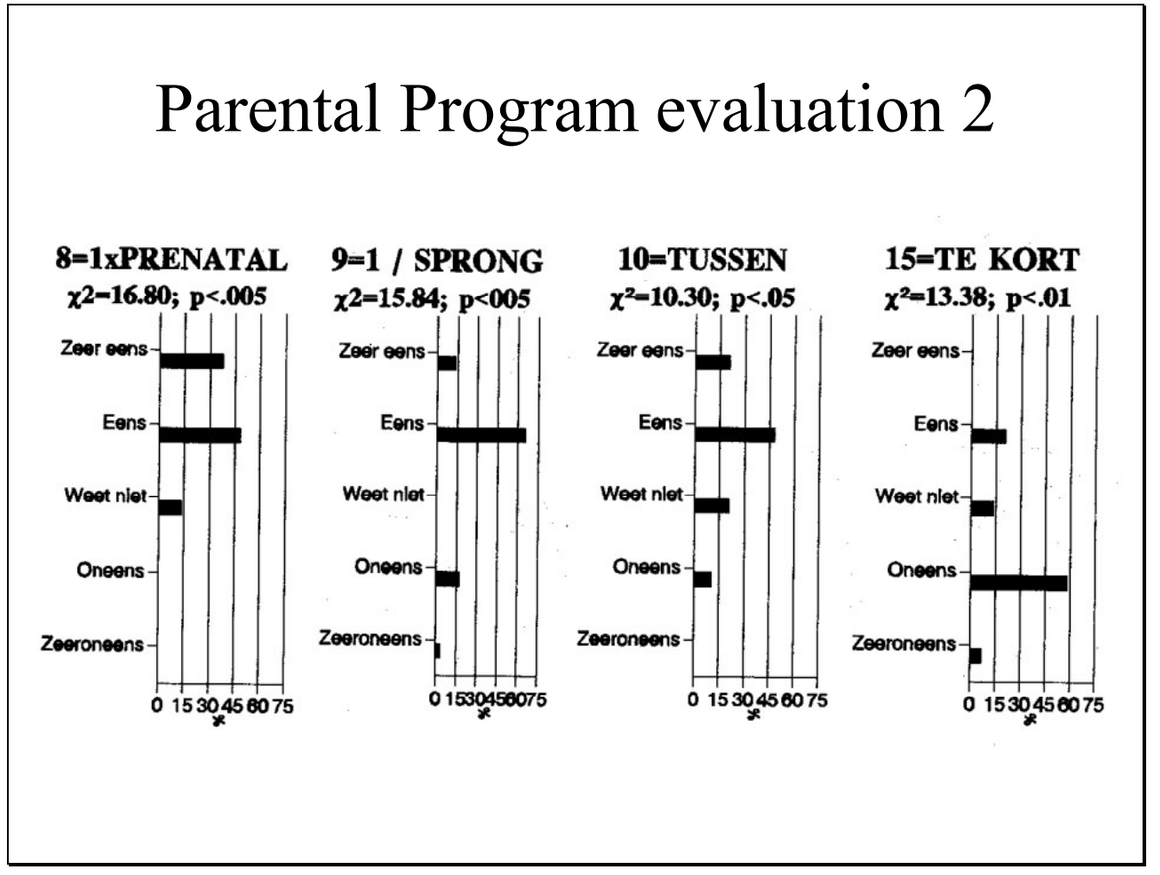
Zeer goed = Very good; Goed = Good; Siecht = Poor; Vardeloos = Worthless

Zeer ens = Strongly agree; Eens = Agree; Weet niet = Don't know; Oneens = Disagree; Zeeroneens = Strongly disagree

These are five-point scales running from 'worthless' to 'very good'. In all cases the distribution of the answers over the five-point scale differs from a score based on chance. If the parents agreed, the black bars move towards the left. If the parents disagreed, the black bars moved towards the right. The parents judged the contents (question number 1='inhoud' in Dutch) of the program good to very good. They agree that the program has given them support (question number 2), self-confidence (3), insight (4), suggestions for games to play with their baby (5), has made them curious for the later development of their baby (6), and has given them the feeling that they have control over their life (7).

Furthermore, the parents confirm that they felt very safe knowing that they could call the help-phone in between meetings (12), and that it was a great help to have seen other babies that were the same age as their own baby (13). Finally, the great majority disagreed with the statement that it would be not pleasant to have men participating in the meetings (14).

The Leaping Hurdles Story Slide 45



Prenatal = Prenatal; Sprong = Leap; Tussen = Between; Te kort = Too short

Zeer ens = Strongly agree; Eens = Agree; Weet niet = Don't know;
Oneens = Disagree; Zeeroneens = Strongly disagree

Another 4 five-point scales report the parents' opinions on the frequency and timing of the meetings. The parents agreed (very much) that one meeting before birth was very useful (8), that one meeting shortly before each regression period is enough (9), that it would be nice to have an extra meeting in between two developmental leaps if the interval between the leaps becomes longer (10).

Finally, two-third of the parents disagreed with the statement that the meetings were too short (15).

Qualitative judgment by parents

- Absenteeism in meetings
- Participation in tests
- Results questionnaire
  - What did the parents get out of the program?
  - Frequency and timing of the meetings
  - Duration of the total program
  - Financial contribution parents

The majority of parents were of the opinion that the duration of the total program was fine.

Qualitative judgment by parents

- Absenteeism in meetings
- Participation in tests
- Results questionnaire
  - What did the parents get out of the program?
  - Frequency and timing of the meetings
  - Duration of the total program
  - Financial contribution parents

When the parents were asked what they were able to pay for attending the program, the amount of money they came up with was far to low to cover the costs. So this kind of parental support and education program needs to be financed by sponsors or the state.

Overview 2: Data and discussion

- Qualitative judgment by parents
- The effect of the training on parents
- The effect of the training on babies
- Qualitative findings and suggestions
- Comparison with other successful intervention programs

Now we go from the qualitative judgment by parents to the quantitative measures of the effects of the training on parents and babies. Because of the lack of time, I am not going to bore you with all the details about the graphs, statistics and significance. I am going to summarize the main effects. Those of you who are interested in more detail can come to me afterwards.

The Leaping Hurdles Story Slide 49

Effects of Leaping Hurdles

- Parents
- Change in judgment temperament
- Change in judgment development from motoric to mental
- More ‘Locus of control’

- Infants
- Higher mental Bayley
- Unisex in Bayley
- Socially more open
- No difference in type of attachment
- Better health, especially the girls

The effects of the program Leaping Hurdles on the parents were as follows:

The parental judgment of the temperament of their baby changed in the sense that it was based on different information, that is on the behavior of the infant instead of their own rules and restrictions.

Their judgment of the development of their baby was based more on information concerning the mental development instead of the motor development.

Finally, the program gave parents more ‘locus of control’.

The effects of the program Leaping Hurdles on the infants were as follows:

First, the infants scored much higher on the mental Bayley scales.

Second, the program resulted in unisex in the sense that it prevented the girls from getting lower scores on the Bayley.

Third, the program children were socially more accepting and open towards strangers and not fearful and reserved as the control children were.

No differences were found in the type of attachment.

The program had positive effects on the health of the infants, especially the girls.

Overview 2: Data and discussion

- Qualitative judgment by parents
- The effect of the training on parents
- The effect of the training on babies
- Qualitative findings and suggestions
- Comparison with other successful intervention programs

The following findings are based on remarks of the mothers in the weekbooks and on our own notes made during running the program.

Remarks in the weekbooks:

Aggressive feelings: when mothers are confronted with a difficult baby, the abused mothers have aggressive feelings more quickly, start acting on those feelings more quickly, and accept both feelings and acts more quickly as being normal and acceptable. As also the non-abused mothers become irritated more quickly towards the end of a difficult period, one can say that the chance that an abused mother starts to abuse her baby increases during a difficult period as time goes by.

It appeared that mothers in general do not realize the danger of ‘grasping the baby firmly while shaking’. This is quite a common reaction of mothers who are fed up for a moment. This reaction can easily escalate into shaking dangerously, with brain-damage being the immediate consequence and sometimes death. In order to prevent escalation, it is important to make the mothers aware and discuss their aggressive feelings and actions.

abused mothers often feel a conflict when interacting with their baby: they are afraid to make demands and set rules, but on the other hand they don’t want their baby to run over them and take advantage of this.

Overview 2: Data and discussion

- Qualitative judgment by parents
- The effect of the training on parents
- The effect of the training on babies
- Qualitative findings and suggestions
- Comparison with other successful intervention programs

Remarks in the weekbooks, continued..

Every developmental change in the baby can make a problematic mother immediately more problematic. These problems are psychological and relational and the mothers cannot cope with the extra stress of the baby becoming more difficult. As a reaction, the mother creates more of her own problems. This reaction takes away the opportunity for the mother to respond to the changing needs of the baby. It is important to approach such a mother positively, to make her discover by herself why she feels worse all of a sudden and to explain to her that her baby need not be influenced by her problems. It is important to detect such a process as early as possible in the program and to prevent it becoming a habit.

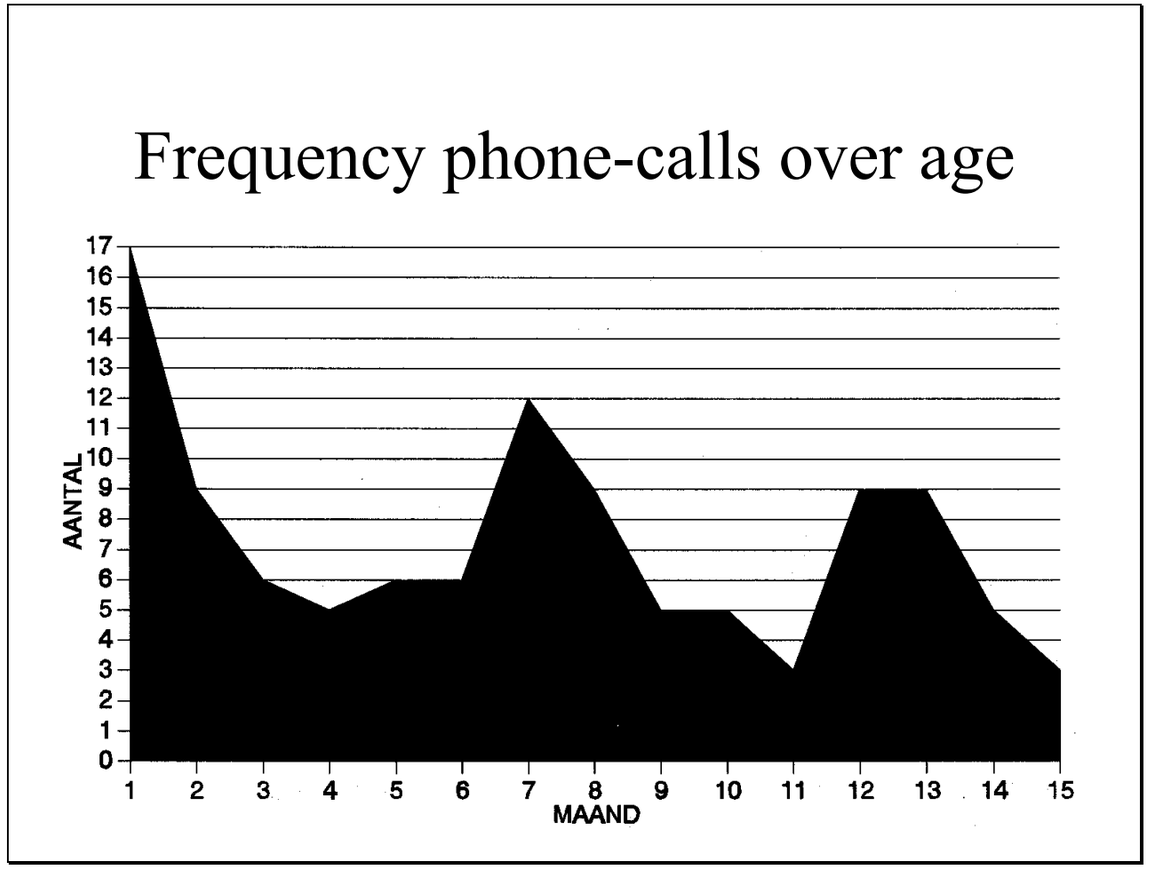
Situations in the present revive old feelings and memories.

Extra stress covers up regression periods.

All abused parents have a great Suspicion towards child protection agencies.

There are three Ages at which problems from the past are more likely to revive: this is shown in the next slide.

The Leaping Hurdles Story Slide 51 part 1 of 2



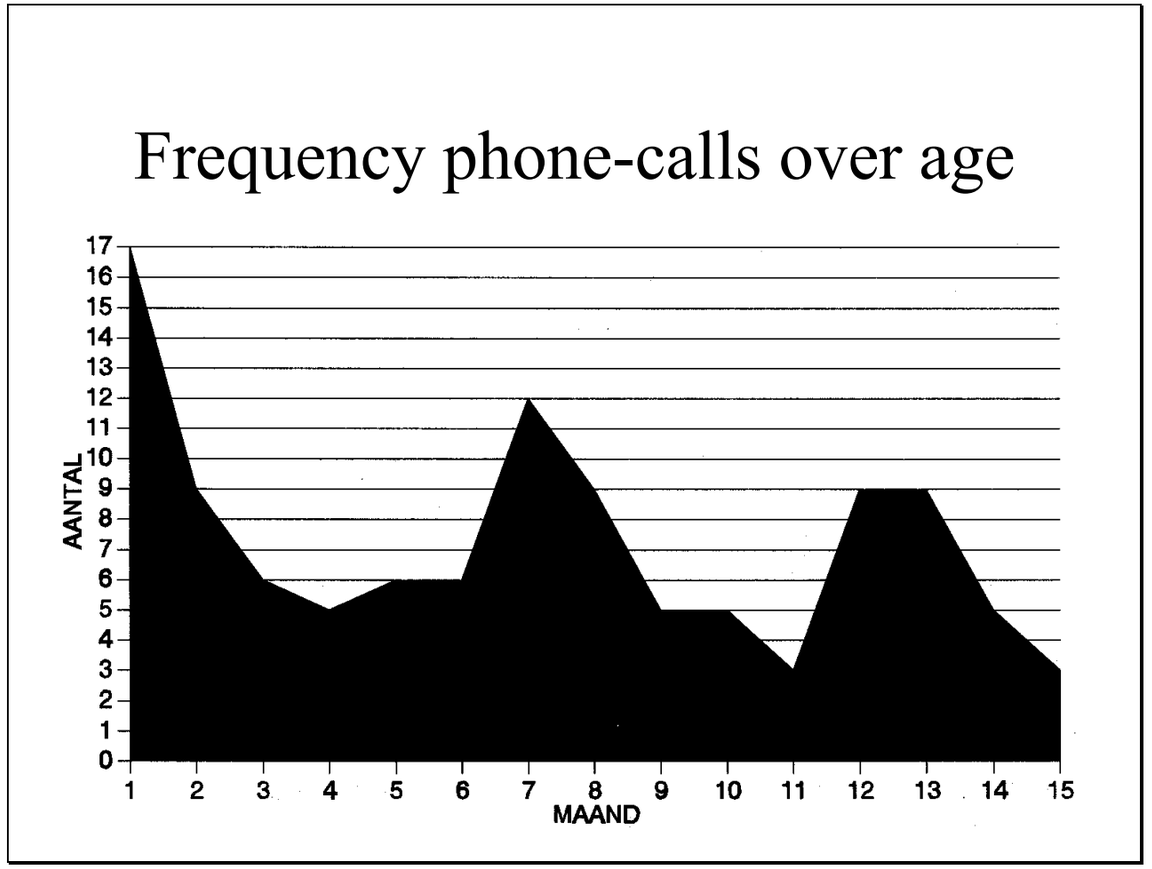
Aantal = Number; Maand = Month

From the frequency of the phone-calls over age as depicted in this graph we can see that mothers had an exceptionally difficult time at three ages of the baby in the first year : immediately after birth, between 6 and 7 months, and around the first birthday. In those periods the mothers phoned the help-line more often to talk about it, to cry and to become very angry.

In the first period shortly after birth the mothers relived the bad memories and experiences of their own childhood, especially those connected with rejection and abuse. They wondered why they had not been able to trigger love and caring when they were that small and innocent. They doubted whether they themselves in their turn would be able to love their baby and they felt lonely and abandoned. Mothers reported regularly that they had restored the earlier broken contact with their mother, hoping that they would get closer to their mother because of the baby. Afterwards the mothers reported that at that time they were very open to grandma's often weird ideas of how to raise a baby, because they were craving for love and attention themselves and because they were not very self-confident about how to handle their baby.

In the second period between 6 and 7 months mothers with a difficult past had an extra difficult time, because the baby demanded more attention and protested every time he was left alone for only a short while (because of the developmental leap concerning the perception and control of relationships such as the distance to the mother). Mothers then felt exhausted, became insecure, thought they had a postnatal depression, or relived the bad experiences from the past again. This time these bad experiences usually concerned mental and sexual abuse. Furthermore, the mothers relived bad memories of the delivery or the days immediately after birth, when the course of events differed unnecessarily from how the mothers had expected it to be.

The Leaping Hurdles Story Slide 51 part 2 of 2



Aantal = Number; Maand = Month

Continued…

The problems in the third period towards the end of the first year usually concentrated on the relationship with their partner. At first, many fathers had not accepted the pregnancy. But after birth they wanted to play some role in the life of their baby. However, after 6-7 months, when their baby started to demand extra attention from their mother and sometimes did so with a temper tantrum, this led to more and more marital conflict. The rows often resulted in the departure of the father, and this time that was final. When this phenomenon was brought out into the open, it supported many mothers to find out that rows with the father were quite common towards the end of the first year.

The Leaping Hurdles Story Slide 52

Our own observations during the meetings

- Mothers that tried to avoid body-contact
- One baby that started to bite other children

Some mothers tried to have as little bodily contact with their baby as possible. This behavior is deviant. By approaching the mother positively and by giving compliments whenever we could, we tried to make this tendency less extreme, hoping to trigger a more fundamental change in the long run.

When one baby started to bite other babies during the meetings, we also noted that the other mothers withdrew their babies from the biter. Consequently, the biter and his mother became isolated in the group. We stimulated her to find out how this biting could have originated. She found out that there was a connection between the home situation and the behavior of her son. The father interacted roughly with the boy, which led to marital conflict.

Suggestions for optimizing

- The design of the meeting room
- Audio-visual media
- Phone helpline
- Constitution of the group
- Embedding the program in more intensive help-organisation

The meeting room should be clean, jolly, colorful, and baby-safe such that the babies can freely lie, sit, and crawl on the floor. There should be age-appropriate toys on the floor and there should be a location for changing nappies, or warm a bottle. Mothers and the people that escort them should be able to sit comfortably and mothers who breastfeed should have enough to drink. The whole room should express warmth and coziness.

By using audio-visual media, it is easier to explain to mothers what it is exactly that you want to show.

The phone helpline is very important. Mothers with a difficult childhood should be able to phone any time of the day and the night (24 hours) to ask for help, especially when the baby is still young. She must feel free to do so. Many mother do have a need for contact with the other mothers outside the meetings.

It is wise to have one or two mothers with a problem-free background in each group of mothers who have had a difficult childhood. The former mothers de-stigmatize and are able to take the sting out of the latter mothers' problems. Furthermore, it is wise to have as many baby boys as girls in the group. This prevents the odd mother feeling left out and it enables mothers to detect differences.

Suggestions for optimizing

- The design of the meeting room
- Audio-visual media
- Phone helpline
- Constitution of the group
- Embedding the program in more intensive help-organisation

Continued…

Because the mothers relive their past shortly after the birth of their baby, this could be a very good moment to deal with the problems of the past and come to terms with them. For that to be realized, the mothers could very well use individual, professional help. In reality it appears that the mothers would accept such help with both hands, if that help would be offered by a professional who has to and will keep the information received from the mother a secret and who communicates that vow clearly. Unfortunately, it was the mothers' opinion that they could obtain this help nowhere, without having to be afraid that their baby would be taken away from them and that their baby would end up in the treadmill of the child-protection organizations, just like themselves. Furthermore, mothers with a difficult childhood want to take the initiative to such help themselves, and they want to be treated positively and with respect.

If mother's problems from the past are not dealt with, these can remerge any time and so they hang above mother's head as the sword of Damocles.

Overview 2

- The effect of the training on parents
- The effect of the training on babies
- Qualitative findings and suggestions
- Comparison with other successful intervention programs

Yoshikawa has written an exhaustive literature review on early risk factors for chronic delinquency and he presented a list of the characteristics that successful programs have in common. These characteristics are presented in the next slide.

Successful intervention programs

- Several short-term effects lead to long-term effects
- Ecological program design
- Three types of support: emotional, information, and instrumental
- Program available for everybody
- Program duration at least two years
- Program starts prenatally
- Child following
- Empowering parents

We shall see that, potentially, the program Leaping Hurdles has all of these characteristics.

1.It had several short-term effects on the parents and through the parents on the children. So there is the basis for long-term effects. We did not have the opportunity to do a long-term follow-up study, but most parents have kept contact over the years and we know for a fact that the intergenerational cycle of aggression and abuse was stopped in all cases.

Successful intervention programs

- Several short-term effects lead to long-term effects
- Ecological program design
- Three types of support: emotional, information, and instrumental
- Program available for everybody
- Program duration at least two years
- Program starts prenatally
- Child following
- Empowering parents

2. An ecological program design means that support is given in two or more situations in which the child is living. Leaping Hurdles only gave support to the parents, but later we had the opportunity to train not only parents but the group leaders of the day-care center as well. That worked very well.

Successful intervention programs

- Several short-term effects lead to long-term effects
- Ecological program design
- Three types of support: emotional, information, and instrumental
- Program available for everybody
- Program duration at least two years
- Program starts prenatally
- Child following
- Empowering parents

3. Leaping Hurdles gave emotional support and provided information on child development and care. Instrumental support was not given. That involves helping the parents solve their practical problems. On the other hand it has always been the intention that Leaping Hurdles should be embedded in a wider network of helping institutions and in that case such instrumental support can be realized.

Successful intervention programs

- Several short-term effects lead to long-term effects
- Ecological program design
- Three types of support: emotional, information, and instrumental
- Program available for everybody
- Program duration at least two years
- Program starts prenatally
- Child following
- Empowering parents

4. As I said before, it is my conviction that Leaping Hurdles should be for everybody, not only for families at risk. We were forced by our financial sponsor to do so, but as I told you, sometimes we allowed non-risk families to participate if groups were not fully booked and it worked fine.

Successful intervention programs

- Several short-term effects lead to long-term effects
- Ecological program design
- Three types of support: emotional, information, and instrumental
- Program available for everybody
- Program duration at least two years
- Program starts prenatally
- Child following
- Empowering parents

5. Leaping Hurdles started prenatally and lasted two years.

Successful intervention programs

- Several short-term effects lead to long-term effects
- Ecological program design
- Three types of support: emotional, information, and instrumental
- Program available for everybody
- Program duration at least two years
- Program starts prenatally
- Child following
- Empowering parents

6. Leaping Hurdles encourages parents to be child following and does not give prescriptions for what to do.

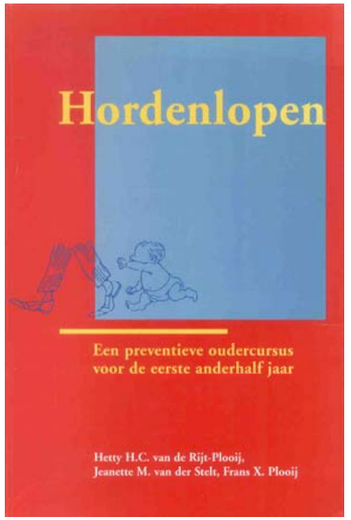
Successful intervention programs

- Several short-term effects lead to long-term effects
- Ecological program design
- Three types of support: emotional, information, and instrumental
- Program available for everybody
- Program duration at least two years
- Program starts prenatally
- Child following
- Empowering parents

7. Leaping Hurdles is empowering parents by respecting their own living situation, perceptions, attitudes, possibilities, values and norms.

The Leaping Hurdles Story Slide 62

‘Leaping Hurdles’



- Concluding

Concluding, Leaping Hurdles has all the characteristics of a successful primary intervention program and the effects are evidence based. What more do you want? At the moment Leaping Hurdles starts to be exported to other countries. At the moment, talks are going on with people in Spain and Australia. If the organisation “the Four Winds” would be interested in implementing the program Leaping Hurdles in Japan, I would be delighted to start this joint venture with you.

Thank you.

The Leaping Hurdles Story Slide 63 part 1 of 3

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

The following measuring instruments were used:

A questionnaire called “Evaluation of the program Leaping Hurdles”

The Infant and Child Questionnaire (ICQ) of J.E. Bates (1980, 1982). This is a questionnaire concerning the temperament of children.

A questionnaire on Locus of Control (LOCO).

A questionnaire on tendency to seek information (GIZO).

Questions on any illnesses of the baby. In the weekbooks there are a number of questions on the health of the baby. Originally is was the intention that the mothers of the control group would fill out these questions too and send them back to us. However, they often forgot and we did not want to phone, because then the mothers would start ‘fishing’ for information and we were not supposed to give that. Instead, we used the health data of the weekbooks of the babies in the original study. These were collected in the same way. The advantage of this illness comparison group is that they did not have any knowledge yet at the time about the parenting book. In order to compare the experimental group with the comparison group with regard to stress, the number of major life events was counted in both groups according to the list of Holmes and Rahe (1967).

Aggressive behavior. It was planned to measure any behavioral problems with the Child Behavior Check List (CBCL) of Achenbach, Verhulst, Baron and Akkerhuis (1987), but this list is validated for the Netherlands from the age of 2 years onwards. Because of the delay in finding the participants, there was no time left in the project to wait for the children to become 2 years of age. Therefore it was decided to use an indirect measure: the Ainsworth Strange Situation (ASS).

The Leaping Hurdles Story Slide 63 part 2 of 3

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

Continued….

In the literature a connection has been reported by Belsky et al. (1991) and Campbell (1990) between insecurely attached children at the age of one year and later behavioral problems. The parents were asked to come to the University in the 59th week of their baby's life and participate in the ASS. The videotapes of the ASS were scored independently and blindly by two researchers who had been trained internationally and who were declared to be experts. The interobserver reliability between both observers was good.

The Bayley Scales of Infant Development (BSID). Both the mental as well as the motoric part of the BSID have been translated and standardized for the Netherlands by Van der Meulen and Smrkovsky (1983, 1984). In the 59th week of life of the baby the scales were scored in the baby's home. The person administering the scales was 'blind' as far as the project was concerned. That is to say that she did not know what baby participated in what group. Ten babies, 5 from the control group and 5 from the experimental group, were also tested by a second person, who was also blind to the study. The interscorer reliability was fine.

The Bayley Behavior Observation List (BBOL). This list enabled us to say something about the social behavior of the children, although aggression is not attended in the list. The BBOL consists of a number of five- and nine-point scales with statements about the social behavior of the child. These scales are the following:

a. Social orienting I: This nine-point scale concerns the child's reaction to persons and goes from the statement "Behavior towards people is not different from behavior directed at objects" on the one hand to "Behavior is constantly influenced by being very aware of the presence of other persons."

The Leaping Hurdles Story Slide 63 part 3 of 3

Setup of the evaluation research

- Tryout of the program with a risk group
- General and specific research questions
- Global research design
- Finding the participants
- Matching the program- and control group
- Quantitative measurements

Continued….

b. Social orienting II: The five-point scale also concerns the reactions to persons and runs from “Avoiding or retreated” on the one hand via “hesitating”, “accepting” and “benevolent” to “inviting” (initiating, explicitly asking) on the other hand.

c. Social orienting III: This five-point scale concerns the reaction to mother and is the same as Social orienting II.

d. Cooperation with test leader, based on interpersonal reactions. This is a nine-point scale which runs from “Resistance to any request or suggestion” on the one hand, to “starts to do the games and tasks suggested by the test leader eagerly and enthusiastically.”

e. Fearfulness. This five-point scale concerns the reaction to something new or strange.

f. General emotional state of mind.

Besides these scales a number of concrete behaviors are recorded to occur or not.

g. The development in retrospect. All parents were asked to fill out a list entitled: “Questions about the development of your baby in retrospect.”

In the experimental group the ICQ was administered at 3, 6, and 13 months of age; the LOCO and GIZO at 0, 6, and 13 months.

In the control group the ICQ, the LOCO, and the GIZO were only administered at the ages of 6 and 13 months.

In both groups the questionnaire “Development in retrospect”, the Bayley and the ASS were only administered at the age of 13 months.

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More effects on the parents

- Program made doubtful mothers confident
- Parents more tolerant
- Difficult periods shorter
- Parents start to recognize regularly recurring signs of upcoming regression period which are idiosyncratic for their baby
- More opportunity for learning new skills

In the beginning of the program we had an intake meeting with each mother discussing their anamnesis. When talking about their plans for the future 23 of the 31 program mothers and 3 of the 12 control mothers doubted whether they would become a good parent. So, significantly more program mothers were doubtful about the future quality of their parenthood (Fisher's exact probability test: p=.005).

Thirteen months after birth the 23 doubtful program mothers scored significantly higher on the LOCO questionnaire than the 3 doubtful control mothers (t-test for independent samples: t=2,20, df=35, p=.034, explained variance 12%). Apparently, the program has boosted the self-confidence of the doubtful mothers.

Of the 31 program mothers 26 filled out the weekbooks every week and sent them to us. The following qualitative aspects were striking:

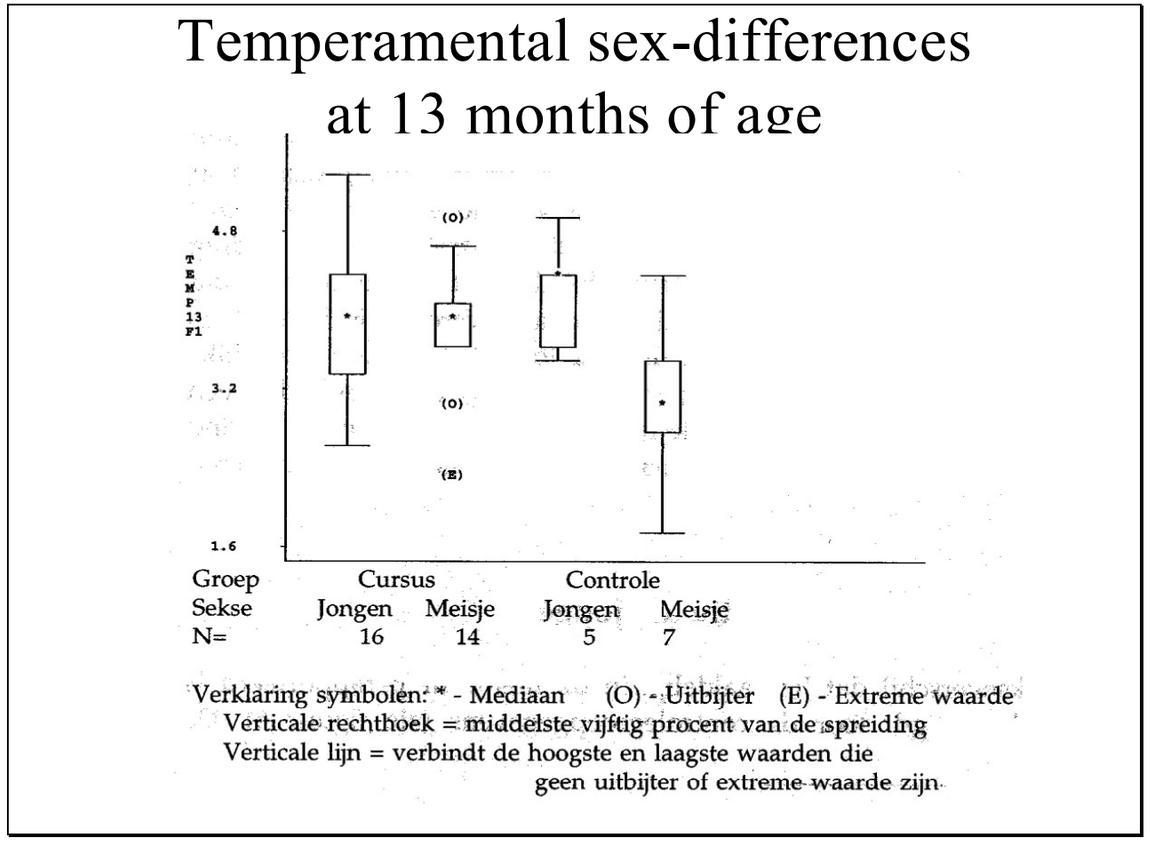
Program mothers who lived in 'quiet' circumstances (that is to say: without extra stress such as lack of money or falling in love) said that they had more understanding for their baby when he/she became difficult again than they would have had if they would have known nothing about the regression periods.

These same program mothers reported that their babies' regression periods lasted shorter than the regression periods of the babies in the original study whose mothers were not told anything about the regression periods. The shorter regression periods started at the same ages as in the original study, and according to a few parents regularly one or two weeks earlier.

The main caretakers of a baby started to recognize the regularly recurring signs of an upcoming or ending regression period that were idiosyncratic for their baby.

If regression periods last shorter and more time remains in between where the baby is sufficient relaxed, the baby gets more opportunities for learning.

The Leaping Hurdles Story Slide 65 part 1 of 2



Groep = Group; Sekse = Sex; Cursus = Class; Controle = Control; Jongen = Boy; Meisje = Girl;

Verklaring symbolen = Explanation of symbols; * - Mediaan = * - Median, (O) - Uitbijter = (O) - Outlier; (E) - Extreme waarde = (E) - Extreme value Verticale rechthoek = Vertical rectangle; middelste vijftig procent van de spreiding = middle fifty percent of the spread; Verticale lijn = Vertical line; verbindt de hoogste en laagste waarden die geen uitbijter of extreme waarde zijn = connecting the highest and lowest values that are not outliers or extreme values

First the ICQ, the questionnaire on temperament.

It turned out the program parents judged the temperament of their babies in another way than the control parents, that is to say their judgment was based on other information.

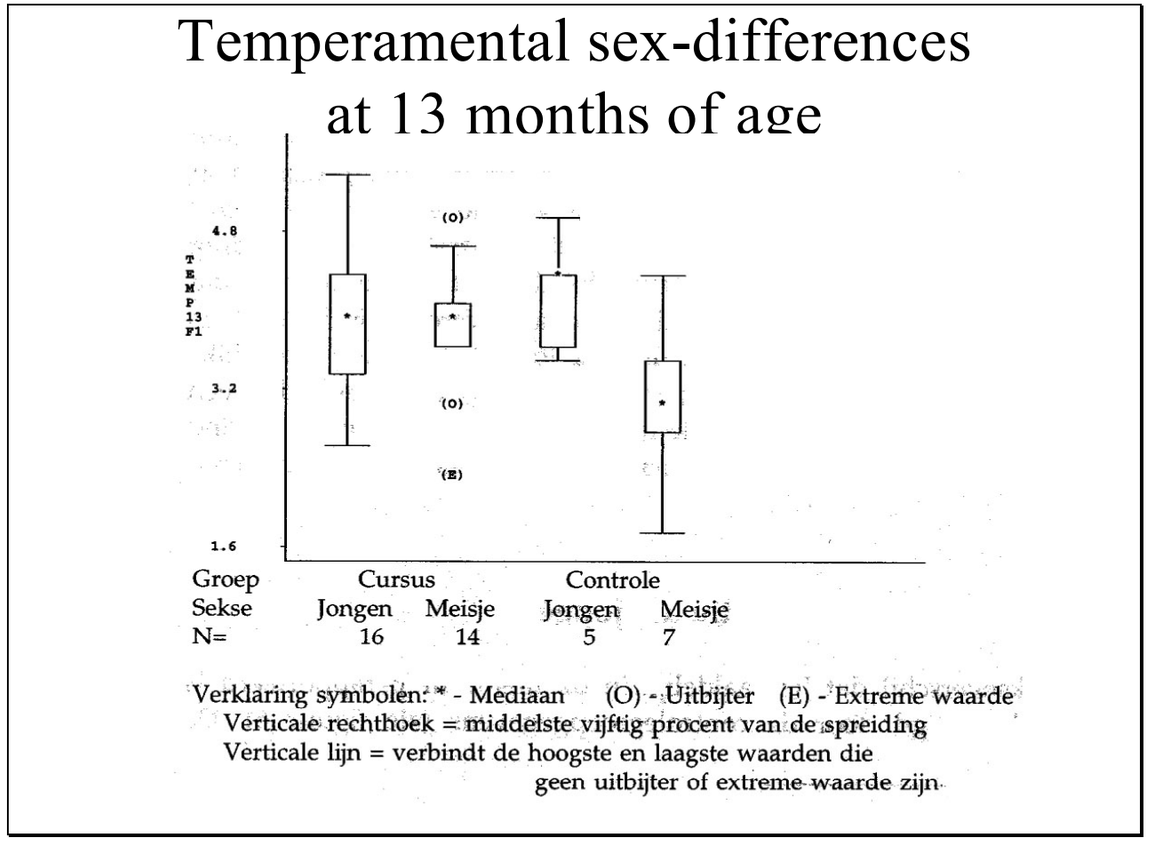
Their was no difference in the total score on the questionnaire ICQ (temperament) between the program parents and the control parents when the babies were 13 months old.

However, the scores on the different parts of the questionnaire showed large differences between the two groups. In a multiple regression analysis with the questions 32 and 33 as criterium and the factors 1-5 as predictors it was shown that in the program group 51% of the variance was explained by factor 1 ($F(1,27)=18,7$; $p=.0002$). This factor is concerned with the behavior of the baby. In the same analysis for the control group it turned out that only 11% of the variance was explained by factor 1 and as much as 73% by factor 3. This factor is concerned with parental rules and commands (such as ‘stay here,’ ‘sit down,’ or ‘don’t touch that’) ($F(1,10)=27,5$; $p=.0004$).

So, the program has caused a change in the way parents see and judge their baby. This was accompanied with interesting sex differences. See the slide.

In this slide the parental judgment of their baby’s temperament at the age of 13 months is box-plotted separately for, from left to right, the program boys (N=16), the program girls (N=14), the control boys (N=5), and the control girls (N=7).

The Leaping Hurdles Story Slide 65 part 2 of 2



Groep = Group; Sekse = Sex; Cursus = Class; Controle = Control; Jongen = Boy; Meisje = Girl;

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Continued…

A sex-difference that is repeatedly reported in the world literature is confirmed in the control group. The control boys are judged to be more difficult than the control girls (t-test, N=12, two-sided, p=.030). This sex-difference is not found in the program group (t-test, N=29, two-sided, p=.893). The girls are judged to be equally difficult as the boys. The scores of the program girls are higher than the scores of the control girls and the median of the program girls is as high as the median of the scores of the program boys.

This sex-difference has not existed from birth. At the younger ages of 3 and 6 months no difference was found in the control group. At the age of 13 months the scores of the control boys have increased a little as compared with the boys at 6 months of age, and the scores of the control girls have decreased between 6 and 13 months.

Other effects of the training on parents

- Judgment of developmental speed based on mental instead of motoric development
- No differences were found between the two groups in the tendency to seek information on how to raise their babies

We asked parents in question 4 of the questionnaire “Questions about the development of your baby in retrospect” whether they thought their baby was developing faster, equally fast or slower than other babies. We compared the judgment of the parents with the scores on the Bayley Scales of Infant Development.

The judgment of the mothers from the control group correlated with the Bayley scores on the part concerning motor development (r=.60, p=.037). This was confirmed by a t-test (t=2.40; df=10; p=.037) and explains 37% of the variance.

In contrast, the program mothers’ judgment correlated with the raw Bayley scores on the part concerning the mental development (r=.41; p=.028). This was confirmed by a one-way analysis of variance which showed a trend in the same direction (F(4,24)=2,54; p=.066) and explained 30% of the variance.

In a one-way analysis of variance no difference was found between the two groups in the tendency to seek information at the age of 13 months.

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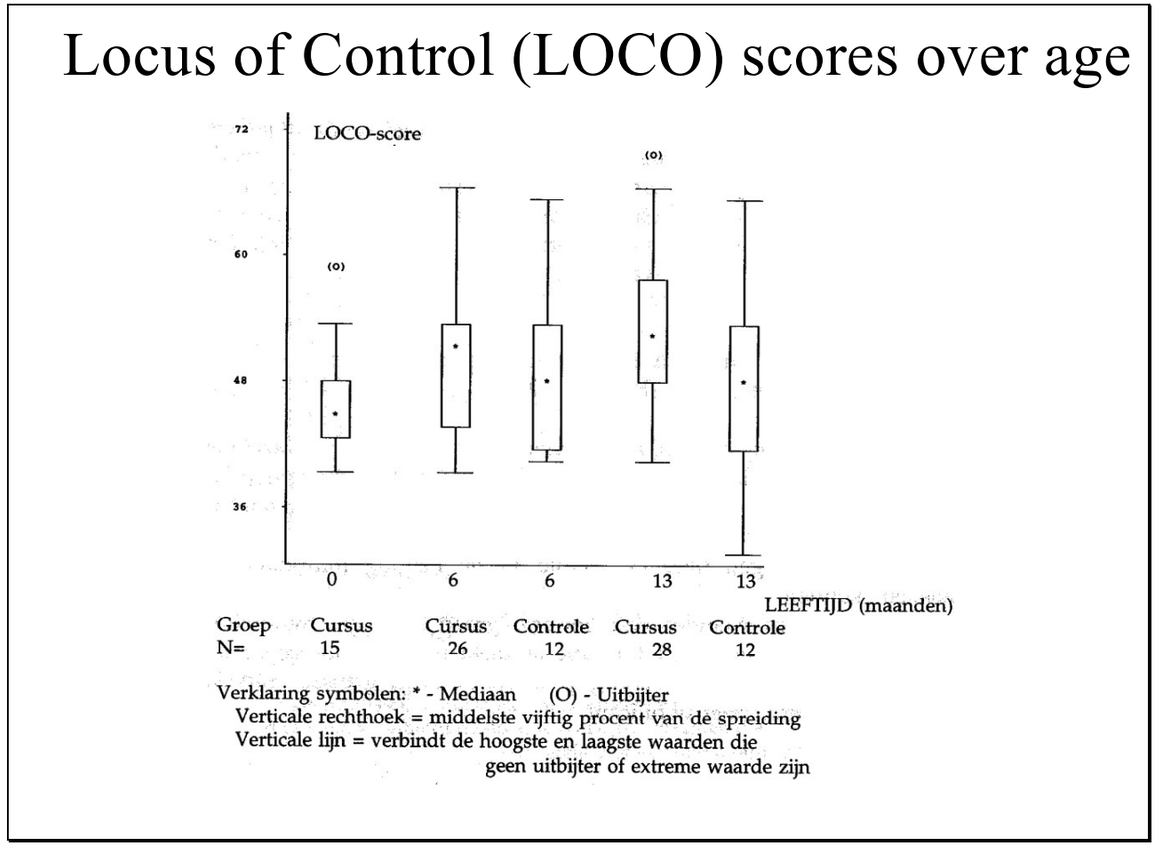


Groep = Group; Cursus = Class; Controle = Control; Leeftizd (maanden) = Age (months),

Verklaring symbolen = Explanation of symbols; * - Mediaan = * - Median, (O) - Uitbijter = (O) - Outlier; (E) - Extreme waarde = (E) - Extreme value Verticale rechthoek = Vertical rectangle; middelste vijftig procent van de spreiding = middle fifty percent of the spread; Verticale lijn = Vertical line; verbindt de hoogste en laagste waarden die geen uitbijter of extreme waarde zijn = connecting the highest and lowest values that are not outliers or extreme values

In this figure the scores on the LOCO questionnaire of both the program mothers and the control mothers are presented over age. From left to right are presented the scores of the program mothers at the age of 0 and 6 months, the control mothers at 6 months, the program mothers at 13 months and the control mothers at 13 months.

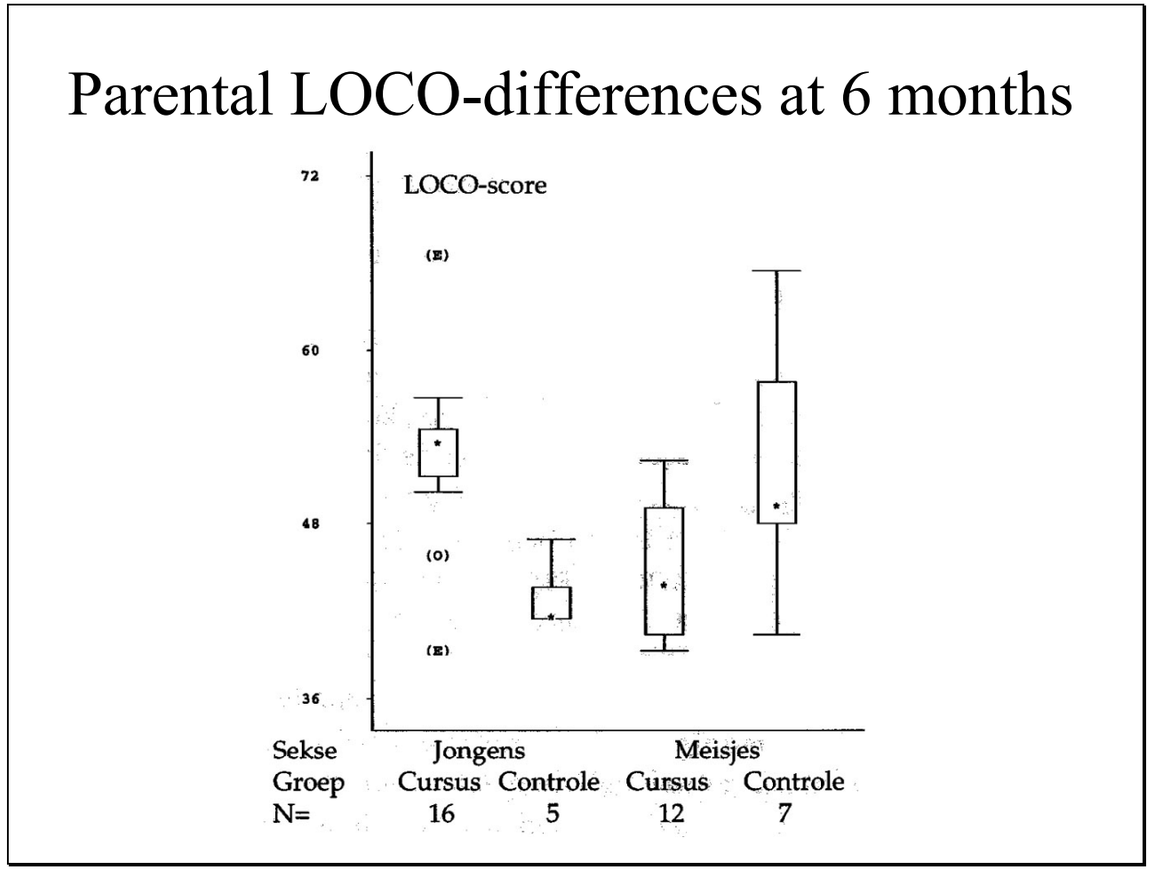
At the ages of 6 and 13 months no significant differences were found between both groups, although the median of the scores of the program mothers is a little higher at both ages.

The program group shows a significant increase in the LOCO scores from 0 to 6 months of age (t-test for paired differences, t=2,24, df=13, two-sided, p=.043; the variance explained is 28%).

Between 0 and 13 months this increase is even larger (t=3,24, df=14, two-sided, p=.006; explained variance is 43%).

This means that over time the program mothers became convinced that they had an influence on the raising of their child. In the next slide it can be seen that the way this developed differed greatly for mothers with boys and mothers with girls.

The Leaping Hurdles Story Slide 68



Sekse = Sex; Jongens = Boys; Meisjes = Girls;
Groep = Group; Cursus = Class; Controle = Control;

This figure shows interesting sex differences at the age of 6 months in the LOCO-scores. On the X-axis are presented from the left to the right: Program Boys (N=16), Control boys (N=5), Program girls (N=12), and Control girls (N=7).

Mothers of Program boys score significantly higher than boys from the control group (t-test for independent groups: t=3,48, df=19, p=.002, explained variance is 39%). In contrast, the mothers of control girls score higher than the mothers of program girls (t-test for independent groups: t=2.50, df=17, p=.023, explained variance is 27%).

Within the program group mothers of boys score higher than mothers of girls (t-test for independent samples: t=3,69, df=26, p=.001). And in the control group it is just the reverse: mothers of girls score higher than mothers of boys (t-test for independent samples: t=2,78, df=8, p=.025).

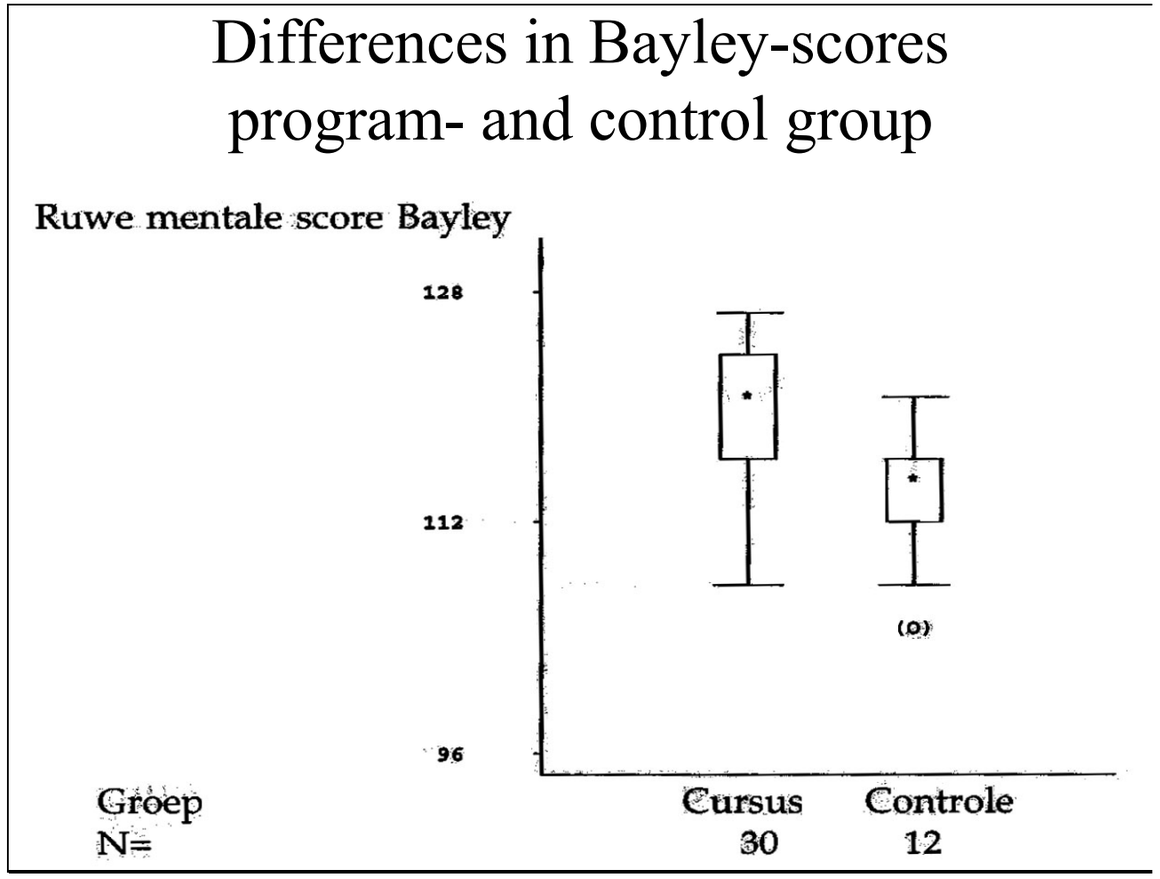
At the age of 13 months the scores of the mothers of program girls had increased and the scores of the mothers of control girls had decreased. Consequently, the differences between the mothers of boys and of girls has disappeared in both the program group and the control group. The difference between the mothers of the program boys and the control boys remained (one-way analysis of variance: F(2, 25) =3,35; p=.052; explained variance is 21%; the higher p-value is not caused by different scores, but because there was one child less in the program group).

It can be concluded that the program has given the mothers the conviction that they have influence in the raising of their child (‘internal locus of control’). Mothers of boys have this conviction already when the boys are 6 months old, while mothers of girls only have developed this conviction when the girls are 13 months old.

Overview 2: Data and discussion

- Qualitative judgment by parents
- The effect of the training on parents
- The effect of the training on babies
- Qualitative findings and suggestions
- Summary findings and discussion
- Comparison with other successful intervention programs

This brings us to the quantitative measures of the effect of the training on babies



Ruwe mentale score Bayley = Raw Bayley mental scores

Groep = Group; Cursus = Class; Controle = Control;

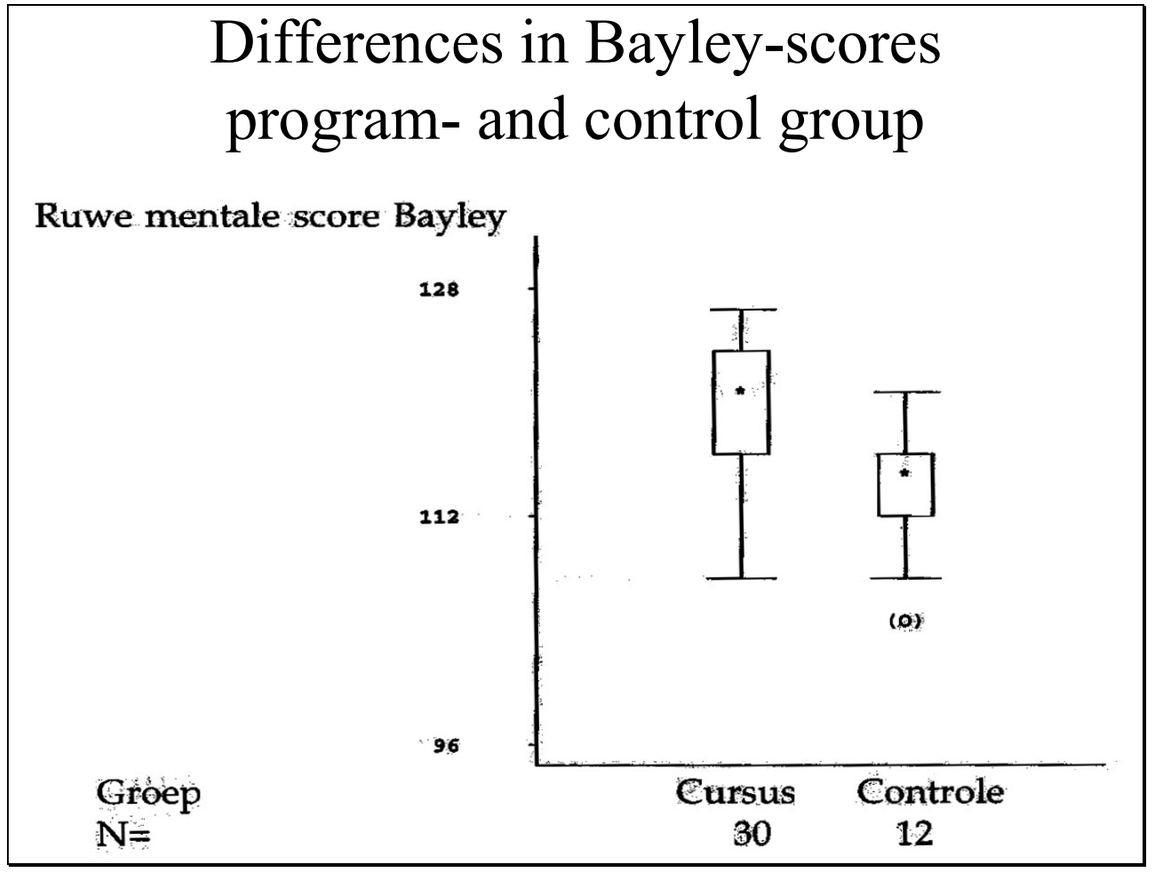
In this figure it is shown that the program babies scored one-and-a-half month higher than the control babies on the Bayley Infant Development Scales at the age of thirteen and a half month (59th week of age). The raw scores on the mental scale of the Bayley were significantly higher for the program babies according to an analysis of variance for independent samples ($F(2, 54)=7,90$; $p=.001$). This difference was confirmed with the Scheffe procedure ($p<.05$) where 23% of the variance was explained.

No differences were found between the program- and control babies on the motoric scales of the Bayley.

There was no sex-difference in the program group in the scores on the mental- as well as the motoric scale of the Bayley (t-test, N=30, two-sided, $p=.903$ and $p=.127$, respectively).

In the control group, however, the girls scored significantly lower on both the mental- as well as the motoric scales of the Bayley (t-test, N=12, two-sided, $p=.019$ and $p=.051$, respectively). This is unexpected in comparison with the norm group for the Netherlands. However, our groups deviate from standard in that the mothers had a very difficult childhood.

No differences were found between the program group and the control group in the attachment as measured with the Ainsworth Strange Situation.



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Differences were found between both groups in their social behavior as measured with the Bayley Behavior Observation List. The impression during the meetings with the program group that the babies were not ‘clingy’ or ‘sticky’ to their mother was confirmed. From a multivariate analysis of variance with the program group versus the control group as independent variables and the four scales ‘Social Orienting’ I, II, and III, and ‘Cooperation’ as dependent variables, an overall significant effect was shown (p=.002). Univariate follow-up test revealed that only one of the four dependent variables was responsible for this result: ‘Social Orienting II’ (p=.001; explained variance 23%). The program group scored on average 4,0 on that five-point scale as compared to 3,25 for the control group. This implies that the program group children are more willing and inviting towards other persons and the control group more hesitant and avoiding.

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Differences in z-scores components dichotomously scored social behavior list of Bayley

Components	Program Z-score	Control Z-score	P-value	% expl. Variance
Hesitant/ Reserved	-.36	+.89	<.001	32
Fearful	-.23	+.58	=.016	14

In addition to the scales there was a list of behaviors that could be scored dichotomously. In the 42 children in both the program- and control group thirteen of these behaviors were scored to occur. In order to prevent that there was too much chance-capitalization with 13 chi-square tests on 2x2 tables, we searched for a possibility to reduce the data to a smaller number of dimensions. A component-analysis resulted in three components (scree test, varimax rotation) that explained 53,5% of the variance. Consequently, the z-scores were calculated (mean=0; standard deviation=1) which the children scored on each of the three components. These component scores were then entered into an multivariate analysis of variance with the program- and control group as independent variables and the component-scores as dependent variables. This resulted in an overall significant effect ($p<.001$). Univariate follow-up tests show that the components ‘Hesitant/reserved’ and ‘Fearful’ were responsible for this effect. This table above shows that the component ‘Hesitant/reserved’ contributed most with more than one standard-deviation difference between the program group and the control group and 32% of the variance explained.

The Leaping Hurdles Story Slide 72 part 1 of 2

Less ill than expected

Group	Mean % ill	Mean Duration (days)	Mean Interval (days)
Program	15	7,6	72,1
Comparison	18	8,2	57,2

Before analyzing the differences in illness between the program group and the special comparison group from the original study on regression periods (see setup of evaluation research), we compared these two groups in terms of a number of co-variables that are related to getting ill. For instance, it is known from both American (Bell et al., 1989) and Dutch (Cobben-Schoonenberg, Zielhuis & Groenewoud, 1994) research that children in day-care centers are ill more often. Furthermore, it is well known that major life events and stress can result in illness (Locke & Colligan, 1986; Stone et al., 1987).

Comparing the two groups on the co-variables, it was shown that the program group had a more difficult life. The program group had significant more major life events (a mean difference of more than three events (3,5 versus 0,33); t=4,92, df=39, p<.001), program mothers worked significantly more (the comparison mothers had stopped working and were given a professional level code of 3; the mothers from the program group had a professional level that was significantly higher than 3 (Mann-Whitney U – Wilcoxon Rank Sum W test, two-sided, p=.012, corrected for similar scores)), program mothers had a more complicated delivery significantly more often (χ^2 =5,84, df=1, p=.016), and had their babies in the day-care centre more often (χ^2 =6,85, df=1, p=.0089). Furthermore, program mothers tended to have a more complicated pregnancy (χ^2 =3,29, df=1, p=.069) and were more often single (χ^2 =4,56, df=1, p=.033). The two groups did not show any differences concerning the education level of the mother, the educational and professional level of the biological father (as far as he was present), the condition of the baby immediately after birth, and postnatal problems of the baby.

The Leaping Hurdles Story Slide 72 part 2 of 2

Less ill than expected

Group	Mean % ill	Mean Duration (days)	Mean Interval (days)
Program	15	7,6	72,1
Comparison	18	8,2	57,2

Continued…

Also in the data of the program group itself the relation was confirmed between some of the co-variables supposed to cause more illness and the babies actually being ill. A positive correlation was found between a higher professional level (a level higher than 3 implies working instead of staying home) and the number of times the baby was ill (Kendalls Tau=.40, N=26, p=.004). Also, a positive correlation was found between the number of ‘major life events’ and the number of days that the baby was ill (Pearson-correlation=.40, N=26, p=.045). Furthermore, a negative correlation was found between the number of ‘major life events’ and the duration of the intervals between two illness periods (in mean number of days). In other words, the more ‘major life events’, the shorter the interval towards the next illness (Pearson-correlation= -.46, N=26, p=.018).

In the comparison group similar correlations were found as well.

Because the babies in the program group had experienced many more of the above described circumstances that make ill, one would expect the program babies to be much more ill. In contrast, the program babies were less ill than the comparison babies as measured in several ways. This is shown in this table shown here. Although the differences were not statistically significant, the least one can conclude is the program neutralized the ill-making circumstances in which the program babies lived.

The Leaping Hurdles Story Slide 73

Sex-differences in illness

Illness measure	Comparison-		Program group			
	♂♂	♀♀	♂♂	♀♀	t	p
Absolute frequency	8,71±4,75	8,37 ±4,98	7,46 ±3,55	5,85 ±4,26	1,05	.304
Total # days	89,43 ±83,31	58,75 ±42,30	72,15 ±42,59	34,15 ±29,20	2,65	.014
% days ill	23,06 ±19,60	13,92 ±6,50	20,94 ±11,90	9,32 ±6,40	3,10	.006
Mean Duration (days)	9,80 ±5,36	6,80 ±1,75	9,66 ±3,16	5,56 ±2,35	3,76	.001
Mean Interval (days)	57,25 ±27,23	57,14 ±25,43	58,56 ±32,63	85,58 ±56,94	1,48	.151

In this table, where we have split up both groups in boys and girls, two interesting differences are shown.

First of all, in the program group the girls are less ill and their separate illnesses last shorter than the boys (see t- and p-values in last two columns of the table). The same differences were found for the girls in the comparison group, but these differences were not statistically significant.

Secondly, especially the girls in the program group are less and shorter ill than the girls in the comparison group. The differences are present only in the absolute sense and are not statistically significant, although the percentage of the days the girls were ill show a trend in the right direction (t= -1,58, df=19, p=.13, two-sided).

These data suggest two ideas.

First, girls are stronger than boys. Doggiedag

Second, again it seems to be the case that our program has a larger effect on girls than on boys, not only in the mental development, but also in terms of health.

The Leaping Hurdles Story Slide 74

About The FOUR WINDS

FOUR WINDS乳幼児精神保健学会
FOR INFANT MENTAL HEALTH www.fourwinds.jp

FOUR WINDS President Hisako Watanabe provided background information in August 2009 for this pdf slide show conversion of Dr. Plooij' s original, November 2007, PowerPoint presentations.

The *FOUR WINDS* stands for the
F orum ***O*** f ***U*** niversal ***R*** esearch for the
W orkings of ***I*** nfant and ***N*** eonatal ***D*** evelopmental ***S*** upport.

The *FOUR WINDS* is a nationwide open forum for Japanese professionals working with infants and their families. It currently has about 370 members, including pediatricians, neonatologists, child psychiatrists, psychiatrists, obstetricians, day-nursery teachers, midwives, nurses, health visitors, infant researchers, child rearing supporters, pediatric dentists, physiotherapists, anthropologists, sociologists, clinical psychologists, local government administrators etc.

Founded in 1997 by clinicians of infant mental health who attended the 6th World Congress of the World Association for Infant Mental Health (WAIMH, http://www.waimh.org) held in 1996 in Tampere, Finland, the *FOUR WINDS* truthfully takes after the WAIMH, especially in its spirit of "infants and families first" and of volunteership.

Over the past 12 years the *FOUR WINDS* has cultivated a barrier-free non-hierarchical forum for exchange of ideas and experiences among infant clinicians of multidisciplinary backgrounds in Japan, which is culturally quite unusual.

In each annual meeting, a leading foreign expert has been invited to present original work and Dr. Plooij's lectures were very well received.

The *FOUR WINDS* was the largest and strongest group in Japan which supported the 11th World Congress of the WAIMH to be successfully organized in Yokohama, Japan in 2008. http://www.waimh.org/Files/Congress/2008/WAIMH2008CongressProgram.pdf

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