Copenhagen Infant Mental Health Project (CIMHP):

Effects of Infant Mental Health Screening and Indicated Prevention Approaches

Focus of talk:
Preliminary Results from implementing a Screening Program using the Alarm Distress Baby Scale (ADBB)

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Topics

1. Background for CIMHP

Infant mental health is a significant public health issue

- Attachment and parental sensitivity
- Screening for Infant social withdrawal: The ADBB measure

2. Method

Aims and design of Copenhagen Infant Mental Health Project

3. Preliminary results

Implementation of ADBB screening program:

Infant Mental Health: A significant public health issue

Early adversity and early childhood stress

= significant risk factors that may have long-term negative developmental consequences for the affected children.

Negative outcomes on a range of developmental areas

- such as physical and mental health, educational and labor market success, social network and establishing of family.

Young infants are more socially invisible than older children

+ completely dependent on their caregivers for their survival

-> more vulnerable and exposed to mental health risks.

Infants may be at risk due to a particular biological risk

(e.g. infantile autism, retardation, prematurity, physical disabilities etc.)

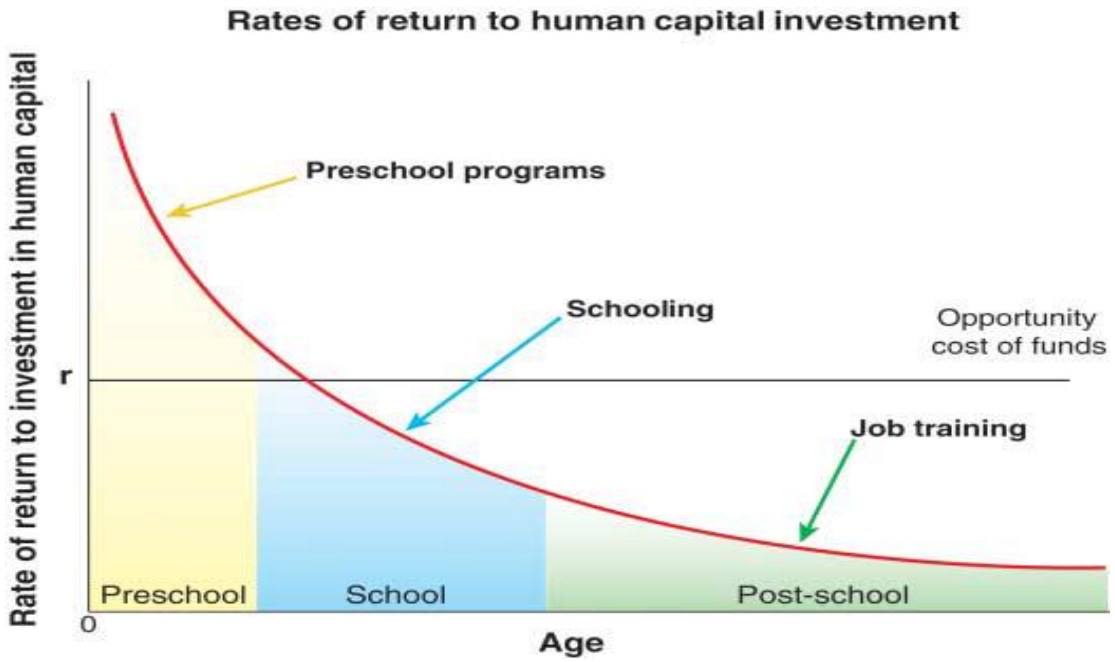
Infants may be at risk due to **psycho-social risks in the family**

(e.g. mentally ill parents, poverty, drug/alcohol abuse etc.).

The economic rationale for early identification and intervention

The earlier we intervene – the bigger rate of return - both in regard to human capital as well as economic capital

(Kautz, Heckman et al, 2014)



Attachment and sensitive parenting

Attachment is

- An affective bond established through early parent-infant interactions and emotional communication
- A framework within which the child learns how to regulate negative emotions during stressful situations.

(Bowlby, 1988; Thompson, 2008)

Differences in quality of attachment in typical populations (SSP)

60-65% of infants develop a secure attachment

20-25% of infants develop an avoidant insecure attachment (minimizing att)

5-10% of infants develop a resistant insecure attachment (maximizing att)

5-10% of infants develop a an insecure disorganized attachment

Sensitive parenting is the most reliable predictor of attachment security.

(Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003; De Wolff & van IJzendoorn, 1997; McElwain & Booth-LaForce, 2006; Cassidy, 2008)

Secure attachment is associated with optimal outcomes in all developmental domains in childhood

Insecure and disorganized attachment: a significant risk

Insecure and disorganized attachment patterns

- are associated with a range of later problems and psychopathologies

(Eisenberg & Sulik, 2012; Feldman, 2012; Obradovic, 2010; Groh et al., 2012; Fearon et al., 2010)

In disadvantaged populations insecure and disorganized attachment patterns are common -> 13-82% of infants develop a disorganized attachment – depending on the presence and type of family risk factors

-> points to the need of identifying early attachment risk and effective methods of addressing such problems.

(Barlow et al, 2016)

In Denmark

One in five families is at risk of inadequate parenting resources and child neglect.

(Christensen & Jørgensen, 2008)

The challenges are:

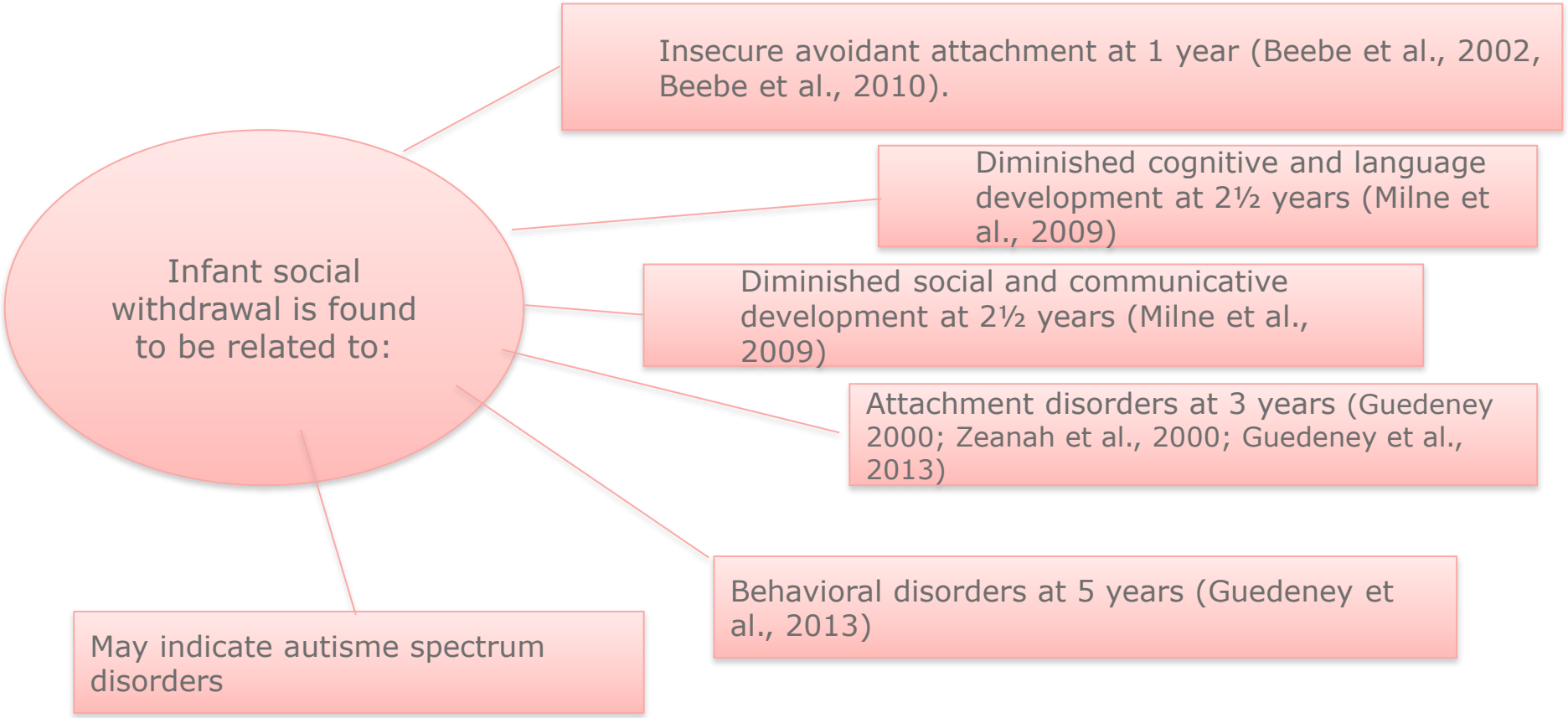
How do we apply attachment theory to clinical practice in the first year of life?

How is the frontline personel (e.g. healthnurses) qualified to detect infant mental health risks in a valid and realible way?

Infant social withdrawal is a risk factor

Infant social withdrawal indicates infant distress and early attachment disturbances

(Bowlby, 1969; Dollberg et al., 2006)



(See also review of studies using ADBB: Guedeney, Matthey, Puura, 2013)

The Alarm Distress Baby Scale (ADBB)

8 behavioral items are rated on a scale 0-4.
Low scores being optimal social behavior 0 (normal) to 4 (severely abnormal).
ADBB can be used with children in the age range of 2-24 months.

Maximum score is 32 and a score of 5 is used as cut-off.

1. Facial expression
2. Eye contact
3. General level of activity
4. Self-stimulating gestures
5. Vocalizations
6. Briskness of response to stimulation
7. Capacity to engage a relationship
8. Capacity of the child to attract and maintain attention

(Guedeney & Fermanian, 2001)

Prevalence of social withdrawal in infants

ADBB is found to have a sensitivity .82 and a specificity .78

(Guedeney & Fermanian, 2001)

Prevalence in high risk samples: 13-38.9 %

(Dollberg et al 2006; Guedeney et al, 2009, Guedeney, Matthey, & Puura, 2013)

Prevalence in low risk samples: 2.7 -11.6 %

(Dollberg et al 2006; Mäntymaa et al, 2008, Puura et al, 2010)

Aims of Copenhagen Infant Mental Health Project (CIMHP)

To test the feasibility of an infant mental health screening program and of an indicated prevention program and it's capacity:

1) To detect infants at risk of mental health adversaries, i.e. identifying mothers with postnatal depression (EPDS) **and identifying socially withdrawn infants (ADBB)**
   = Focus of my talk to day

2) To alter these risks in a cost effective way in the general population by focusing on enhancing maternal sensitivity and child attachment, here we examine the effects of Circle of Security – Parenting (COS-P) compared to Care As Usual (CAU)

(Væver et al, *BMC Psychology,* 2017)

Collaborators:

The City of Copenhagen and 250 healthnurses in Cpgh (5 districts)

Economists at TrygFondens Centre for Child Research, Aarhus University

Professor Antoine Guedeney, Hopital Bichat Claude Bernard, Paris

Funding:

Grant from the charitable foundation Tryg Foundation, City of Copenhagen, Dept of psychology, UCPH

Implementation of the ADBB screening program in Copenhagen

The Danish Home Visiting Program
A health nurse visits the family and examines (weight & length) infant right after birth and at 2, 4 (only first time mothers) and at 8 months.

More than 95% of the Danish families accept these visits.

No standardized methods for assessment of infant socioemotional development.

All 250 healthnurses in Copenhagen
-are trained and certified in clinical use of ADBB as part of CIMHP

ADBB screening and intake to CIMHP RCT of eligible parents
started July 2015 and will be finished 2020

(Væver et al, *BMC Psychology,* 2016)

Screening:

N=>18.000

Child
2, 4, 8 months

CIMHP psychologist homevisits

N=704

Intervention:
Allocation 2:1
COS-P / CAU

N= 314

Follow-up :

Child
12-16 months

N=250

(status N=54)

(expected 20% drop-outs in both groups)

Nurse homevisit:
EPDS >10 and/or ADBB >5

CIMHP homevisit/Baseline measures (only in families eligible for the RCT):
- Validation of EPDS and/or ADBB score
- Maternal sensitivity (CIB)
- Questionaires (e.g ACES, PRFQ, PSI)

Circle of Security-P (UCPH BabyLab) (status *N*=93)

Care as Usual (CAU) in Copenhagen (status *N*=49)

Follow-up Assessment in UCPH BabyLab:
Primary outcome:
Maternal sensitivity (CIB)
Secondary outcomes:
Child attachment (SSP)
Childs socioemotional development (ASQ-SE)
Childs cognitive, language and motor development (Bayley III)
Parental reflective functioning (PRFQ)
Parental stress (PSI)
Parental mental health
Family functioning (FAD)

CIMHP: Preliminary results of ADBB implementation

What is implementation research:

-> a systematic evaluation of whether the practician actually is able and willing to use a new method or instrumnet in his or her practice

Aim of ADBB implementation study:

-> What is the feasibility of ADBB healthnurse routine practice?

-> What is the acceptability amongst the healthnurses in using the ADBB in their dayly practice?

Sample:

-> the first 72 healthnurses certified in ADBB and who used ADBB int the period of July 15th 2015 – July 15th 2016

Method:

-> mixed method -> data from interviews og frequences of ADBB use

CIMHP: Results from ADBB implementation

Feasibility:

Is it feasible to achieve an accetable prevalence rate in ADBB screening during a one year period?

[1]Only children included seen by health visitors (*n* = 72) using ADBB from project start

Time point (post implementation in july 2015)	Children seen[1]	Children with ADBB-score	
	N	N	%
6 months post (Jan 2016)	869	405	47
9 months post (April 2016)	972	647	67
12 months post (July 2016)	1000	789	79

CIMHP: Results from ADBB implementation

Acceptability:

-> How do the healthnurses experience the use of ADBB in their dayly practice?

The majority (92 %) of the healthnurses reported, that ADBB was a positive contribution and a qualification of their work with the infants and the families.

However, a majority also experienced the use of ADBB in their dayly practice as a challenge to some extent

The majority did not experience the use of ADBB as disturbing for or diminishing their job satisfaction

CIMHP: Results from ADBB implementation

Adherence to guidelines:

-> Is the ADBB screeningprevalence related to the healthnurses attitudes toward the ADBB?

The health visitors' attitudes (positive and negative) toward ADBB measured 7 months post-implementation, significantly predicted screening prevalence rates 12 months post-implementation.

Conclusion and future analyses

Implementation of ADBB screening program

Screening prevalence rates increased during the first year:

Adding ADBB to the Danish established surveillance program is feasible and acceptable.

Screening prevalence rates may be related to the primary care worker's attitude toward the instrument, i.e. successful implementation relies on an instrument that adds value to the work of the screener.

Future analyses:

Validity and prevalence of ADBB scores in a Danish context

Effects of COS-P compared to CAU and an indicated prevention program

For whom does COS-P work and for whom does it not work?

Thank you for your attention!

CIMHP research group