Maternal & Infant Health as an entry point to Early Childhood Development (ECD)

Topics

1. NZFH early prevention networks in Germany, 2006-2017 – origins and outcomes. Dr Rupert Linder, OB-GYN and Psychotherapist in private practice, Birkenfeld, Germany

2. The day-to-day working and role of OB-GYNs and health professionals in a multi-profession, early prevention network in the city of Pforzheim. Dr Thomas Bernar, Chief Physician, Obstetrics and Gynecology, Helios Maternity Clinic, Pforzheim

3. The holistic philosophy of midwifery and the key role of midwives in an integrated team. Ms. Trude Thommesen, Board Member, Northern European Region, International Confederation of Midwives

4. The WHO/UNICEF Nurturing Care Framework and the CEPPs SisterCities Initiative – pathways for global implementation. Ms. Valerie Unite, Founder & Executive Director, CEPPs Global Initiative
NZFH early prevention networks in Germany, 2006-2017 – origins and outcomes
Dr. Rupert Linder

Declaration of Good Standing and Conflict of Interest Disclosure

My presentation complies with FIGO’s policy for declaration of good standing and conflict of interest disclosure;

- I do not have a financial interest in any product or service related to my presentation.
- My participation at this Congress is not supported in any way by a company or organization.
• Pforzheim is situated in Baden-Württemberg between the major conglomerations of Stuttgart and Karlsruhe

• It has 125000 inhabitants

• It is surrounded by the Enzkreis with 200000 inhabitants
• The origins of the multiprofessional cooperation of Early Care and Health Care

• Change of the system from intervention to prevention in the 90s

• Involving independent sponsors into the 1st and 2nd line of youth welfare
• Start as a pilot study of *good start to life* in Pforzheim 2006 – 2008
  (Guter Start ins Kinderleben) – first town in Baden-Württemberg

• For early encouragement of parent’s educational and relational competences in precarious life and risk situations especially prevention of neglecting and child endangerment
Law for Cooperation and Information in Child-Protection, Jan 1st, 2012

Gesetz zur Kooperation und Information im Kinderschutz (KKG)

Only 4 paragraphs:
Child protection and public responsibility,
Information of parents about supporting aids,
Introduction of public networks,
Procedures for health professionals in endangerment of child’s welfare threatening
**Early childhood and family assistance in Pforzheim**

**General coordination**
- Information, communication, consulting, system development
- Youth welfare office of the city of Pforzheim (Mrs. Poscharsky)

**Counseling service**
- Advise to families and professionals on early childhood assistance
- Youth welfare office of the city of Pforzheim (Mrs. Speck)

**Baby welcome package**
- Welcome visit to all families with newborn babies including a welcome letter of the Lord Mayor together with practical hints
- Information as well as connection aids in the respective family centers

**Network of early childhood assistance and child protection**
- With different participants from youth welfare and health care since Dec. 2006

**Midwife consultation**
- **Family consultation**
  - **Pro Familia** – Midwife information and information to various topics on early childhood
  - **Family consultation**

**Collaboration with various clinics**
1. Children’s hospital Pforzheim
2. Gynecological clinic Helios
3. Gynecological clinic Siloah
4. Social pediatric center Maulbronn
5. Center for Psychiatry in Hirsau

**Pregnancy counseling centers**
- Information, support, contraception, and pregnancy counseling

**Family godparents**
- Accompanying and relieving families by honorary staff
- Kinderschutzbund
Pregnancy counseling centers
- Information, support, contraception, and pregnancy counseling
- Medical and psychosocial counseling
- ProFamilia
- Diakonisches Werk

Medical-educational assistance
- Low-threshold practical assistance of various kinds at the earliest possible time
- Kinderschutzband

Opstapje — Step-by-step
- Parent education program
- Family centers

Social-educational visit
- at the two birth clinics and at the children’s hospital
- Kinderschutzband

“Welcome”
- Modern form of neighborhood assistance for families with newborns
- Kinderschutzband

Various targeted connection offers off early childhood assistance in the regional family centers (refer to No. 5)

Developmental psychological counseling
- Special training program with video-supported consulting process
- Youth welfare office
- Family centers

Quality circle
- Multiprofessional exchange between youth welfare and health care
- Mrs Poscharsky
- Dr. Linder

Cooperation with the Association of Statutory Health Insurance Physicians
- Mrs Poscharsky

Cooperation with the State
- Youth Welfare Office
- Mrs Poscharsky

2) Gynecological clinic Helios
3) Gynecological clinic Siloah
4) Social pediatric center Maulbronn
5) Center for Psychiatry in Hirsau
6) Addiction medicine day clinic Pforzheim of the Center for Psychiatry Hirsau
Development of inhabitants with foreign nationalities in Pforzheim from 2005 on

Enzkreis: 28,3 %

21,3 %

60,8 %
• Some impressions from the Family Center Au (one out of six), which I had the occasion to recently visit.

• They do an intense job to integrate older and recently approached families in our town. 58 employees are working there, many on a voluntary basis.

• It is chaired by Doris Winter, the 3rd from the left on the 3rd slide.
From the Bevölkerungsheft Pforzheim 2017:

Download Bevölkerungsreport Pforzheim 2017

The first is showing the percentage of foreigners in different urban districts.

The 2nd the relative deviation of the percentage of young people (under 18) in the different districts of the town.
Abb. 16: Anteil der unter 18-Jährigen an der Stadtteilbevölkerung

Abweichung vom Stadtwer (17,5 %) in %-Punkten

- 1,5 und mehr
- 0,5 bis 1,5
- 0 bis unter 0,5
- -0,5 bis unter -0,5
- -1,5 bis unter -1,5

1  Oststadt
2  Innenstadt
3  Weststadt
4  Südweststadt
5  Au
6  Südsiedlung
7  Buchenberg
8  Nördling
9  Döbling
10  Dornbirn
11  Hohenwart
12  Böblingen
13  Hohenfeld
14  Eutingen
15  Eutingen
Family midwives
family children nurses
Sensitivity trainings

Networking of about all 45 institutions
24/7 emergency telephone

social ward round in children hospital
and in the delivery hospitals
THE PRENATAL BABY …
A WORLD TO DISCOVER!

Dr. Gabriella Ferrari
Association “9 mesi ed oltre”
www.9mesiedoltre.it
This program **9 months and beyond**, developed by my most appreciated colleague Dr. Gabriella Ferrari from Italy is informing adolescents since more than four years in Pforzheim about the sensual development of the prenatal child and helpful or rather avoidable conditions for pregnancies.

Especially impressive is a video that shows the interactions between the unborn child and his parents, especially the reaction to the kiss of the father on the belly.

It recently has been extended also to the Enzkreis.
Founded The Prenatal University where, according to his observations on consistent tactile feedback of the foetus, it learns to "pay attention" and to improve a range of intellectual abilities.

The first lesson (around the fourth month of gestation) focuses on teaching parents to respond to the child's kick with pressure applied with the hand at the point where the kick was felt, as if pushing the foot away. After a while, when giving the tummy a pat, the baby will respond with a kick, and when giving two pats, the baby responds with two kicks.

In the seventh month of gestation the foetus is taught a few words, PAT, RUB, SHAKE, which are spoken against the tummy, whilst carrying out the corresponding action. The 33 BABIES SUBJECTED TO THESE EXERCISES SHOWED SIGNS OF SPEAKING EARLIER, BEING MORE ALERT AND BEING ABLE TO RAISE THEIR HEAD IN ADVANCE OF THE CONTROL GROUP.

AT SCHOOL AGE, THESE SAME BABIES ACHIEVED BETTER ACADEMIC RESULTS AND WERE SOCIALLY MORE COMPETENT THAN THEIR COUNTERPARTS.
• 2007 Founding of the National Centre for Early Prevention — Nationales Zentrum Frühe Hilfen (NZFH)

with the goal to enforce preventive child-protection and support professionals building up a system of Early Prevention in Germany
NZFH was set up as part of an governmental programme of the Ministry for Family Affairs. It supports research-based knowledge and the systematic embedding of early prevention by generating knowledge and making this available to all political entities in the whole country (almost 600).

It is building up effective and sustainable support service for parents-(to-be) and their children. It promotes and coordinates research and renders knowledge to all people and institutions involved.
Perinatal center Level 1

- Care of High-risk and physiological pregnancies and labor
- Enabling of physiological births also in a high risk
- Intensive collaboration with children clinic and neonatologists
- Intensive collaboration with pediatric surgeons
- Spontaneous labor even at breech position, twins and preterm birth
- Low C-section rate (23%)
- ALWAYS bonding, even at extreme premature births
PFORZHEIM STUDY

2 Reasons:

Severe devastation 1945
  (bombing by the RAF Febr. 23rd)
  highest ratio of deaths among all German cities
  18000, one 3rd of the then population
  >70% of all buildings destroyed
There are no prospective multigenerational studies yet
PFORZHEIM STUDY

and:

Very high immigration of often traumatized refugees
(highest ratio of people with migration background in Baden-Württemberg – more than 53%)

So:
Coincidence of populations traumatized 2 – 3 generations ago
and recently.
PFORZHEIM STUDY

Gerlinde Metz and Tanzi Hoover, Lethbridge, Canada
David Olson; Edmonton, Canada
Thomas Bernar, Brigitte Joggerst, Markus Haist, Rupert Linder, Thomas Schuster, Ingo Thalmann, Michael Wagner,
all Pforzheim/Enzkreis
INTRODUCTION

Contemporary epigenetic research shows that stress may alter neurodevelopment and metabolic health due to disruption in an individual’s hypothalamic-pituitary-adrenal (HPA) axis influencing subsequent generations. Offspring exposed to ancestral stress may be at risk for anxiety, depression, autism, ADHD, and schizophrenia (Franklin et al., 2012). Previous research is based on cohorts that were subject to starvation/plenty, or on animal models in which stressors were laboratory based. It is presently unknown whether a psychological stress such as war trauma, result in overt physiological stress, still produce transgenerational psychological and physiological disorders. The city of Pforzheim, Germany, is uniquely suited for the study of ancestral stress due to severe destruction in World War II on February 23, 1945.

Theory: Transgenerational epigenetic inheritance. Adverse experience can alter gene expression and under some circumstances have transgenerational influences.

Hypothesis: We expect that the bombing of Pforzheim results in recognizable psychological and physiological effects.

PRELIMINARY DATA

Preliminary data shows that Pforzheim has higher rates of low/very low birth weight per 1,000 births, and children obesity rates for ages 4 to 5 are higher than the rest of Germany. Male suicide rates, and school entrance language ability needs are significantly higher than the national average.

EXPECTED RESULTS

By combining psychological, physiological, metabolic and epigenetic analysis of personal and ancestral adverse experiences, we anticipate the introduction of physical and psychological abnormalities, changes in DNA methylation, mRNA expression in placenta that are predictive of later offspring health outcomes.

CONCLUSIONS & FUTURE DIRECTIONS

• We anticipate that personal and ancestral adverse experiences introduce biological signatures of chronic stress that significantly determine health outcomes in generations of offspring. This study will suggest tools to increase stress resilience and support maternal and fetal health.
• Explore the effects of introducing a resilience-enhancing strategy; such as, a narrative therapy technique (directive and non-directive reflective writing assignments) to mitigate the effects of stress on mothers and children.
Direct Influence vs. Epigenetics

Zucchi et al., PLOS ONE, 2014
To take home:

In primary prevention start supporting families from the very beginning

Include and network with all professional groups
To take home:

In primary prevention start supporting families from the very beginning

Include and network with all professional groups of the social care system
To take home:

In primary prevention start supporting families from the very beginning

Include and network with all professional groups of the social care system and the medical system
Thank you for listening!

Dr. Rupert Linder

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