

Children of teenage mothers : delayed psychomotor and language development

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Teenage mothers and their children

Epidemiology

- In Europe : wide variation (major concern in England)
- 4% of live births in the french-speaking side of Belgium

The mothers features : a vulnerable population :

- exposure to negative socio-economic and psychosocial factors : poverty, inadequate social support, lack of education, cognitive immaturity, stress, low self-esteem, social isolation, neglect and abuse during childhood and violence during pregnancy
- 70-85% of unplanned/unintended pregnancies
- high prevalence of prenatal and postpartum depression
- Rapid repeat pregnancies (< 24 months)

Teenage mothers and their children

The children features : increased risk of poor health outcomes and development :

- Prematurity and low-birth weight
- Poor growth
- Abuse and neglect
- More injuries
- Cognitive, behavioural and emotional complications

Many of these outcomes are attributable to low SES and mother's mental state

Our goal was to investigate the development of pre-school children of teenage mothers and to compare to adult mothers

Context



ONE = Office de la Naissance et de l'Enfance

- Free preventive well-child visits beyond immediate postnatal contact for all families (634 sites)
- Priorities : global health, parenting and breastfeeding support, health promotion, vaccinations...
- Calendar of visits and preventive interventions (18 times until 6 years), including counseling
- Attending : higher representation of vulnerable families
- Database about child health and development : data encoded at 6 times (prenatal period, birth, « first contact » at home, and 9, 18 and 30 months)

Methods

- BDMS « Banque de données médico-sociales » = DB
- Study population : children registred for well-child visits at ages
 - 18 months (16-20 months) : n=30486 (~20% coverage)
 - 30 months (28-32 months) : n=13247 (~10% coverage)
 - Cumulated data from 2006 to 2009
- Measures of child development and occurrence of accidents
- Comparaison in regard to the maternal age at delivery :
<20 years, 20-35 years and >35 years.

Methods

- Measures at 18 months
 - Psychomotor development
 - speech item (number of words)
 - motor item (walking)
 - Occurrence of domestic accidents (bites, burns, falls, others)
- Measures at 30 months
 - Psychomotor development : 3 motor items (standing jump, circle, vertical line)
 - Language development (using « I », sentence of 3 words)

Children development at 18 months

	<20 years N=1250 (4,1%)	20-35 years N=24381 (80%)	>35 years N=4855 (15,9%)	<i>p</i>
Familial situation				
2 parents	72,9%	91,8%	91,0%	<0,001
<input type="checkbox"/> Mothers speaking french very well	88,4%	89,4%	89,5%	NS
Mothers living in Belgium < 5 years	18,0%	13,2%	10,8%	<0,001
Psychomotor development				
<input type="checkbox"/> Number of words ≥ 6	50,5%	47,8%	43,3%	<0,001
<input type="checkbox"/> Walking alone	96,7%	95,8%	94,8%	0,003
<input type="checkbox"/> Score	93,9% >	92,3%	90,5%	<0,001
Occurrence of accidents	14,5% >	11,0%	9,8%	<0,001

Children development at 30 months

	<20 years N=449 (3,4%)	20-35 years N=10604 (80%)	>35 years N=2194 (16,6%)	<i>p</i>
Familial situation				
<input type="checkbox"/> 2 parents	65,7%	90,1%	88,1%	<0,001
<input type="checkbox"/> Mothers speaking french very well	83,4%	90,0%	90,0%	<0,001
Mothers living in Belgium < 5 years	20,3%	10,4%	9,5%	<0,001
Psychomotor development				
<input type="checkbox"/> Standing jump	92,4%	92,6%	91,2%	NS
<input type="checkbox"/> Vertical line	74,6%	82,7%	81,7%	<0,001
<input type="checkbox"/> Circle	70,7%	75,8%	72,6%	0,003
<input type="checkbox"/> Score	58,3%	< 67,2%	64,9%	0,005

Children development at 30 months

	<20 years N=449 (3,4%)	20-35 years N=10604 (80%)	>35 years N=2194 (16,6%)	<i>p</i>
Language development				
☐ Using « I »	48,8%	53,4%	50,9%	0,033
☐ Sentence 3 words	72,7%	82,0%	80,1%	<0,001
☐ Score	45,9%	50,8%	49,2%	<0,001

Discussion

Results in agreement with previous studies

Possible explanations

- Less verbal stimulation
- Less understanding about knowledge of child development
- Less perception of dangerous situations
- Emotional immaturity
- Risk taking behaviour
- Depression
- Absence of the father

How to explain the better psychomotor score at 18 months ?

Limitations and perspectives

Limitations

- Lack of information about sociodemographic factors, life context, mother-child interaction, mother health behaviors and depression...
- A snapshot
- Dropped-out profiles ?

Perspectives

- Multivariate statistical analysis
- Longitudinal epidemiological study : comprehensive approach (biopsychosocial factors, prenatal mother-child attachment, perinatal depression, mothers' specific needs)

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Questions ?