

BONN JULY 2014



DOTT. VITTORIO VEZZETTI –PEDIATRICIAN
SCIENTIFIC RESPONSIBLE EUROPEAN
PLATFORM COLIBRI AND ANFI

Effects of the loss of parental care on the
well-being of children after parental
separation

Science has demonstrated direct biological effects of loss of parental care and abuse on wellbeing of the children:

f.i. if genetically inclined, children will have in their lives a greater risk of panic disorders if they had a history of parental loss

A Genetically Informed Study of the Association Between Childhood Separation Anxiety, Sensitivity to CO₂, Panic Disorder, and the Effect of Childhood Parental Loss

Marco Battaglia, MD; Paola Pesenti-Gritti, MSc; Sarah E. Medland, PhD; Anna Ogliari, MD; Kristian Tambs, PhD; Chiara A. M. Spatola, MSc

Arch Gen Psychiatry. 2009;66(1):64-71. doi:10.1001/archgenpsychiatry.2008.513.

Psychoneuroendocrinology 8 July 2013

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doi:10.1016/j.psyneuen.2013.05.007

Parental separation increases CRP LEVELS in adulthood via chains of disadvantage across the life course (correlated with type II diabetes, coronary heart disease, depression...) **The study points towards potential points for intervention and highlights a need to support separating families in order to minimize the long-term impact on adult health.**

Parental separation in childhood and adult inflammation: The importance of material and psychosocial pathways ☆

Rebecca E. Lacey, Meena Kumari, Anne McMunn

Department of Epidemiology & Public Health,
University College London, United Kingdom
Department of Epidemiology & Public Health,
University College London, United Kingdom

Journal of Psychiatric Research
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**Association of elevated cytokines with
childhood adversity in a sample of healthy
adults**

Karen J. Hartwell ,Megan M. Moran-Santa,Maria Waleed O. Twal
Stephanie Shaftman
Stacia M. DeSantis
Aimee L. McRae-Clark
Kathleen T. Brady

Importantly, this association was found in
healthy adults, suggesting that these
alterations may precede the development of
significant stress-related psychiatric disorder or
disease.

DIRECT ACTION ON CHROMOSOMES! Adverse childhood events are related to continued vulnerability among older adults enhancing the impact of chronic stress factors: it means more psychiatric disorders (for abuse has been demonstrated to lead to an increase of metabolic diseases, cancers, lung's diseases)

Childhood Adversity Heightens the Impact of Later-Life Caregiving Stress on Telomere Length and Inflammation

JANICE K. KIECOLT-GLASER, PhD, JEAN-PHILIPPE GOUIN, MA, NAN-PING WENG, MD, PhD, WILLIAM B. MALARKEY, MD, DAVID Q. BEVERSDORF, MD, AND RONALD GLASER, PhD

Objective: To address the question of whether childhood abuse and other adversities have lasting, detectable consequences for inflammation and cell aging late in life, and whether the effects are large enough to be discernible beyond that of a major chronic stressor, dementia family caregiving. Previous research on the physical health consequences of childhood abuse and other adversities has been based on data from young or middle-aged adults. **Method:** In this community sample of 132 healthy older adults (mean age = 69.70 years; standard deviation = 10.14), including 58 dementia family caregivers and 74 noncaregivers, blood samples were analyzed for interleukin (IL)-6, tumor necrosis factor (TNF)- α , and telomere length, a measure of cell aging. Depressive symptoms were assessed by the Center for Epidemiological Studies Depression Scale. **Results:** After controlling for age, caregiving status, gender, body mass index, exercise, and sleep, the presence of multiple childhood adversities was related to both heightened IL-6 ($0.37 \pm 0.03 \log_{10} \text{ pg/mL}$ versus $0.44 \pm 0.03 \log_{10} \text{ pg/mL}$) and shorter telomeres ($6.51 \pm 0.17 \text{ Kb}$ versus $5.87 \pm 0.20 \text{ Kb}$), compared with the absence of adversity; the telomere difference could translate into a 7- to 15-year difference in life span. Abuse was associated with heightened IL-6 and TNF- α levels; for TNF- α , this relationship was magnified in caregivers compared with controls. Moreover, abuse and caregiving status were associated significantly and independently with higher levels of depressive symptoms. **Conclusions:** Adverse childhood events are related to continued vulnerability among older adults, enhancing the impact of chronic stressors. Childhood adversities cast a very long shadow. **Key words:** psychoneuroimmunology, interleukin-6, tumor necrosis factor- α , depression, cell aging, trauma.

INFLUENCE ON HORMONAL ASSESSMENT

2012 Jan;15(1):1-10. Epub 2011 Jun 19.

Experience of stress in childhood negatively correlates with plasma oxytocin concentration in adult men.

Source

Department of Life Sciences, Roehampton University, London, UK.

Abstract

Early life experience is known to affect responses to stress in adulthood. Adverse experience in childhood and/or adolescence sensitises to life events that precipitate depression in later life. Published evidence suggests a relationship between depression and oxytocin (OT), but the extent to which early life experience influences OT disposition in adulthood deserves further exploration. This study hypothesised that early life stress (ELS) has a long-term negative effect on OT system activity. The study was performed on 90 male volunteers (18-56 years; mean \pm standard deviation = 27.7 \pm 7.09 years). Several questionnaires were used to assess: health, early life stressful experiences in childhood (ELS-C, up to 12 years) and early life stressful adolescence (13-18 years), recent stressful life events, depressive symptoms, state-trait anxiety and social desirability. Plasma OT concentration was estimated by means of a competitive enzyme immunoassay.

Lower OT concentrations were significantly associated with higher levels of ELS-C ($p < 0.01$), and with depressive symptoms and trait anxiety (both $p < 0.05$). The interaction between ELS-C and trait anxiety was significant ($p < 0.05$), indicating that the link between ELS-C and plasma OT concentration is moderated by trait anxiety. These results contribute to the evidence that early life adverse experience is negatively associated with OT system activity in adulthood, and offer further insight into mediator and moderator effects on this link.

Epigenetic regulation of the glucocorticoid receptor in human brain associates with childhood abuse

Patrick O McGowan^{1,2}, Aya Sasaki^{1,2}, Ana C D'Alessio³, Sergiy Dymov^{1,2}, Gustavo Turecki^{1,4} & Michael J Meaney^{1,2,5}

VOLUME 12 | NUMBER 3 | MARCH 2009 NATURE NEUROSCIENCE

Maternal care influences hypothalamic-pituitary-adrenal (HPA) function in the rat through epigenetic programming of glucocorticoid receptor expression. In humans, childhood abuse alters HPA stress responses and increases the risk of suicide. We examined epigenetic differences in a neuron-specific glucocorticoid receptor (*NR3C1*) promoter between postmortem hippocampus obtained from suicide victims with a history of childhood abuse and those from either suicide victims with no childhood abuse or controls. We found decreased levels of glucocorticoid receptor mRNA, as well as mRNA transcripts bearing the glucocorticoid receptor 1_F splice variant and increased cytosine methylation of an *NR3C1* promoter. Patch-methylated *NR3C1* promoter constructs that mimicked the methylation state in samples from abused suicide victims showed decreased NGFI-A transcription factor binding and NGFI-A-inducible gene transcription. These findings translate previous results from rat to humans and suggest a common effect of parental care on the epigenetic regulation of hippocampal glucocorticoid receptor expression.

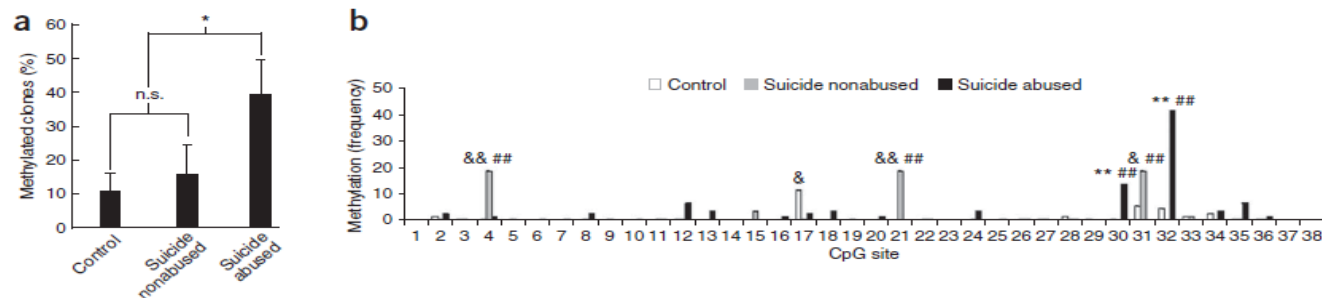


Figure 2 Methylation of the *NR3C1* promoter in the hippocampus. Twenty clones were sequenced for each subject for methylation mapping. (a) Mean \pm s.e.m. percentage of methylated clones for suicide victims with a history of childhood abuse ($n = 12$), suicide victims without a history of childhood abuse ($n = 12$) and controls ($n = 12$). The methylation percentage was calculated as the number of clones with at least one methylated CpG site divided by the total number of clones (* indicates $P \leq 0.05$; n.s. indicates not statistically significant). (b) Methylation of the *NR3C1* promoter region, showing the frequency of methylation observed at each CpG site for suicide victims with a history of childhood abuse, suicide victims with no history of childhood abuse and control subjects (* $P < 0.05$, ** $P < 0.001$, abused suicides versus controls; & $P < 0.05$, && $P < 0.001$, non-abused suicides versus controls; # $P < 0.05$, ## $P < 0.001$, abused suicides versus non-abused suicides; Bonferroni *post hoc* comparisons).

We must not be surprised: we have in fact a lot of evidence in mammals (also primates) of the organic effects of parental loss. Much more are studied the effects of maternal loss but also the studies on the effects of paternal loss are quickly increasing.

**Father Absence in the Monogamous California Mouse
Impairs Social Behavior and Modifies Dopamine and
Glutamate Synapses in the Medial Prefrontal Cortex**

[Francis R. Bambico^{1,2}](#),

[Baptiste Lacoste¹](#),

[Patrick R. Hattan¹](#) and

[Gabriella Gobbi^{1†}](#)

[†](#) Author Affiliations

¹*Neurobiological Psychiatry Unit, Department of Psychiatry,
McGill University Health Center, McGill University, Montreal,
QC H3A 1A1, Canada and*

²*Behavioral Neurobiology Laboratory, Center for Addiction
and Mental Health, Toronto, ON M5T 1R8, Canada*

Address correspondence to Dr Gabriella Gobbi, 1033 Pine
Avenue West, McGill University,

Here, the authors examined the behavioral consequences of Paternal Deprivation in the California mouse, a species displaying monogamous bonding and biparental care, and assessed its impact on dopamine (DA), serotonin (5-HT), and glutamate (GLU) transmission in the medial prefrontal cortex (mPFC). The authors thus demonstrate that, during critical neurodevelopmental periods, Paternal Deprivation leads to sex-dependent abnormalities in social and reward-related behaviors that are associated with disturbances in cortical Dopamine and Glutamate neurotransmission.

In infant titi monkeys...

separation from the mother for 1 hr did not elicit an adrenocortical response from the infant unless the father was also removed. Separation from the father elicited a significant elevation in adrenocortical activity even when the mother remained with the infant during the separation period. Infants showed the highest cortisol levels and vocalization rates when both parents were removed and the infant remained alone in the living cage for 1 hr. As in previous research, infants maintained higher levels of contact with the father than with the mother.

The results indicate that in this monogamous New World primate, the father is the primary attachment figure for the developing infant. On the morphological level the authors found that, compared with offspring raised by both parents (mother and father), the father-deprived animals displayed significantly reduced spine numbers on the basal dendrites of pyramidal neurons. Furthermore, paternal deprivation induces hemispheric asymmetry of the dendritic morphology of somatosensory pyramidal neurons.

Dev Psychobiol. 1995 Nov;28(7):399-407.

Responses of infant titi monkeys, *Callicebus moloch*, to removal of one or both parents: evidence for paternal attachment

Hoffman KA1, Mendoza SP, Hennessy MB, Mason WA.

Author information 1Department of Psychology and California Regional Primate Research Center, University of California, Davis 95616, USA.

Dev Neurobiol. 2009 Sep 1;69(10):663-73.

Paternal deprivation induces dendritic and synaptic changes and hemispheric asymmetry of pyramidal neurons in the somatosensory cortex in rodent Degus Degus.

Pinkernelle J, Abraham A, Seidel K, Braun K.

Source

Department of Zoology and Developmental Neurobiology, Otto-von-Guericke University, Magdeburg, Germany.

But we can have also «less biological»
effects of stress and parental loss...

Sexual activity. In a study of 700 adolescents, researchers found that "compared to families with two natural parents living in the home, **adolescents from single-parent** families have been found to engage in greater and earlier sexual activity."

Source: Carol W. Metzler, et al. "The Social Context for Risky Sexual Behavior Among Adolescents," Journal of Behavioral Medicine 17 (1994).

A myriad of maladies. Fatherless children are at a dramatically greater risk of drug and alcohol abuse, mental illness, suicide, poor educational performance, teen pregnancy, and criminality.

Source: U.S. Department of Health and Human Services, National Center for Health Statistics, Survey on Child Health, Washington, DC, 1993.

Drinking problems. Teenagers living **in single-parent households** are more likely to abuse alcohol and at an earlier age compared to children reared in two-parent households

Source: Terry E. Duncan, Susan C. Duncan and Hyman Hops, "The Effects of Family Cohesiveness and Peer Encouragement on the Development of Adolescent Alcohol Use: A Cohort-Sequential Approach to the Analysis of Longitudinal Data," Journal of Studies on Alcohol 55 (1994).

Sexual abuse. A study of 156 victims of child sexual abuse found that the majority of the children came from disrupted or single-parent homes; only 31 percent of the children lived with both biological parents. Although stepfamilies make up only about 10 percent of all families, 27 percent of the abused children lived with either a stepfather or the mother's boyfriend.

Source: Beverly Gomes-Schwartz, Jonathan Horowitz, and Albert P. Cardarelli, "Child Sexual Abuse Victims and Their Treatment," U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.

Drug Use: "...the absence of the father in the home affects significantly the behavior of adolescents and results in the greater use of alcohol and marijuana."

Source: Deane Scott Berman, "Risk Factors Leading to Adolescent Substance Abuse," Adolescence 30 (1995)

Living in two homes-a Swedish national survey of wellbeing in 12 and 15 year olds with joint physical custody

Bergström et al. BMC Public Health 2013, 13:868

<http://www.biomedcentral.com/1471-2458/13/868>

CONCLUSIONS: Children who spent equal time living with both parents after a separation reported better wellbeing than children in predominantly single parent care. This was particularly true for the 15-year-olds, while the reported wellbeing of 12-years-olds was less satisfactory. There is a need for further studies that can account for the pre and post separation context of individual families and the wellbeing of younger age groups in joint physical custody.

FIRST TAKE-HOME MESSAGE:
CO-PARENTING IS NOT JUST A JURIDIC,
PSYCHOLOGICAL, SOCIOLOGICAL
CONCEPT ANYMORE... BUT A
MEDICAL-SCIENTIFIC ISSUE TOO!
SO WE CAN SAY IN A EUROPEAN
APPROACH THAT THE COMPETENCE
SHOULD BE NOT ONLY OF JUSTICE
COMMISSIONER...

Unfortunately according the European Commission...“The definition of joint custody belongs to substantive family law. As such, it does not fall within the EU's competence but remains under the sole responsibility of the Member States. This explains why there may be differences in the national systems as regards the definition of joint custody and how it works in practice”.

7 March 2013 E-000713/2013

Answer given by Commissioner Mrs Reding on behalf of the Commission
to Hon. Angelilli

But we have important differences in Europe:
equal custody in Europe:

SECTION 1	Sweden	Exact time division > 25%
SECTION 2	Belgium	Exact time division > 20%
SECTION 3	France, Denmark, Spain	Exact time division 8-20%
SECTION 4	UK, Germany,	Exact time division 3-8%
SECTION 5	Romania, Austria, Czech Republic, Slovakia, Italy, Greece, Switzerland, Portugal	Exact time division <3%

shared custody<15%

>15 s.c..<30%

s.c.>30%

Italia, Svizzera, Grecia, Austria, Germania	Francia	Svezia, Spagna,Belgio,Danimarca
Repubblica Ceca, Slovacchia		
Regno Unito, Romania		
Portogallo		

- 14% OF SWEDISH CHILDREN ENDS OUT TO LOSE CONTACT WITH ONE PARENT AFTER THE DIVORCE (13% IF IN JOINT CUSTODY, 25% IF IN SOLE CUSTODY)
 - <http://www.scandinavianlaw.se/pdf/38-11.pdf>
- 30% OF ITALIAN CHILDREN LOSES CONTACT WITH ONE PARENT AFTER THE DIVORCE
 - http://www.figlipersempre.com/res/site39917/res642225_SIPPS_SippsPediatri3-1-pag_1_26-31-1-.pdf
 - BUT ALL THESE DIFFERENCES MEAN DIFFERENCES REGARDING HEALTH



International Council on Shared Parenting (ICSP)
Lutheran University of Applied Sciences Nuremberg



International Conference on Shared Parenting 2014

Bridging the Gap between Empirical Evidence and Socio-Legal Practice

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So... to bridge the gap we prepared a new question to European Commission:

Subject: Tackling family crisis for the sake
of children

The need to protect children is a responsibility that is keenly felt in the European Union, including with particular regard to family conflict, in which children tend to be the worst affected. However, **the conference on 'Tackling family crisis for the sake of children', which was held at the European Parliament on 23 October 2013, highlighted the fact that there are significant differences in the ways in which divorce is managed in terms of the custody of children. It is sometimes simply a case of crossing a border for children to be unjustifiably treated in a totally different way.**

The Italian paediatrician, Vittorio Vezzetti, has also shown that the loss of a parent or difficulties caused by parental separation can have both immediate and long-term effects on children's health. The wealth of international scientific literature has provided ample evidence of changes affecting the body's biochemical, hormonal, psychoneurological and even chromosomal balance (with stress affecting the telomeric region). It is therefore clear that this subject — far from being seen as an issue specific to family law, as in the case of maintenance and the allocation of the family home — has to be tackled using a more universal scientific language that each legal system will then be able to transpose independently in accordance with its own methods.

Since Europe can clearly not claim to be truly united and solidarity-based when it is not guaranteeing **the same treatment** for all of its children, and since a wealth of material is available in the scientific literature, I ask:

Can the Commission say whether, in order to ensure equal rights to health, it is intending to conduct or assess research to identify the best practices that might serve as a guide for Member States with a view to greater harmonisation of procedures?

April 2014

SECOND TAKE-HOME MESSAGE: PARENTAL
LOSS AND PSYCHOLOGICAL STRESS CAN
CAUSE ORGANIC DAMAGE, not only untangible
pain; SHARED-EQUAL CUSTODY WOULD BE A
GOOD INSTRUMENT TO PREVENT PARENTAL
LOSS AND THE MOST OF SCIENTIFIC
LITERATURE IS TODAY FAVOURABLE

**Less frequent loss of father-child contact after
alternating residence (1% vs. 21% in maternal custody)**

Less frequent loss of father-child contact when the residences are near
(loss in 33% when they are more than 400 kms each other distant and in
81% when the father is not able to answer about the duration of the trip)

Number 500 • May 2013 • *Population & Societies* • Monthly bulletin of
the French National Institute for Demographic Studies

Number 500

May 2013

EN

E-005595/2014

Answer given by Mr Hahn
on behalf of the Commission
(4.7.2014)

The growing mobility of citizens within the European Union has resulted in an increasing number of families with an international dimension. Family separation is often a difficult and painful affair, but when it takes place across borders, difficulties and stress are frequently compounded.

The Commission is aware of differences in the national systems and diverging practices when it comes to granting and exercising custody rights and maintenance and their possible impacts on children. It is of the opinion that in all actions concerning children the primary consideration must be the best interests of the individual child; such an assessment can obviously be done only on a case by case basis.

European legislation covers, insofar as parental responsibility is concerned, only the procedural matters relating to the jurisdiction of the courts and the recognition and enforcement of judgments (Brussels IIa Regulation). The Commission is currently assessing the functioning of the Brussels II a Regulation. The question of more harmonised procedures on specific matters is raised in the evaluation report adopted by the Commission on 15 April 2014, for instance with respect to the hearing of the child in cross-border custody cases. Furthermore, the Commission has launched an online public consultation on integrated child protection systems, one of the aims of which is to gather good practice examples.

The matters raised by the Honourable Member will be assessed in the overall review of the Brussels IIa Regulation and, more broadly, of the EU policy in respect of the promotion of the protection of the rights of the child.

http://ec.europa.eu/justice/newsroom/fundamental-rights/opinion/140402_en.htm

Further, to bridge the gap between empirical evidence and socio-legal practice in Italy we prepared two different projects (one for Senate and one for Deputies Chamber) trying to introduce scientific guidelines for the judges where the first option is equal custody and second option is not less than 10 overnights per month spent by less involved parent

FLOW CHART

Presumption of equal custody 50-50

(motivation 1st gate)



Shared custody 33-66%

(motivation 2nd gate)



Sole physical custody

Nel nome dei figli, a Strasburgo, Ottobre 2013



THE WAY FOR CO-PARENTING WILL BE HARD AND
LONG BUT WE CAN SUCCEED...



THANKS EVERYBODY!! VV