UNITED NATIONS
Office on Drugs and Crime

Substance abuse prevention:
changing the trajectory of children at risk

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Is substance abuse prevention a dream… an utopia…???

Do policy makers believe in prevention effectiveness?





Is prevention cost-effective?

Is prevention an investment?

Can we change
the trajectory
of children at risk?

Science findings
about
the pathogenesis
of
substance use disorders



Hostile autonomy



Agreeable autonomy

short version (S) of the 5-HTTLPR

secure attachment → agreeable autonomy

insecure attachment → hostile autonomy

Zimmermann et al., 2009

Adverse childhood experiences





neglect

abuse

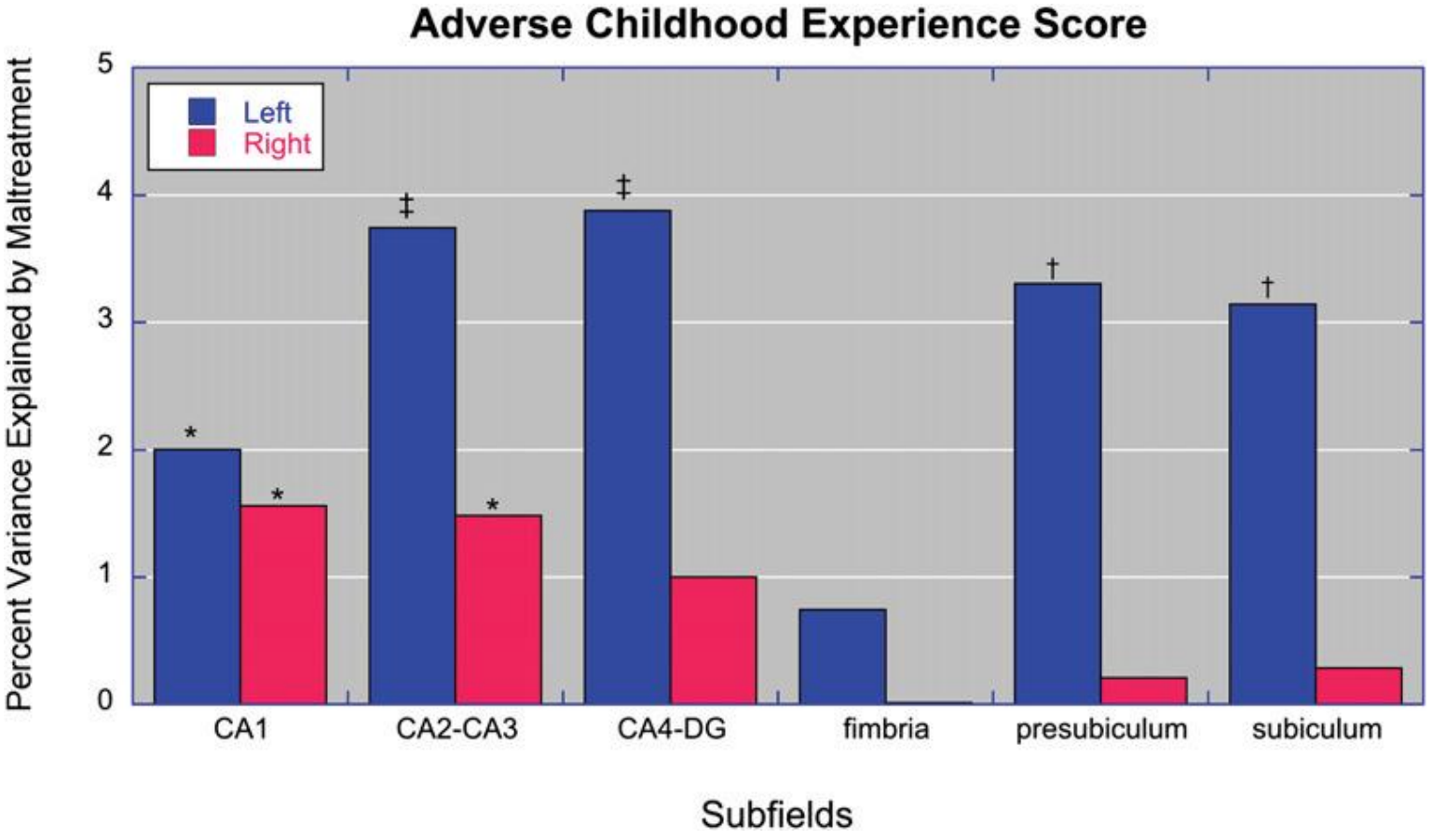


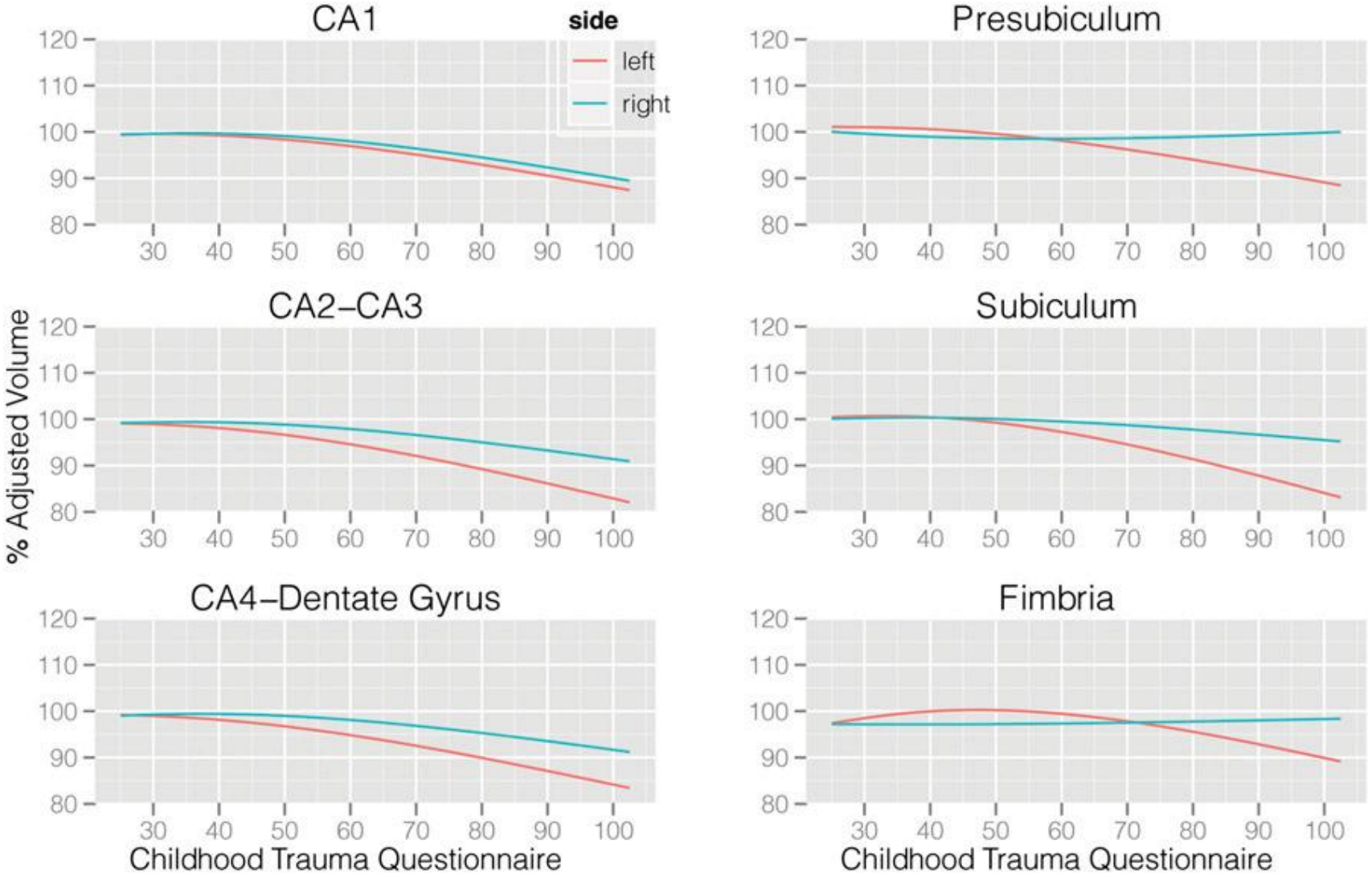
household dysfunction

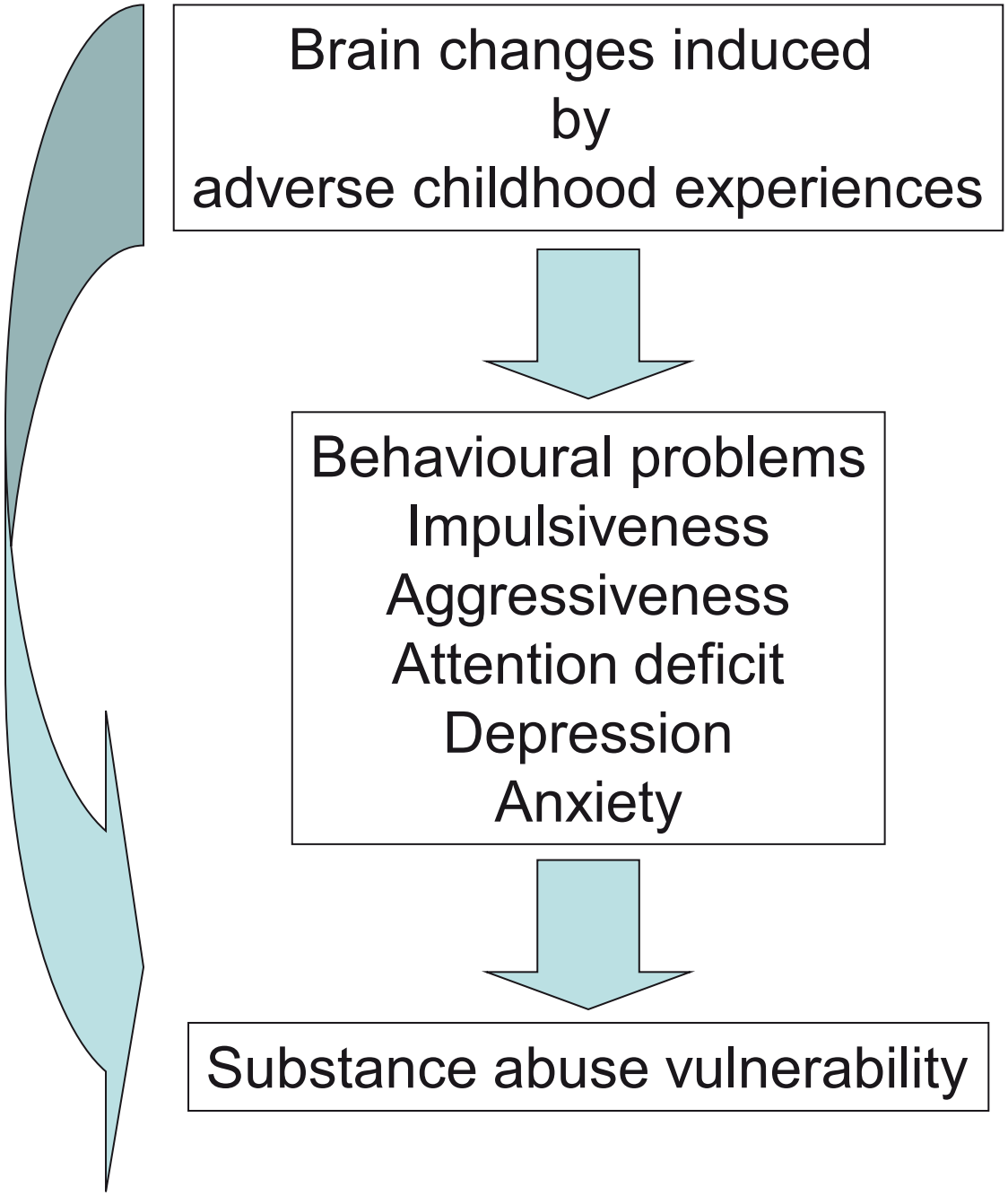
Proceedings of the National Academy of Sciences of the United States of America (PNAS), 2012

Childhood maltreatment is associated with reduced volume in the hippocampal subfields CA3, dentate gyrus, and subiculum

Martin H. Teicher[a,b,1,2], Carl M. Anderson[a,b,c,1], and Ann Polcari[a,b,d]




CA1
Presubiculum
CA2–CA3
Subiculum
CA4–Dentate Gyrus
Fimbria
side
left
right
% Adjusted Volume
Childhood Trauma Questionnaire
Childhood Trauma Questionnaire
120
110
100
90
80
30
40
50
60
70
80
90
100


Brain changes induced
by
adverse childhood experiences
Behavioural problems
Impulsiveness
Aggressiveness
Attention deficit
Depression
Anxiety
Substance abuse vulnerability



Can prevention change the trajectory of children in post-conflict area ?

Afghan population mental health:

High rate of
anxiety disorders, schizophrenia, suicide
and post-traumatic stress disorder.

Women: depression 55%, anxiety disorders 78%

Children: frightened, sad and unable to cope, 80%

World Health Organization (WHO), 2011

PTSD:
child labor
family and military violence
bombings
abuse
long-term poverty
familial turmoil



300 Afghan school children

The interplay of these stressors contributes to a higher vulnerability in the children frequently exposed to traumatic experiences

50% of children exposed --→ PTSD

Catani et al., 2009 *Journal of Traumatic Stress*





Work for less than 1 $ a day

Lack of adequate nutrition
Lack of health care
Lack of education
Exploitation

It creates an environment that is damaging to children's development in every way – mental, physical, emotional and spiritual.

UNICEF, 2012


www.ccoo.cat/noesenjoc

Children displaced from home:
working force
in rural areas

Loneliness
Neglect
Social exclusion
Affective deprivation
Exposure to violence
Exposure to alcohol





Internally displaced persons:

highest scores for the PTSD internalizing symptoms

Traumatic exposure and displacement:

externalizing symptoms

Mells et al., 2010

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MIGRATION

- Broken family
- A society without fathers
- Poverty and frustration

Central Asia: Migrants and Economic Crisis
Asia Report N°183 5 Jan 2010

44% of households with a member living abroad are caring for at least one child left behind.

This proportion is higher in rural than in urban areas: 47% respectively.

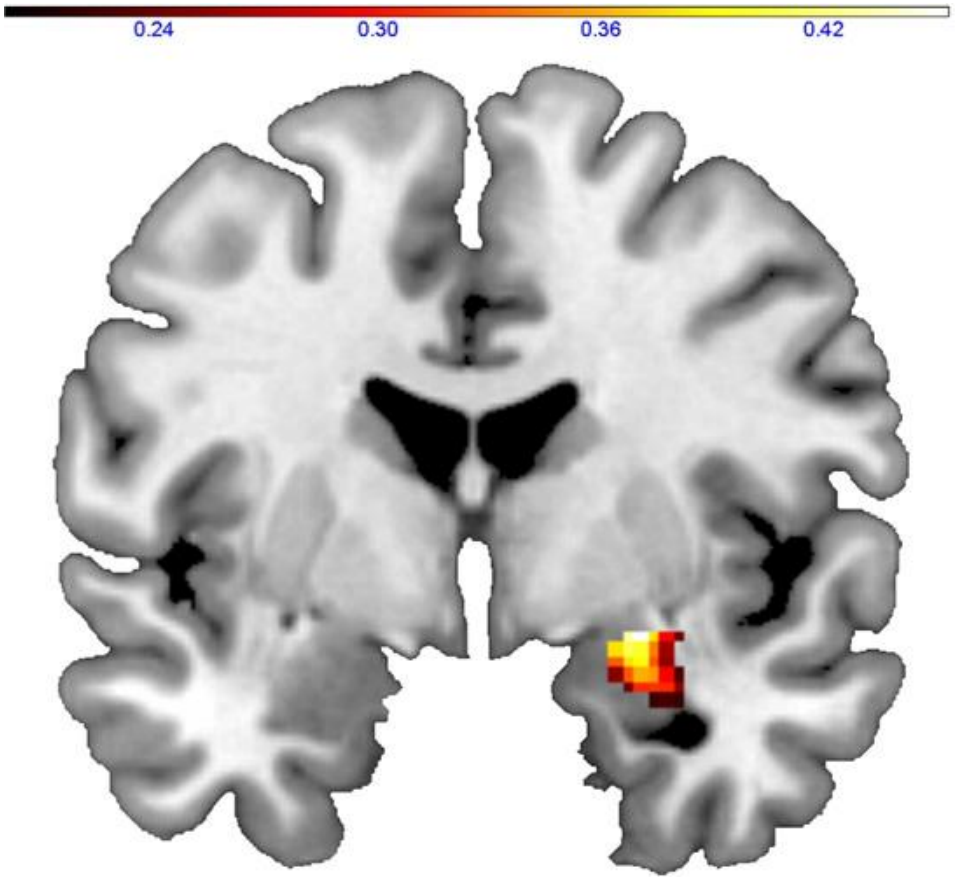
UNICEF 2009

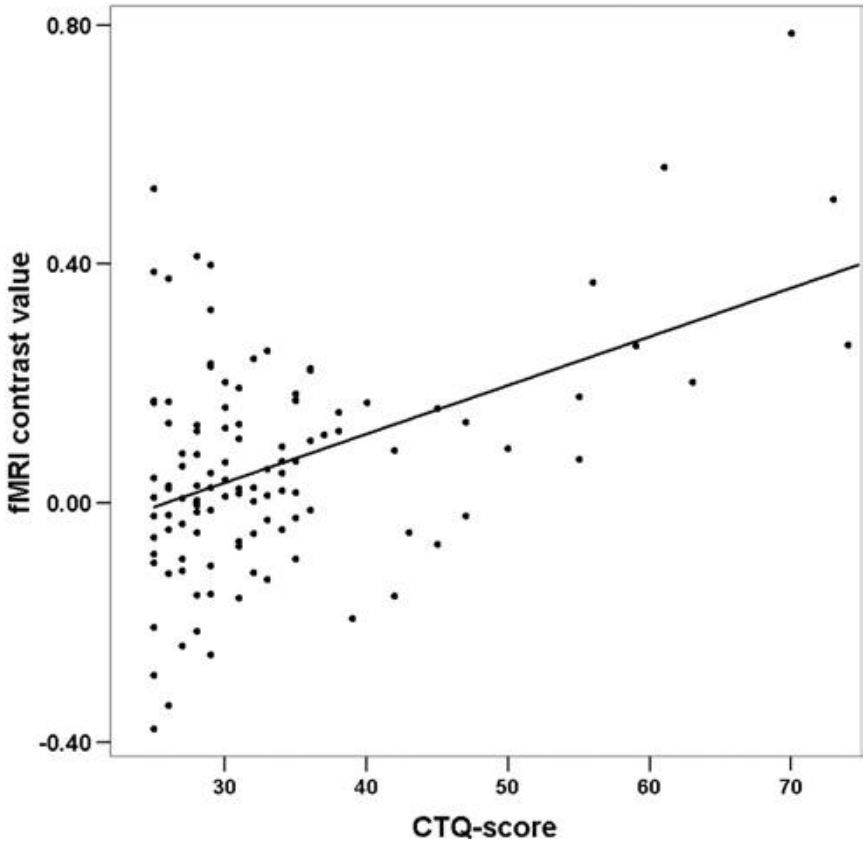
- Maternal deprivation
- A grandparents society
- Social exclusion



“I see my mother in my dreams a lot,” says Maria, “I see her coming home and staying with me. I always dream about her coming home”.







Childhood Trauma Questionnaire [CTQ] scores correlate with right amygdala responsiveness to negative facial expressions



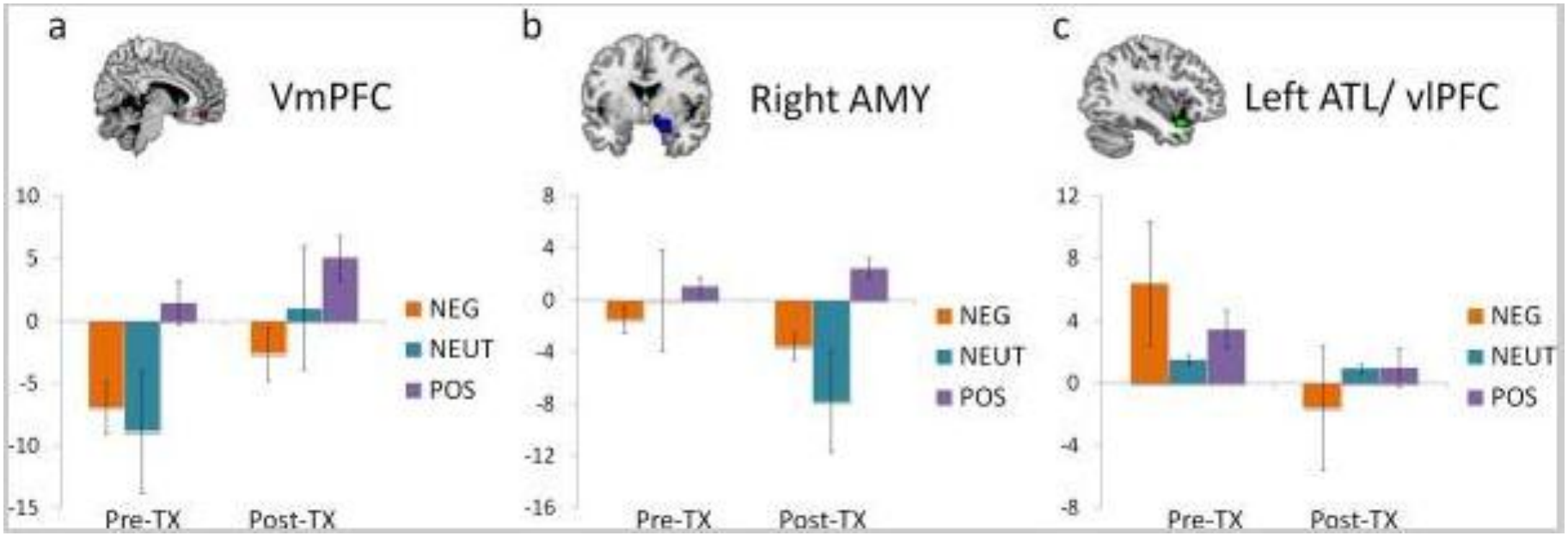
Can we change the trajectory?

long-term neurobiological changes associated with early stress can be modified by the quality of the subsequent care-giving environment





Kaufman and Charney, 2001



J Psychiatr Res.

Neural correlates of emotional processing in depression: changes with cognitive behavioral therapy and predictors of treatment response.

Ritchey et al., 2011

persistent elevated trajectories of externalizing behavior associated with GABRA-2

gene encoding
the alpha-2 subunit
of GABA receptor



Parental monitoring and support reduced GABRA2 associated externalizing trajectories

Dick et al., 2009

RESEARCH ARTICLE

AMERICAN JOURNAL OF
medical genetics
Neuropsychiatric Genetics

Relevance of Perceived Childhood Neglect, 5-HTT Gene Variants and Hypothalamus–Pituitary–Adrenal Axis Dysregulation to Substance Abuse Susceptibility

G. Gerra,[1]* A. Zaimovic,[2] L. Castaldini,[2] L. Garofano,[3] M. Manfredini,[4] L. Somaini,[5] C. Leonardi,[6] M.L. Gerra,[7] and C. Donnini[4]

reduced maternal care perception
was found to represent
a key intermediate factor
of the association between SS polymorphism
and drug use, suggesting that genetic factors
and parental behavior concur to drug use
susceptibility

Invest in early intervention on groups and individual at risk

Protect the children and support their families

Build care-giving environment in the community

Reasons for substance abuse vulnerability

PTSD and cognitive deficit

Emotional derangement and inability to cope

Depression, anxiety

Social deprivation

Exclusion from school: poor life skills

Lack of values, believes and dream

Social exclusion and frustration

Lack of reliable information

SPECIFIC MEASURABLE RESPONSES

Family and community cohesion (…..%)

Replacement of care giving (…..%)

Engagement in schools / stop minors labour (…..%)

Financial support for families / job opportunities (…..%)

Self help groups for violence victims/survivors (…..%)

Strengthening bonding to the community and identity (cultural, national, religious initiatives) (…..%)

Youth mobilization in response to illicit drugs and dissemination of reliable information (…..%)

Urgent interventions including:
- warm care-giving
- social protection
- school engagement
- community cohesion
- reliable information on health



Dinner with daddy



Supervision



Engaged in school



Warm childrearing style: supportive parenting



Communication skills in the family



Dreaming together with your children


Shelter, protection and social support

UNODC

United Nations Office on Drugs and Crime



Guide to implementing family skills training programmes for drug abuse prevention

We can change the trajectory





National and International Institutions are responsible for this