

avventure nel parentoma

psicobiologia del legame genitore-bambina/o

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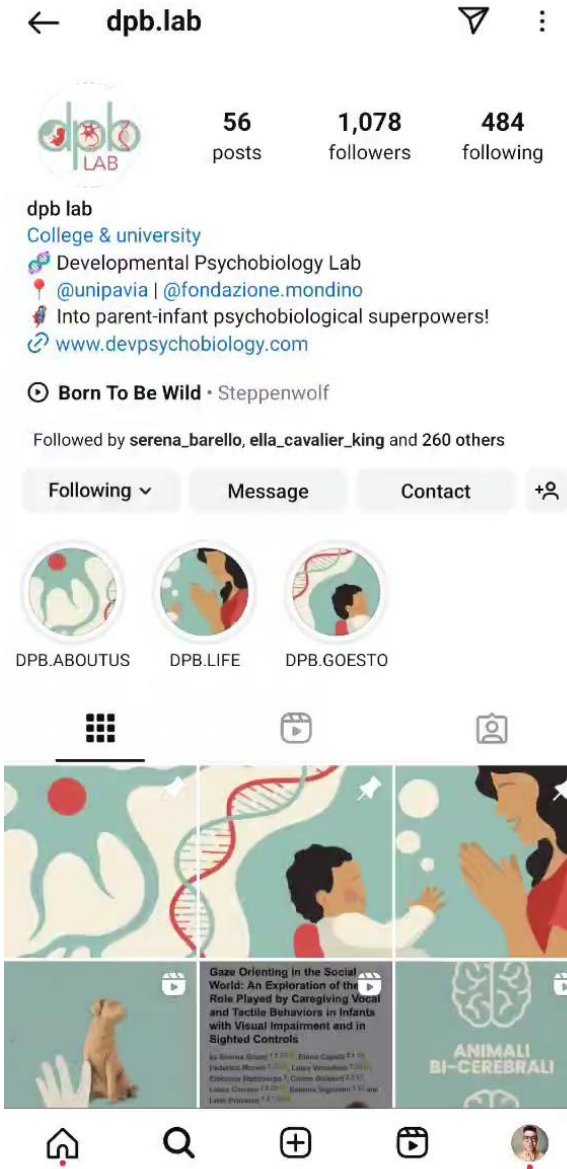


dpb lab

developmental psychobiology lab



We contribute to the [UN Sustainable Developmental Goals \(SDGs\)](#):



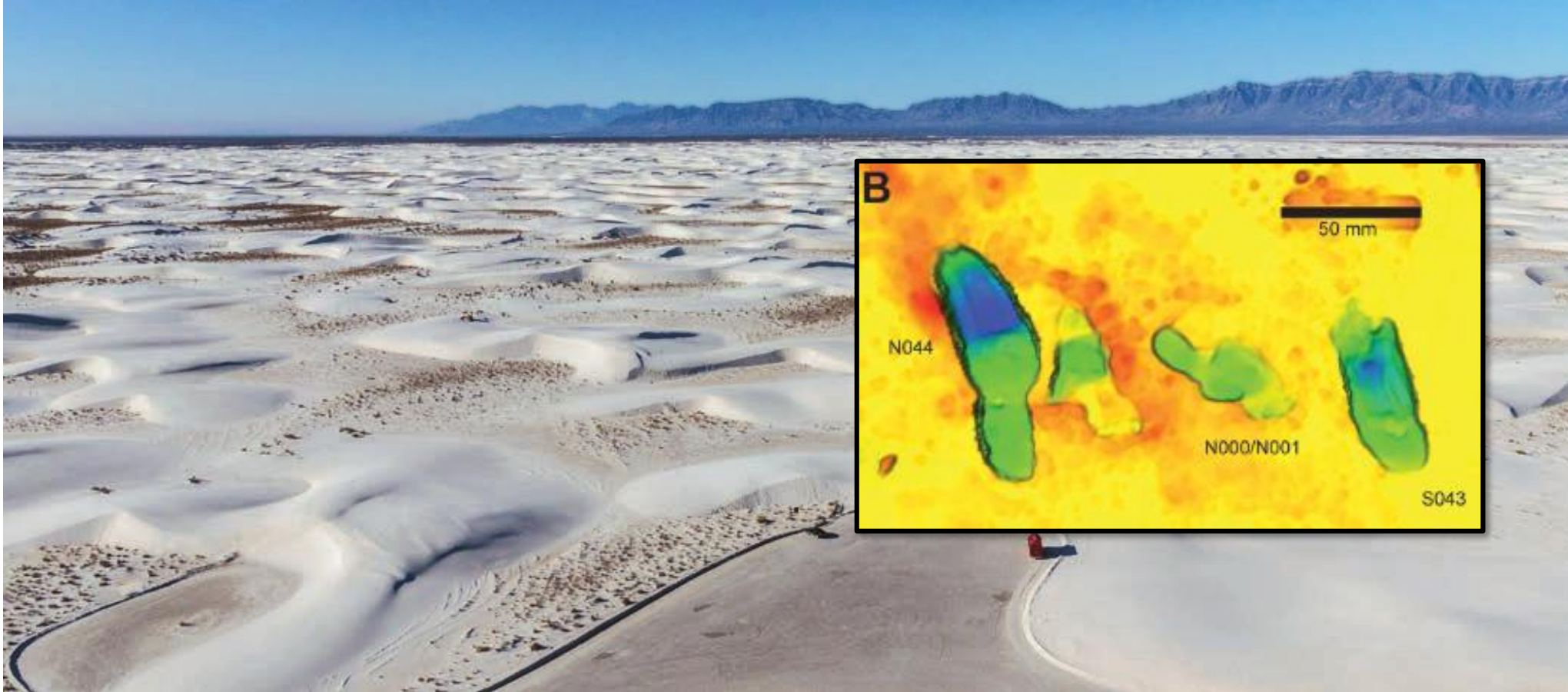
La nostra vita è una sciarada,
sulle prime sembra xxxxyx,
e invece è zxxyxz.

Stefano Belisari (Elio) | Nubi di ieri sul nostro domani odierno

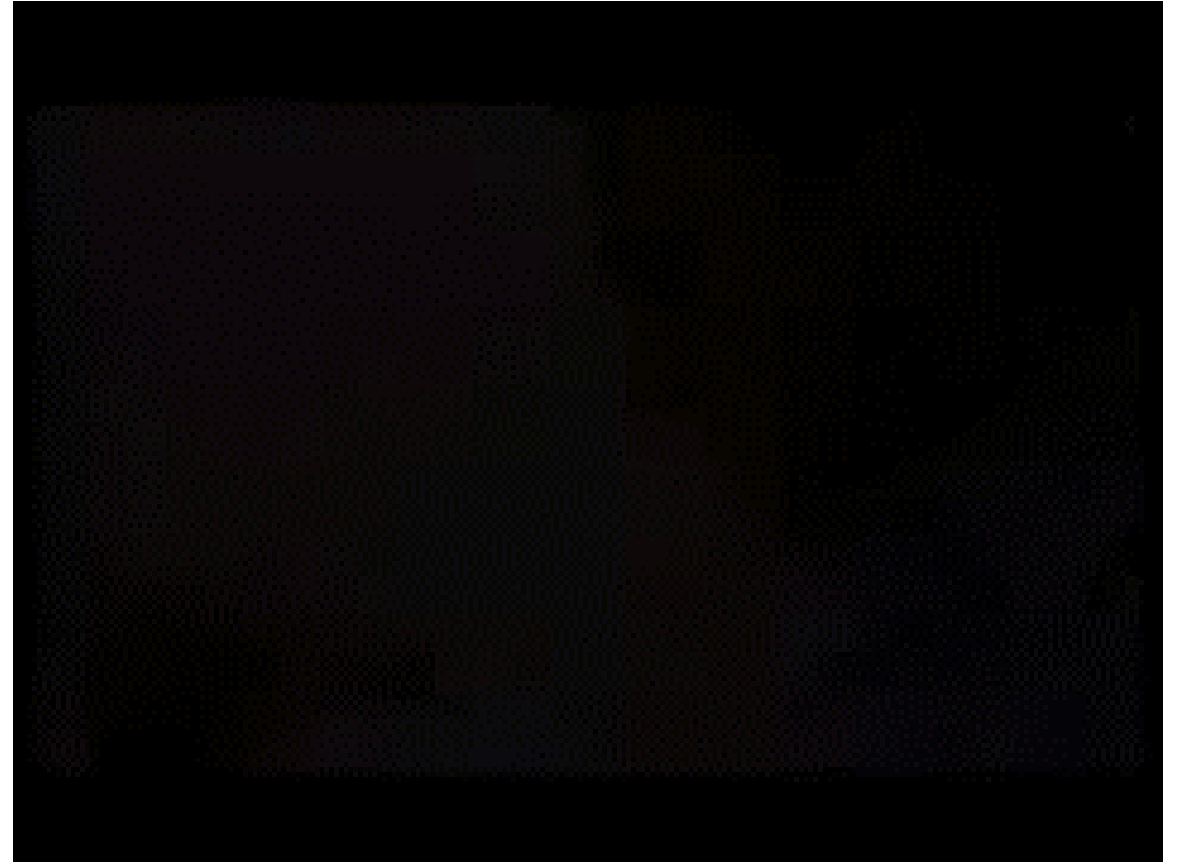
la grande rapina al treno (1903)



impronte



born to be wired



match, break, repair, grow

from messiness to socio-cognitive development

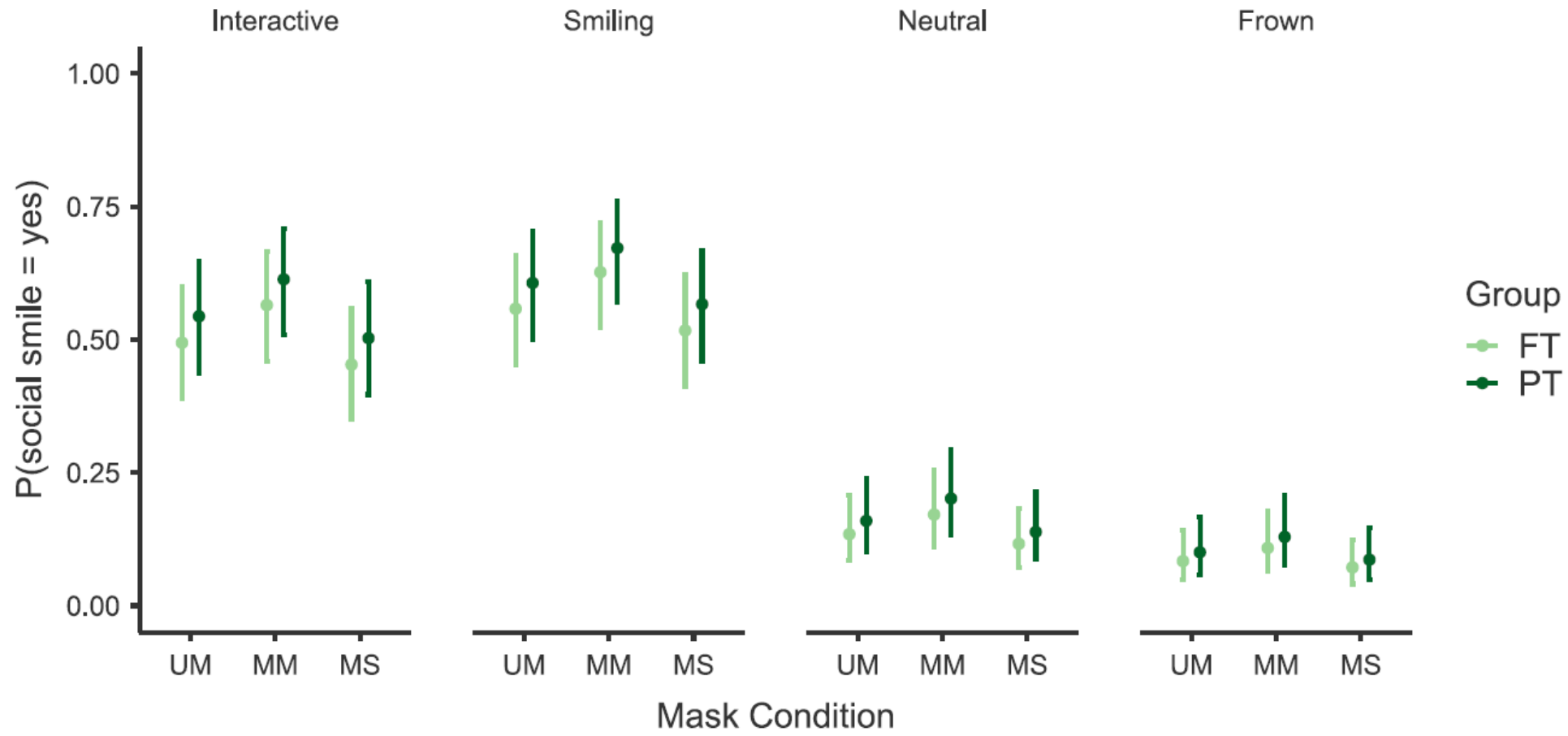


1. Veloce orientamento a stimoli sociali rilevanti
2. Social smile coordination by time and direction
3. Pointing to check naïve theories about other minds

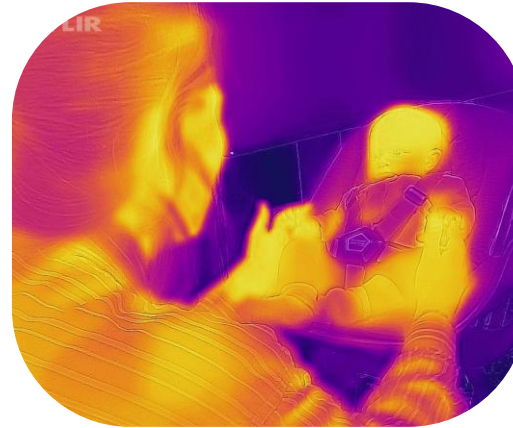
born to be wired



masked or not



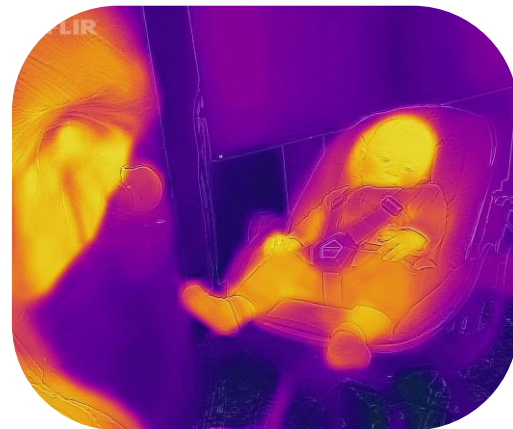
connessioni invisibili



With the ARIEL project we aim at exploring thermal (arousal) response to technoference during mother-infant interaction in 3-month-old babies.

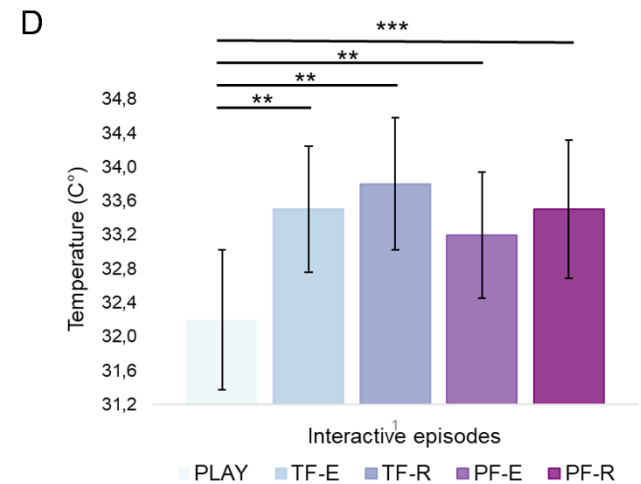
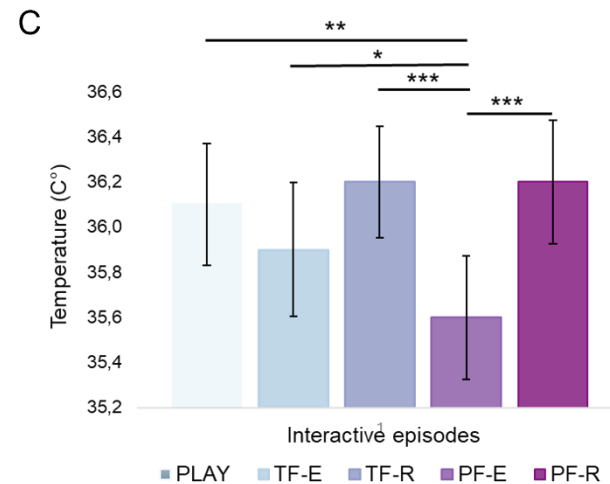
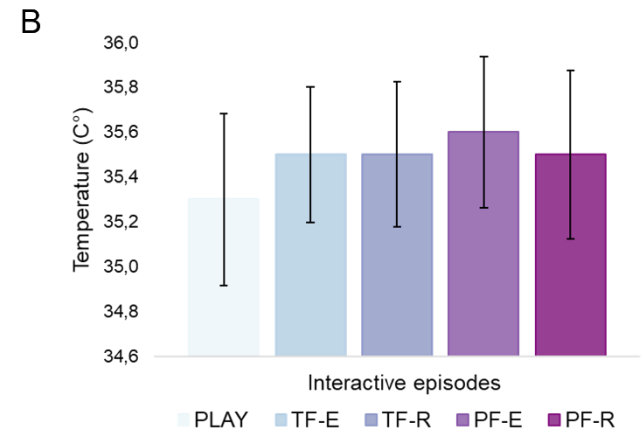
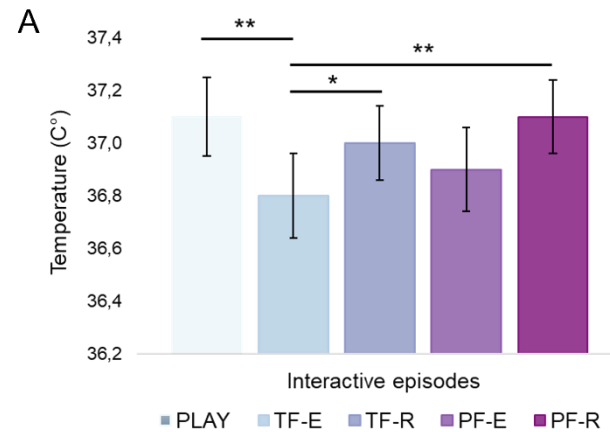
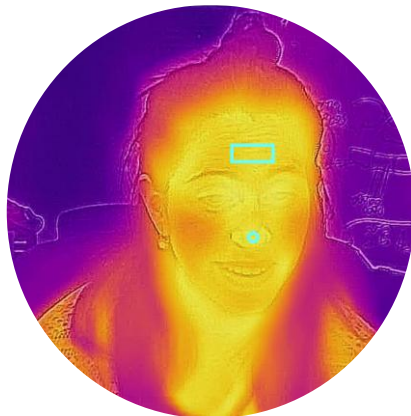
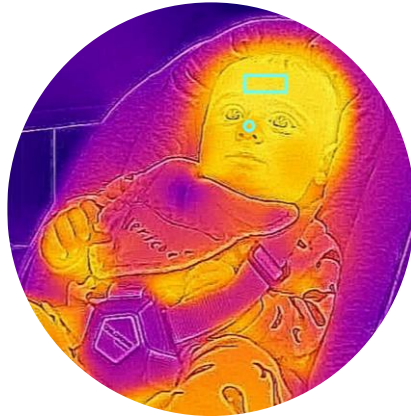
Technoference was contrasted to paperference and counterbalanced in order of exposure.

Everything videotaped and recorded with normal cameras and thermal plug-in cameras (FLIR).



connessioni invisibili

Changes in mean temperatures across the five episodes of the procedure at the selected ROIs (i.e. forehead and nasal tip) are shown for both infants and mothers: A) infant forehead; B) infant nasal tip, C) maternal forehead, and D) maternal nasal tip. Note. * $p < .05$, ** $p < .01$, *** $p < .001$

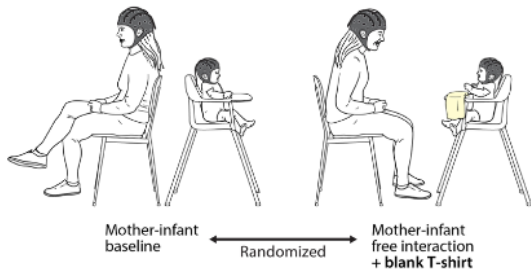


Brains in sync

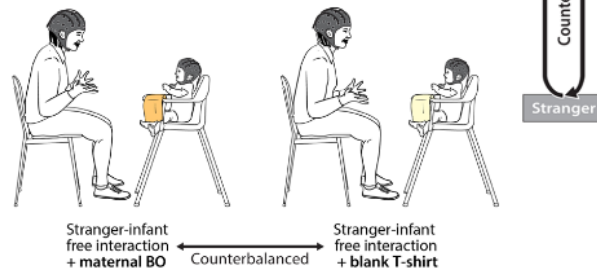
A 2 days before experiment



B Experiment procedure

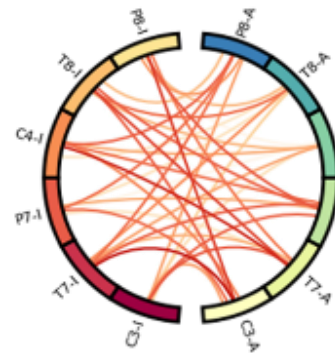


C

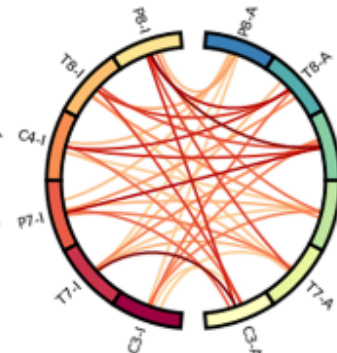


A

Stranger-infant blank wPLI

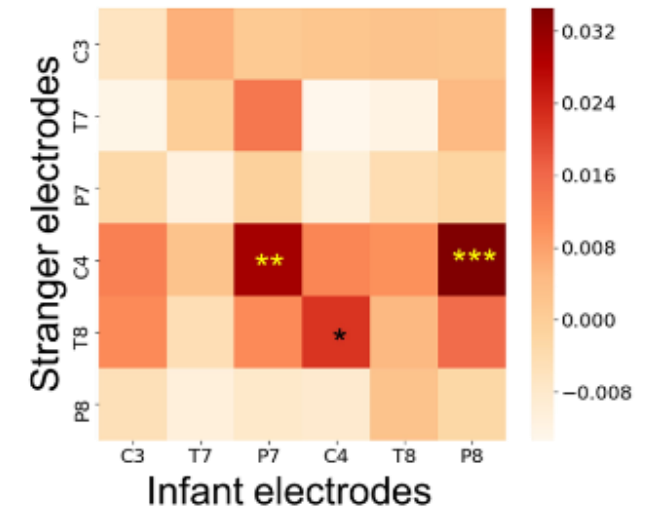


Stranger-infant BO wPLI



B

Difference in connectivity values
BO - Blank ($\Delta wPLI$)



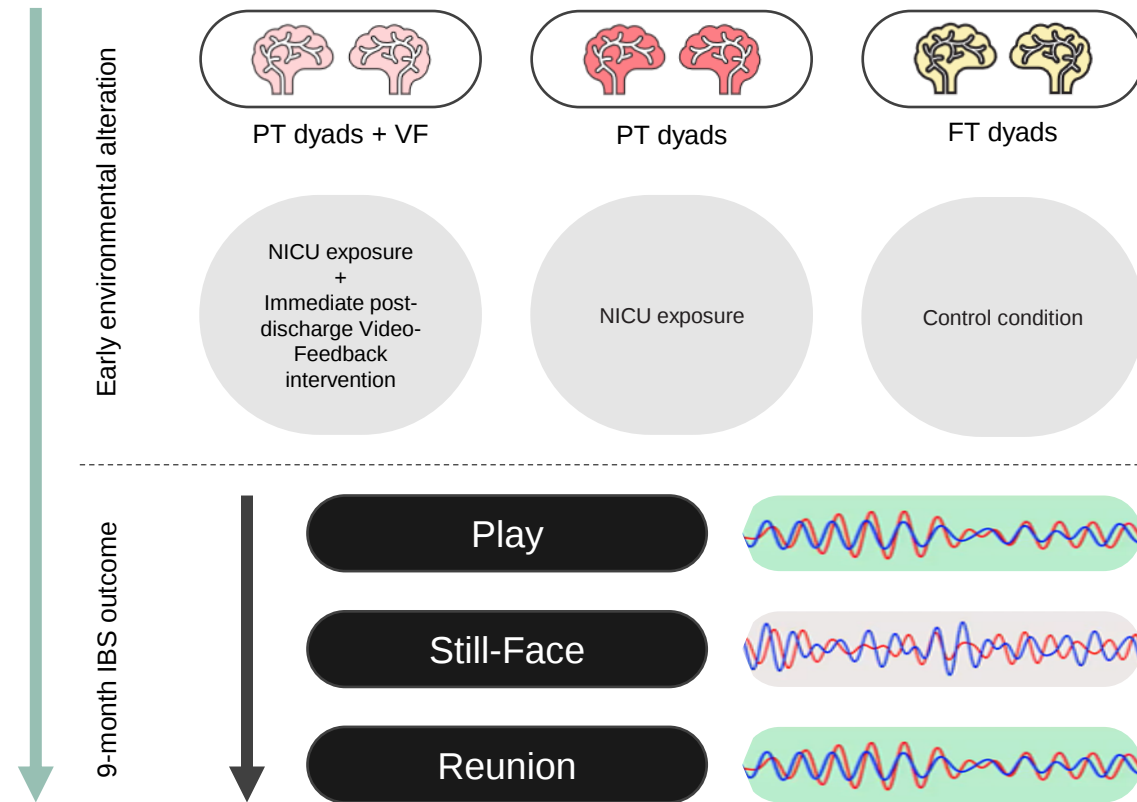
connessioni invisibili

siamo animali bi-cerebrali?

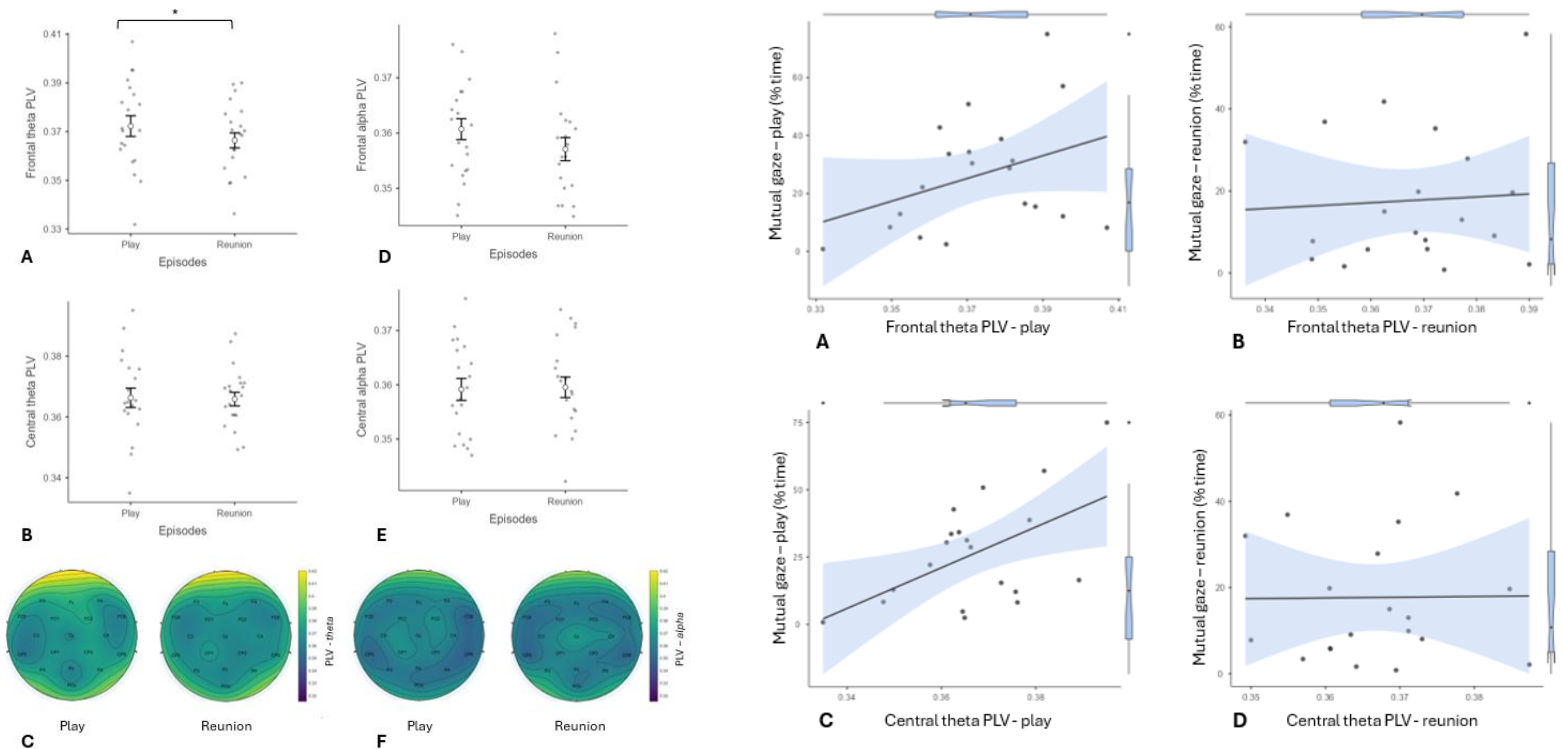
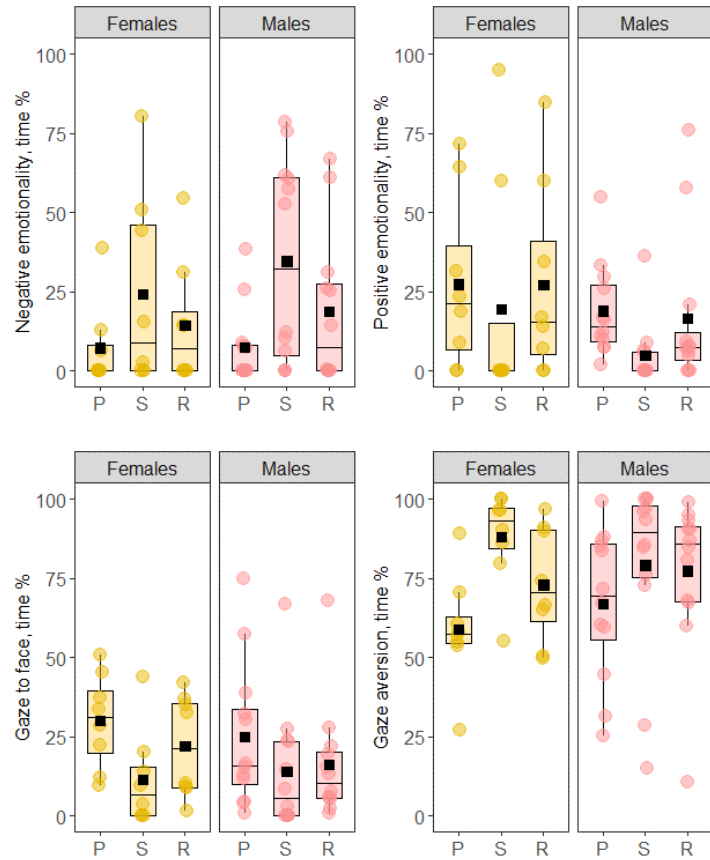
Stiamo studiando come diadi genitore-bambino regolano l'attività cerebrale insieme, dal vivo.

Lo facciamo in diadi con bambini a sviluppo tipico e atipico (e.g., nascita pretermine, ipovisione) tramite procedura hyperscanning EEG.

E vogliamo scoprire se un intervento precoce a support della genitorialità possa arrivare anche a modulare questa regolazione bi-cerebrale continua.



connessioni invisibili



l'importanza dell'ambiente



source | Campbell-Staton et al., 2021 *Science*; Francis et al., 1999 *Science*; Weaver et al., 2004 *Nat Neurosci*

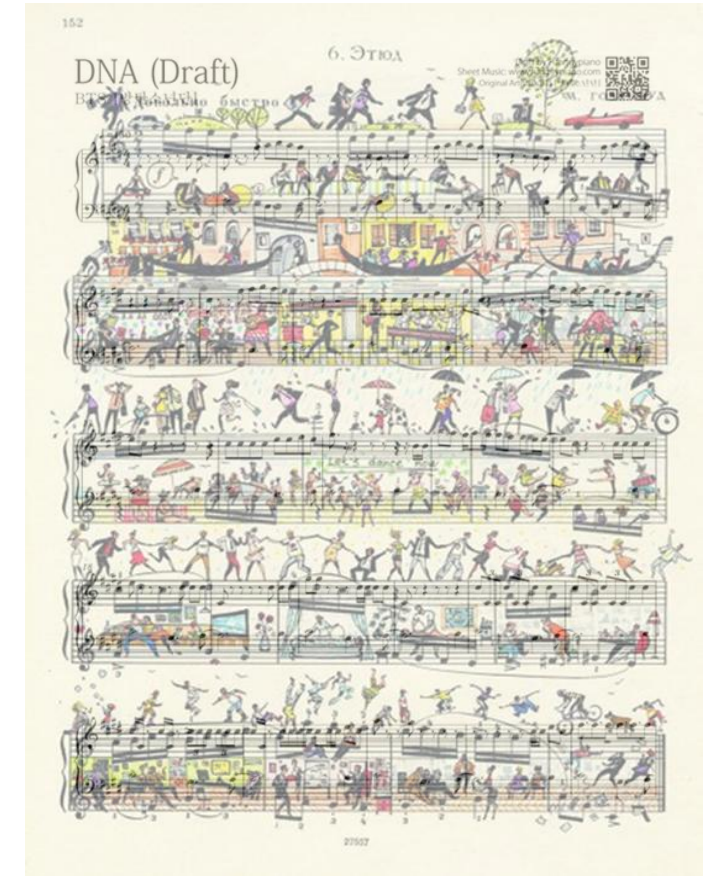
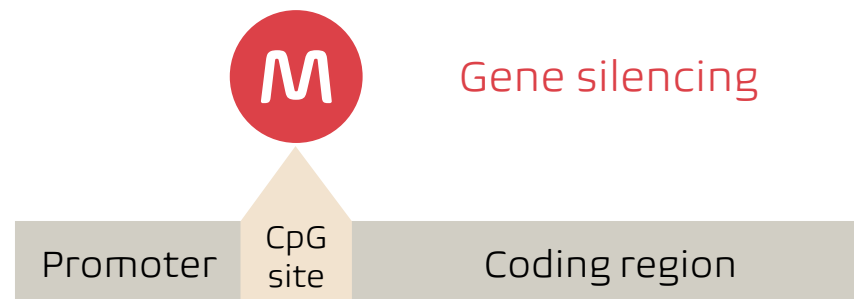
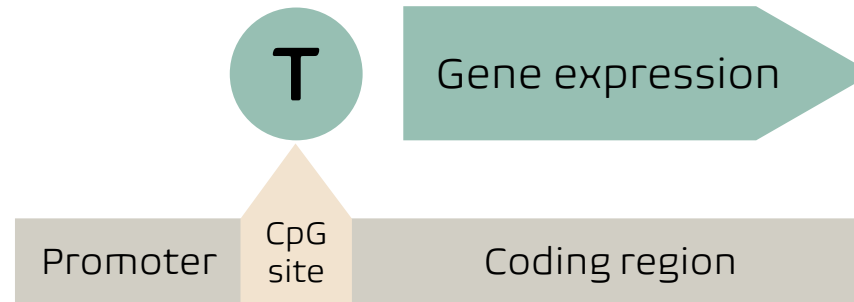
www.devpsychobiology.com

l'importanza dell'ambiente



source | Campbell-Staton et al., 2021 *Science*; Francis et al., 1999 *Science*; Weaver et al., 2004 *Nat Neurosci*

epigenetica comportamentale



il corpo non dimentica



source | Devlin et al., 2010 *Plos One*; Vijayendran et al., 2012 *Front Psychi*; Kuan et al., 2017 *Transl Psychi*; Cao-Lei et al., 2014 *Plos One*

www.devpsychobiology.com

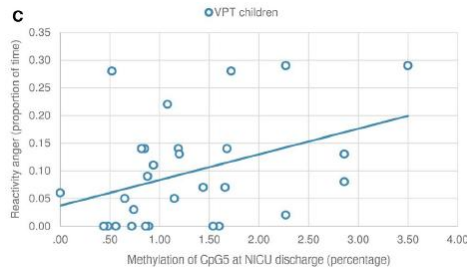
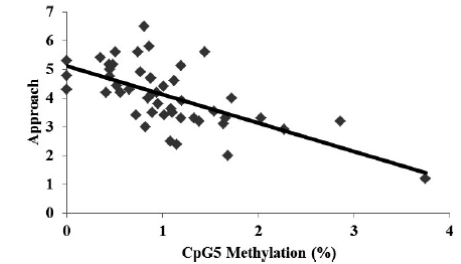
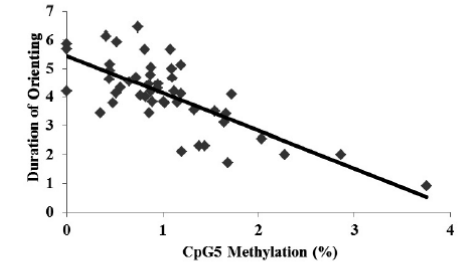
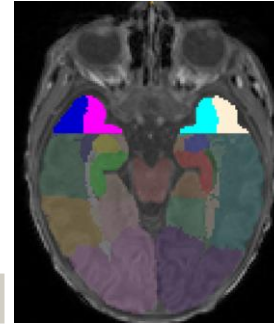
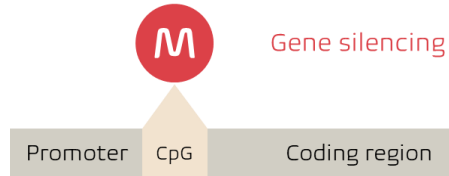
Quali memorie epigenetiche per il nato pretermine?

Preterm Behavioral Epigenetics Project | 2011-2018

epigenetica e stress neonatale



Neonatal pain
Skin-breaking
procedures



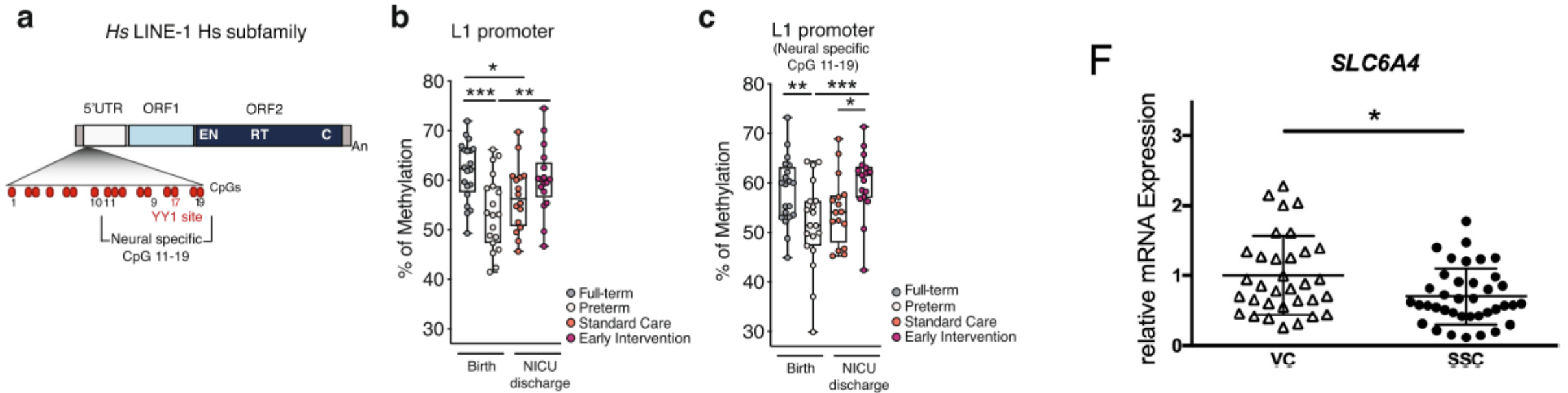
DISCHARGE
+ SLC6A4 methylation
- brain volumes (TPL)
(Provenzi et al. 2015; Fumagalli et al., 2018)

3-MONTH (corrected age)
- attention; + stress reactivity
(Montirosso et al. 2016)

4.5-YEAR AGE
+ emotional reactivity
(Provenzi et al., 2020)

12-MONTH (corrected age)
- socio-affective quotient
(Fumagalli et al., 2018)

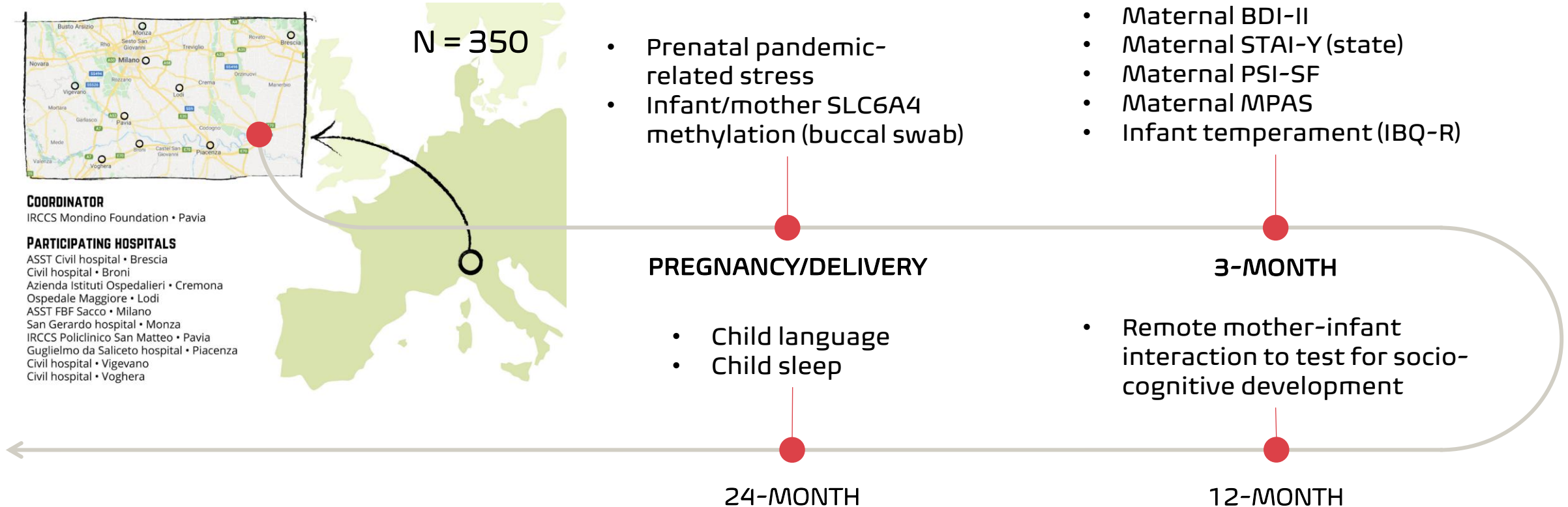
epigenetica e stress neonatale



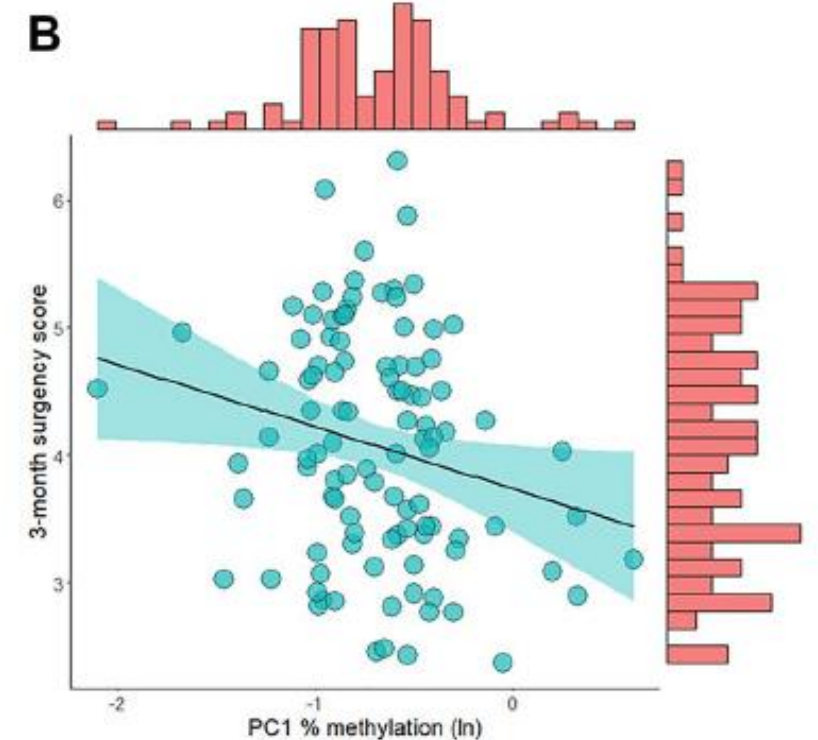
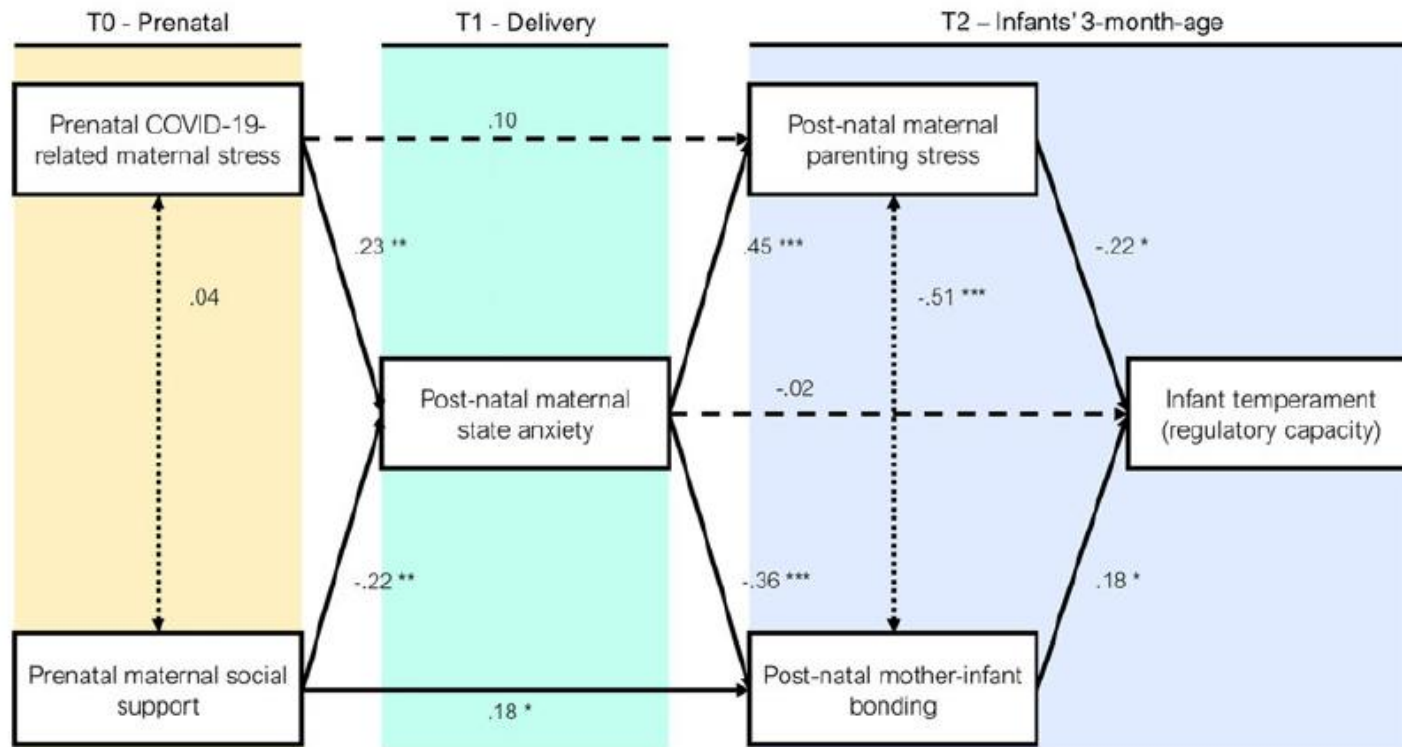
Quali memorie epigenetiche dello stress prenatale?

MOM-COPE Project | **2019-ongoing**

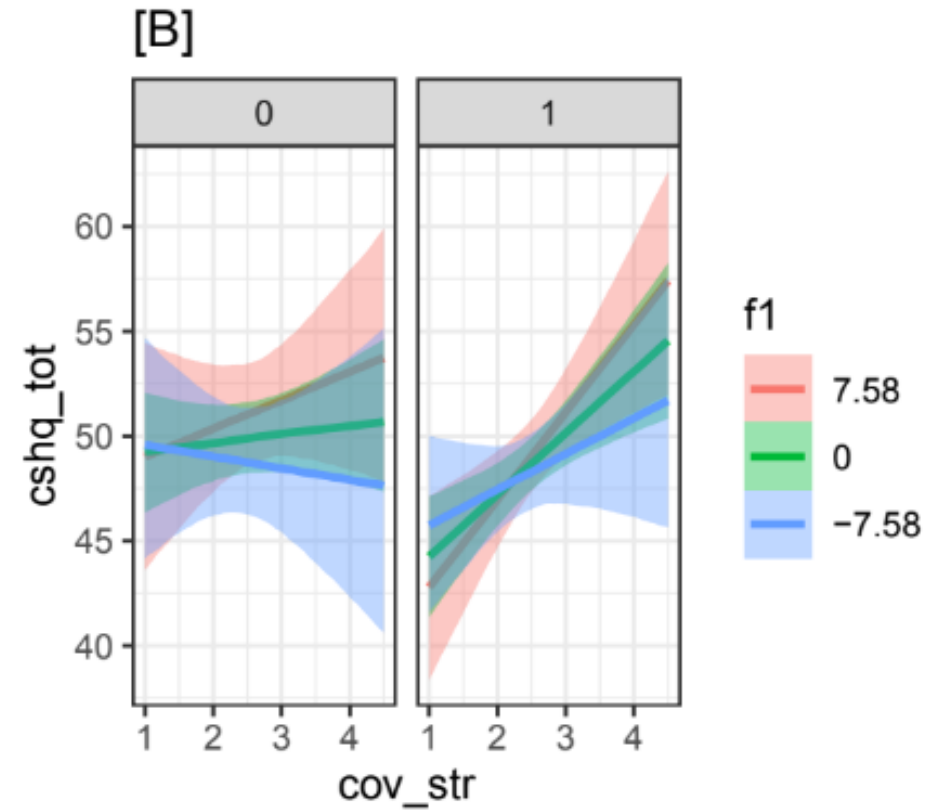
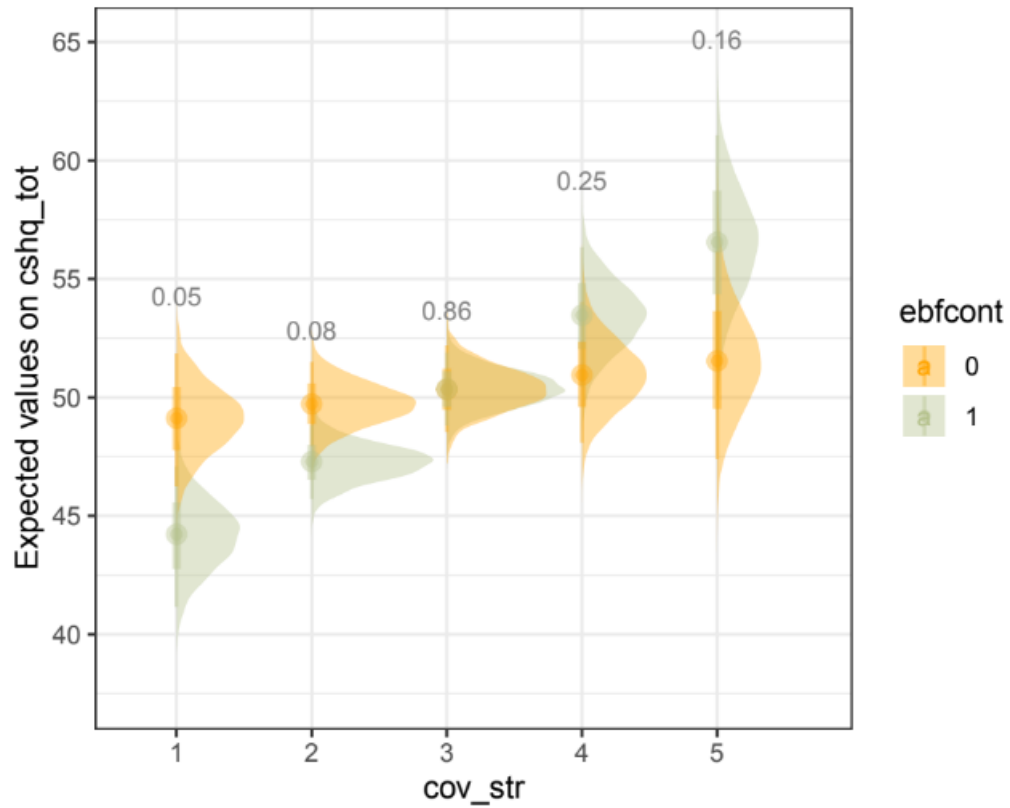
epigenetica e stress prenatale



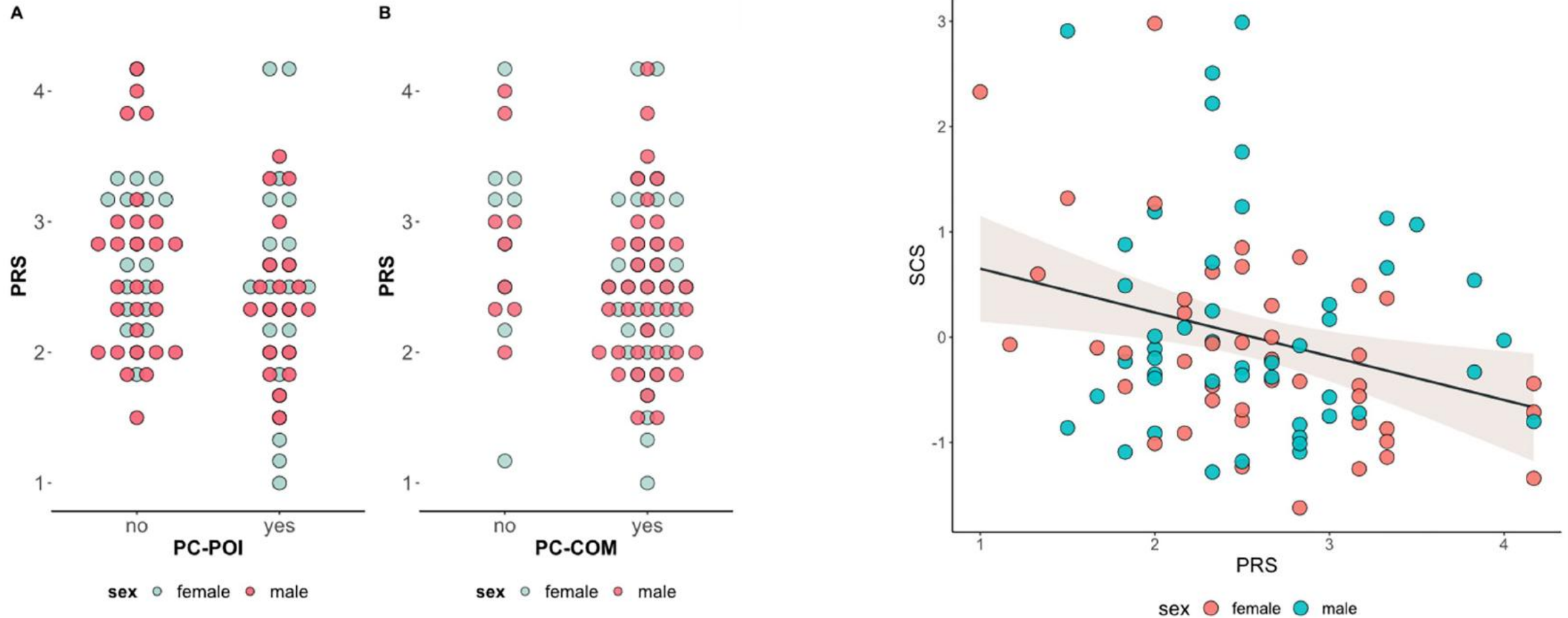
epigenetica e stress prenatale



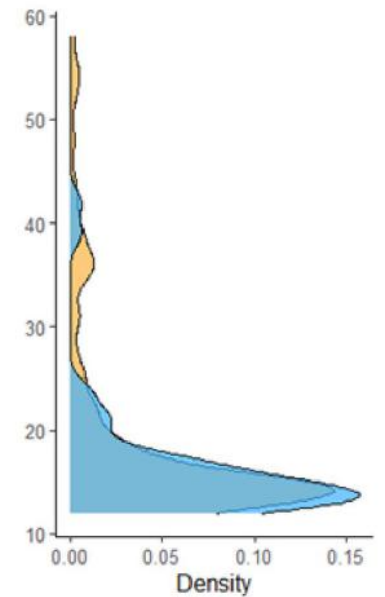
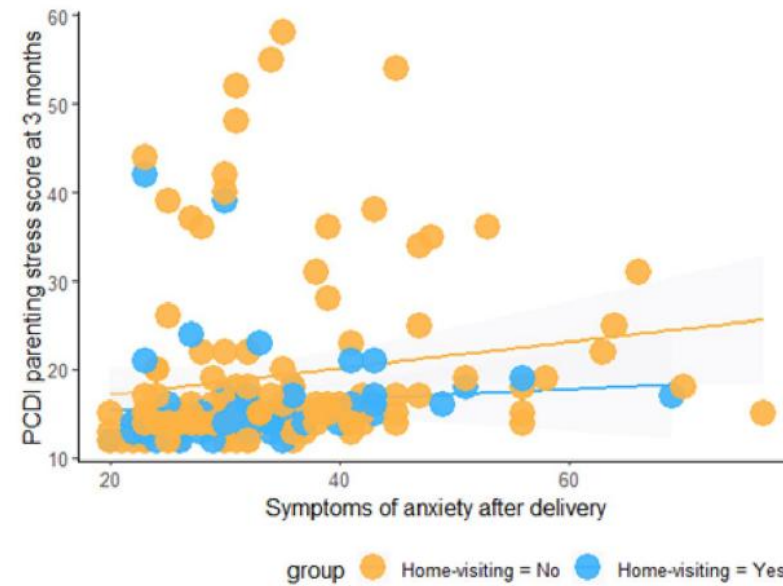
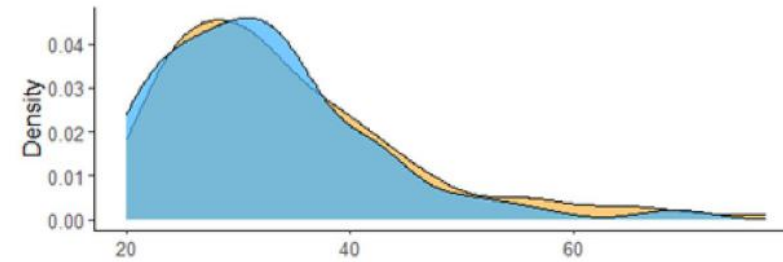
epigenetica e stress prenatale



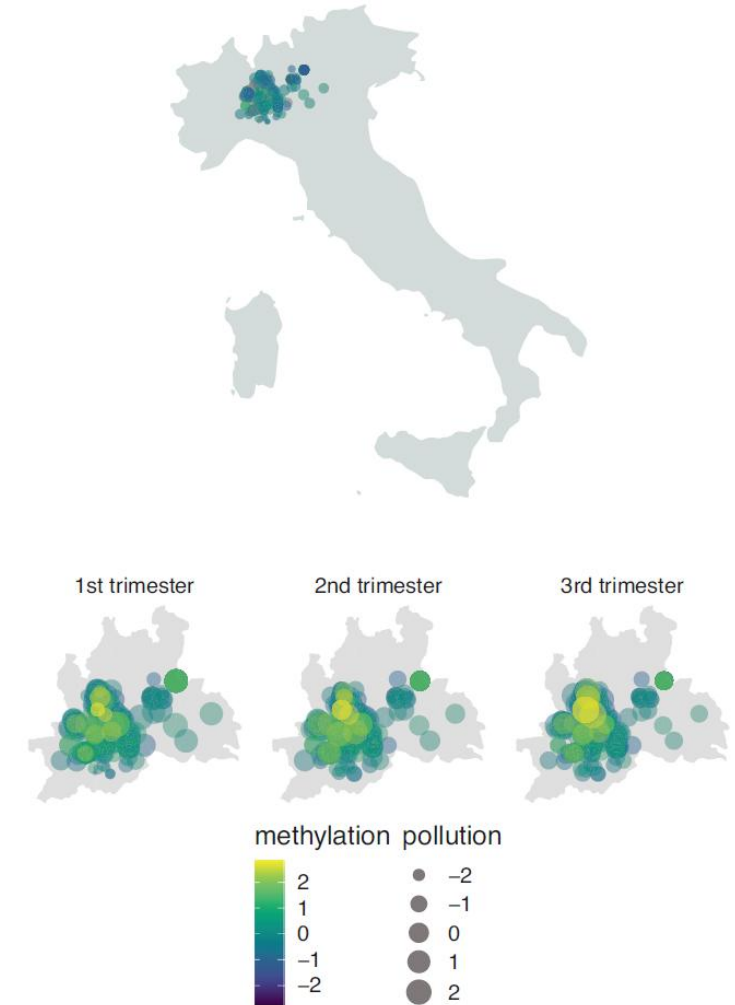
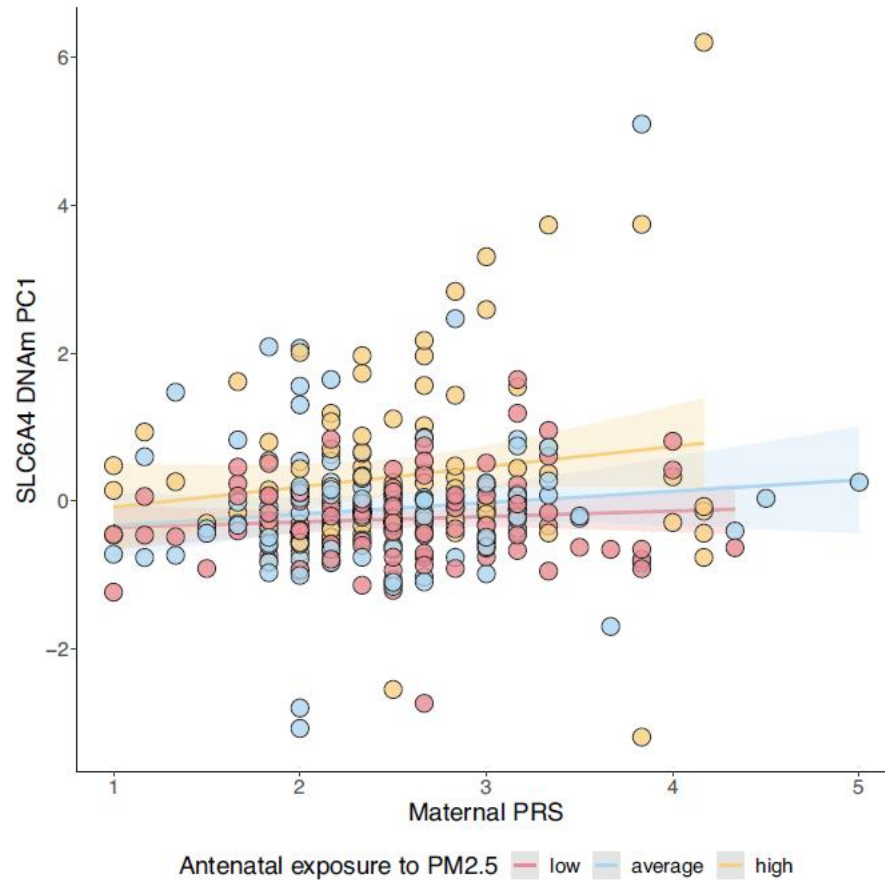
epigenetica e stress prenatale



epigenetica e stress prenatale



...e le cose sono anche più complesse di così



Un'applicazione clinica *Il modello del Porridge*

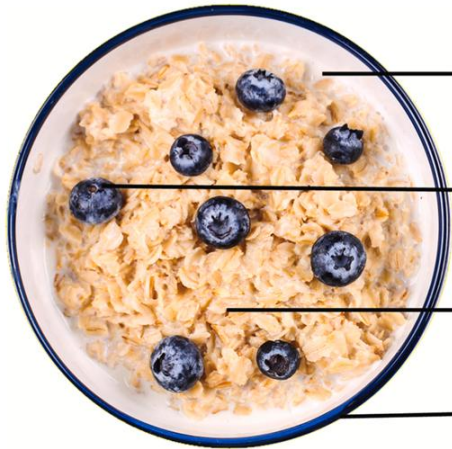


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)
Research in Developmental Disabilities
journal homepage: www.elsevier.com/locate/redevdis



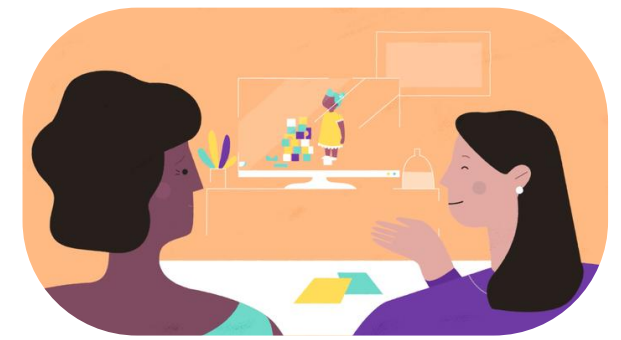
The porridge-like framework: A multidimensional guidance to support parents of children with developmental disabilities

Livio Provenzi^{a,*}, Serena Grumi^a, Elisa Rinaldi^a, Lorenzo Giusti^b



- (A) Affects and emotions [*milk*]
- (B) Behavior and interactive skills [*fruit*]
- (C) Cognitions and representations [*flakes*]
- (D) Degree of child impairment [*cup size*]

Un modello di intervento centrato sul parentoma e sulla centralità delle interazioni con l'ambiente.



FONDAZIONE
MONDINO
Istituto Neurologico Nazionale
a Carattere Scientifico | IRCCS

Struttura Complessa
Neuropsichiatria Infantile

NATI PER ESSERE IN CONNESSIONE

Come i genitori
possono sostenere
lo sviluppo di bambini
con bisogni speciali



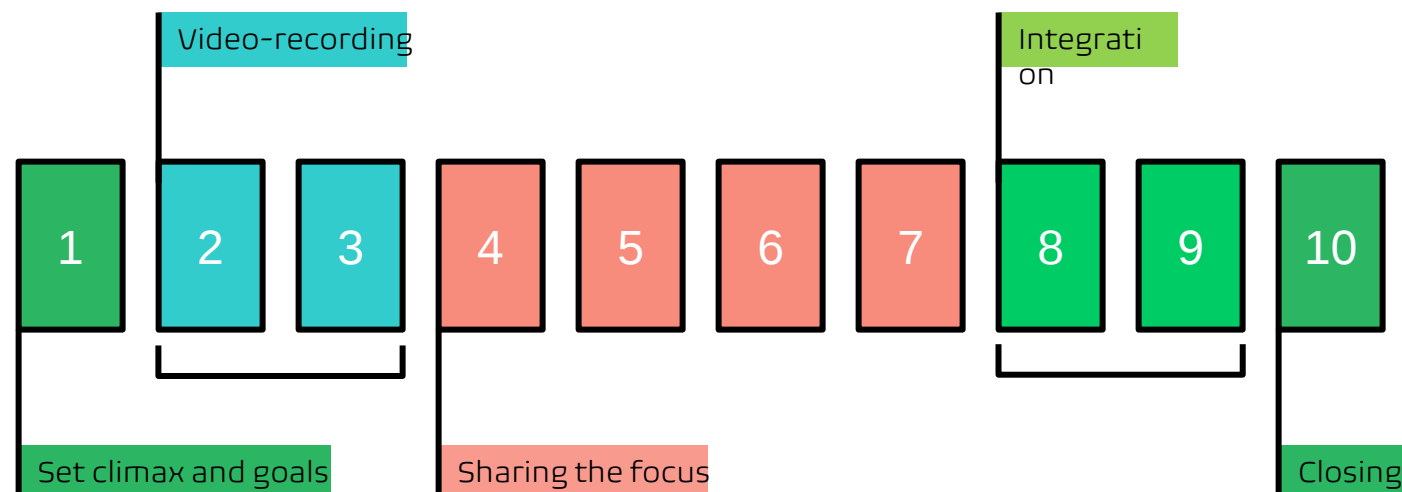


Phases	Sessions
<i>Sharing the focus</i>	Sensitivity-Responsiveness Stimulation Encouragement Parental Perspective
<i>Interactive integration</i>	Real-time mother-infant interaction

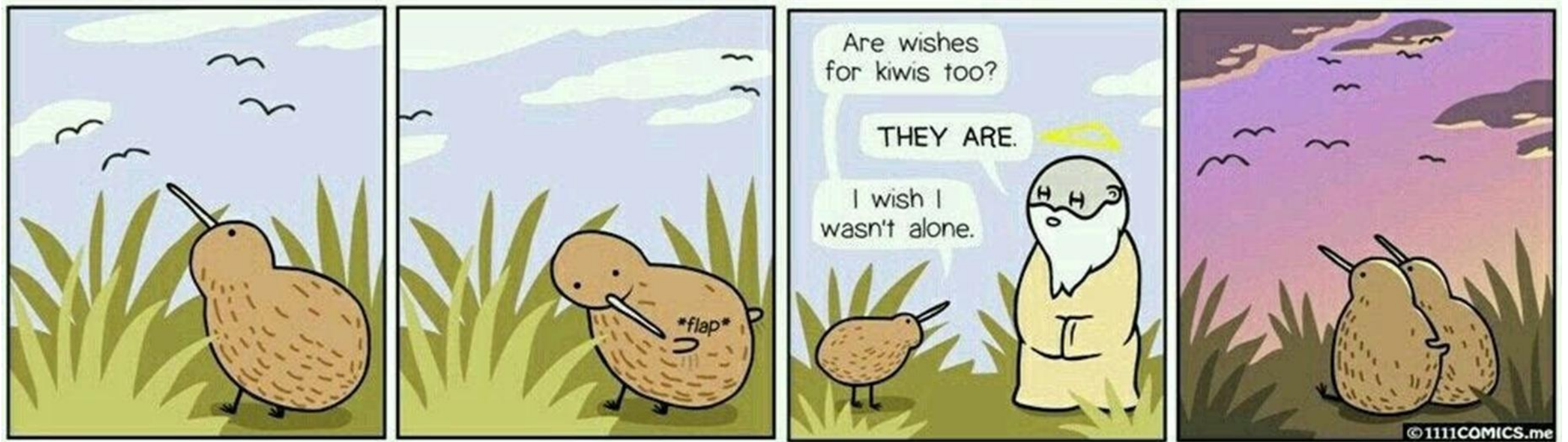
Early intervention using the video-feedback methodology



Serena Grumi
Psychologist
Senior researcher



Il valore della curiosità



le persone dietro queste storie



Ministero della Salute



Funded by the
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Giulia Barani, Sara Belloni, Alessia Berardino, Martina Collura, Giacomo Cremaschi, Silvia D'Alfonso, Fatemeh Darvehei, Yaren Gunay, Ellie N. Jensen, Samuele Lucchin, Giorgia Mulé, Beatrice Riva, Anastasiia Samoukina, Andrea Saporoso, Aysel B. Sancar, Elgin B. Tonga, Luisa Vercellino

And all the members of the **MOM-COPE Research Project** and the colleagues from the participating Neonatal Units, departments, and research centers.

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