

PROGETTO STRATEGICO SULL'AUTISMO: LINEE GENERALI

a cura di Massimo Molteni



Ricerca Finalizzata 2007: PROGRAMMA "STRATEGICO" (PS)

- Aggregazione di un massimo di 5 Progetti, articolati in Unità Operative differenti
- Ideati e presentati da Destinatari Istituzionali diversi (Regioni, ISS, IRCCS, ISPESL, Agenzia per i Servizi Sanitari Regionali)
- Finalizzati a raggiungere un insieme di obiettivi conoscitivi tra loro coerenti all'interno di 8 aree tematiche individuate in coerenza con il Piano Sanitario Nazionale
- Coordinati da un Progetto Capofila
- Contenente almeno un progetto presentato da una Regione e almeno uno presentato da un IRCCS

Ricerca Finalizzata 2007: PROGRAMMA “STRATEGICO” (PS)

Interazione tra Irccs e strutture SSN
finalizzata a:

- Sviluppo di nuove conoscenze e approcci preventivi, diagnostico-terapeutici e/o soluzioni organizzative trasferibili al SSN
- Valutazione di efficacia ed appropriatezza
- Implicazioni assistenziali ed organizzative per il SSN

La salute mentale nel bambino e nell'adolescente: dai fattori di rischio, agli indicatori di carico, per lo sviluppo di modelli di intervento e prevenzione evidence-based

Programma Strategico composto da

- 5 progetti di ricerca coordinati da
 - Istituto Superiore di Sanità
 - Regione Emilia Romagna
 - Regione Lombardia
 - Irccs Stella Maris di Pisa
 - Irccs EUGENIO MEDEA di Bosisio Parini (progetto Capofila)
- **24 Unità Operative** dislocate in **8 Regioni** (*Abruzzo, Emilia-Romagna, Friuli Venezia Giulia, Lazio, Lombardia, Marche, Piemonte, Toscana,*)
- **5 università:** La Sapienza, Parma, Udine, Campus Biomedico (Rm), Pisa
- **9 Aziende sanitarie locali e ospedaliere**
- **4 Irccs** (Medea – Stella Maris – San Raffaele – Mondino)
- **2 centri di Bioingegneria**
- **Istituto Superiore di Sanità**

La salute mentale nel bambino e nell'adolescente

- Due ambiti di ricerca:
 - Autismo
 - Disturbi Esternalizzanti in adolescenza
- Finalità per il SSN:
 - Condivisione di strumenti diagnostici e di metodologie di intervento nei due ambiti
 - Innovazione e traslazione
- File Rouge trasversali
 - Prevenzione e individuazione precoce
 - Appropriatezza di interventi

Disturbi esternalizzanti in adolescenza

Nuove conoscenze: fattori di rischio in una prospettiva GxE

Five-year' longitudinal follow-up in a general population sample of 607 Italian children aged 10-14 years evaluated both for behavioural problems and psychosocial/genetic risk factors five years previously.

Data will be analyzed in a GxE perspective. (*Irccs Medea*)

An extended twin design method in a longitudinal 24-month assessment; of observed phenotypes will be treated, as appropriate, by bivariate, longitudinal, and multivariate approaches in the context of gene-environment interplay in a sample of MZ twins of both sexes and same-sexed DZ pairs aged 10-16 from the Italian Twin Registry general population of all pairs born and living in Milan and Lecco provinces (*Irccs San Raffaele*)

Disturbi esternalizzanti in adolescenza

Nuove conoscenze: fattori protettivi

- To evaluate the protective role of adolescents' and parents' emotional regulation, interpersonal and self-efficacy skills, and prosocial behaviour for adolescents referred for treatment to mental health services

[Uonpia: H San Paolo (Mi), H Niguarda (Mi), H dei Bambini di Brescia, Mondino (Pavia), Ospedali Riuniti di Ancona]

- To implement and assess a selective, preventive intervention for promoting adolescents' emotional regulation, interpersonal and self-efficacy skills, and prosocial behaviour in a sample of adolescents at risk of school drop-out, retention and transgressive behaviours
(Università La Sapienza – Roma)

Disturbi esternalizzanti in adolescenza

Valutazione di appropriatezza: interventi terapeutici

To assess and follow-up a representative sample of children and adolescents aged 6-18 yrs in treatment at public Child Psychiatric Units (CPUs) by comparing children and adolescents undergoing treatment with medications with children and adolescents not treated with psychotropic drugs

To assess the sociodemographic, clinical, and treatment-related characteristics of a large sample of children and adolescents contacting the CPUs of the participating units

To evaluate possible differential effects of gene variants on pharmacological and non-pharmacological treated patients and to assess genetic variants associated with treatment side effects

(Agenzia Sanitaria e Sociale Regionale dell'Emilia Romagna, Uonpia Emilia-Romagna: 11 uonpia territoriali, 4 uonpia ospedaliere, 2 cattedre universitarie)

AUTISMO: SVILUPPO DI NUOVE CONOSCENZE

Intelligent systems for unobtrusive monitoring and analysis of early infant behaviour.

To develop

- an instrumented toy-cube, which senses its changing orientation when reoriented in space, to be inserted into a square hole
- a wearable sensors to measure joint angles (hip, knee, ankle) during free walking.

(Campus Biomedico e Irccs Medea)

AUTISMO: SVILUPPO DI NUOVE CONOSCENZE

- Intentional understanding and intentional attunement: to test the presence of pro-active gazing behaviour during the child's observation of human goal-related actions, to assess the presence of visuo-tactile mirroring activation in somatosensory cortical areas, to assess comprehension and imitation of intentional actions.

(Università di Parma: Dipartimento di Neuroscienze)

AUTISMO: SVILUPPO DI NUOVE CONOSCENZE

- New technologies for exploring emotions and imitation: implementation of the interactive and biomimetic android (FACE) able to express and modulate six basic emotions; a biomimetic wearable suit and electrode cap for the acquisition of physiological signals

*(Centro Interdipartimentale di Ricerca “Piaggio”,
Università di Pisa e Irccs Stella Maris)*

AUTISMO: SVILUPPO DI NUOVE CONOSCENZE

- Genetic epidemiology of autistic traits: a twin design to estimate the role of genetic factors (heritability) and environmental influences in determining the inter-individual differences observed in each of the three autistic-like behavioural impairments: social interaction and communication, restricted and repetitive patterns of behaviour, interests, and activities.

(ISS)

AUTISMO: SVILUPPO DI NUOVE CONOSCENZE

Measurement of arylesterase enzymatic activity and assessment of genetic polymorphisms located in the PON1 gene as a diagnostic tool in autism-spectrum disorder“: a "disease-specificity" study, by measuring arylesterase activity and genotyping the rs705379 and rs662 SNPs in children with behavioral disorders that "border" with autism (mental retardation, ADHD, OCD), monogenic forms of PDD (Rett syndrome), and disorders unrelated to autism
(Campus Biomedico e SIRFA)

AUTISMO: SVILUPPO DI NUOVE CONOSCENZE

Autism as a disconnection disorder: a multimodal MRI study will be conducted with patients suffering from high functioning autism or Asperger's syndrome and matched healthy comparisons; the study will include structural (3D), diffusion, and functional acquisitions (fMRI). Specifically, anatomical and diffusion data will allow for investigation of brain morphology and microstructural integrity, whereas fMRI will focus on action- and emotion imitation performance

(Centro Interuniversitario di Neuroscienze di Udine, Laboratorio di Neuroimmagine Stella Maris, IRCCS Mondino, Irccs Medea)

AUTISMO: DIAGNOSI PRECOCE E SOLUZIONI ORGANIZZATIVE TRASFERIBILI AL SSN.

- A population-based screening programme specifically developed as a two-step screen, integrated into the general health assessment schedules routinely conducted by Italian Paediatricians at 12 and 24 months with M-Chat, which will make it possible to intercept both early- and late-onset cases of ASD, and will be administered to all babies born in Tuscany. At-risk children will be referred to local Child and Adolescence Mental Health Services (CAMHS) for further intervention.

Screening sensitivity, specificity, positive predictive value
(AUSL Prato & CAHM'S Toscana, Irccs Stella Maris)

AUTISMO: APPROPRIATEZZA DEGLI INTERVENTI TERAPEUTICI

- To compare the efficacy of two further types of ASD treatment in terms of what they add to standard treatment in Italian CAMHS's. The two treatment models will be:
- a) the DIR-model (Developmental-Individual differences-Relationship based by Greenspan & Wider) and
- b) the ABA (Applied Behavioral Analysis). An integral part of this aim will be identify what factors predict children's post-treatment outcomes and to describe cognitive profiles for responders/non-responders to the two specific types of treatment.

AUTISMO: IMPLICAZIONI ASSISTENZIALI E ORGANIZZATIVE PER IL SSN

- Epidemiology of family burden: a cross-sectional study.

Data on family burden will help researchers, policy-makers, and clinicians identify critical points in healthcare service organization and design intervention addressed to the specific needs of patients with ASDs and their families.

(ISS, Centro per le Psicosi Infantili – L'Aquila, Centro per l'autismo – Rimini, Uonpia di Alessandria)

AUTISMO: IMPLICAZIONI ASSISTENZIALI E ORGANIZZATIVE PER IL SSN

- The treatment guidelines, through the use of multiple dissemination techniques and active implementation, will be highly transferable to the National Health Care System. It will be easily accessible to all interested citizens and will foster the dissemination of evidence-based treatment.

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