



“Same world, different views”

Autism Spectrum Disorders



PlusMe: Transitional Wearable Companions for the therapy of children with Autism Spectrum Disorders

a European Union Horizon2020 Project

A Transitional Wearable Companion (TWC) is an innovative design concept, implemented as an interactive, animal-shaped soft toy that can emit colored lights and entertaining sounds when it is touched. The control software, running on a Bluetooth connected tablet, allows combining the sensorial outputs in several ways, then producing many patterns characterized by increasing multisensory-motor complexity. These outputs, most rewarding for the children, can be exploited by the therapist to set up playful activities, which aim to encourage the development of long-lasting social and emotional skills. The first experimental prototype of TWC is called **PlusMe**: this is a soft pillow looking like a panda, which can be worn around the neck. Thanks to the gratifying output, the PlusMe encourages intrinsic motivation and favors the interaction between two or more actors.



www.plusme-h2020.eu



Thanks these abilities, in an ongoing experiment, the PlusMe is used as a potential support tool in the therapy of autism to increase social skills such as eye-contact, smiling, the interaction with the therapist in order to change the output of PlusMe. This is the first time that the device is used in consecutive sessions, with the purpose to improve social competences (i.e., imitation and eye-contact) and to improve the general social engagement. The observations of three participants seem to show that the PlusMe-based activities are effective in eliciting (and then training) some social skills.



from Intrinsic Motivations to Transitional Wearable INtelligent companions for autism spectrum disorder

a European Union Horizon2020 Project

Through Artificial Intelligence and Machine Learning algorithms integrated into the PlusMe, the toy is able to “understand” the affective state of children during the therapeutic activity. Affective information is often unclear or “hidden” in ASD children; this knowledge would be extremely helpful for therapists, to adapt and tune the activities and make them more effective in improving the social competence of children.

www.im-twin.eu

