



PlusMe: a Transitional Wearable Companion as support tool to encourage social-emotional engagement in children with Autism Spectrum Disorders during early therapy

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Transitional Wearable Companion (TWC) is an innovative design concept, implemented as an interactive, animal-shaped soft toy that can produce lights and sounds when it is touched. The shape and material are thought to arouse emotional attachment and reassuring feelings, it can be perceived as a playmate, thanks to the nice animal shape; it can be used in simple sensory-motor games which can stimulate social competences (e.g., imitation, eye-contact, smile), by leveraging the attractiveness of coloured lights and sounds.

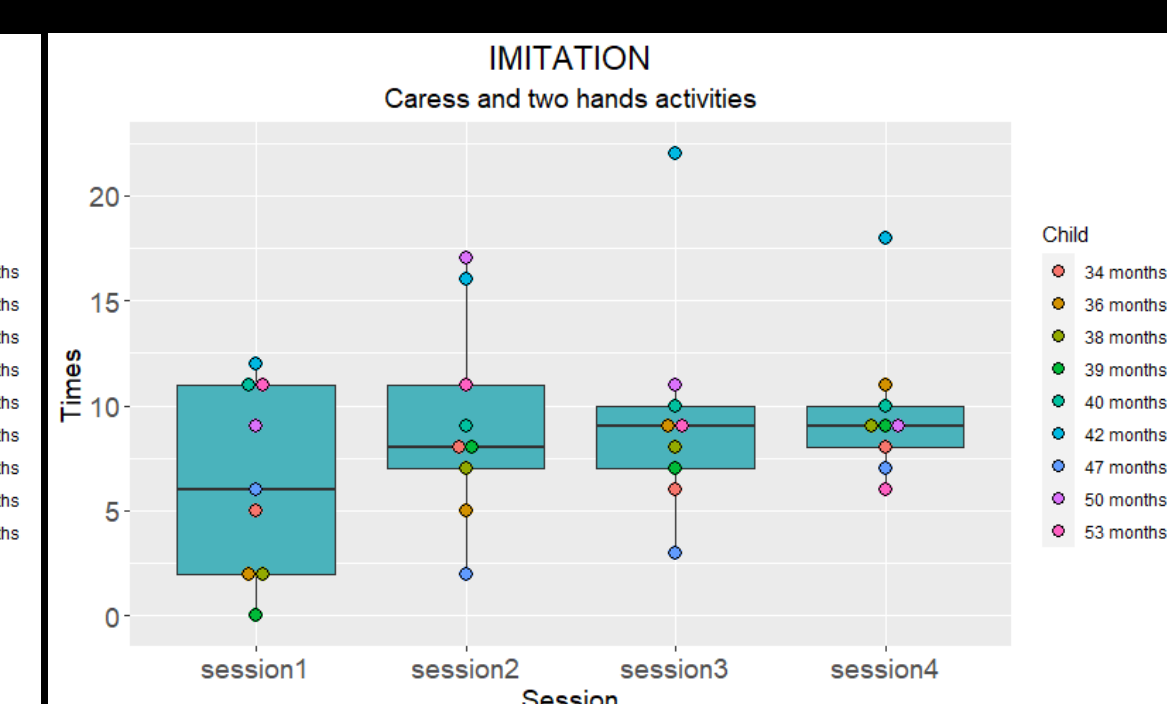
The first experimental prototype of TWC is called PlusMe: this is a panda shaped soft pillow, which can be worn around the neck. In the context of early therapy of Autism Spectrum Disorder (ASD), we present preliminary results about the social behaviour of children with ASD using the PlusMe (carry out in collaboration with the Dept. of Human Neuroscience, Section of Child and Adolescent Neuropsychiatry, University of Rome Sapienza).

In this pilot experiment, the PlusMe is used to stimulate the children's curiosity and encourage key behaviour for social interaction. The test involved nine high-functioning ASD children, mean age 42 months, range 36-53 months. The participants were engaged in five play activities together with the PlusMe toy and a therapist who aimed to encourage the social interaction. The session, lasting around 10 minutes, were repeated for four times, one per week.

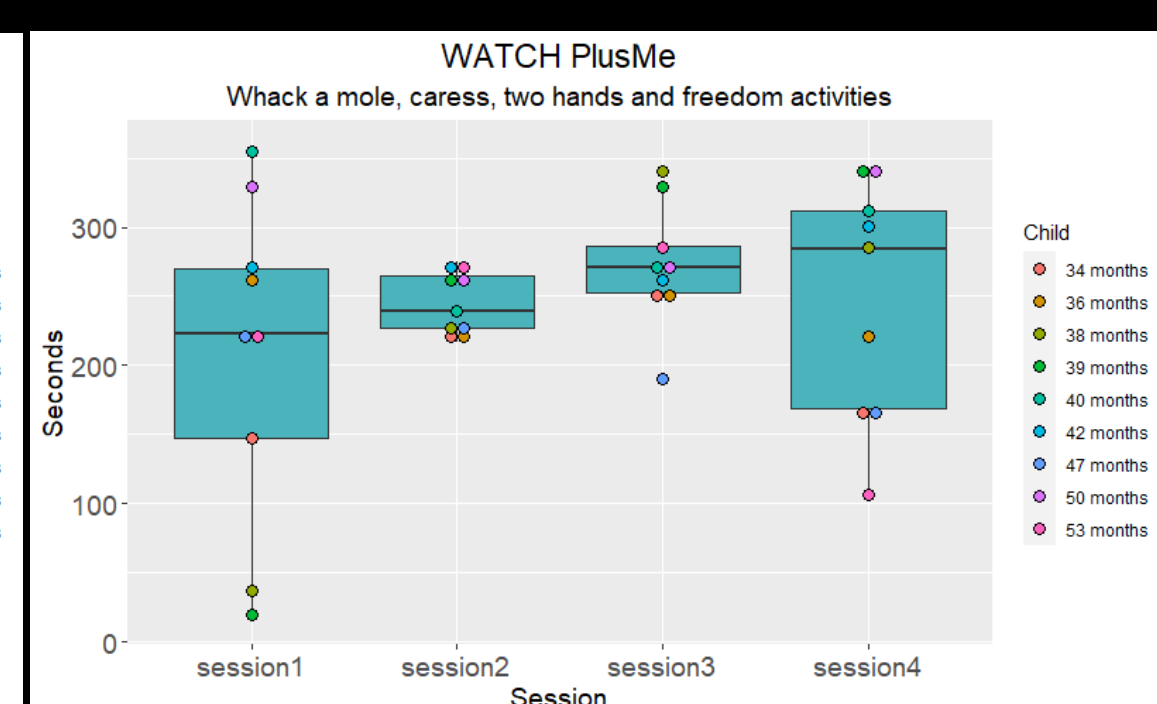
The preliminary results demonstrate that PlusMe, during the sessions, is effective in capturing the children's attention. This may mean that the different rewarding patterns of the PlusMe stimulate the child's curiosity and engagement. In addition, the PlusMe toy can be used to improve important social behaviour such as smile and imitation gestures.



Smile child's behaviour increase throughout the four sessions.



The imitation gestures throughout the four sessions.



The time that child spend to watch PlusMe toy throughout the four sessions.



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