

Early Intervention in Children with Cerebral Palsy: Is mobile application based Management Strategies the NEXT BIG THING?

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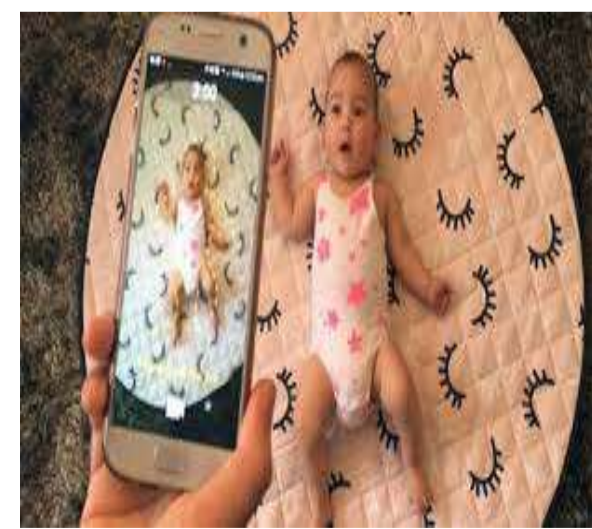
Introduction

- Cerebral palsy (CP) is the most common motor disability in childhood. Population-based studies from around the world report prevalence estimates of CP ranging from 1.5 to more than 4 per 1,000 live births or children of a defined age range. Often Early identification and Early Intervention is the key to minimize the challenges and the associated disabilities in the future. Early Intervention consists of giving the child with CP the appropriate input that includes sensorimotor and Cognitive experience that Can shape the future of the child. This includes educating the Parent /Primary caregiver to have an effective follow up at home. In today's world of technology the mobile has become an integral part of our lives and this could be the next big thing in Early Intervention to form a bridge between the caregiver and the professional

Apps In cerebral palsy

- Early diagnosis appears key for physiotherapy interventions for cerebral palsy, so researchers have developed an app for parents to video their child for remote screening in Australia
- [Baby Moves](#) – available in the [Apple App Store](#) and [Google Play](#) – that parents themselves can use to video their babies and allow clinicians to identify potential symptoms remotely. There is strong emerging [evidence](#) that early intervention, including physiotherapy and occupational therapy, can improve the trajectory for children with cerebral palsy by helping them to wire their brains to better move their bodies and perform activities,” says Associate Professor [Alicia Spittle](#) of University of Queensland who has led the development of the app
- VIDEO ASSESSED BY CLINICIAN
Cerebral palsy is generally diagnosed through observing abnormal or absent spontaneous movement in babies aged up to 20 weeks. But this is usually only carried out in hospital. The idea of the app is to make it easier for parents to screen their own child for cerebral palsy by taking a video to be assessed by a trained clinician. If a clinician detects any suspicion of the disorder the parents are then asked to bring in their child for a formal assessment.

Baby Moves



In Collaboration with



Need for such an app

- A study published in 2014 by Mijna Hadders algra, Department of Pediatrics, Developmental Neurology, University Medical Centre Gronigen, Netherlands has stressed that the programs that stimulate all aspects of infant development by means of family coaching are most promising . Although evidence of early intervention
- The evidence that early intervention is able to improve developmental outcome in children with CP is, however, very limited. Weak evidence suggests that parental coaching and provision of hints and suggestions on how to challenge infant activities during daily life are associated with improved functional outcome



- The Importance of making the parent/ caregiver an active contributor in the habilitation process of the child with cerebral palsy Starts with three basic things
- Ways to Lifting the child Ways in Carrying the child Ways to position the child Growing evidence supports the efficiency of early intervention (EI) services to children with developmental delays
- Brain development is something that has been studied for many generations and new technology makes it possible to get even more insight and knowledge about how the brain is developing and what stimulates to development. It is for example well known that the first two years of life is a critical period of learning tasks, because there is a burst of synapse production in the brain, and this is the time where the brain is most likely to adapt and learn (Johnston, 2009).



Continued

- A study titled A systematic review of interventions for children with cerebral palsy: state of the evidence. Suggests that out of 64 interventions
- 16% were graded 'do it' (green go);
- 58% (76 out of 131) 'probably do it' (yellow measure);
- 20% (26 out of 131) 'probably do not do it' (yellow measure); and
- 6% (8 out of 131) 'do not do it' (red stop).
- The Green interventions included anticonvulsants, bimanual training, botulinum toxin,, casting, constraint-induced movement therapy, context-focused therapy, diazepam, fitness training, goal-directed training, hip surveillance, **home programmes**. So Home Programmes included in this list states the efficacy of a well detailed plan of care to be followed at home

What could be included in APP

- Sensory motor inputs that are essential to contribute for the overall development of the child
- Activities to be done for cognitive improvement including understanding self and environment
- Parent child Interaction tips to improve bonding and for communication
- Lifting , carrying positioning techniques to address the motor issues
- Correct Feeding Positions to counter patterns that can influence
- Tips for improving Body awareness to Body schema so that the child can become more functional
- To be aware of current assistive devices and technology that can contribute for the development
- To address specific issues like spasticity , low tone through easy follow up techniques
- Facetime with the Concerned professional if required

Conclusion

- Qatar had ratified the Convention in 2008 and in April 2015 it had adopted the law on persons with disabilities (Law NO. 2 for 2004), which covered the rights contained in the Convention.. Further, Qatar had adopted a national health strategy which provided free health insurance for persons with disabilities, and a medical Committee of Disability had been established in order to look into health, social and family concerns of persons with disabilities.
- The app based Home management in Early Intervention would be a boon to state of Qatar there by reducing the burden on Facility access by the Children with cerebral palsy in the early Intervention Group as the Children requiring all kind of follow up is huge and that can include a waiting list as well