

## **Mobile Addiction and Cognitive-Behavioural Intervention: A Case Study**

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### **ABSTRACT**

*Mobile addiction is increasingly becoming a severe problem in children leading to aggression . The purpose of this article is to present a case study on Smartphone addiction. An intervention programme based on Cognitive-behaviour modification is employed with the child. The subject in this case study was a 3.7 year old child who lived in India. The child received behavior modification for about 3 months. And his mother received 3 months of counseling. Changes in the child and mother were seen in reducing smartphone addiction. This paper suggests that tailored behaviour change programmes could significantly benefit in reducing the mobile addiction.*

**Keywords:** *Mobile Addiction, Cognitive-Behavioural Intervention, Child with Intellectual Disability*

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### **I. INTRODUCTION**

Intellectual Disability in India is the only third to the depressive disorders and anxiety disorders. Improving access to evidence-based mental health services for those with mental disorders is the best approach to address the burden of mental disorders in India. The World Health Organization (WHO) defines 'Disability' as "an umbrella term, covering impairments, activity limitations, and participation restrictions. Intellectual disability is a condition characterized by significant limitations in both intellectual functioning and adaptive behavior that originates before the age of 22 (AAIDD). The Preamble to the Convention on the Rights of Persons with Disabilities (CRPD) -2006, adopted by the United Nations, describes disability as: "Disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others." As per the Census 2011, the differently abled population in India is 26.8 million. There has been a marginal increase in the differently-abled population in India, with the figure rising from 21.9 million in 2001 to 26.8 million over the period of 10 years. Children with ID are somewhat more likely than other children to have behavioral problems, such as explosive outbursts, temper tantrums, and physically aggressive or self-injurious behavior. These behaviors are often related to specific frustrating situations compounded by an impaired ability to communicate and control impulses.

"Mobile Attachment" is defined as a bond between a person's self and a mobile phone that varies in strength. The radio waves from the mobile penetrate deep into the brain, not just around the ear. The disturbed brain activity could impair children's learning ability and other behavioral problems. It could even affect their mood and ability to learn in the classroom if they have used the phone during the break time. Separation from the mobile can induce behavioural and physiological stress, proximity seeking behaviour, and an attentional bias to separation-related stimuli for those with higher mobile attachment.

In 2019 covid pandemic has brought in an another angle of the disability in the context of attachment and attachment which is through digital world particularly computer, mobile, tab, in this context who/ unicef has expressed deep anguish about children and their addiction to mobiles and computers with particularly with movies, gaming, pornography, unsafe sites for kids and so on.. Through this study we would like to explore and analyze things so that planned help can be extended to the children who are addicted to smartphones. Professional help can be extended after understanding it from the research point of view.

Smartphone addiction can be described as a disorder in which the individual's inability to control smartphone use causes significant distress or functional impairment, and which further creates psychological distress, difficulties with social relationships, school or work problems (Burnay, Billieux, Blairy, & Larøi. , 2015). Attachment to phone is harming an effect on the children with damaged eyes, forgetfulness due to

increased screen time, attention issues, disturbed sleep, anxiety, tiredness, violent behaviours, temper tantrums and self injurious behaviours.

According to a study around 66 % Indians confessed to being on their smartphones while spending time with their kids. Parents worry that their children will become/are addicted to devices. The tables have turned. Kids are worried about how often parents or adults are using different devices since the pandemic forced us indoors. According to a study titled 'Impact of Smartphones on Human Relationships 2021', 66 per cent of Indian parents have confessed to being on their smartphones while spending time with their kids. The Vivo-SwitchOff 3.0 report, conducted in association with Cybermedia Research (CMR), focused on relationship dynamics differently. It shed light on the various trends, patterns associated with smartphone usage and analyzed the changing behaviour of consumers. In pre-Covid times, we were using the phone 4.94 hours on average per day, which went up to 6.85 hours during the early days of the pandemic and now it's 6.5 hours. 84 per cent agree that the smartphone has improved their quality of life. 32 per cent increase in the time spent on smartphones from pre-COVID era. 30 per cent increase in smartphone usage by kids. 74 percent of parents feel that their relationship with their kids may be hurt because of smartphones. 74 percent of parents get irritated when kids ask for something while they are immersed in their smartphones. 66 percent of parents confess to always being on the phone when with their kids. 86 percent of parents accept that they are distracted by their phones when with kids. 70 percent of parents are using smartphones while eating food/at the dinner table. 94 percent of parents agree that their phones have become a part of their bodies that they cannot separate from. 46 per cent have voluntarily switched off their phones for a considerable amount of time. 95 percent of parents want to spend more uninterrupted time with their kids.

The factors that can affect a person experiencing smartphone addiction according to Jameel, Shahnawaz, & Griffiths, 2019, are Salience, Modify the mood, Tolerance, Withdrawal, Conflict, Relapse. The factors of smartphone addiction (Agusta, 2016) on smartphone addiction as suggested by several factors that cause smartphone addiction a. Internal Factors This factor consists of factors are Sensation seeking, Low self-esteem, High extraversion personality and Low self-control . The External Factors high media according to Kwon et al., 2013 are – Stress, Sadness, Grief, Loneliness, Anxiety and Learning Saturation and Leisure boredom.

The aim of the current intervention study is to find out the effectiveness of cognitive behavioural intervention programme in reducing mobile addiction in a child with intellectual disability. The objectives of the study: a) To determine how mobile addiction leads to increased self injurious behaviours; b) To determine the effective symptom management of problem behaviours/ aggressive and self injurious behaviours in a child.

## **II. METHODS**

### **2.1 Participants**

A child who was about 3.7 months, diagnosed with mild developmental delay and moderate autism was considered for the study. He was taken from the cross disability center, NIEPID, Secunderabad. He had presented the complaints of mobile addiction with violent and destructive behaviours. His developmental milestones like speech and toilet control were delayed. The child is not attending any school. He plays with siblings and his grandfather but not with others. He is the second child. His mother takes sole care of him. Mother is educated but seems to be slightly depressed. They resided in the urban area with no history of MI/VI/HI/ID/PH in the family.

### **2.2 Materials Used**

Attachment, Addiction and Aggression (AAA) Case Taking Checklist by the Researcher

The Researcher prepared a semi structured case taking checklist which has 14 questions related to items on Attachment, Addiction and Aggression. Information is gathered from the informant.

Behavioural Assessment Scale for Indian Children with Mental Retardation - Part B (BASIC MR-Part B)

The BASIC MR-Part B is developed by Reeta Peshawaria and S. Venkatesan in the year 2000. It consists of 75 items grouped under ten domains namely violent and disruptive behaviour, temper tantrums, misbehaves with others, self injurious behaviours, repetitive behaviours, odd behaviours, hyperactive behaviours, rebellious behaviours, antisocial behaviours and fears. It is scored from 0,1 and 2. The test-retest reliability was found to be 0.68

National Institute for the Mentally Handicapped - Disability Impact Scale (NIMH-DIS)

The NIMH-DIS is developed by Reeta Peshawaria, D.K. Menon, Don Bailey and Debra Skinner in the year 2000. It consists of 11 areas of impact namely physical care, health, career, support, financial, social, embarrassment/ridicule, relationships, sibling effect, specific thoughts and positive impact. It is scored from 2,1,0. The inter-rater reliability was found to be 0.849.

### 2.3 Procedure

Consent from the parent was taken for the intervention. It was done in three phases. Phase one included a Pre-Intervention Assessment where the child was assessed for IQ. The second phase consisted of Intervention where the child was given behaviour modification training and the mother was given counseling and cognitive behavioural therapy. Phase three included a Post-Intervention Assessment where follow up and feedback was taken from the parent.

## III. RESULTS AND DISCUSSION

Table 1 showing the scores of a child engaged in using Mobile

Assessment	Raw Score	Cumulative Percentage
Baseline	10	0.7
1st Quarter	7	0.5

Table I shows that the number of hours a child engaged in mobile phone addiction before the behaviour modification was given is 10 which is high with a cumulative percentage of 0.7. The score in the first quarter which was 7 after the intervention is given with a cumulative percentage of 0.5

Table 2 showing the results of the Child on BASIC MR- Part B

Assessment	Raw Score	Cumulative Percentage
Baseline	30	3.75
1st Quarter	13	1.6

Table II shows the scores of the child on BASIC MR-Part B in the various domains. Before the behaviour modification was given, the baseline score was 30 which is high with a cumulative percentage of 3.75. The score in the first quarter which is 13 after the intervention was given with a cumulative percentage of 1.6.

Table 3 showing the results of the Mother on NIMH - Disability Impact Scale

Assessment	Raw Score	Cumulative Percentage
Baseline	61	5.54
1st Quarter	38	3.34

Table III shows the scores of the Mother on NIMH-DIS in the various areas. Before the counseling and the cognitive behaviour therapy was given, the baseline score was 61 which is high with a cumulative percentage of 5.54. The score in the first quarter which is 38 after the intervention was given with a cumulative percentage of 3.34.

## Discussion

Mobile is useful but if used excessively can lead to behavioural changes in children and adolescents. Mobile addiction has a significant effect on the child's social engagement. Alamri (2023) found that exposure to gadgets in children was negatively associated with expressive and vocabulary language. Hosokawa, R., & Katsura, T. (2018) found that smartphones can interfere in a child's development. Educating and teaching parents in going about with the child can help in reducing the phone addiction and to deal with the situations in a better way.

Table I showed that the number of hours a child engaged in mobile phone addiction before the behaviour modification has come down from 10 to 7 after the intervention. Child was given a phone to keep him engaged while mother was busy in the kitchen. He watched rhymes, beat songs for about 4 hrs in a day. If the phone was not given, a child engaged in pinching, throwing things and biting self-others behaviours is given. Mother was trained to engage him in constructive play with highly reinforcing activities. Biting, throwing and pinching behaviours reduced to an extent in the child.

Table II shows the scores of the child on BASIC MR-Part B, a baseline score of 30 which is high with a cumulative percentage of 3.75 followed by a first quarter score which is 13 after the intervention was given with a cumulative percentage of 1.6. The child had these behaviours - Self biting, Does not sit at one place, Eats inedible things, Beats others, Doesn't play with others, No eye contact and Uses phone. He communicated through crying, biting and throwing things. He expressed anger through crying and throwing objects. He was more attached to and depended on mother. Considering the relative frequency, duration & severity; whether posing danger; hindering learning activity and parent consultation, following behaviors were selected as target behavior for BMP - Sitting Tolerance, Reduce Biting Behaviour and aggressive behaviour was chosen. Some of the rewards which were given to the child were - Cornflakes, Murmura, Jaggery, Balloons. Waterballs and Sensory Ball - Light. The child could identify common objects - fan, glass, bottle and comprehended simple instruction. Frequency recording technique was used to record the problem behavior. Sessions for about 45 minutes each, thrice a week for three months, were taken for the child at the institute. Differential Reinforcement of Alternate Behaviour and Scheduling of Activities was done for the child. The mother was trained to follow the same at home as well. Partial changes were seen in the child after three months.

Table III shows the scores of the Mother on NIMH-DIS, before the counseling and the cognitive behaviour therapy was given, the baseline score was 61 which is high with a cumulative percentage of 5.54 followed by the score in the first quarter which is 38 after the intervention was given with a cumulative percentage of 3.34. The mother has severe stress as she stayed in a joint family and had two other children to take care of. Sessions for the mother were for about 30 minutes thrice a week for three months. Relaxation, journaling, reframing of thoughts were recommended and she was asked to practice regularly. Partial changes were found in her effectively managing herself and the child.

Keya Ding et.al (2023) found that the digital addiction in children and adolescents using cognitive behavioural therapies and family based interventions could reduce problematic behaviours. A cognitive behavioural programme for the parent and child can significantly reduce the mobile addiction in children with appropriate follow ups.

## REFERENCES

- [1]. American Association on Intellectual and Developmental Disabilities (2010). Definition manual, Intellectual Disability: Definition, Classification, and Systems of Supports (Eds.) (pp 5-6). Washington, DC, USA.
- [2]. Allen, D. (2000). Recent research on physical aggression in persons with intellectual disabilities: An overview. *Journal of Intellectual and Developmental Disabilities*, 2000,25, 41–57. doi: 10.1192/bjp.bp.113.131227.
- [3]. Ding K, Li H. (2023). Digital Addiction Intervention for Children and Adolescents: A Scoping Review. *International Journal of Environmental Research and Public Health*. 2023; 20(6):4777. <https://doi.org/10.3390/ijerph20064777>
- [4]. Hosokawa, R., & Katsura, T. (2018). Association between mobile technology use and child adjustment in early elementary school age. *PloS one*, 13(7), e0199959. <https://doi.org/10.1371/journal.pone.0199959>
- [5]. Mawaddah Nasution (2021). Factors affecting smartphone addiction in children. *Proceeding International Seminar on Islamic Studies*. Volume 2, Nomor 1, 2001
- [6]. NIMH Disability Impact Scale (2000). Retrieved from <https://niepid.nic.in/NIMH%20Disability%20Impat%20scale.pdf>
- [7]. Peshawaria, Reeta & Venkatesan, Srinivasan. (1992). Behavioral Assessment Scales for Indian Children with Mental Retardation (BASIC-MR). <https://www.niepid.nic.in/Behavioural%20assessment%20scales%20for%20indian%20children-basic-mr.pdf>
- [8]. Peshawaria, Reeta, Menon, D.K. et.al. (2000). NIMH - Disability Impact Scale. <https://www.niepid.nic.in/NIMH%20Disability%20Impat%20scale.pdf>
- [9]. World Health Organization (2002). *Towards a Common Language for: Functioning, Disability and Health*. The International Classification of Functioning, Disability and Health, Geneva.