



# FEEDING BEHAVIOR AMONG CHILDREN WITH CEREBRAL PALSY

By

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**Title: “Feeding Behavior among Children with Cerebral Palsy”**

**Aim of the study:** To identify the feeding behavior of children with cerebral palsy.

**Methodology:** This is a quantitative type of cross-sectional survey study where 191 samples were assigned conveniently from Pediatric Department of Centre for the Rehabilitation of the Paralyzed (CRP), Savar and William and Marie Taylor School (WMTS), CRP, Savar, Dhaka. Behavioral Pediatric Feeding Assessment Scale (BPFAS) was used for the study. Data was analyzed by using descriptive statistical analysis (SPSS= Statistical Package for the Social Sciences) method.

**Result:** Majority of the participants 61% (117) showed feeding difficulties and showed more problematic behavior like food refusal behavior, picky eating behavior, oral sensory and motor problem and disruptive mealtime behavior. And most of the parents faces psychological disturbance for their child’s feeding behaviors.

**Conclusion:** Feeding is a multisectoral procedure and children with CP faces severe feeding problem and shows lots of feeding behavior during their mealtime. In this study among the total participants maximum participants were male 61% and 39% were female. In this study majority of the children had feeding difficulties 61% and shows lots

of maladaptive feeding behaviors like food refusal behaviors (takes longer than 20 minutes to finish meal 62.8%, delays, has poor appetite 32.5%, spit out food 30.4% gets up table during meal 24.1%), oral motor and sensory problem (has chewing problem 35.6%, eats only ground, stained or soft food 28.8%) Picky eating factors (drink meal 65.4%, eats meat or fish 49.7%, eats fruits 44.5%, eats vegetables 39.8%, try to new foods 34% and enjoy eating 27.2%) and disruptive mealtime behaviors (tantrum at mealtimes 29.30%, whines or cries at feeding time 29.30%). Parents with CP applied some strategies to coping with their child problem like always feel confident to manage child behavior 72.8%, feel confident to their child feed 47.1%, serve food to their child preference 40.8% and doesn't show aggressive behavior like getting angry 69.6%, never force to feed their child 44.5% coaxing their child 28%. Parents showed also some mental disturbance for their child's feeding related issues (feel nervous 80%, headache 73.8%, trouble to think clearly 60.2%, easily tired 58.6% sleep badly 56.5% etc.). Thus, professionals working with CP (Doctors, physiotherapists, occupational therapists) need to remain alert to the presence of feeding behaviors related challenges in their clients and refer to Speech and Language Therapists for diagnosis and treatment of behavioral feeding difficulties; which will increase the quality of life of people with CP.

**Limitation:** This is the first study of feeding behavior among children with cerebral palsy in Bangladesh. So, there were some situational limitations and barriers while considering the results of the study in different aspects. Those are as follows:

- Because of short period of time researcher conduct the research very short time so, the data set was limited.
- This study was conducted among CP child age between (2-7) at CRP and one school.
- Because of limited resources researcher faced lots of barriers to conduct the research.
- Researcher conducted only the qualitative method.
- Parents educational status and living status was different which exaggerated their understanding.

**Recommendation:** This is the first primary study on feeding behavior among CP child in Bangladesh. So, there were some limitations during conducting the study. The recommendations for future study are:

- The study was done within short period of time and within a limited budget, a longer duration and proper funding would result in more fruitful and complete study.
- Purposive sampling was used to select participants. So, the future research can be done with a more reliable sampling procedure.
- It would be better, if there is no age range barrier.
- Further research should investigate on Parents perception about quality of life of CP child for their feeding behavior.
- Study can be done with larger group of samples so that the more impact will come.

**References:**

Adams, M. S., Khan, N. Z., Begum, S. A., Wirz, S. L., Hesketh, T., & Pring, T. R. (2011). Feeding difficulties in children with cerebral palsy: low-cost caregiver training in Dhaka, Bangladesh. *Child: Care, Health and Development*, 38(6), 878–888. doi: 10.1111/j.1365-2214.2011.01327x

Afzali, M., Etemad, K., Kazemi, A., & Rabiei, R. (2019). Cerebral Palsy Information System with an approach to information architecture: A systematic review. *BMJ Health & Care Informatics*, 26(1). doi: 10.1136/bmjhci-2019-100055

Andrew, M. J., Parr, J. R., & Sullivan, P. B. (2012). Feeding difficulties in children with cerebral palsy. *Archives of Disease in Childhood - Education & Practice Edition*, 97(6), 222–229. doi: 10.1136/archdischild-2011-300914

Arvedson, J. C., (2013). Feeding children with cerebral palsy and swallowing difficulties. *European Journal of Clinical Nutrition*, 67(S2). doi.org/10.1038/ejcn.2013.224

- Bachmeyer, M. H. (2009). Treatment of selective and inadequate food intake in children: A review and practical guide. *Behavior Analysis in Practice*, 2(1), 43–50. doi.org/10.1007/bf03391736
- Baily, D.M. (1997). *Research for the Health Professional: A Practical Guide* (2<sup>nd</sup> ed.). Davis company, USA
- Benfer, K. A., Weir, K. A., Bell, K. L., Ware, R. S., Davies, P. S. W., & Boyd, R. N. (2015). Food and fluid texture consumption in a population-based cohort of preschool children with cerebral palsy: relationship to dietary intake. *Developmental Medicine & Child Neurology*, 57(11), 1056–1063. doi: 10.1111/dmcn.12796
- Cans, C., Dolk, H., Platt, M. J., Colver A., Prasauskene, A., & Ragelohmann, I. K. (2007). Recommendations from the SCPE Collaborative Group for defining and classifying cerebral palsy. *Developmental Medicine & Child Neurology*, 49, 35–38. doi.org/10.1111/j.1469-8749.2007.tb12626.x
- Clancy, K. J., & Hustad, K. C. (2011). Longitudinal changes in feeding among children with cerebral palsy between the ages of 4 and 7 years. *Developmental Neurorehabilitation*, 14(4), 191–198. doi: 10.3109/17518423.2011.568467
- DePoy, E., & Gitlin, L. N. (1998). *Introduction to research- Understanding and applying multiple strategies*. USA: Mosby
- Donkor, C. M., Lee, J., Lelijveld, N., Adams, M., Baltussen, M. M., Nyante, G. G., ... Zuurmond, M. (2018). Improving nutritional status of children with Cerebral palsy: a qualitative study of caregiver experiences and community-based training in Ghana. *Food Science & Nutrition*, 7(1), 35–43. doi: 10.1002/fsn3.788
- Graham, H. K., Rosenbaum, P., Paneth, N., Dan, B., Lin, J.-P., Damiano, D. L., Becher, J. G., Gaebler-Spira, D., Colver, A., Reddihough, D. S., Crompton, K. E., & Lieber,

R. L. (2016). Cerebral palsy. *Nature Reviews Disease Primers*, 2(1).  
doi.org/10.1038/nrdp.2015.82

Hicks, C. M. (2000). *Research methods for clinical therapists (3rd ed.)*. London:  
Churchill Livingstone

Karim, T., Jahan, I., Dossetor, R., Giang, N. T., Van Anh, N. T., Dung, T. Q., Chau, C. M., Van Bang, N., Badawi, N., Khandaker, G., & Elliott, E. (2019). Nutritional status of children with cerebral palsy—findings from Prospective Hospital-based surveillance in Vietnam indicate a need for action. *Nutrients*, 11(9), 21-32.  
doi.org/10.3390/nu11092132

Katangwe, T. J., Van Toorn, R., Solomons, R. S., Donald, K., Steel, S., Springer, P. E., & Kruger, M. (2020). A south african cerebral palsy registry is needed. *South African Medical Journal*, 110(5), 353. doi.org/10.7196/samj. 2020.v110i5.14504

Ketelaar, M., Volman, M. J., Gorter, J. W., & Vermeer, A. (2008). Stress in parents of children with cerebral palsy: What sources of stress are we talking about? *Child: Care, Health and Development*, 34(6), 825–829. doi.org/10.1111/j.1365-2214.2008. 00876.x

Khandaker, G., Muhit, M., Karim, T., Smithers-Sheedy, H., Novak, I., Jones, C., & Badawi, N. (2018). Epidemiology of Cerebral Palsy in Bangladesh: A population-based surveillance study. *Developmental Medicine & Child Neurology*, 61(5), 601–609. doi.org/10.1111/dmcn.14013

Kim, J.-S., Han, Z.-A., Song, D. H., Oh, H.-M., & Chung, M. E. (2013). Characteristics of dysphagia in children with cerebral palsy, related to gross motor function. *American Journal of Physical Medicine & Rehabilitation*, 92(10), 912–919.  
doi.org/10.1097/phm.0b013e318296dd99

- Lang, T. C., Fuentes-Afflick, E., Gilbert, W. M., Newman, T. B., Xing, G., & Wu, Y. W. (2012). Cerebral palsy among Asian ethnic subgroups. *Pediatrics, 129*(4). doi.org/10.1542/peds.2011-2283
- Ribeiro, M. F., Sousa, A. L., Vandenberghe, L., & Porto, C. C. (2014). Parental stress in Mothers of children and adolescents with cerebral palsy. *Revista Latino-Americana De Enfermagem, 22*(3), 440–447. doi.org/10.1590/0104-1169.3409.2435
- Rosenbaum P, Paneth N, Leviton A, et al. A report: the definition and classification of cerebral palsy April 2006. *Dev Med Child Neurol Suppl 2007; 109: 8–14*
- Russell, M., Jewell, V., Poskey, G. A., & Russell, A. (2017). Enteral feeding and its impact on family mealtime routines for caregivers of children with cerebral palsy: method study. *Australian Occupational Therapy Journal, 65*(1), 25–34. doi: 10.1111/1440-1630.12418A
- Salmon, M. K. (2018). Cerebral palsy: A webliography. *Journal of Consumer Health on the Internet, 22*(3), 244–252. doi.org/10.1080/15398285.2018.1513763
- Serel Arslan, S., Ilgaz, F., Demir, N., & Karaduman, A. A. (2017). The effect of the inability to intake chewable food texture on growth, dietary intake and feeding behaviors of children with cerebral palsy. *Journal of Developmental and Physical Disabilities, 30*(2), 205–214. doi.org/10.1007/s10882-017-9580-y
- Serel Arslan, S., Ilgaz, F., Demir, N., & Karaduman, A. A. (2017). The effect of the inability to intake chewable food texture on growth, dietary intake and feeding behaviors of children with cerebral palsy. *Journal of Developmental and Physical Disabilities, 30*(2), 205–214. doi.org/10.1007/s10882-017-9580-y
- Martins, Y., Young, R. L., & Robson, D. C. (2008). Feeding and eating behaviors in children with autism and typically developing children. *Journal of Autism and Developmental Disorders, 38*(10), 1878-1887. doi:10.1007/s10803-008-0583-5

- Crist, W., McDonnell, P., Beck, M., Gillespie, C. T., Barret, P., & Mathews, J. (1994). Behavior at mealtimes and the Young Child with Cystic Fibrosis. *Journal of Developmental & Behavioral Pediatrics, 15*(3). doi:10.1097/00004703-199406000-00001
- Crist, W., & Napier-Phillips, A. (2001). Mealtime behaviors of young children: A comparison of normative and clinical data. *Journal of Developmental & Behavioral Pediatrics, 22*(5), 279-286. doi:10.1097/00004703-200110000-00001
- Lopes, P. A., Amancio, O. M., Araújo, R. F., Vitalle, M. S., & Braga, J. A. (2013). Food pattern and nutritional status of children with cerebral palsy. *Revista Paulista De Pediatria, 31*(3), 344-349. doi:10.1590/s0103-05822013000300011
- Martins, Y., Young, R. L., & Robson, D. C. (2008). Feeding and eating behaviors in children with autism and typically developing children. *Journal of Autism and Developmental Disorders, 38*(10), 1878-1887. doi:10.1007/s10803-008-0583-5

***[N.B. For better understanding of the study, please see hard copy & for any further information please contact: jnntlnayem@gmail.com]***