

Influence of marital discord on compliance to physiotherapy appointment for caregivers of children with cerebral palsy in Kano metropolis (Nigeria)

Mahmoud Y.U, Kawthar A.A.

Department of Physiotherapy, Faculty of Allied Health Sciences, College of Health Sciences, Bayero University, Kano, Nigeria

Abstract

Background: The involvement of parents in compliance to treatment regime and home program may not be properly achieved where there is marital discord or separation. Despite the high growth of marital conflicts, and high number of children with cerebral palsy, there seems to be a dearth of research on the influence of marital discord on compliance to physiotherapy appointment in Kano state (Nigeria).

Objectives: This study was to find out the influence of marital discord on compliance to physiotherapy appointment for caregivers of children with cerebral palsy in Kano metropolis.

Methods: In this cross-sectional survey, Seventy-four (74) participants were recruited from Aminu Kano Teaching Hospital, Murtala Muhammad Specialist Hospital and Hasiya Bayero Pediatric Hospital using purposive sampling technique. Case notes of the patients and closed ended questionnaire were used to collect data from the patients' caregivers. Descriptive statistics of means and standard deviation in form of percentages, tables and graphs were used to summarize the results. Inferential statistics of Chi-square (at 5% level of significance), was employed to determine the associations between pairs of categorical variables in the study.

Results: It was found out that there is statistically significant association between marital discord and compliance to physiotherapy appointment (p -value=0.001). The most predominant type of CP was found to be mixed CP 52(70.3%), the most common co-morbid condition associated with CP was speech problem and the commonest aetiological factor was birth asphyxia 31(41.9%).

Conclusion: Marital discord among caregivers of children with cerebral palsy has influence on their compliance to physiotherapy appointment for management.

Key words: Cerebral palsy, Marital discord, Compliance, Physiotherapy.

Background of the Study

Cerebral palsy (CP) is a static encephalopathy affecting the immature brain which leads to permanent motor dysfunction [1]. It is probably the most common neurological condition causing permanent physical disability in childhood [1]. It designates a group of permanent disorders of the development of movement and posture that are attributed to non-progressive disturbances occurring in the developing foetal or infant brain

[2]. Raising a child with cerebral palsy is stressful for the parent because it requires an intensive physical engagement as well as coping with emotional reactions to the child's condition [3]. In addition to usual demands imposed by the parenthood, families with a child with developmental difficulties face a series of specific tasks arising from the child's health condition [4]. Many children with cerebral palsy also show evidence of sensory and intellectual impairments and may face limitations in self-

care functions such as dressing, feeding, bathing, and mobility. Such limitations, and the long term dependency they create, can place demands on caregivers that far exceed the usual requirements for developing children [5].

“Marriage”, being the basis of a family, is considered as one of the most important interpersonal relationships in human life [6]. Causes such as health problems of children or parenting stress have negative influences on marital relationship [7,8]. Therefore, Marital adjustment is considered as a part of social wellbeing, disturbed marital relationship adversely affects physical health, mental health, the quality of life, and even economic status of individuals. This may also affect children of the family, especially when marital discord or divorce appears [9]. Among key points in making progress and succeeding with a therapeutic [10].

Compliance is defined as behaviour coinciding with clinical prescription [11]. In the population of disabled children, parental compliance refers to the adherence of the child's parents to the rehabilitation team's instructions on performing exercises accurately and at the recommended frequency, as well as accepting restrictions, and keeping appointments with medical and rehabilitation staff [10]. Involving parents in their child's therapy and making them active partners seems to hasten achievement of intervention goals [12]. However, the involvement of parents in compliance to treatment regime and home program may not be properly achieved where there is marital discord or separation [13]. Some studies have found the correlation between severity of the child's condition and worse family functioning, but other studies have not replicated this direct relation [14].

Despite this, according to my findings, there is no clear evidence to justify the influence of marital discord on compliance to physiotherapy appointment for the caregivers of children with

cerebral palsy, and also there is no presentable data to evidently show that physiotherapy appointment or home programme is encouraged among the divorced family of the caregivers of children with cerebral palsy in Kano Metropolis. This study was proposed to find the influence of marital discord on compliance to physiotherapy appointment for the caregivers of children with cerebral palsy in Kano metropolis.

Materials and Methods

Seventy-four (74) participants were recruited in this cross sectional study. The subjects (principal caregivers of the children with CP) were recruited from Aminu Kano Teaching Hospital (AKTH), Murtala Muhammad Specialist Hospital Kano (MMSH) and Hasiya Bayero Paediatric Hospital Kano (HBPH) using purposive sampling method. The recruitment was done based on the inclusion and exclusion criteria such as (1) subjects must be the principal caregivers of the children with CP available in the departments of physiotherapy of the above hospitals at the time of the research (2) caregivers of children diagnosed with CP and referred for physiotherapy for at least a period one month.

The instruments used were the case notes of the children with cerebral palsy and a close ended questionnaire. The questions in the questionnaire were generated through literature reviewing and studying sample of questionnaire from related articles. The questionnaire was then validated. Each participant was required to sign a consent form, agreeing to participate in the study. The respondents were assured of the confidentiality of their responses. The questions were asked to each of the participants and the responses were recorded, some information were extracted from the case notes of the children.

The data was collected and analysed using descriptive statistics of means and standard deviation in form of percentages, tables and graphs.

Inferential statistics of Chi-squares (at 5% level of significance) was employed to determine the associations between pairs of categorical variables in the study, using Statistical Package for Social Sciences (SPSS) version 16.0.

Result

Seventy-four (74) caregivers gave their consent to participate in this study. They were given questionnaires to fill and their case notes were also used to get the basic information related to the condition of the patients. The socio-demographic characteristics of the participants and the findings of this study are presented in the tables below.

Table 1 below shows that 53 (71.6%) of the caregivers were mothers, 37 (50%) are within the

age range of 20-40 years, 66 (89.2%) travelled <20km from home to the hospital and 68 (91.9%) of the principal caregivers are married.

Table 2 below depicts the association between marital discord among the parents and compliance to physiotherapy appointment. The Chi-square test shows that the relationship between marital discord among caregivers and compliance to physiotherapy appointment is significant (i.e. P-value<0.05).

Table 3 below shows the level of satisfaction of the caregivers to the physiotherapy service. The table depicts that 57 (77%) of the caregivers were satisfied with the treatment, while 17(23%) of the caregivers were not satisfied with physiotherapy treatment in the hospitals recruited.

Table 1: below shows socio-demographic characteristics of the caregivers

Variables	Frequency (n)	Percentage (%)
Caregiver		
Father	21	28.4
Mother	53	71.6
Age		
<20	0	0
20-40	37	50
40-60	22	29.7
60-80	15	20.3
Distance (km)		
<20	66	89.2
20-50	8	10.8
Marital status		
Single	0	0
Married	68	91.9
Divorced	4	5.4
Widowed	2	2.7

N= Sample size, (N=74)

Table 2: below shows association between marital discord and compliance to physiotherapy appointment for parents of children with cp .

Variables Marital discord	Compliance to appointment N=24 n(%)	Non-compliance to appointment N=50 n(%)	df	X ²	P-value
YES	1(4.2)	42(84.6)	1	49.8	0.001
No	23(95.8)	8(15.4)			

N= total number of the subjects, significant level= P<0.05.

Table 3: below shows level of satisfaction of caregivers to physiotherapy service

VARIABLE	Frequency (n)	Percentage (%)
YES	57	77
NO	17	23

Figure 1 below shows the patterns of clinical presentation of CP. It shows that 52 (70.3%) of the types of CP was mixed CP, followed by spastic quadriplegia which has frequency of 9(12.2%).

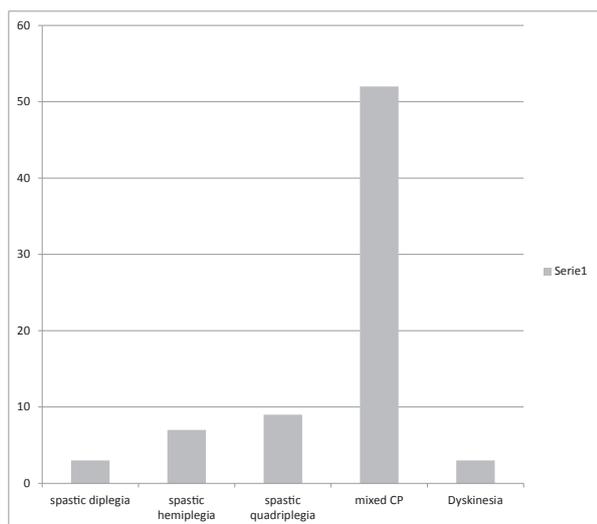


Figure 1: frequency distribution of CP presentations pattern in Kano metropolis.

Figure 2 below shows the distribution of aetiological factors of CP. It shows that the predominant aetiological factor was birth asphyxia 31 (41.9%), followed by Cerebral malaria 20 (27.0%) and then Jaundice 17 (23.0%).

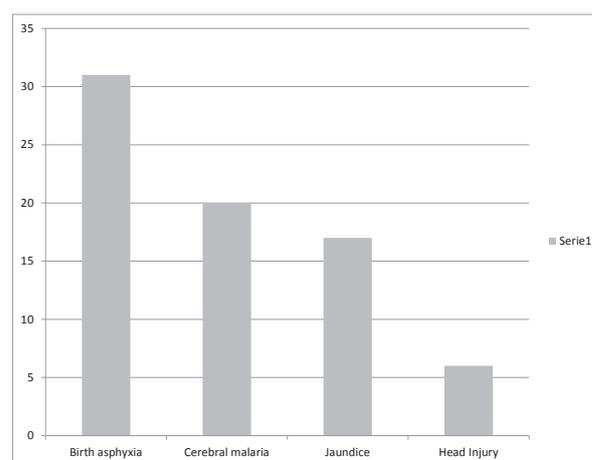


Figure 2: frequency distribution of the aetiological factors of CP

Figure 3 below shows the age distribution of the CP patients. It was found that most of the patients 34 (45.9%) were within the age range of 12-24months followed by age range of 0-12months which has frequency of 24(32.4%).

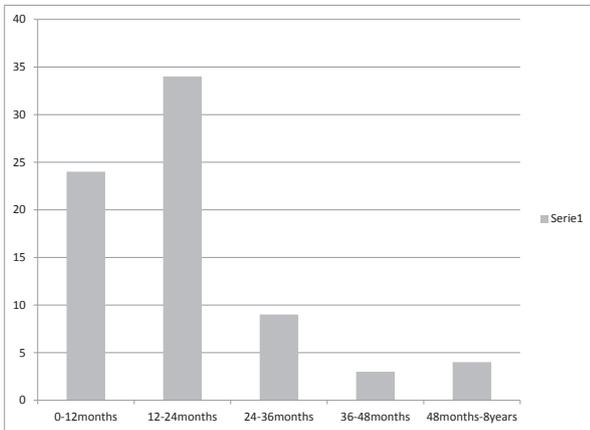


Figure 3: Age distribution of CP Patients in Kano metropolis

Figure 4 below shows the distribution of co-morbid factors associated with CP. It was found out that the most frequent co-morbid factor is speech problem 28 (37.8%), followed by oromotor problem 27 (36.5%), mental retardation 10 (13.5%) and then epilepsies 10 (13.5%).

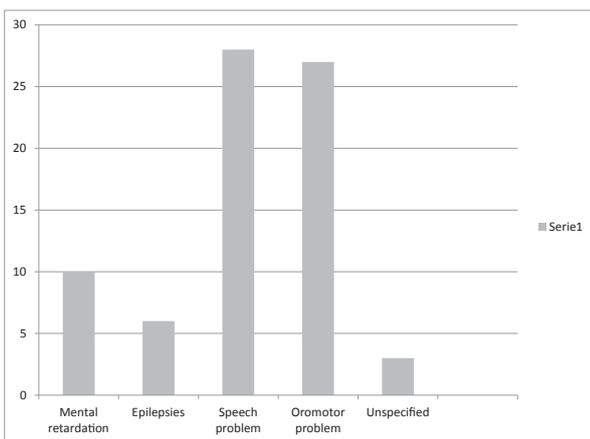


Figure 4: frequency distribution of common co-morbid factors associated with CP in Kano metropolis

Discussion

Findings from this study showed that the most common aetiological factor of CP cases in Kano metropolis is birth asphyxia 31(41.9%). This finding was similar to the result of the study conducted by [15,16,17,18] . However, it is in contrast with most of the studies conducted in United States and Europe in which prematurity or low birth weight was one of the major risk factors identified [16] .

The result of this study revealed that the most predominant type of CP in Kano metropolis is mixed CP 52 (70.3%). This is however in contrast with a publication by national institute of neurological disorders and stroke that the most common type of CP was spastic CP which consists of spastic hemiplegic, spastic diplegic and spastic quadriplegic.

The result of this study showed that the most predominant co-morbid condition associated with CP is speech disorder 28 (37.8%), which is in lined with the research carried out by[19], where the speech and language disorders were observed in 38 percent of children with CP, and these children also present with oromotor problem that cause feeding difficulties, swallowing dysfunction and drooling.

The result of the study also showed that 58 (77%) of the caregivers were satisfied with physiotherapy service in Kano metropolis, which is in lined with the research carried out by [20] that investigated the satisfaction of patients towards orthopaedic services and found out that patients were generally satisfied with services with the highest satisfaction shown to be with the physiotherapist.

The result of this study showed a significant association between marital discord among parents of children with cerebral palsy and compliance to physiotherapy appointment. This study is similar to the findings of the research conducted by [13], which stated that the involvement of parents in compliance to treatment regime and home

program may not be properly achieved where there, is marital discord or separation of parents.

Additionally, it was also concluded in a study conducted by [21,22,23] that as the family's stress increases, the likelihood of treatment compliance for the ill child decreases, which coincided with the findings of this research.

Conclusion

Marital discord among caregivers of children with cerebral palsy has influence on their compliance to physiotherapy appointment . Mixed CP was found to be the most predominant type of CP while birth asphyxia was found to be the most common aetiological factor that is associated with CP in Kano metropolis.

Recommendation

From the findings of this study, the following recommendations were made:

Intervention measures should be put in place to checkmate marital conflicts. Such intervention strategies include: Self management technique, Bibliotherapy, Assertiveness skills training, Marital communication skills, Cognitive behavioural therapy, etc. These may help to facilitate family adjustment and family stability that can minimise the existing high rate of marital separation, especially for the sake of children living with neurological deficits. Where the marital breakdown is unavoidable, measures should be available and enforced to protect right of the children involved .

Caregivers should be fully enlightened about what cerebral palsy is, what actually causes it, risk factors and the preventive measures to be taking so as to minimize the number of cases that occur due to cerebral malaria through regular antenatal clinic. They should be also enlightened on the importance of compliance to appointment treatment and the implications of non-compliance even when there is marital discord or separation

Professionals should emphasized on family-centred care whereby there is use of social model in which the patient condition is not individualized rather incorporating family and relatives to the management regime to ensure compliance.

Since from the findings of this research, the most common co-morbid factor of CP was found to be speech problem, a comprehensive speech therapy unit should be established in the hospitals so as to tackle the speech problems that these patients present with.

Further studies (using large sample size) should be conducted on the barriers to compliance of caregivers to physiotherapy appointment across different parts of Nigeria and the entire world at large.

Reference

1. Tsirikos, A.I., Spielmann,P. Spinal deformity in paediatric patients with cerebral palsy;2007.
2. Rosenbaum, P., Paneth, N., Leviton, A., Goldstein, M., Bax, M., Damiano, D.'A report: The definition and classification of cerebral palsy. *Developmental Medicine & Child Neurology Journal*, 2006; vol. 109, pp. 8–14.
3. Tatjana K., Marina O.,Coping With Stress And Adaptation in Mothers of Children With Cerebral Palsy, *Medical Pregl Journal*, 2012; vol. 9, pp. 373-377.
4. Ketelaar, M., Volman, M.J., Gorter, J.W., Vermeer, A., Stress in parents of children with cerebral palsy: what sources of stress are we talking about, *Child Care Health Development Journal*, 2008; vol. 34, pp. 825—829.
5. BarabasG, Matthews W, &Zumoff P. Care-load for children and young adults with severe children palsy, *Developmental Medicine &Child Neurology*, 1992; vol. 34, pp. 979-984.
6. Brehaut J. C., Kohen, D. E., Garner, R. E., Miller, A. R., Lach, L. M., Klassen, A. F.,Health among caregivers of children with health problems: Findings from a Canadian population-based study. *American Journal of Public Health*, 2009; vol .99, no.7, pp. 1254-1262.
7. Davies, P. T., & Cummings, E. M. Exploring children's emotional security as a mediator of the

- link between marital relations and child adjustment, *Child Development journal*, 1998;vol. 69, pp. 124-139.
8. Ozden,M.S., Celen, N. "The Relationship between Inherent and Acquired Characteristics Of Human Development With Marital Adjustment,Procedia - Social and Behavioral Sciences, 2014; vol.140, pp. 48 - 56.
 9. Moon, Y. S. "Effects of perception of marital conflict and child rearing attitude on child abuse and emotional maladjustment behaviour in children, *Journal of Korean Academy of Child Health Nursing*, 2011; vol.17, no.1, pp. 22-30.
 10. Neil, B. G., Lee, Y. Y., Lee, S. W., Jane, W., & Paul, J. R. "Fathers and maternal risk for physical child abuse, *Child Maltreatment*, 2009;vol.14, no.3, pp. 277-290.
 11. Tavallaii,S.A., Nemati,E., Vishteh, H.R.K., Farahani, M.A., Lankarani, M.M., Assari, S."Marital Adjustment in Patients on Long-Term Hemodialysis.,A Case-Control Study, *Iranian Journal of Kidney Diseases*, 2009; vol. 3, no. 3, pp. 156-61.
 12. Aharon G, Hasi L, Nurit H." Compliance with home rehabilitation therapy By parents of children with disabilities in Jews and Bedouin in Israel, *Developmental Medicine & Child Neurology*, 2001;vol 43, pp. 261-268.
 13. Blum RW. Chronic Illness and Disabilities in Childhood and Adolescence, *journal of Orlando, FL: Grune and Stratton*, 1984 ; pp. 143-58.
 14. Short DL, Schkade JK, Herring JA. "Parent involvements in physical therapy, A controversial issue, *Journal of Pediatric Orthopedics*, 1989;vol. 9, pp. 444-6.
 15. Epstein LM, Cluss PA. "A behavioural medicine perspective on adherence to long-term medical regimens, *Journal of Consulting and Clinical Psychology*, 1982; vol. 50, pp. 950-71.
 16. Mulvihill BA, Wingate MS, Altarac M, Mulvihill FX, Redden DT, Telfair J. "The association of child condition severity with family functioning and relationship with health care providers among children and youth with special health care needs in Alabama, *Maternal Child Health Journal*, 2005;vol.9, pp. 87-97
 17. El-Tallawy H.N., Farghaly W.M., Shehata G.A. "Epidemiology of Cerebral palsy in El-Kharga District-New Valley (Egypt), *Journal of Brain Development*, 2011;vol. 33, pp. 406-411.
 18. Ogunlesi T., Ogundeyi M., Ogunfowora O. "Socio-clinical issues in cerebral palsy in Sagamu, Nigeria, *South Africa Journal Child Health*, 2008;vol.3, pp. 120-124.
 19. Couper J. "Prevalence of childhood disability in rural KwaZulu-Natal. *South Africa Medical Journal*, 2002;vol.92, pp. 549-552.
 20. Karumuna J.M., Mgone C.S. "Cerebral palsy in Dar Es Salaam. *Central Africa Journal Medicine*, 1990; vol.36, pp. 8-10.
 21. Chung J, Wong T, Yeung A. "Non-attendance at an orthopaedic and trauma specialist, outpatient department of a regional hospital, *Journal of nursing management*, 2004; vol. 12, pp. 362-367.
 22. Brand A., Johnson, J. and Johnson, S. "Life stress and diabetic control in children and adolescents with insulin dependent diabetes, *Journal of Paediatric Psychology*, 1986 vol.11, pp. 481-495.
 23. Patterson, J., McCubbin, H. and Warwick, W. "The impact of family functioning on health changes in children with cystic fibrosis. *Social Science Medicine*, 1990; vol,31, pp. 159-164.
 24. Hamlet, K., Pellegrini, D. and Katz, K. "Childhood chronic illness as a family stressor, *Journal of Pediatric Psychology*, 1992; vol.17, pp. 33-47.
- Correspondence address**
Mahmoud Y.U.
Department of Physiotherapy,
Bayero University Kano.
Email: abusuhailpt@yahoo.com
Mobile: +2347036922803