

Stress, Attitude and Marital Relationships of Mothers of children with Chronic Neurological Disorders in Southern Nigeria

[Güney Nijerya'da Kronik Nörolojik Bozukluğu Olan Çocukların Annelerinin Stres Düzeyleri, Tutumları ve Ailevi İlişkileri]

SUMMARY

AIM: Neurological disorders (NDs) occur commonly in children in our environment. Increasingly, the poor knowledge of these conditions among parents results in negative attitude with stress and disruption in interpersonal relationships. The objective of this study was to assess the level of stress and quality of marital relationships among mothers of children with NDs.

METHOD: Between January and December 2008, 126 mothers of children with NDs at the Child and Adolescent Psychiatric clinic, University of Uyo Teaching Hospital were assessed for perceived stress, attitude and quality of marital relationships using PSQ and GRIMS Questionnaires. This was compared with mothers of normal children.

RESULTS: There were prevalent negative attitudes among respondents in both groups; only 15 (13.2%) mothers with NDs and 6 (5.3%) controls attributed causes to medical conditions; 10 (7.9%) against 26 (22.8%) wished the child had died. Stress was high in mothers aged below 30 and 50 years and above; with tertiary education and in those who were self-employed ($p<0.001$). Quality of marital relationship was poorer in subjects than controls ($p<0.001$).

CONCLUSION: Mothers of children with neurological disorders have increased stress resulting in poor interpersonal relationships. Education is important to improve parental knowledge and enhance family cohesion.

ÖZET

AMAÇ: Bölgemizde nörolojik bozukluklar (NB) genel olarak çocuklarda görülmektedir. Artan bir şekilde; aileler arasında bu konu ile ilgili bilgi yetersizliği, strese karşı olumsuz tutum ve kişiler arası ilişkilerde bozulma ile sonuçlanmaktadır. Bu çalışmanın amacı; NB yaşayan çocukların annelerinin stres düzeyi ve anneleri arasında evlilik ilişkilerinin kalitesini değerlendirmektir

YÖNTEM: Bu çalışma Ocak ve Aralık 2008 tarihleri arasında Uyo Üniversitesi Eğitim Hastanesi Çocuk ve Adolesan psikiyatrisi kliniğine başvuran 126 NB hastası çocukların annelerinin stres düzeyleri, tutumları ve evlilik ilişkileri PSQ ve GRIMS soru formları kullanılarak değerlendirilmiş, normal çocukların anneleri ile karşılaştırılmıştır.

BULGULAR: Katılımcılar arasında her iki grupta da yaygın negatif tutum görülmüş olup, NB'lu çocukların annelerinden 15'inin (%13,2) ve kontrol grubunun annelerinden 6 (%5,3) annenin tıbbi rahatsızlıklara neden atfetmekte olduğu, NB'lu çocukların annelerinden 10'unun (%7,9) ve kontrol grubunun annelerinden 26 (%22,8) annenin çocuklarının ölmesini istediği saptanmıştır. Stres düzeyi annelerin 30 yaş altında ve 50 yaş üstünde olanlarında, yüksek öğrenim görenlerde ve serbest meslek sahibi olanlarda yüksek bulunmuştur ($p<0.001$). Ailevi ilişkilerinin kalitesi hasta çocukların annelerinde sağlam çocukların annelerine göre daha düşük düzeydedir ($p<0.001$).

SONUÇ: Nörolojik bozukluğu olan çocukların annelerinin stres düzeyleri artmıştır ve bu durum kişiler arası ilişkilerin kötüleşmesine neden olmaktadır. Eğitim ebeveyn bilgisini ve aile uyumunu artırmak açısından önemlidir.

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Key Words: Stres, Attitude, Marital relationship, Mothers, Children, Neurological Disorder.

Anahtar Kelimeler: Stres, Tutum, Ailevi ilişki, Anneler, Çocuklar, Nörolojik Bozukluk.

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INTRODUCTION

Neurological disorders (NDs) in children are lifelong disabilities (1). The presence of a chronic neurological child in the family is like a catastrophe with a total loss of dreams and hope (2,3). Although this is a serious health problem in many countries, one major concern has been the lack of interest and efforts to address the health needs of the parents. In recent times, there has been little or no current

information, especially in developing countries on the impacts of children with neurological disorders on parents. Earlier studies in developed countries have reported serious adverse consequences, with severe distress and distortion in family dynamics (4,5). These often manifest in various negative reactions and attitudes toward the affected children, with lots of social/health hazards (3,6). Therefore, there is need for more researches and investigations in this area to

provide information aimed at developing adequate coping and intervention strategies.

In many African countries faced with lack of basic social policies, the care of children with neurological disorders is often the responsibility of the family, and parents face great difficulties. Consequently, the superstitious beliefs and myths surrounding these disorders affect families, leading to disruption in interpersonal relationships among parents (1,7). Previous studies have shown higher incidence of marital breakdown and divorce among parents or guardians of children with neurological disorders (8,9). This has been attributable largely to poor knowledge of factors responsible for their causes (1,7,10). Although children are usually subjects of segregational practices and abuse, the disruption in family dynamics and increased demand of care predispose parents to a high level of stress with emotional and psychological consequences (11,12,13).

The situation in Nigeria is pathetic and worrisome, with numerous social and economic difficulties. Anecdotal reports from general observations show that there is increasing burden of care of children with neurological disorders. Unfortunately, despite the social indicators and emerging high prevalence of these conditions among children, there is paucity of data, with respect to impacts on their parents. Few studies in the past had only concentrated on the frequency of occurrence. This study, therefore, aimed at examining the presence of perceived stress, reactions and quality of marital relationships among mothers of children with neurological disorders in southern Nigeria. It is hoped that the findings would provide necessary information for healthcare providers, with a view to focusing more attention on the psychological wellbeing of parents, in order to enhance adequate care of the children with neurological disorders.

MATERIALS AND METHODS

The study was carried out at the University of Uyo Teaching Hospital, located in Uyo, a community in southern part of Nigeria and capital of Akwa Ibom State. The State occupies the south-eastern corner of Nigeria. It lies between latitudes 4° 33' North of Equator and longitudes 7° 25' and 8° 25' East. It is bounded on the north by Cross River and Imo (now Abia and Imo) States and on the south by Atlantic Ocean; on the south-west by Rivers State. The hospital is the only tertiary health institution serving

the entire area with a population of 3.9 million people, and its environs.

Data Collection: Between January and December 2008, One hundred and twenty six mothers of children with neurological problems at the Child and Adolescent Psychiatric clinic of the University of Uyo Teaching Hospital, were assessed for perceived stress, attitude and quality of marital relationships, using the Perceived stress Questionnaire (PSQ) and Golombok Rust Inventory of Marital (GRIM) State (14,16). This was compared with 114 mothers of normal children.

A semi-structured sociodemographic questionnaire was used to elicit information on biota such as age, marital status, education, occupation and religion. The GRIMS instrument is a 28-item questionnaire designed to assess the quality of the relationships of married or cohabiting couples. Each item of the questionnaire is followed by series of possible responses; strongly disagree (SD), disagree (D), agree (A), strongly agree (SA). The scores are assigned to these responses as follows: SD=1, D, 2, A, 3 and SA, 4. The scores are summed up to obtain category A and B scores respectively. The marital satisfaction in couples is obtained when the category A score exceeds category B. Similarly, lack of satisfaction (dissatisfaction) is when the category B score exceeds category A. Any mother with equal categories A and B scores remain undifferentiated. The GRIMS produces overall score of quality of relationship for male and female separately. The PSQ was developed to assess subjectively experienced stress. It comprises of 30-items that fell on factor analysis into 7 scales (harassment, overload, irritability, lack of joy, fatigue, worries, tension). Respondents rate how often an item applies to them, in general in the last six months on a 4-point scale (1: almost never, 2: sometimes, 3: often, and 4: usually). The PSQ Index and the scale values are mean values often calculated from the raw items scores and linearly transformed to values between 0 and 1. The instrument was originally validated in English-and Italian-speaking gastroenterological inpatients, outpatients, hospital employees and students. It has good reliability values and constructive validity. Only mothers who were still together with their husbands were recruited into the study. The attitude was assessed using attitude Questionnaire adapted from previous studies (16). Prior to the collection of the data, the instruments were pretested in a pilot study by interviewing 20 mothers of children with epilepsy in the general outpatient clinic. This was done to acquire experience and determine its applicability in our environment. The results were similar to the findings in previous

studies (14). Permission to carry out the study was obtained from the Ethics and Research Committee of the hospital. Two assistants who were trained on the questionnaire helped in administering them to those with little or no education.

Data analysis: The results of the study were analyzed using the Statistical Package for social sciences (SPSS 10.0). Sample means and percentages were calculated with which simple frequency tables were created. Standard deviation from the mean was also calculated. Comparisons of categorical data were done using chi-square test. The corresponding P-

values were found to determine the level of statistical significance. The p-value of 0.05 was used to determine the level of statistical significance.

RESULTS

Sociodemographic characteristics of mothers and levels of stress

Table 1 shows the sociodemographic characteristics and stress levels of the respondents.

Table 1. Sociodemographic characteristics and perceived stress level of Respondents of Children with neurological disabilities.

Variables	Subjects		Controls		X ²	P-values
	n(%)	Aps	n(%)	Aps		
Age in (yrs)						
≤20	–	–	12(10.5)	29.6	6.40	0.000*
21–30	4(3.2)	58.3	31(27.2)	35.8	3.36	0.001*
31–40	21(16.7)	62.0	47(41.2)	55.9	0.83	0.407
41–50	57(45.2)	51.5	13(11.4)	43.9	1.05	0.295
≥50	44(34.9)	48.7	11(9.7)	26.6	3.22	0.000*
Total	126(100)		114(100)			
Educ. Level						
Nfe	14(11.1)	47.8	9(7.9)	44.2	0.57	0.570
Prim. Sch.	26(20.7)	51.5	24(21.1)	50.4	0.04	0.967
Sec. Sch.	42(33.3)	53.0	22(19.3)	41.1	1.71	0.086
Graduates	44(34.9)	55.2	59(51.7)	41.0	2.07	0.039*
Total	126(100)		114(100)			
Occupation						
U/employed	45(35.7)	62.4	24(21.1)	50.1	1.79	0.074
Employed	43(34.1)	50.8	59(51.7)	44.7	0.82	0.415
S/employed	38(30.2)	53.1	31(27.2)	39.1	2.04	0.041*
Total	126(100)		114(100)			
Tribe						
Indigenes	113(89.7)	53.3	107(93.8)	51.0	0.23	0.821
Ibo	10(7.9)	50.1	4(3.5)	50.9	0.00	1.000
Hausa	–	–	–	–	–	–
Yoruba	3(2.4)	49.7	3(2.6)	50.1	0.00	1.000
Total	126(100)		114(100)			

Mean age of subjects=45.9±4.7 years and controls=33.7±3.5 years (t=22.61, p<0.001).

*Statistically significant.

Aps=Average perceived stress

Educ.Level=Educational level

Nfe=No formal education

Prim.Sch=Primary school

Sec.Sch=Secondary school

U/employed=Unemployed

S/employed=Self-employed

Afr=African

Table 2. Highlighting attitudes and reactions of Respondents of children with neurological disabilities.

Attitudes/ Reactions	Subjects		Controls	
	Yes n(%)	No n(%)	Yes n(%)	No n(%)
Causes of neurol. disorders				
Due to errors	17 (13.5)	109 (86.5)	14 (12.3)	114 (87.7)
Causes due evil spirit/witches	101 (80.2)	29 (23.0)	96 (84.2)	18 (15.8)
Blamed on family members	91 (72.2)	35 (27.0)	92 (80.7)	13 (11.4)
Blamed and quarrel with spouse	27 (21.4)	71 (56.3)	12 (10.5)	87 (76.3)
Causes due to combination of factors	93 (73.8)	19 (15.1)	99 (86.8)	9 (7.9)
Causes due to medical conditions	15 (13.2)	82 (65.1)	6 (5.3)	93 (81.6)
Reactions/Attitudes				
Shock/disbelief/angry	85 (67.5)	22 (17.5)	(84.2)	17 (14.9)
Feelings of shame and rejection	101 (80.2)	11 (8.7)	0 (87.7)	8 (7.0)
Feelings of guilt and depressed	96 (76.1)	17 (13.5)	9 (16.7)	76 (66.7)
Wished the child had died	10 (7.9)	103 (81.7)	17 (14.9)	87 (76.3)
Can spread to other children	89 (70.6)	26 (20.6)	93 (81.6)	11 (9.6)
Afraid of future occurrence	81 (64.3)	11 (8.7)	99 (86.8)	6 (5.3)
Thought of ending marriage	28 (22.2)	85 (67.5)	55 (48.2)	47 (41.2)

*Respondents with neither yes nor no response were not included in this table.
neurol. =neurological.

Of the 126 mothers of children with neurological disorders (subjects) and 114 mothers of normal children (controls) analyzed, 101 (80.1%) subjects aged between 41 and above, while 25 (19.9%) were below 40 years of age. Similarly, 78 (68.4%) controls aged between 21 and 40 years old, 24 (21.1%) aged between 41 and above, while 12 (10.5%) aged 20 and below. The mean age of the subjects was 45.9±4.7 years, while the mean age of controls was 33.7±3.5 years. The difference in the mean was statistically significant ($t=22.61$, $df=4$; $p<0.001$). Eighty six (68.3%) subjects compared to 81(71.0%) controls had at least secondary school education, 20 (15.9%) against 13 (11.4%) had primary school education, while 14 (11.1%) against 9 (7.9%) had no formal education. A total of 81 (64.3%) subjects against 90 (78.9%) controls were gainfully employed; while 45(35.7%) against 24 (21.1%) were unemployed. Majority, 113 (89.7%) subjects as well as 107 (93.8%) controls were indigenes of the State. The levels of stress were more in subjects as compared to controls. The level of stress was statistically significant in mothers aged below 30 years ($p<0.001$); 50 years and above ($p<0.001$); with tertiary education ($p<0.001$) and mothers who were self-employed ($p<0.001$).

Pattern of neurological disorders

During the period of study, seizure disorders (46.9%) were among the majority of neurological disorders seen. The majority of children were between 5–11 years old. Attention deficit hyperactivity disorder (ADHD) and mental retardation (MR) made up of 30.8% of cases. Others were: Down syndrome 6.1%; Conduct disorder 6.1%; Speech impairment 4.1%; Hearing deficit 4.1%; while Autistic disorder was 2.0%.

Attitudes and reactions of mothers

Table 2 illustrates various reactions/attitudes of the mothers of children with neurological disorders and controls. A total of 101 (80.2%) subjects compared to 92 (80.7%) controls attributed the causes of neurological disorders to evil spirits/witchcrafts; 91(72.2%) subjects, as well as 96 (84.2%) controls blamed the causes on family members; 27 (21.4%) against 12 (10.5%) blamed and quarreled spouses; 17 (13.5%) subjects and 14 (12.3%) controls admitted being due to errors on their parts; while 93 (73.8%) against 99 (86.8%) attributed causes to a combination of these factors. Only 15 (13.2%) subjects against 6 (5.3%) controls attributed the causes to medical

conditions. Eighty five (67.5%) subjects, as well as 92 (84.2%) controls were shocked and angry; 101 (80.2%) against 100 (87.7%) were ashamed and had feelings of rejection; 96 (76.1%) against 19 (16.7%) were guilty and depressed and 10 (7.9%) subjects against 17 (14.9%) controls wished the child had died. A total of 81 (64.3%) subjects and 99 (86.8%) controls were afraid of future occurrence; 89 (70.6%) against 93 (81.6%) believed the conditions can spread to other children; while 28 (22.2%) subjects and 55 (48.2%) controls thought of ending their marriages.

Quality of marital relationships

Table 3 shows the quality of marital relationships among mothers of children with neurological disorders and controls. Less than half, 37 (29.3%) subjects compared to 79 (69.3%) controls had satisfactory relationship ($X^2=6.05$, $p<0.001$). This was statistically significant. More, 68 (54.0%) mothers of children with neurological disorders compared to 26 (22.8%) controls were dissatisfied in their marriages ($X^2=4.81$, $p<0.001$). Twenty one (16.7%) subjects and 9 (7.9%) controls neither enjoyed nor were satisfied in their marriages.

Table 3. Illustrating Quality of marriage among the Respondents of Children with neurological disorders.

Quality of marriage	Subjects	Controls	X^2	P value
	n (%)	n (%)		
Satisfaction	37(29.3)	79(69.3)	6.05	0.001*
Dissatisfaction	68(54.0)	26(22.8)	4.81	0.001*
Undifferentiated	21(16.7)	9 (7.9)	1.86	0.063
Total	126 (100)	114 (100)		

* Statistically significant.

DISCUSSION

The results of this study show that chronic neurological disorders in children present more challenges to mothers. The levels of stress experienced by the mothers of children with the disorders were found to be higher than the levels in controls. This is similar to the findings reported in previous studies (11,12,13). Although it is difficult to estimate the impact of stress on parents, especially, with respect to social functioning. However, the

negative attitudes and reactions could be the consequences of excessive stress. This could have adverse effects on the entire family, leading to poor interpersonal relationships among parents and inadequate care of the children. It is also evident from the results of this study that mothers of normal children experienced stress as well. This is probably an indication that stress is an inevitable consequence of life. Therefore, it may be unreasonable to imply that stress can only be due to appraisal and emotional response to events or situations. As a clinical syndrome, it is increasingly being experienced daily by all individuals. However, it is possible the higher levels in the mothers of children with neurological disorders may be attributable to their children's conditions.

The findings from this study also demonstrate the basic sociodemographic characteristics of mothers of children with neurological disorders. About 80% of mothers were aged 41 years and above, with an average age of 45.9 ± 4.7 years (S.D). In comparison with the controls, the findings seem to corroborate reports in previous studies (17,18,19). Although we did not determine the ages of mothers at delivery in this study, however, judging from the ages of the children seen during the period of the study, it may be reasonable to argue that mothers of children with neurological disorders were older and more prone to having children with the problems. It has also been revealed in this study that mothers who aged 30 years and below, 50 years and above, experienced more stress. The high level of stress in these age groups may be due to increased demand and responsibility of care. Evidence abounds that the burden of care could have a devastating impact on the children, with respect to the quality of care (1,5). The findings also highlight the level of education and occupational status of the mothers. About 68% of them had at least secondary school education and 64% were gainfully employed. Although, these findings are inconsistent with reports in earlier studies, which had demonstrated high prevalence of children with neurological conditions among mothers of low socioeconomic status (19). It is possible the large number of educated mothers in this study may have been accounted for by the study environment. Although these findings could be regarded as positive attributes, with respect to a better understanding of the problems as well as the desire and ability to afford care. However, in an environment such as ours, with a strong cultural influence and prejudice, these factors alone may not be enough to break the domineering custom, values and beliefs. Therefore, inspite of these positive endowments, the influence of culture could

act as an impediment to care and the quality of life of the children may not necessarily be guaranteed.

This study also demonstrates high levels of stress in mothers with higher education (graduates) and those who were self-employed. A possible reason for this may be that education increases awareness and access to medical care. The high level of stress in these mothers could be due to the knowledge they would have acquired about the likely outcome of their children's conditions. Similarly, the high level of stress in mothers who were self-employed is not surprising, considering the fact that responsibility for the care of the children may be their own predicament. It seems plausible that the excessive stress in these mothers may result from increased burden of care. It is also important to take cognizance of the mothers who were unemployed in this study. The fact that 36% of the mothers had no reliable source of income is significant. This could have adverse effects on the mothers, in terms of their psychological wellbeing and the quality of care given to the children. With the increasing level of poverty in our environment, the overwhelming burden of care could predispose mothers of children with neurological disorders to more serious health hazards, including psychiatric complications. However, it is important to emphasize that the present rate of unemployment in this study may not be unconnected with the impact of global economic crisis in the country, which has made it even more difficult for those with good education to find and maintain jobs.

Another significant finding in this study is the attitude and reactions of mothers to children with neurological disorders. The findings suggest that more than 80% of the mothers, as well as controls exhibited irritable attitudes leading to anger and non acceptance of the children with the problems. This may be due to ignorance and poor knowledge of the aetiological factors responsible for neurological disorders in children (7,10,20). Traditionally, in our environment, people have wrong perception to causes of illnesses. This could be seen in this study by over 70% of respondents, who attributed causes of neurological disorders in children to a combination of factors other than medical conditions. The resultant lack of tolerable attitude could be traceable to this perception. Factors that often increase concern include the severity of the condition, unavailability of adequate social support, finance and uncertainty about the outcome. The negative attitude in this study cut across both groups, in spite of the fact that majority of the respondents were educated to at least secondary school level. It would appear in this study that education has no positive influence on the

reactions and attitudes of mothers. A possible reason may be due to deeply ingrained cultural beliefs, which are prevalent and are re-enforced by poor knowledge of aetiological factors of these disorders. The pervasive negative attitudes are inimical to care and could serve as constant sources of stress, which may lead to abuse of the children.

It is also important to examine the nature and implications of some of the reactions and attitudes of the mothers. In this study, about 8% of the subjects and 15% of controls wished the child had died. This sort of horrendous feelings among mothers is a major source of concern. The poor frame of mind could be due to uncontrollable stress and poor psychological adjustment, as shown by more than 75% of mothers who had depressed feelings. Also the resultant high intent of rejection among them suggests that these children are not safe. This finding is similar to the observations in earlier studies (6). Evidence from previous studies have shown increased feelings of rejection, low self-esteem, guilt, poor psychological adjustments, higher level of daily stress and low family support among parents (21). The fact that there is no specific plan or action in death wishes means that infanticide could develop when primary impairment of emotions and affects involve cognitive domain in adults (22).

The findings from this study also highlight the quality of marital relationships among the respondents. As demonstrated in the study, 29% of mothers of children with neurological disorders had satisfactory marriage. This rate is far less than 69% in controls whose marriages were perceived as satisfactory. This is not surprising, judging from the fact that the demand and burden of care could have serious effects with strains on parental relationships. In African societies, although women are culturally subservient, the domineering influence of men does not preclude women from assuming leading roles in extended family system. This is often due to perceived lack of support from spouses and the scenario seems to be apparent and worst in times of crises, such as illness. Evidence from previous studies has shown that fathers have often been more concerned about the impact of diagnosis on the family (23). Therefore, they usually view neurological disorders as sources of embarrassment. Consequently, mothers are to grapple with the responsibility and burden of care. This predisposes them to enormous distress, leading weakening of interpersonal relationships. The impact on children often triggers rejection and avoidance behaviour. Earlier studies have also reported several behavioural reactions including anxiety and depression among

family members (21). The associated psychiatric complications in these conditions have been widely reported and seem to widen the gap with increase in the levels of frustration (24).

The limitations of this study lies in the fact that it was a hospital-based and the sample size, apart from being small was not randomly selected. Therefore, it was not broadly representative and the result cannot be generalized. This is a self-reported and subjective assessment of variables without operational diagnosis.

In conclusion, this study has shown that mothers of children with neurological disorders are often exposed to enormous stress and disruption in their marital relationships. In view of the chronic nature and poor outcome of neurological disorders, efforts must be made to strengthen the psychological wellbeing of parents to cope with the increasing stress. There is need to embark on massive enlightenment campaigns to educate the public on the causes and possible outcome of neurological disorders in children. This will enhance full participation in programmes aimed at shortening the course of these conditions and thereby reducing further disabilities. Efforts must also be made to improve psychiatric care services to deal with commonly associated psychological comorbidities in both children and caregivers.

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