

An Exploratory Study of Emotional and Behavioral Problems in Physically Disabled Children and Adolescents

Saroj P. Ojha¹ Abdul Khalid⁴
Mahendra K. Nepal² Naba Raj Koirala⁵
Shisir K. Regmi³ Chitra K. Gurung⁶

Abstract

A two-stage study was carried out to estimate the prevalence of emotional and behavioural problems in physically disabled children and adolescents and also to study the patterns of psychiatric morbidity among them.

A stratified random sample of 100 institutionalized and non-institutionalized disabled children and adolescents aged 4 to 18 years from among a total of 618 disabled children and adolescents were evaluated by using CBCL questionnaires, which were completed, by their parents or caretakers in the first stage study. All high scorers (above 98th percentile) and 20 percent of low scorers (below 98th percentile) on CBCL scores were interviewed by using DSM-IV criteria for diagnosis in the second stages.

The weighted prevalence of DSM-IV disorders among the physically disabled children and adolescents was 35.20 per cent. Boys were more often having problems than girls (1.6:1.0). Similarly, the prevalence of psychiatric morbidity was higher in non-residential compared to the residential based group. The most common psychiatric disorder among these children and adolescents were depressive disorders (39.2%), enuresis (21.8%) and panic disorder (13.25). Females were more likely to suffer from depressive and panic disorders in contrast to the enuresis in males.

Emotional and behavioral problems as well as psychiatric disorders in the physically disabled children and adolescents in Nepal are much more common than those reported in the Western and Indian literatures.

Keywords: Child Behavior Checklist (CBCL); childhood psychopathology; epidemiology; disabled children and adolescents; Diagnostic Criteria from DSM-IV.

Introduction

The child and adolescent psychopathology has become a major concern among health professionals and educators in the developed world, yet has remained relatively unrecognised (Malatu, 1995) and only a little effort has been put forward to address this issue in the developing countries (Nikapota, 1991). Although studies have shown that the prevalence of emotional and behavioural disorders in the child population is as high as one in five (Baasher & Cederblad, 1966; Giel et al, 1969; Lal & Sethi, 1977; Giel et al, 1981; Costello, 1989), most of these children do not come for help and remain in the community unnoticed. As in other developing countries, the under-fifteen years age group in Nepal although constitutes approximately 43% of the projected population in mid 1995 (UN, 1993) the proportion of disabled children and the amount of psychiatric and behavioural problems in this age group population is hardly to find out. However, after the restoration of democracy the need of awareness and the systematic studies in this field is increasingly being felt in Nepal than at any other time. Thus acknowledging the need of present health situation of the country and also of the targeted population, this present study is an attempt to identify the prevalence of specific psychiatric diseases and its morbidity patterns in a physically disabled children and adolescents in Kathmandu Valley. The attempt has been made to measure prevalence rate of psychopathology in a disabled children and adolescents with a hope that at least some guidelines may be arranged for more extensive plan for this group in the future.

Method

Objectives of the Study

The aim of the present work is to study emotional and behavioural problems in physically disabled children and adolescents. The specific objectives of the study are:

1. To estimate the prevalence of the emotional and behavioural problems in physically disabled children and adolescents.

2. To study the psychiatric morbidity pattern among them.

The sample

The sample for the present study comprised of physically disabled children and adolescents residing in Kathmandu Valley. The sample was divided into two broad groups:

1. Institutional based
2. Non-institutional based

1. Institutional Based

In institutional based group, the sample was selected from Khagendra Navajivan Kendra. Here, about 118 physically disabled children are being looked after.

This center encompasses Ryder Cheshire Home, SOS Children's Village and Khagendra Navajivan Special Educational and Vocational Training School. Among these 118 disabled children 50 were selected by stratified random sample technique. These children were administered CBCL with the help of their caretakers.

2. Non Institutional Based

To strengthen the implementation of community-based rehabilitation programmes, CBR Bhaktapur and CBR Patan have been established in Nepal. Both these two centers are working with physically disabled children in Patan and Bhaktapur and providing essential elements of rehabilitative care and thereby enabling them to lead meaningful lives in their community. In this group again 50 disabled children were selected. Among them 25 were taken from Patan and 25 from Bhaktapur. The selection procedure was same as in other group by stratified random sampling technique.

Procedure

This study was conducted in two stages. During the first stage of the study, CBCL was used as a screening instrument to identify children at high risk for psychiatric disorder. All children scoring above the normative cut off point were recruited for detail psychiatric assessment. All the interviews were conducted in the subjects' homes in a non-institutional group of children by facilitators of CBR Patan and Bhaktapur office. During the interview, the interviewer read aloud the Nepali version of CBCL while the parent followed along on another copy. As the parent answered each question, the interviewer recorded the answers. In the case of institutional based group the interview were conducted in their respective centres. During the interview, the interviewers read it in front of the caretakers of the children and answers were recorded in the same manner as was recorded in another group. The procedure to determine which child was brought in for a second - stage assessment followed a dual policy. First, a random sub sample that consisted of 20% (N=20) of the total negative sample (low scorers) who were already administered CBCL was selected. Children in this sub sample were to come in for a second-stage assessment regardless of their screening scored on the CBCL. Of the remaining children, all those who scored over the published cut off points (above 98th percentile) in parent CBCL (high scorers) were also targeted for a second-stage assessment. In the second stage of the study, a total of 39-sub sample of the disabled children (24 high scorers and 15 low scorers) were interviewed and the diagnoses of emotional/behavioural problems and psychiatric disorders if any, were made on the basis of DSM IV criteria.

Results

First Stage Sample Population and Result

Table I shows that during the first stage of the study CBCL was administrated to 100 disabled children and adolescents of whom 56 percent were male and 44 percent were female. Among them there were 5 (3 male and 2 female) in 4–5 years, 42 (22 male and 19 female) in 6–11 years and 54 (31 male and 23 female) in 12-18 years of age group. The highest numbers were in the age group of 12-18 and lowest in 4-5 age group.

Table II shows the distribution of high scores (positive sample) in stage-first according to various syndromes. It shows that somatic complains is the most common CBCL syndrome among (29.2%) which is followed by social problems (25%) and withdrawal (16.7%). There was not a single case in delinquent and thought problems syndrome.

Second Stage Sample Population and Result

For the analysis of the second-stage data, the first stage screening was also taken into account. Our methodology aimed to obtain second-stage assessment on all the high scores (100% positive sample) and 20% of those who had low score (20% negative sample). In this way, a total of 39 sample were assessed.

Table III shows age and sex distribution of the second stage sample. Here, boys constituted 58.9% and girls 41.1% of the total sample. In all age groups males have outnumbered females. Out of them, 7.7% were in 4-5 years, 35.9% in 6-11 years and 56.4% were in 12-18 years of age group.

Table IV gives the detail of psychiatric morbidity above and below the cut-off score. Among the 24 subjects who scored above the cut-off point on CBCL, 20 (83.3%) were found morbid while 4 (16.7%) were found normal in the second stage clinical evaluation. Similarly, among 15 who scored below the cut-off point on CBCL, 3 were found morbid (20%) while 12 (80%) were found normal. In this way there were 23 (58.9%) morbid and 16 (41.1%) normal in a total of 39 subjects.

Table V shows the prevalence of psychiatric disorder in stage first and stage second. In stage first it was 24 per 100. Similarly, in the second stage 23 out of 39 had one of the conditions diagnosed on the basis of clinical assessment by using DSM-IV diagnostic criteria. Hence the weighted prevalence was calculated and the prevalence rate was found to be 35.20 per 100.

Table VI gives the distribution of the different psychiatric cases as per DSM-IV diagnosis. In this table the results show that the depressive disorders was the commonest (39.2%) diagnosis among the 23 morbid disabled children and adolescents. It was followed by enuresis (21.8%) and panic disorders (13.2%). There was one case each (4.3%) for separation anxiety disorder, conduct disorder, oppositional defiant disorder, specific phobia and attention deficit hyperactivity disorder.

Socio-Demographic Profile of Sample Population

Table I: Age and Sex Distribution of Sample Population

<i>Age Group (in years)</i>	<i>Male (%)</i>	<i>Female (%)</i>	<i>Total (%)</i>
4 – 5	3(60)	2(40)	5(5)
6 – 11	22(53.7)	19(46.3)	41(41)
12 – 18	31(57.4)	23(42.6)	54(54)
Total	56(56)	44(44)	100(100)

Table II: Distribution of Cases According to CBCL Syndrome (N=24)

<i>Syndrome</i>	<i>Positive cases</i>	<i>Percentage</i>
Somatic Complaints	7	29.2
Social Problems	6	25.0
Withdrawal	4	16.7
Aggressive Behaviour	3	12.5

Anxious/ Depressed	2	8.3
Attention Problems	2	8.3
Thought Problems	0	0.0
Delinquent Behaviour	0	0.0

Second-Stage Sample Population and Results

Table III: Age and sex distribution of the cases (N=39)

<i>Age in years</i>	<i>Male (%)</i>	<i>Female (%)</i>	<i>Total (%)</i>
4-5	2 (5.1)	1 (2.6)	3 (7.7)
6-11	8 (20.5)	6 (15.4)	14 (35.9)
12-18	13 (33.3)	9 (23.1)	22(56.4)
Total	23 (58.9)	16 (41.1)	39 (100)

Table IV: Psychiatric Morbidity Above And Below The Cut Off Score (N = 39)

	Above cut off score (%)			Below cut off score			Total
	Male	Female	Total	Male	Female	Total	
Morbid	14	6	20	2	1	3	23
	(70.0)	(30.0)	(83.3)	(66.6)	(33.4)	(20.0)	(58.9)
Normal	2	2	4	4	8	12	16
	(50.0)	(50.0)	(16.7)	(33.4)	(66.6)	(80.0)	(41.1)
Total	16	8	24	6	9	15	39

Table V: Six Months Prevalence of Psychiatric Disorders

Psychiatric disorders	Numbers	Unweighted Prevalence
First stage sample (N=100)		

Positive CBCL	24	24.0
Psychiatric disorders	Numbers	Weighted Prevalence per 100
Second stage sample (N=39)		
DSM-IV diagnosis	23	35.20

Table VI: Diagnostic Distribution According to DSM-IV (N=23)

<i>DSM-IV code</i>	<i>Diagnostic categories</i>	<i>Male (%)</i>	<i>Female (%)</i>	<i>Total (%)</i>
296.2X	Depressive disorders	6 (37.3)	3 (42.8)	9(39.2)
307.6	Enuresis	5 (31.2)	0 (0)	5(21.8)
300.01	Panic disorders	1 (6.3)	2 (28.6)	3(13.2)
309.21	Separation Anxiety Disorder	1 (6.3)	1 (14.3)	2(8.7)
313.81	Conduct Disorder	1 (6.3)	0(0)	1(4.3)
300.29	Oppositional defiant disorders	0(0)	1(14.3)	1(4.3)
312.8	Specific phobia (Simple phobia)	1 (6.3)	0 (0)	1(4.3)
314.xx	Attention-Deficit/ Hyperactivity Disorder	1 (6.3)	0 (0)	1(4.3)
Total		16	7	23

DISCUSSION

In this study, a total of 100 disabled children and adolescents from different centers in Kathmandu Valley between age group of 4-18 years were studied. Among them the main disabilities were paraparesis, hemiparesis, clubfoot, polio, cerebral palsy, muscular dystrophy etc. All total 39 children and adolescents, who had included both high scorers and low scorers on CBCL were assessed in the second stage clinical diagnosis for final diagnosis. The analysis shows that the in this study the emotional disorders are more frequent than the behavioral disorders. Similarly, there were no cases of schizophrenia, pervasive developmental disorders, gender identity disorders, or eating or substance abuse disorders. Using a T score of 70 (98th percentile) as the cut off for psychopathology, in CBCL this study shows that the prevalence rate of the emotional and behavioural problems in physically disabled children and adolescents in age of 4 to 18 years was found to be 35.20%. Males were more affected (30.19%) than females (14.89%) and this difference are statistically not significant. The various prevalence rates of psychiatric disorders in school children have been reported in various parts of the world. In India, Deivasigamani (1990) have found a prevalence rate of 33.7%, while Jiloha and Murthy (1981) have reported it to be 20.7%. The present study reported a more or less similar rate of prevalence (35.20%). This rate is similar to that found in the study in Southern India by Chandra et al, (1993) and according to this study report, prevalence rate of mental disorders in children above 5 years of age attending to general pediatric department to be 33 percent. However, there are other studies that show, in contrast to our findings, lower rates of prevalence of child psychopathology. Abiodien (1993), in his study of prevalence had found some form of psychopathology in 15%

of 5 to 15 years-old children by using RQC in Nigeria. In Africa, studies in Sudanese villages have placed the rate between 8% to 20% (Cederbald, 1968) and research on Ugandan school children found overall rate of 18% with a high rate of 24% in urban settings (Minde, 1975). Similarly, the prevalence rates of psychiatric disorder in school children have consistently been lower in developed countries. In a community sample study of 2441 French school-aged children by Fombonne (1994), the overall prevalence rate among 8 to 11 year olds was estimated to be 12.4%. In a study by Morita et al, (1993) in Japanese secondary school children using Rutter's Teachers and Parents Questionnaire and Diagnostic Interview, the prevalence estimate was 16% for 12-13 years old and 14% for the 14-15 years old children. In another epidemiological survey of psychiatric disorders in Japanese school children, overall prevalence was found to be 14.8% (Suzuki et al, 1990). Controlled studies of school children in different situations of Urban Uganda (Minde, 1975), Beijing (Yu-Feng et al, 1989) and Hong Kong (Luk et al, 1988) have demonstrated that the rate of behavioural problems in children is very close to that observed in studies in developed countries. But rate found in studies from India, as well as in this study is quite high as compared to that in developed countries. Several factors may be responsible for these variations. Some of these variations can be explained by differences in the sample population, in the techniques used for the screening and diagnosis. More over, prevalence figures vary from culture to culture, within country and across countries and the differences are often enormous (Engelsman, 1980; Murphy, 1982; Singer, 1984). However, having discrepancies in the prevalence rates, this study shows that the prevalence of child psychopathology is more common in disabled children than non-disabled children.

The prevalence rate of psychiatric morbidity in boys and girls were 30.19% and 14.89%, respectively, which are not comparable to the result of Molatu (1985). They have found that the prevalence rate for boys and girls was 21.45% and 25.17% respectively. There may be several reasons for the reported sex differences in psychiatric morbidity among disabled children and other children. Here in our study the rate psychiatric morbidity in boys and girls was almost 2:1. It could be because of the higher proportion of boys than girls in the study population as well sex role in our society.

Diagnostic breakup of the morbid group as per DSM-IV categories shows that depressive disorders as the commonest diagnosis (9 out of 23 cases-39.2%), followed by Enuresis (21.8%), panic disorder (13.2%) and separation anxiety disorder 9.87%). Similarly, the corresponding prevalence rates in the total sample (N=100) for these categories are depressive diseases 9%, enuresis 5%, panic disorder 3% and separation anxiety disorder 2%. There has been not a single subject with other disorders like schizophrenia, mania and organic psychiatric disorders, reported in the study. Even in the clinical diagnosis the researcher did not come across a grossly psychotic illness during administration of DSM-IV diagnosis criteria. In general, the overall rates of psychiatric disorders in the study using DSM-IV criteria are more than the study reported by Costello et al, which range between 14% and 20.6%. Similarly, the prevalence rates obtained for specific disorders are bound to be affected by the demographic characteristics of the target population. Here, the high proportions of children are classified under affective disorder, functional enuresis, and anxiety disorder. Turner and Noh (1988) demonstrated that the risk of clinically significant depression is about 3 times higher among disabled (35% versus 12%) than among the non-disabled. But we do not have any other related data to compare with these findings.

Conclusion and Recommendations

Childhood and adolescents periods are marked by entry into the schooling system, and by participation in a wider world outside the family home. It is a time when individual, including intellectual and social functioning will become more obvious. It is good time to attempt to detect and treat psychiatric disorders before the attitudes of family and society towards these people have become enriched with maladaptive patterns. It can thus be concluded that the prevalence rates of psychiatric disorders and the symptomatology observed in the physically disabled children and adolescent are higher than those reported in the studies of school aged children in developed and developing countries. The prevalence rates which obtained among physically disabled children reflected that a significant portion of them suffer mental ailments. Therefore it is recommended that efforts are to be made for the formation of sound policy and guidelines for these disabled children. It is also recommended that sufficient attention have to be paid to the provision of services and funding for the physically disabled child to make good use of his or her educational and social opportunity and to setting up priorities for research and training for child mental health care.

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