Non-compliance of children with ADHD to outpatient clinic appointments at the Psychiatric Hospital, Kingdom of Bahrain

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ABSTRACT

Introduction and Objectives: Non-adherence to clinic appointments by children with ADHD is considered a major obstacle to treatment.The aims of the study were to determine the rate of non-compliance to treatment and to identify the reasons for non attendance, as well as the characteristics of children who did not comply with clinic appointments.

Method: A retrospective cross-sectional survey was undertaken of all children aged 18 years and under who attended the Child Psychiatric Unit, Psychiatric Hospital, Bahrain, from June 2010 until September 2011 and who were subsequently diagnosed with ADHD according to DSM-IV and Conners' Parent and Teacher checklist (n=53).

Results: More than 60% of the cases did not keep their clinic appointments. Their families were characterized by a higher level of education and social status compared to other parents attending the same clinic. Non-compliant children were characterized by the presence of comorbidity (53%), and were in the older age group.

Discussion and Conclusion: The degree of compliance to outpatient clinic appointments of children with ADHD should be monitored regularly in team meetings. Problems should be analyzed and solved quickly to ensure better compliance. Education of parents and children should be an integral part of the management plan and presented to families as soon as diagnosis is reached.

Keywords: Non–compliance; children; ADHD; Reasons; Bahrain

عدم التزام الأطفال ذوي نقص الانتباه وفرط الحركة بمواعيد العيادات الخارجية

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ملخص البحث

المقدمة والأهداف: عدم الالتزام بالمواعيد لدى أطفال نقص الانتباه وفرط الحركة يعتبر عائقاً كبيراً للعلاج ، يهدف البحث معرفة مدى انتشار عدم الالتزام بالعلاج ومعرفة الاسباب وخصائص الأطفال الغير ملتزمين بمواعيد العيادة

الطريقة – استخدام طريقة منهج الرجعية المقطعية لكل الأطفال اقل من 18 عاما والذين حضروا الى العيادة النفسية للاطفال والناشئة بمستشفى الطب النفسي / مملكة البحرين خلال الفترة بين يونيو 2010 وديسمبر 2011 وشخصوا حسب الفهرس الرابع المراجع للامراض النفسية ومقياس كونرز للوالدين والمدرسين (عدد = 53)

النتيجة – أكثر من 60% من الأطفال لم يلتزموا بالمواعيد المعطاة لهم

امتازت عائلات هؤلاء الأطفال بارتفاع درجة التعليم والوسط الاجتماعي بالمقارنة مع الاطفال الآخرين – الأطفال غير الملتزمين بالمواعيد كما ان من ضمن الأطفال الأكبر سناً والذين لديهم اضطرابات مصاحبة اخرى (53%)

المناقشة والتوصيات: يجب الاهتمام بمراجعة ومعاينة تردد الأطفال على العيادة ومن خلال اللقاء الأسبوعي لفريق العمل وذلك للتدخل السريع واصلاح الخلل ان امكن.

كما يجب أن يكون التعليم والتعريف بالمرض من ضمن خطة العمل العلاجية للطفل واسرته بعد الانتهاء من عملية التشخيص مباشرة.

INTRODUCTION

DSM-IV cites Attention Deficit Hyperactivity Disorder (ADHD) as one of the most commonly diagnosed childhood disorders and it is estimated to affect 3-5% of school-aged children.[1] Worldwide, the rate of compliance of these children is low (ranging from 20-60%), hence identifying reasons and subsequently managing these cause will have a great impact on both the child and his family.[2-3]

There have been many theories advanced and much research done which has reported the reasons and characteristics of noncompliance of these children and their families. Swanson reported that social attitude as well as pressure and worries surrounding medication and the inconvenience of multiple daily doses as the main reasons for treatment non-compliance.[4]

Stein found that non-adherence to treatment resulted from complex interactions between drug response, psychosocial variables and individual and family dynamics. To minimize the rate of non-adherence clinicians must be prepared to deal actively with psychosocial sources of non-compliance such as the parents' or child's difficulty in accepting the diagnosis, fear of medication and media misinformation about medication.[5]

Characteristics of these children were also studied. Faraone

reported that the mean adherence rate was 75% in children receiving pharmacological treatment and that the older the patient the fewer the ADHD symptoms. This study also found that minority ethnic status was associated with lower adherence to medication.[6] Other studies have reported that the presence of oppositional behavior, in addition to ADHD, difficulty in emotional acceptance of diagnosis and fear of medication as factors among boys who had low adherence.[1]

The issue of non-compliance to treatment has never been studied in the region and so this study was undertaken to assess the prevalence of non-compliance, and reasons and factors associated with it.

METHODS

Design: This study is a retrospective cross-sectional survey.

Sample: The sample included all patients aged 18 years and under who attended the Child and Adolescent Psychiatric Unit (CAPU) outpatient clinic from June 2010 until September 2011 and were subsequently diagnosed with ADHD according to DSM-IV criteria, supported by Conners' Parent and Teacher checklist.[7] Those who had the diagnosis of mental retardation in addition to ADHD were excluded. Non-compliance to appointments in the sample population was defined as "missing 3 subsequent or 6 scattered appointments in one year."

Procedures: Files were reviewed and those participants who met the criteria were identified (n=53). Data were unavailable for 10 cases because the parents could not be located or refused to consent to the study. A questionnaire was developed to obtain basic bio-demographic data, compliance, type of intervention and the reasons for missing appointments. Social class was constructed following a modified Hollingshead and Redlich 5-point scale.[8] Ethical approval was obtained from appropriate sources. Families were contacted by telephone to obtain their consent and were interviewed by one of the authors.

ANALYSIS

All data were entered in the SPSS program, Chi square test of significance was used to assess difference wherever applicable.

RESULTS

Table 1 shows sample descriptions in terms of bio-demographic characteristics, comorbidity and type of intervention. The majority of cases were male (67%), under 9 years of age (63%) attending junior school (93%) belonging to intact families and from a middle-class background (88.5%, 76.7%).The non-compliance rate was 62.8%. Fathers and mothers were college graduates (33%, 42% respectively). Fathers were mostly employed (91%) while half of the mothers were housewives (53.5%).

Factor	N	%
Male	29	67
Female	14	33
Age group		
9 years and under	27	62.8
Above a year	16	37.2
Child education		
Junior school (0-6)	40	93
Senior school (7-12)	3	6.9
Class appropriate level	28	65
One year below	15	35
Comorbidity		
Present	23	53.5
Not present	20	46.5
Father's education		
High school	29	67
College	14	33
Mother's education		
High school	25	58
College	18	42
Father's employment		
Employed	39	90.7
Non-employed	4	9.3
Mother's employment		
Housewife	23	53.5
Other	20	46.5
Family structure		
Intact	38	88.5
Not intact	5	11.5
Social class		
Class 2	16	37.2
Class 3	17	39.5
Class 4	7	16.3
Class 5	3	7.0
Intervention		
Medication only	26	60.5
Behavioral modification	4	9.4
Combined	8	18.6
No treatment	5	11.6
Compliance		
Compliant	16	37.2
Non-compliant	27	62.8
Total	**43**	**100.0**

Table 1. Sample bio-demographic characteristics, comorbidity and type of intervention

Comorbidity was high (53.5%) while one-third of the cases had one year below the expected educational level (35%). Nearly two-thirds of the cases (60.5%) received medication only, (9.4%), behavioral therapy (18.6%), or a combination of therapies and no treatment (11.6%).

Table 2 illustrates the parents' reasons for non-adherence to clinic visits. Difficulty accepting treatment plans and difficulty accepting medication and safe transportation stood out as the main reasons. Factors such as difficulty accepting diagnosis, medication side effects and lack of social support were ranked low among the listed factors.

Reasons	N	%
Difficulty accepting diagnosis	1	3.7
Difficulty accepting treatment plan	4	14.8
Difficulty accepting medication	4	14.8

Medication side effects	1	3.7
No transport	2	7.4
Safe transportation	5	18.5
Missed appointment card	2	7.4
Child refusal to attend	3	11.1
Travelling outside the country	3	11.1
Lack of social support	1	3.7
Other	3	11.1
Total	**27**	**100.0**

Table 2. Cases by parents' reasons for non-compliance

DISCUSSION AND CONCLUSION

Sample characteristics were similar to those reported in other studies involving ADHD children from the same clinic.[9] These characteristics include: more male gender, younger age group, intact family structure and middle-class socioeconomic status. The high level of employed mothers probably reflects the higher education attained. The rate of non-compliance to appointments was high and similar to other reports.[2] The high rate was expected due to the fact that the rate of comorbidity, especially learning difficulties and conduct problems, was also high among the sample. These factors would definitely make management of these cases more difficult, and accordingly vigorous efforts to keep them in treatment wereneeded.

As to reasons for non-compliance to appointments, issues related to the diagnosis and management of the disorder stand out as major obstacles to continued treatment. This was the case in other studies from different regions.[4]

It is not convincing for many parents to accept treatment of a learning and behavioral disorder by using medication rather than psychosocial intervention. Psychosocial intervention is time consuming, needs trained personnel and is not available in all schools. This makes prescribing medication the most widely used and the most practical method of intervention. However, this explanation needs further support as children who receive psychosocial intervention alone present a challenge to therapists in adhering to treatment plans. Non-adherence to treatment was found to be a major issue in the treatment of adults with ADHD.[10] This finding would make one think that adults with ADHD symptoms as future parents would have difficulties in organizing activities and in being consistent in following long-term commitments.

Among the reasons listed, safe transportation was mentioned several times by parents. Data collection was done in 2011 where there were road closures in some areas due to the civil unrest which made moving around the city difficult for some families.

Study limitations:

The study suffered from some limitations such as the retrospective nature of the design, which carries with it known limitations. Among other limitations was losing contact with 20% of the study sample for different reason such as relocation, declined to participate and inability to contact by telephone.

Summary:

In a group of children with ADHD examined for reasons of non-attendance to their appointments in an outpatient clinic, the main prevalent reason was lack of safe transportation followed by difficulty in accepting treatment plans and medication. Reasons such as lack of social support, difficulty accepting diagnoses and medication side effects were of low importance.

In order to increase the rate of compliance parents need to be educated about the nature of the disorder, itsoutcome and prognosis. A system of reminding families about appointments should be adopted in outpatient clinics.

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