

## Knowledge of Parents of Children with Attention Deficit Hyperactivity Disorder towards the Illness

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### Abstract

### Original Research Article

Attention-Deficit/Hyperactivity Disorder (ADHD) is a common childhood psychiatric disorder marked by inattention and/or hyperactivity-impulsivity. With a global prevalence of 5% to 7%. Various factors, including parental engagement, education, cultural perceptions, and healthcare access, affect the quality of care for children with ADHD. Inadequate parental involvement can lead to poor adherence to treatment. Parental knowledge of ADHD is influenced by socio-cultural factors like education, race, and stigma. This study aims to explore the knowledge, misconceptions, and treatment preferences of parents of children with ADHD at Arrazi Psychiatric Hospital in Morocco.

**Keywords:** Attention-Deficit/Hyperactivity Disorder, Knowledge, Attitude, Belief, Parents, Treatment.

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## INTRODUCTION

ADHD is characterized by a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently observed and more severe than what is typically seen in individuals at a comparable developmental level [1]. Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most common psychiatric disorders that begin in childhood, with a stable global prevalence of 5% to 7% [2, 3], including in Africa [4], and South Africa [5]. ADHD accounts for a significant number of referrals of children to psychiatric and pediatric mental health services.

Several factors, such as education and awareness programs, cultural and public perceptions, physician characteristics, parental knowledge and attitudes, as well as various environmental exposures, can influence access to and the quality of care received by children with ADHD [6]. Poor or inadequate parental engagement in managing ADHD can lead to insufficient adherence to treatment, both pharmacological and non-pharmacological, or even its discontinuation [7].

Parental knowledge of ADHD can be influenced by multiple psycho-socio-cultural factors, including education level, race, culture, stigma, access to the Internet, and healthcare services [8].

Studies have shown that improving parents' understanding of ADHD through training can increase adherence, which may help enhance the quality of life and long-term prognosis of children with ADHD [9].

Little is known about parents' knowledge, attitudes, and beliefs regarding ADHD in Morocco. Therefore, this study aimed to describe the knowledge and misconceptions about ADHD and to understand the preferences, concerns, and expectations of parents regarding ADHD treatment among parents of children receiving outpatient care in the child psychiatry department at Arrazi Psychiatric Hospital in Salé, Morocco.

## METHODOLOGY

This is a cross-sectional descriptive study.

The sample consisted of parents of children aged 8 to 17 years who had a clinically established diagnosis of ADHD, according to the criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5 TR). These children had been referred to the hospital by schools or doctors from other specialties.

The inclusion criteria were parents of children with ADHD who had received care in the outpatient child psychiatry department at Arrazi Psychiatric Hospital in Salé.

Caregivers who were not biological parents were not included in this study.

All questionnaires were completed by the principal researcher after obtaining consent.

### Instruments:

#### Sociodemographic and Clinical Questionnaire:

A sociodemographic and clinical questionnaire was used to gather information about both the child and the parent, and it consisted of two parts.

Part 1 collected demographic details about the parents, such as age, gender, occupation, education level, household income, and number of children. They were also asked about any consultation with a spiritual healer and whether they had considered psychiatric treatment.

Part 2 collected the sociodemographic (age, gender, education level) and clinical characteristics of the child from the parents.

#### Questionnaire on Parents' Knowledge, Attitudes, and Beliefs Regarding ADHD in Children

A 25-item survey was used to collect data on the knowledge, attitudes, and beliefs of parents of children with ADHD. It consisted of 25 true/false questions (incorrect answer = 0; correct answer = 1). The third part included multiple-choice questions aimed at gathering treatment preferences and concerns regarding ADHD treatment strategies.

#### Data Analysis:

Descriptive analysis was used to examine demographic characteristics and differences in age and education level between fathers and mothers.

The distribution of parents' knowledge, attitudes, and beliefs regarding ADHD, their views on ADHD treatments, as well as their concerns, were analyzed descriptively.

## RESULTS

### 1. Characteristics of the Participants

Of the 59 parents invited to participate, 55 accepted and 4 declined.

The majority of parents were between 31 and 40 years old (58.2%), were women (n = 47, 85.5%), married (81.8%), had not completed higher education (83.6%),

and had two children (60%). Seven parents (3.6%) had two or more children with ADHD, while the majority (96.4%) had only one affected child. The sociodemographic data of the parents are presented in Table 1.

### 2. Demographic and Clinical Characteristics of the Children

Table 2 shows that the majority of the children were male (n = 38, 85.5%). Regarding age, 45.5% were between 10 and 12 years old, and 69.1% (n = 61) attended public schools. Although 65.6% had been diagnosed for more than a year, only one patient was currently receiving pharmacological treatment, and five patients had a history of pharmacological treatment.

Regarding consultation with a traditional healer before the medical consultation, 9.1% (n = 5) had consulted a healer prior to the consultation.

**Tableau 1: Caractéristiques sociodémographiques des parents (n = 55)**

Variable	n	%
<b>Age</b>		
18-30	2	3,6
31-40	32	58,2
41-50	20	36,4
51-60	1	1,8
<b>Relationship with the Child</b>		
Father	8	14,5
Mother	47	85,5
<b>Marital Status</b>		
Married	45	81,8
Divorced	8	14,5
Widowed	2	3,6
<b>Education Level</b>		
Never attended school	7	12,7
Primary education	13	23,6
Secondary education	26	47,3
University education	9	16,4
<b>Employment</b>		
Yes	26	47,3
No	29	52,7
<b>Number of children</b>		
1	12	21,8
2	33	60
3 or more	10	18,1
<b>Number of children with ADHD</b>		
1	53	96,4
2	2	3,6

**Table 2: Demographic and Clinical Characteristics of Children Followed for ADHD**

Variable	n	%
<b>Age</b>		
Under 5 years old	1	1,8
5-6 years old	4	7,3
7-9 years old	11	20
10-12 years old	25	45,5
>12 years old	14	25,5
<b>Gender</b>		
Mal	47	85,5
Femal	8	14,5
<b>Schooling</b>		
Unschoolled	3	5,5
Public school	38	69,1
Private school	14	25,5
<b>Duration of follow-up for ADHD</b>		
Less than or equal to 1 year	19	34,5
Greater than 1 year	36	65,5
<b>Current pharmacological treatment</b>		
Yes	1	1,8
No	54	98,2
<b>Previous pharmacological treatment</b>		
Yes	5	9,1
No	50	90,9
<b>Consultation with a traditional healer</b>		
Yes	5	9,1
No	50	90,9

### 3. Knowledge, Attitudes, And Beliefs of Parents About ADHD

All parents answered the questionnaire regarding beliefs and misconceptions about ADHD (Table 3). No significant difference was observed between parents with different education levels concerning their knowledge, attitudes, and beliefs about ADHD.

Regarding the nature of ADHD, the majority of parents believed that ADHD was a disease (87.3%), around 60% thought it was a condition linked to biological and genetic factors, and 65.5% believed it was a disorder that self-heals.

Regarding the etiology of ADHD, 40% of parents believed that ADHD was caused by the consumption of sugar and food additives, and 76.4% thought that poor habits could be the cause of the condition (Table 3).

In terms of functional impairments, 85.5% of parents were aware that ADHD reduced academic performance, peer relationships (70.9%), and interactions with family members (70.9%). More than half knew that children with ADHD were at high risk of committing disciplinary infractions (58.5%).

**Table 3: Percentage of correct responses to questions on knowledge, attitudes, and beliefs about ADHD**

Question number	Questions	True (T) / False (F)	Correct responses of participants
1	ADHD is a condition linked to biological and genetic factors.	T	50,9%
2	ADHD is a condition that occurs only during childhood.	F	32,7
3	ADHD is simply a manifestation of the child's curiosity.	F	34,5%
4	ADHD is a serious condition that affects the health of children.	T	81,8
5	ADHD is a condition that heals on its own.	F	34,5%
6	ADHD can be caused by poor parenting and overprotection.	F	16,4%
7	Children with ADHD are at serious risk of absenteeism and school dropout.	T	72,7%
8	ADHD has negative effects on life.	T	90,9%
9	Extra lessons are more appropriate for children with ADHD.	F	9,1%
10	Children with ADHD are at an increased risk of disciplinary violations.	T	85,5%

11	Children with ADHD have a higher IQ than children without ADHD.	F	58,2%
12	Children with ADHD need psychological support.	T	90,9%
13	Children with ADHD should be subject to discipline and rules like other children.	F	20%
14	Teachers should understand ADHD and adaptation methods.	T	96,4%
15	Children with ADHD have more difficulty interacting with their peers.	T	70,9%
16	Children with ADHD have lower academic performance than children without ADHD.	T	85,5%
17	Children with ADHD have more difficulty interacting with family members.	T	70,9%
18	Students with ADHD should have fewer homework assignments than others.	T	67,3%
19	Students with ADHD should be assessed orally.	T	78,2%
20	ADHD can only be treated with medication.	F	80%
21	ADHD is often caused by the consumption of sugar and food additives.	F	56,4%
22	ADHD is a problem of poor habits.	F	23,6%
23	ADHD-related behavior manifests only at school.	F	52,7%
24	Excessive punishment increases behavioral problems in children with ADHD.	T	49,1%
25	ADHD is not a disease	F	87,3%

**4. Parents' Preferences, Concerns, and Expectations Regarding ADHD Treatment Outcomes.**

Overall, 90.9% of parents believed their children needed psychological support. Around 29% of parents opted for medication, 20% for speech and psychomotor therapy, 12.7% for a change in habits, and 5.5% for behavioral therapies (CBT). However, 32.7% believed their children did not need treatment.

For the main concerns regarding medication treatment, 32.7% are worried about side effects, 21.8% about the unavailability of the medication in Morocco, 18.2% have doubts about its effectiveness, and 18.2% have concerns based on what others have said (Table 4).

The aspects of the child that concern parents the most are academic performance (85.5%), followed by relationships with peers (7.3%) and societal perception (5.5%) (Table 4).

**Table 4: Parents' opinions on ADHD treatment and their concerns**

Parents' opinions	Percentages % / n
<b>Preferred treatment</b>	
No treatment needed	32,7% (n=18)
Medications	29,1% (n=16)
Reeducation	20% (n=11)
Change of habits	12,7% (n=7)
CBT	5,5(n=3)
<b>Concerns about medication treatment</b>	
Side effects	32,7% (n=18)
Unavailability of medications	21,8% (n=12)
Doubt about effectiveness	18,2% (n=10)
Concerns based on others' opinions	18,2% (n=10)
Fear of stigma for children	7,3% (n=4)
Duration of treatment	1,8% (n=1)
<b>The aspects of the child that concern parents the most</b>	
Academic performance	85,5% (n=47)
Relationships with peers	7,3% (n=4)
Societal perception	5,5% (n=3)
Personal development	1,8% (n=1)

**DISCUSSION**

The main findings of this study show that parents of children with ADHD all had some knowledge

of the disorder. While the majority of them believed they had received information about the diagnosis and

treatment, there were still gaps in their understanding of symptoms, etiologies, and treatments.

Among the misconceptions in our study, we found that ADHD is believed to be a condition that only occurs during childhood, the association between sugar consumption and ADHD symptoms, excessive punishment may reduce negative behaviors, and the idea that ADHD disappears with age, which is similar to findings in other studies [10-14].

One study reported similar findings among South African teachers, who also believed that sugar caused ADHD and that children would eventually "outgrow" their symptoms [15].

Another study in the United States [16], with a sample of 374 adolescents followed for ADHD and their parents, claimed to have a good understanding of ADHD. However, their responses reflected misconceptions, such as the etiology linked to sugar. They also believed that medications were over-prescribed.

In our study, more than half of the parents believed that ADHD could be caused by poor parenting and overprotection, which is consistent with two other studies [17, 18]. Indeed, attributing ADHD to poor parenting can lead to feelings of guilt among parents and compensatory thoughts toward their children, which may promote excessive overprotection and worsen their children's behaviors [17].

The majority of parents in our study believed that teachers should understand ADHD and adaptation methods, which aligns with the findings of the study by Fan X *et al.*, [18]. Additionally, a survey in the United States of parents of children with ADHD regarding the management of the disorder also revealed that these parents frequently mentioned the need for academic support and teachers' involvement in managing ADHD [19].

ADHD leads to several functional impairments, including low academic performance, disciplinary violations, and conflicted peer relationships. Our study revealed that some parents believed that students with ADHD should have fewer written homework assignments. This shows that parents recognize that reducing academic workload can be beneficial for their children and understand the functional consequences of the disorder.

The parents in the study acknowledged that children with ADHD face difficulties in their relationships with peers and within their family. These results are consistent with other studies [20, 18], and highlight that raising parents' awareness of these aspects could encourage them to opt for a treatment combining pharmacological and psychological therapy. Fortunately, in our survey, the majority of parents were aware that

children with ADHD are at high risk of disciplinary violations and school absenteeism.

Parents' perceptions of ADHD play a crucial role in choosing the intervention strategy after diagnosis, strongly influencing the long-term treatment outcomes [16-21]. Studies have shown that low levels of parental knowledge can explain the association between ADHD symptoms and risky behaviors [22], as well as other areas of impairment [23].

Bennett *et al.*, [24], found that parents' knowledge of ADHD was positively linked to their acceptance of medication treatments and the adoption of appropriate therapeutic strategies. Long-term outcomes of ADHD improve with a consistent and standardized treatment model combining medication and behavioral therapy [25].

Therefore, parents' knowledge and beliefs are crucial for the prognosis of ADHD.

In our study, the main concerns regarding ADHD medication treatment were side effects and the unavailability of medications in the country. Other parents had doubts about the effectiveness and concerns based on what others had said. Similar to our study, another study conducted in the United States showed that parents were worried about side effects and long-term adverse effects, believing that medications should be a last resort [21].

However, in another study [15], approximately 67% of parents believed that prolonged use of stimulant medications increased the risk of addiction (to psychoactive substances, alcohol) in adulthood, an observation also noted in other studies [12].

In our study, some parents were concerned about the stigma their children might face. This has been described in previous studies [26, 27], which showed that young people with ADHD and their parents may experience stigma, with negative effects on the self-esteem of the young individuals and their receptiveness to treatment.

## CONCLUSION

Despite some knowledge of ADHD, essential information about the disorder remains unclear or incorrect, perpetuating misconceptions and erroneous beliefs. Therefore, the implementation of psychoeducation programs appears essential to correct these perceptions, provide parents with the necessary tools for better understanding and managing the disorder, and dispel myths and misconceptions.

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