



Research Article

## Knowledge, Attitudes and Practices of Physicians Exercising in Pediatric Departments on Autism: Case of Cocody, Treichville and Angre University Hospitals in Abidjan-Ivory Coast

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### Abstract

Autism is a serious developmental disorder in children that has lifelong consequences. Its causes are multifactorial and the signs of the disease appear from the first years of life. Pediatricians and general practitioners are the first-line practitioners contacted by parents. Early detection associated with and adapted management considerably improves the prognosis. Our study, which aimed to evaluate the knowledge, attitudes and practices of doctors working in paediatric services on autism, was carried out over

a three-month period. It involved pediatricians, physicians specializing in pediatrics, interns, and general practitioners; all of whom were active in the pediatric departments of the University Hospital Centers (CHU) of Cocody, Treichville, and Angre (city of Abidjan-Côte d'Ivoire).

A total of 78 physicians were included, including 5 interns; 7 general practitioners; 47 physicians in specialization and 19 pediatricians. Most physicians had less than 5 years of professional experience.

About 45% of doctors said they see more than 15 children a day ; with an estimated consultation time of 15 minutes in 47.4% of cases. In general, the normal psychomotor developmental milestones of the child were not well known and no physician was able to cite all the signs of the autistic triad.

The main sources of information on this topic were personal research and hospital placements. The level of knowledge of these practitioners was considered insufficient and did not correlate with professional experience or qualification. However, all physicians felt that the care of children with autism was either the responsibility of child psychiatrists and/or neuropsychiatrists.

**Keywords:** Autism; Assessment; Knowledge; Physician

## 1. Introduction

The definition of autism has evolved significantly since it was first described in 1943 by Kanner [1]. Autism is an early-onset neurodevelopmental disorder and has been classified as an autism spectrum disorder (ASD) since 2013 [2]. After having been considered for a long time as a rare disease, ASD is currently considered as a frequent condition whose prevalence is estimated around 1% in the general population and up to 20% in the siblings of autistic children [3]. However, few data are available and this prevalence remains unknown or underestimated, especially in low- and middle-income countries [4].

The essential features of autism spectrum disorder constitute a triad and are manifested by:

- qualitative alterations in social interactions,
- Qualitative impairments in communication,
- restricted, repetitive and stereotyped behaviours, interests and activities. [2]

There are other non-specific signs, heterogeneous in their existence or intensity. They are not part of the diagnostic criteria but are frequently mentioned. They are developmental heterogeneity, morphological anomalies, sensory anomalies or motor anomalies. In sum, the clinic is variable from one individual to another and depends on the intensity of the disorders, the developmental age and the chronological age of the child [5, 6]. ASDs are pervasive and long-lasting, but they are not inevitable. Knowing how to detect them early, before the age of 3 years, allows parents and children to save precious time. In addition, appropriate treatment will mitigate the effects and promote development, thereby improving the quality of life for the child and family [7].

The management of ASDs therefore requires early diagnosis for prompt and appropriate intervention. As soon as the first signs and concerns of parents appear, they turn to pediatricians who are the first-line actors. The objective of our study was to evaluate the knowledge, attitudes, and practices of physicians working in pediatric services and thus to assess the need for initial training or refresher training on autism for these personnel.

## 2. Methodology

We conducted a prospective cross-sectional study with an evaluative purpose that took place from May 27 to August 30, 2020, in the pediatric wards of three Hospital and University Centers (CHU) that are: the CHU of Cocody, Treichville and Angre. They are all located in Abidjan, the economic capital of Côte d'Ivoire. We selected these services because they are considered reference centers in the health pyramid of our country.

The following were included:

- Physicians practicing in the pediatric services of these university hospitals (interns, general practitioners, physicians in specialization and pediatric physicians)
- Doctors who agreed to participate in the survey

The data were collected using an anonymous survey form prepared for this purpose. The data collected took into account the socio-demographic aspects of the physicians, the sources of information on autism, the general knowledge on autism, the attitudes and the therapeutic orientations in case of suspicion of autism.

The evaluation was based on judgement criteria based on the percentage of correct answers:

- Poor level: 0%-25% correct response
- Insufficient level: 26%-50% correct response
- Average level: 51%-75% correct
- Good level: 76%- 100% correct

Data were analyzed using Word and Epi-Info software.

## 3. Results

### 3.1 Socio-demographic characteristics

We included in our study 78 physicians, 51.9% of whom were women. The average age of the physicians was 35.9 years, with extremes of 27 and 50 years. The subjects under 35 years of age represented 51.9%.

The average professional experience was 6.2 years, with extremes of 1 and 20 years; 51.9% of physicians had less than 5 years of professional experience. Physicians with a pediatric specialty accounted for 72.2%, compared with 24.1% of pediatricians. The physicians interviewed came from the Treichville University Hospital in 55% of cases.

### 3.2 Daily practices

Daily practices		Respondents' answers	
		N	%
Number of consultations per day	<15	43	55.1
	16-20	17	21.8
	21-30	11	14.1
	>30	7	8.9
Consulting time	10-15 mins	37	47.4
	16-20 mins	26	33.4
	>20 mins	15	19.2
Level of knowledge of staturo-poderal development	Adequate	69	88.5
	Inadequate	9	11.5
Level of knowledge of psycho-motor development	Adequate	44	56.4
	Inadequate	34	43.6
Total		78	100

**Table 1:** Distribution of physicians by their daily practices.

### 3.3 Knowledge of autism

In our study, all practitioners had heard of autism through various channels. The main source of information was personal research (59.1%) followed by initial medical training (29.6%). Regarding the warning signs, the physicians stated that in 22.8% of the cases, delay/lack of language or isolation was the main sign of suspicion. No professional was able to cite the components of the autistic triad; while 35% of them mentioned partial signs.

The majority of the doctors (87%) evoked signs related to hyperactivity. In our study, 58% of the respondents stated that the diagnosis of autism could only be established from the age of four years. The

main differential diagnoses mentioned were sensory disorders, in particular deafness (15.2%) and phobic disorders in children (8.5%); however, 87.9% of the physicians did not mention any differential diagnosis. Out of 78 physicians interviewed, only nine mentioned the existence of an autism screening questionnaire.

All the doctors interviewed maintained that the management of children with autism spectrum disorders was multidisciplinary, combining medication, education and psychotherapy. Ultimately, the level of knowledge about autism among practitioners in these different services was deemed insufficient.

## **4. Discussion**

### **4.1 Socio-demographic characteristics**

The average age was 35.9 years and 51% of the physicians interviewed were under 35 years old. The average professional experience was 6.2 years and 51.9% of the physicians had a professional seniority of less than 5 years. These results reflect the relative youth of the practitioners in these services. This fact could be a negative point for the recognition and management of autism, as it is an infrequent and underestimated condition in our context. However, this youthfulness could represent an asset because young people are often more receptive to the introduction of new data into their daily practice. Also, the fact that 72.2% of the physicians were in training for the specialized study diploma in pediatrics, could facilitate the acquisition of new knowledge and skills; especially if these are part of the training curricula.

### **4.2 Daily practices**

About 45% of the physicians surveyed consulted at least 16 patients per day. Consultations were mainly done in the morning, i.e. from 7:30 am to 2 pm. The workload remained relatively high according to the doctors. This state of affairs could lead the doctors to have expeditious consultations. Moreover, in our study, 47.4% had a consultation time of between 10 and 15 minutes per child. This means that they did not have enough time to systematically observe the child's relationships with his or her environment, as 74% of them stated. These results are interesting because the suspicion of autism is based on the

observation of the child in his interactions with his environment [8].

A good knowledge of the child's normal development is a prerequisite for the detection of abnormalities, especially since the autistic spectrum is wide and the border between individual variations and pathological characteristics is sometimes thin [5]. Our results showed a good knowledge of the normal development of the child by the questioned doctors with regard to the principal motor acquisitions which are the sitting, the standing with support and the standing walk. On the other hand, skills such as smile response, vocalizations and proto-declarative pointing were less well known.

However, these skills are important markers in the detection of autism. Our results were similar to those of Darthenucq in Guadeloupe [9].

### **4.3 Knowledge of autism**

All physicians interviewed had heard about autism through a variety of channels. The sources of information were multiple, with personal research and hospital internships at the forefront. This could result in heterogeneous and disparate knowledge among physicians, with an impact on screening and management.

As autism is an infrequent but topical condition, it would be interesting for specialists in the field to develop and popularize a consensus guide for screening and management, taking into account our specificity, as is the case in some countries, including France and Canada [9, 10].

The knowledge of the autistic triad composed of communication disorders, social interaction disorders, stereotyped behaviors and restricted interests, is essential for the screening of autism. Our study revealed a lack of knowledge of this triad by physicians and no significant relationship was found between knowledge of the signs of autism and professional experience. Some practitioners (35%) mentioned some of the signs of this triad in a fragmented way and most (87%) mentioned signs related to behavioural disorders, particularly hyperactivity. In his study, Darthenucq, revealed that only 2 doctors out of 61 were able to state this triad [9]. In relation to the warning signs, for the majority of doctors, the parents' concern about the delay in the acquisition of certain functions, in particular language, was the main reason for seeking care [9]. Indeed, the acquisition of language from 12-18 months is part of the normal development of the child. The absence of this function, which is essential for social life, after the second year of life is very suggestive and flagrant in autism spectrum disorders. This observation was made in the studies of Giacomo and Young [11, 12].

Overall, 58% of the doctors considered that the diagnosis of autism could only be made from the age of 4 years. They were not aware of how early the signs appeared. However, it is well known that early detection of autism (before the age of 3), associated with efficient care, significantly improves the autonomy of children suffering from autism spectrum disorders [13]. Lack of knowledge of the clinical manifestations of a pathology and inability to make a differential diagnosis may lead to underestimation in

terms of diagnosis; this was verified in our study by the fact that among the 87% of physicians who were unable to cite a differential diagnosis, 58.5% had not yet suspected a case of autism in their current practice. Screening and diagnosis of autism is done using certain diagnostic tools such as the M-CHAT (Modified Checklist for Autism in Toddlers); CARS (Childhood Autism Rating Scale); ADI-R (Autism Diagnostic Interview-Revised) [14]. They were unknown to the practitioners interviewed in general. In fact, although 9 out of 54 physicians claimed to be familiar with them, only 2 of them gave an exact answer. In our study, the physicians maintained that the management of autistic children was the responsibility of child psychiatrists and neuropsychiatrists, and that it involved socio-educational, psychotherapeutic and chemotherapeutic means.

## **5. Conclusion**

This study highlights gaps in knowledge about autism among health care personnel working in pediatric services. Given that these are front-line practitioners, it is clear that specific teaching on autism should be reinforced during basic and specialist training as well as during continuing education.

## **Conflict of Interest**

None.

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