

Knowledge and Perception Regarding Autism among Primary School Teachers: A Cross-sectional Survey from Pakistan, South Asia

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Abstract

Background: Early detection and intervention seem to improve development in autistic children, and teachers form an important part of their early social environment. **Objectives:** The objective of this study was to assess baseline knowledge and misconceptions regarding autism among school teachers and evaluate factors influencing their knowledge. **Materials and Methods:** This is a cross-sectional survey enrolling primary school teachers using a self-administered questionnaire. **Results:** Seventy-three teachers (mean age of 34 years, 66% females) responded. Gaps in awareness and knowledge were found. About 52 (71.2%) teachers identified themselves as having some knowledge about autism, with 23 (44.2%) among this group understanding autism as a neurological/mental disorder. The majority (73.1%) believe that special education is a helpful intervention. The only significant factor that influenced knowledge among teachers was attendance of behavioral classes ($P = 0.01$). **Conclusion:** Results suggest that teachers have an inadequate understanding of autism due to several misconceptions. This calls for increased education of teachers with regard to autism and other childhood disorders.

Keywords: Autism, knowledge, primary school teachers

INTRODUCTION

Autism spectrum disorders (ASDs) are described as a set of diverse neurological and developmental disorders, the hallmark features being impaired socialization and communication, restricted interests, and repetitive patterns of behavior.^[1] Epidemiological studies have reported a disease prevalence of approximately 1%–2%.^[2] In addition, studies have shown that early intervention between ages 3 and 6 years can improve communication and social skills in children with ASD.^[3] However, there is a relatively long time lag between recognition of autistic symptoms to the time of diagnosis which often leads to delayed diagnosis and treatment. One of the primary shortfalls of autism is that abnormal behavior occurs in episodes which might be missed in short clinical observations. Since teachers form an integral part of a child's initial social circle, their knowledge about the child could be crucial for early identification of autistic children. Furthermore, teachers also have a fundamental role in support services and educational progress of autistic children; therefore, their perceptions about

ASD are critical for better long-term outcomes.^[4] In this study, we aim to assess knowledge and perceptions regarding autism among primary school teachers, evaluate factors affecting their knowledge, and highlight their misconceptions.

MATERIALS AND METHODS

A cross-sectional survey was conducted in five public and five private schools between August and October 2012. Ten questionnaires each were distributed among teachers in each school. Data were collected using a self-administered questionnaire, developed based on validated scales used in previous studies.^[5,6] Ethical approval was obtained from our hospital's Ethical Review Committee. Written consent

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was obtained from the respective school authorities and teachers. Analysis was performed using SPSS Version 17.0 (IBM Corp., USA). Proportions and percentages were calculated for responses. Chi-square test was utilized to analyze the association between factors and knowledge about autism.

RESULTS

Of 100 distributed questionnaires, 73 teachers responded (public = 38, private = 35). Median age was 34 years (range, 19–60) with majority ($n = 28$) having a teaching experience of <3 years. Sixty-six (90.4%) teachers were females. Other characteristics of participants are summarized in Table 1. Of the 73 teachers who responded, 52 (71.2%) identified themselves as having some knowledge about autism. Among these, 44.2% (23/52) understood autism as a neurological/mental disorder. While 30.7% (16/52) had encountered at least one case of autism, only 23.1% (12/52) were aware of a specialized center for autism in the country. Majority of teachers (73.1%) believed that special education is a helpful intervention for autism. However, almost half had no idea as to who they will refer in case of a child suspicious of autism. Table 2 summarizes responses of 52 teachers who had knowledge about autism.

Common misconceptions identified were autistic children do not show any social attachments, even to parents (48.1%) and autism is a rare condition in this country as compared to the West (40.4%). However, a majority (65.4%) responded that autism is underrecognized and is often missed in general practice. No association was found between age groups, gender, teaching experience, qualification, teacher training courses, and knowledge about autism. However, teachers who had attended a behavioral class (including child psychology

Table 1: General characteristics ($n=73$)

| Variable | <i>n</i> (%) |
|--|--------------|
| Teaching experience (years) | |
| <3 | 28 (38.4) |
| 3-6 | 11 (15.1) |
| 7-9 | 8 (11.0) |
| 10-12 | 9 (12.3) |
| >12 | 17 (23.3) |
| Qualification | |
| Metric/inter (higher secondary school) | 6 (8.2) |
| Undergraduation | 43 (58.9) |
| Postgraduation | 24 (32.9) |
| Teaching training courses attended | |
| Yes | 49 (67.1) |
| No | 24 (32.9) |
| Behavioral classes attended | |
| Yes | 37 (50.7) |
| No | 36 (49.3) |
| Ever heard about autism? | |
| Yes | 52 (71.2) |
| No | 21 (28.8) |

and adult psychology, early childhood education, public health, and developmental disabilities) were more likely to have knowledge about autism ($P = 0.01$).

DISCUSSION

It is vital to identify typical behaviors associated with autism as early as possible to refer cases for further evaluation. These behaviors can be observed by parents, health caregivers, or early childhood educators. Hence, it is imperative for the parents and other caregivers, including teachers, to obtain adequate knowledge about ASD, for earlier intervention, appropriate education planning, and arrangement of family support services.^[4]

This is the first study that evaluates factors associated with having knowledge about ASD and highlights misconceptions and familiarity with its resources among school teachers. Altogether, 71% of the teachers claimed to have knowledge

Table 2: Familiarity of autism resources, features, and treatment among teachers who had heard about autism ($n=52$)

| Question | <i>n</i> (%) |
|--|--------------|
| Source of information | |
| Media (internet, television, newspaper) | 20 (38.5) |
| Books | 5 (9.6) |
| Workshops and training courses | 5 (9.6) |
| Others (colleagues, family, friends) | 22 (42.3) |
| Who would you refer to for a suspected case? | |
| Hospital | 11 (21.2) |
| Parents | 10 (19.2) |
| Special child care services | 2 (3.8) |
| Don't know | 29 (55.8) |
| Understanding of autism as a disorder | |
| Neurological/mental disorder | 23 (44.2) |
| Behavioral/social disorder | 7 (13.5) |
| Learning disability/low IQ | 5 (9.6) |
| Developmental delay/disability | 6 (11.5) |
| Other | 11 (21.2) |
| Identification of disease features (yes response) | |
| Lack of eye contact | 32 (61.5) |
| Peculiar speech | 30 (57.5) |
| Social interaction difficulties | 28 (53.8) |
| Language delays | 25 (48.1) |
| Stereotyped behavior | 24 (46.2) |
| Onset of symptoms before 36 months | 22 (42.3) |
| Preoccupation with objects | 21 (40.4) |
| Unusual mannerisms such as finger flickering | 18 (34.6) |
| Resistance to change in routine | 17 (32.7) |
| Identification of helpful interventions for autistic children (yes response) | |
| Special education | 38 (73.1) |
| Medication | 29 (55.8) |
| Referral to psychologist | 28 (53.3) |
| Speech therapy | 27 (51.9) |
| Referral to psychiatrist | 25 (48.1) |

regarding autism and wide gaps were identified in their perceived knowledge about autism. With respect to familiarity about resources, three-fourth were not aware of a specialized center for autism, and identification of disease characteristics showed variability with most features only identified by 50% of the participants. Our results are consistent with previous studies reporting low familiarity about autism among health-care workers and general population.^[5,7,8]

We identified attendance of behavioral class as an important factor in imparting knowledge about the disease. Other than that, media was recognized as the most important source of knowledge in this study. This highlights the importance of spreading awareness through media and incorporating specialized behavioral training classes for teachers about childhood disorders. However, it is possible that misconceptions about autism may be due to the influence of public media which often portrays autistic children as having high IQ, excellent mathematical talent and skills.^[9,10] Therefore, we recommend that the general public, teachers, and parents should be informed about this disorder by professionals and media content should be verified prior to release.

CONCLUSION AND RECOMMENDATIONS

ASDs are rare with limited strategies for early diagnosis. Since teachers form an initial social contact of children, their knowledge about this disease carries immense importance. We identified the importance of teacher training, especially behavioral classes, in spreading knowledge about the disorder. The insights gained from this study call for more work in this subject and can be used to develop awareness programs

regarding autism and similar childhood disorders. Even though media was identified as the most frequent source of knowledge, we recommend verification and scrutiny of media content before dissemination to the general public.

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Conflicts of interest

There are no conflicts of interest.

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