

Research Article

A Pilot Study to Explore Whether the Needs of Preschoolers with Speech-Language Problems are Met in Turkey

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- Preschool children
- Delayed speech
- Early intervention

Abstract

This study investigated whether the needs of preschoolers with speech and language problems are being met in Turkey. The study was conducted in the Speech and Language Unit of Trakya University's Early Childhood Education and Research Center based on data gathered retrospectively from case files. Factors thought to be important for the future course of the children's condition (i.e., referral age for speech-language evaluation, attendance in the planned program, presence of additional risk factors, receptive language problems, and whether the families were given any information about the problem by their children's doctors and teachers) were explored. It was found that needs related to speech-language intervention were not met in a great proportion of the children because about 80% of the families did not bring their children to therapy or follow-up. Attendance was significantly higher among children attending school compared with those not enrolled in school. Only 18% of the families had been previously informed of their children's problems, and none of the families had been given any advice on how to behave toward their children's problems or what to do to develop their speech-language skills. Barriers to children's receipt of required interventions should be identified, and any additional supports needed to increase attendance should be provided.

ABBREVIATIONS

SSD: Speech Sound Disorders

INTRODUCTION

Speech-language disorders are among the more common problems of childhood and seen in about 5% to 8% of preschool children [1]. Some children have speech disorders, such as impairment in the articulation of speech sounds or fluency, whereas others have language disorders, meaning an impairment of the ability to understand and use spoken language. Children with spoken language disorders can experience problems with one or more aspects of language (i.e., phonology, morphology, syntax, semantics, and pragmatics). Whatever the problem, deficits in speech and language can lead to communication difficulties and cause social, behavioral, and academic problems in children because speech and language skills are central to social interaction and mental ability [2], and they have an important impact on school success [3].

Early speech and language difficulties have been found to have long-term negative impact on children's literacy and learning [4-6]. Studies show that the majority of children with speech-language disorders encounter reading problems in school [7,8] and 50-100% of children with preschool speech and language disorders have academic difficulties [9]. In addition, such children can be perceived as less desirable playmates and experience peer relationship difficulties [10]. Difficulties or differences in speech and language abilities may affect these children's involvement in the general school curriculum, putting them at increased risk for both social exclusion and academic underachievement [3,11].

Early identification of speech-language problems is important because interventions in the early years of life can have a significant impact on child outcomes [12]. Early identification and the right support increase the chances for improving speech-language skills and preventing potential social and academic difficulties. However, children living in countries where regular speech-language screening is not done, or where early assessment and

intervention services cannot be provided for all children, are at risk of experiencing many disadvantages resulting from speech and language problems. Turkey is a country where the profession of speech language pathology (SLP) has started to develop over the past 10-20 years. In Turkey, the professional education programs in SLP were initiated for the first time in 1980s under the name of 'audiology and speech disorders'. However, the first separate SLP program in Turkey, as an independent discipline, was established at the master's level in the year 2000 [13]. Considering that there were speech therapists practicing in the USA, UK, and Canada since the 1950s [14], SLP is a very new field in Turkey. For this reason, there is a shortage of speech language pathologists. Although speech language services are provided by some university hospitals/clinics and research centers – unfortunately, only in some cities –, systematic services cannot be delivered. Based on our experience, we can say that children with severe speech and/or language problems, particularly those with other conditions (e.g. hearing loss, intellectual disability, autism, cleft palate) are diagnosed early and access services more easily. However, there are no national policies for early identification of speech language disorders as yet, except screening for children with hearing loss. We also could not find any nationally representative data to provide information about the level of need for speech-language services among preschoolers. This study aimed to investigate whether and to what extent the needs of preschoolers with speech-language problems were being met in Turkey. To this end, some factors thought to be important for the future course of children's conditions (i.e., the age at which they were referred for speech-language evaluation, attendance in the planned program, presence of additional risk factors and receptive-language problems, and whether the families were given any information about the problem by their children's doctors and teachers) were explored.

MATERIALS AND METHODS

The study was conducted in the Speech and Language Unit of Trakya University's Early Childhood Education and Research Center. In the study, the files of 231 children with speech-language problems were examined. The data were gathered retrospectively from the participants' casefiles. Prior to the selection of cases, the files of children who were brought to the speech-language unit (between 2010.01.01 and 2016.01.31) were screened, and those files including adequate information to identify whether and to what extent the needs of the children and their families had been met were chosen. The inclusion criteria for the study were as follows:

- Aged 2½ - 7 years
- Being brought to our clinic due to communication difficulties and found to have problems in speech and/or language requiring therapy or monitoring with follow-up visits after an evaluation by the speech-language pathologist.
- Files containing the following information: cause of referral to speech-language unit, educational status of mothers, age at which the child was referred for speech-language evaluation, diagnosis, additional developmental risk factors, attendance at the scheduled therapy/monitoring program, and whether the

parents were given any information or advised by the person who referred the child.

After screening the files, the final study sample was composed of 231 children (80 females and 151 males) with a mean age of 4.5 years (SD = 1.2). Children thought to be referred for typical developmental speech-language errors were excluded from the sample. However, families of children having developmental dysfluencies were included when we thought there was a risk for the child from the parent's inappropriate attitudes (e.g. commenting on the child's manner of speaking, correcting or finishing the child's utterance, exerting pressure on their child to speak more fluently).

The children were categorized into groups according to their types of speech-language problems. They were also categorized as attenders/non-attenders according to their attendance at therapy sessions. Children who had attended therapy sessions (at least five visits) or follow-up appointments (at least two visits) were accepted as attenders.

The data were analyzed descriptively using the Statistical Package for the Social Sciences (SPSS, version 17.0) and presented as frequencies and percentages. Proportions were compared using the Chi-square test.

RESULTS AND DISCUSSION

Results

The children were found to have speech-language problems that could be investigated by categorizing them into four groups: 1) speech-language delay, 2) speech-sound disorder (SSD), 3) language disorder (impairment in the acquisition and use of language when older than five years of age), and 4) fluency disorder (continuing longer than six months). The most common problem among the children was speech-language delay (40.7 % of the participants). This was followed by speech-sound problems (30.7 %), fluency disorder (17.3 %), and language disorder (11.3 %). About one-fourth of the children had problems in receptive language, and a majority of those whose comprehension was found to be inappropriate for their ages were placed in the delayed speech and language disorder groups (Table 1).

As seen in Table 1, 22.5% of the children had some risk factors for speech-language development. These were: developmental delay/disorder (16 children), hearing loss (9 [6 had hearing aids]), speech disorder in the child's family (2), repaired cleft palate (6), problem with oral motor skills (7), bilingualism (5), epilepsy (5), and attention deficit hyperactivity disorder (2). Twelve children having speech-language problems secondary to other conditions (developmental disorder, hearing loss, and attention deficit hyperactivity disorder) were receiving services related to their special needs, including communication, from other facilities.

Table (2) shows where the referrals came from. The percentage of children who were brought to us due to the concerns expressed by their teacher and referred by the schools was 18.5%. Considering only the participants who were attending school, this ratio was calculated as 25.8%. The proportion of children whose parents made a self-referral was largest in the fluency problem group (87.5%).

Table 1: Distribution of children in each group according to their mean age and schooling, and the presence of additional risk factors and receptive language problems.

Groups	N	Age (year) M ± SD	Children attending school	Children with additional risk (% within group)	Children with receptive language problem (% within group)
Delayed Speech	94	3.7 ± 0.8	18 (19%)	31 (33.0%)	34 (36.2%)
Speech Sound Disorder (SSD)	71	5.2 ± 0.9	46 (65%)	10 (14.1%)	3 (4.2%)
Fluency Disorder	40	4.4 ± 1.1	12 (30%)	0 (0%)	0 (0%)
Language Disorder	26	5.6 ± 1.1	13 (50%)	11 (42.3%)	17 (65.4%)
Total	330	5.7 ± 2.3	89 (38.5%)	52 (22.5%)	54 (23.4%)

Abbreviations: SSD: Speech Sound Disorders

Table 2: Distribution of the children according to attendance, by whom they were referred to our center, and whether families were informed by the persons who referred the children for speech-language assessment.

	Referral source (% within groups of problem)			Attenders (% within groups)	Families informed by their children's doctors or teachers (% within groups)
	Self-referral by parents	Doctor / hospital	School / teacher		
Delayed Speech	23 (24.5%)	69 (73.4%)	2 (2.1%)	16	11.7
SSD	32 (45.1%)	25 (35.2%)	14 (19.7%)	34.2	5.6
Fluency Disorder	35 (87.5%)	3 (7.5%)	2 (5%)	10	25
Language Disorder	5 (19.2%)	16 (61.5%)	5 (19.2%)	26.9	38.5
Total	95 (41.1%)	113 (48.9%)	23 (18.5%)	21.3	19.5

Abbreviations: SSD: Speech Sound Disorders

Parents' worry about their children being left out or teased by peers was the primary reason for self-referrals in the groups with fluency problems and speech-sound disorders. The mothers having a child that stuttered expressed their fears about the possible persistence of the problem into school age. Reactions toward their children's speech by others, particularly by relatives, and the children's avoidance of speaking were among the reasons for parental self-referrals in this group. A majority of children with delayed speech were referred from a hospital (73.4%) by an otolaryngologist, child psychiatrist, or frequently by a pediatrician providing well-child care. The reasons for parental referral in this group were as follows: questions or advice on seeking help from others (relatives, friends), children's communication skills falling behind their peers, parents' concerns about their general development, and behavioral problems. Children with language disorders and speech-sound problems who were attending kindergarten had been referred by their teachers due to behavioral problems and/or concerns about school readiness.

Although all parents had been recommended to return either for a reevaluation to observe their children's development (75.8%) -mostly the ones with delayed speech and fluency problem- or a therapy visit (24.2%), 78.7% of the parents did not follow the proposed program for their children. Moreover, 76.9% of the children with poor comprehension skills did not attend the intervention. The rates of children brought for scheduled therapy (at least five visits) or follow-up appointments (at least two visits) were 34.2% for SSD, 26.9% for language disorders, 16% for delayed speech, and 10% for the stuttering group, indicating a significant difference among groups ($X^2 = 10.381$, $df=3$,

$p=0.02$). Attendance was significantly higher among children attending school (28.1%) compared with those not enrolled in school (16.9%) ($X^2 = 4.10$, $df=1$, $p=0.04$). Children's attendance in the scheduled program did not differ with respect to their mothers' educational level ($X^2 = 0.03$, $df=1$, $p=0.88$) or where/by whom they were referred ($X^2 = 0.98$, $df=2$, $p=0.61$). Although the percentage of children living in remote or rural areas was slightly higher among non-attenders (59.3%) than attenders (55.1%), there was no significant relationship between the families' place of residence and children's attendance in the program ($X^2 = 0.29$, $df=1$, $p=0.59$).

For all children in the study except those with some additional risks (children with hearing aids or developmental delay/disorder), this was the first time a detailed speech-language evaluation had been made by a speech-language pathologist. Of the families, 18% reported that they had been previously informed of their children's problems and given some advice (i.e., on the seriousness/importance of the situation, need for treatment, and services they could reach). However, none of the families had been given any advice about how to behave toward their children or what to do to develop their speech-language skills. Only three families reported thinking that their children had been sufficiently supported by their teachers specifically to improve their speech skills.

Discussion

Children develop speech and language skills with different capabilities and some children can experience delays or temporary problems in the early stages of speech-language development. However, some can have more serious or long-lasting problems

requiring indirect or direct intervention, or regular monitoring to support them when necessary. Because of the case-selection criteria, the children in this study were thought to fall into the second category after a comprehensive evaluation by a speech-language pathologist. They all had been proposed an intervention or follow-up program because the parents needed to learn ways to support their children appropriately and how to behave towards the problem—even those with children whose problems were thought likely to resolve on their own (e.g., stuttering and expressive speech-language delay). Thus, receiving effective services, including parent education and regular monitoring or direct intervention where appropriate, were the primary needs of these children. From this perspective, the results showed that the needs of about 80% of the children had not been met due to non-attendance.

Although attendance in the intervention was thought to be very important, particularly for the children who had problems with both receptive and expressive language, 77% of them had not participated in the scheduled intervention program. Even in language disorder group, despite 65% of them having receptive language problems and 42% having additional risk factors, the attendance rate was only 27%. Attendance was highest in the SSD group, which was also the group having the highest rate of children enrolled in preschool or kindergarten. However, although about three-quarters of children with delayed speech had an obvious problem causing them to be referred by their doctors, attendance was only 16% among those cases. Considering the mean ages of the children in the groups with language disorders and SSD, they had not had much time to overcome their problems by the time they start primary school. The type of the problem and the children's school attendance were among the factors that seemed to be related to families' engagement with the planned program. The retrospective nature of the study makes it difficult to understand the reasons fully. However, based on our multiple conversations with families, some families come to us with the expectation that we can solve the problem immediately without their involvement, as if it were an illness treatable with medication. The necessity of maintaining a program that can sometimes be demanding because of increased homework and other changes (less TV, more shared activity time with the child, for example) may cause disappointment and parental non-engagement.

Studies have shown that children with histories of preschool speech-language disorders experience more reading, spelling, and language problems in school [7,15,16]. Although it is emphasized that early detection and intervention can reduce the negative impacts of speech-language disorders on children's lives [17,18], we saw that many children in this study—except the ones in the delayed speech group—had been examined just before entering school because their parents wanted to know whether the speech-language problems would resolve before school age or have a negative effect on their children's social relationships and academic achievement. However, as we experienced, they needed to gain an understanding of their roles and responsibilities in this process, particularly for bringing their children to the interventions or follow-ups. It was very important for us that parents were able and willing to work with the children because collaborative work including parents and

teachers provides the best intervention for these children [19]. We may have more opportunity, particularly for children in the delayed speech group, to change things when we help parents learn how to promote their children's communication and how to work with them at home to enhance their language skills. It is accepted that parent training has a substantial effect on the receptive and expressive language skills of young children [20]. From this perspective, it can be said that mothers were deprived of the opportunity to learn how to support their children because they did not come to the therapy or follow-up sessions.

In this study, parents brought their children for evaluation because the children had difficulties resulting from differences or delays in their speech-language abilities. We saw that, even if health professionals and teachers recognized these differences or delays, they tended to leave all responsibility for informing parents about the importance of early intervention and the role of the family in speech-language development to the speech-language pathologist. Identifying and responding to the needs of children as early as possible can help them catch up to their peers. However, as seen in the study, the opportunity for early intervention is often missed. Based on our experience, most of these children are likely to come back to us after encountering difficulties in primary school.

CONCLUSION

The speech-language intervention needs were not met in a great proportion of the children because their families did not bring them to the therapy or follow-up sessions. This may be due to multiple reasons, including situational factors (e.g., having several children, lack of transport, changes in circumstances), lack of knowledge about the necessity of the intervention (not knowing what to expect, relying on the possibility of spontaneous recovery), and fear of being labeled. Barriers to children's receipt of the required intervention should be identified and any additional supports needed to increase their attendance should be provided. In addition, doctors and teachers should take into consideration that they may be the only source for some parents to obtain information about speech-language development, the importance of early intervention, and ways of supporting their children. Measures to reduce non-attendance, explore its determinants, and provide required support at early stages should be taken through collaboration among health care, social services, schools, and families. Currently, insufficient collaboration exists in our country, particularly with regard to the needs of preschool-aged children.

Further research with a larger sample is required to obtain findings that can be generalized to the entire preschool-aged population in our country. There is also a need for further studies exploring the causes of non-attendance among this population.

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