The Management of Developmental Stuttering: Child Psychiatrists' Perspectives

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ÖZET:
Gelişimsel kekemeliğe tedavi yaklaşımları: Çocuk psikiyatristlerinin bakış açıları

Amaç: Kekemelik, genellikle konuşmanın akışında aksamaların olduğu bir iletişim bozukluğudur. Gelişimsel kekemeliğin nedenlerine yönelik birçok kuram ileri sürülmesine karşın, yeterince açıklama getirilememiştir. Gelişimsel kekemeliğin kesin tedavisi yoktur, tedavi yaklaşımlarının çoğu konuşma akıcılığındaki düzensizliklerin azaltılmasına yardımcı olmaya yöneliktir. Gelişimsel kekemeliğin tedavisine yönelik profesyonellerin yaklaşım ve tutumlarında fikir birliği yoktur. Bu çalışmada, gelişimsel kekemeliğe yönelik tedavi yaklaşımları hakkındaki ülkemizdeki çocuk psikiyatrisi uzmanlarının görüşlerinin araştırılması amaçlanmıştır.
Yöntem: Veriler 38 çocuk psikiyatri uzmanına, çok seçenekli sorular ve varsayımsal çerçevede vaka senaryosu içeren anket uygulanarak elde edilmiştir. Verilere tanımlayıcı analiz uygulanmıştır.
Bulgular: Çocuk psikiyatristlerinin %43.3'ü okul öncesi dönemde gelişimsel kekemeliğe müdahale edilmemesi görüşündeydi. %65.7'i en azından başlangıçta "bekle ve gör" stratejisini tercih ediyordu. Çocuk psikiyatristlerinin büyük bir kısmı, birincil olarak anne-babanın hedeflendiği dolaylı müdahale lehinde görüş bildirdi. Sedatif antihistaminikler ve seçici serotonin geri alım inhibitörleri sık olarak tercih edilen ilk seçenek ilaçlardı (sırasıyla %36.8 ve %34.2). Risperidon ise %15.8 oranında ilk seçenek olarak tercih ediliyordu. Çocuk psikiyatristlerin çoğu, akıcı konuşmayı destekleyici aygıtlara aşina değillerdi ve alternatif tıp yaklaşımlarının etkisiz oldukları görüşündeydiler.
Tartışma: Gelişimsel kekemeliğin tedavi yaklaşımlarına yönelik çocuk psikiyatristlerinin görüşleri heterojen tablo sergilemektedir. Türkiye'deki çocuk psikiyatristleri daha konservatif tedavi yaklaşımlarını tercih etmektedir. Gelişimsel kekemeliğin tedavisinde çocuk psikiyatristlerinin konuşma terapistleri ile yoğun işbirliği önemlidir.

Anahtar sözcükler: Gelişimsel kekemelik, çocuk psikiyatristi, tedavi yaklaşımları, görüşler

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ABSTRACT:
The management of developmental stuttering: child psychiatrists' perspectives

Objective: Stuttering is a communication disorder generally characterized by involuntary disruptions in the flow of speech. Various theories have been offered to explain developmental stuttering, but its causes are not well understood. There is no known cure for developmental stuttering, though many treatment approaches help children reduce the number of dysfluencies in their speech. There is no common consensus on approaches and attitudes of professionals towards management of developmental stuttering. This nationwide survey of child psychiatrists was conducted to assess child psychiatrists' views about management approaches to developmental stuttering.
Method: Data obtained from 38 respondents who were the child psychiatry specialists using a specific questionnaire including items formatted as multiple-choice questions and a case scenario with a hypothetical frame. Descriptive analysis was applied to the data.
Results: Of the child psychiatrists, 43.3% agreed that early developmental stuttering should be ignored. 65.7% of them preferred at least initially, a "wait and see" strategy. An appreciable majority of the child psychiatrists were in favor of the indirect therapy, which is aimed primarily at the parents. Sedative antihistamines and selective serotonin reuptake inhibitors were preferred frequently used as first-choice drug class (36.8% and 34.2%, respectively) while risperidone was prescribed as a first-choice drug by 15.8 percent. Most of the child psychiatrists were not familiar with anti-stuttering devices, and alternative medicine was considered as non-effective and not helpful.
Discussion: Child psychiatrists show a heterogeneous picture regarding their views on therapeutic approaches in developmental stuttering. Child psychiatrists in Turkey prefer more conservative approaches. It is important that child psychiatrists work in extensive collaboration with speech pathologists for treating developmental stuttering.

Key words: Developmental stuttering, child psychiatrist, therapeutic approaches, beliefs

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INTRODUCTION

Stuttering is a communication disorder that affects the fluency of verbal expression characterized by involuntary, audible or silent, repetitions or prolongations of sounds or syllables. Developmental stuttering (DS) isn't associated with apparent brain damage or other acquired known cause. DS emerges before puberty, usually between two and five years of age and there is high incidence with around 5% (1). The course of DS varies considerably across individuals. Studies have shown that a large number of children who stutter, between 50% and 80%, recover with or without professional intervention, generally before puberty (2). However, there is no good way of predicting whether an

affected child will recover naturally. Also, it is not clear to what extent this recovery is spontaneous or induced by early behavioral management and/or speech therapies. Persistent DS does not undergo spontaneous or therapy–induced remission, and it has been estimated that about 1% of adults have persistent DS (3).

Child psychiatrists and speech pathologists use many different therapeutic approaches to manage DS. Whereas most treatment programs for children who stutter are "behavioral," in that they are designed to teach the speaker specific skills or behaviors that lead to improved oral fluency, some clinicians prefer pharmacological intervention alone or in combination with behavioral management. However, the approaches and treatments are generally heterogeneous (4,5). Although there have been several surveys of speech pathologists' and other professionals' attitudes toward stuttering, published data on physicians' attitudes and approaches toward stuttering are limited (6).

In Turkey, it appears that the first referral for a child who stutters is most likely to a child psychiatrist or a pediatrician because the number of speech pathologists is limited. Thus, the child psychiatrists play an important role for early intervention and management approaches to DS. In Turkey, there is no published data on the child psychiatrists' current practices toward DS. This nationwide survey of child psychiatrists looked at their practices and views on the behavioral and pharmacological approaches to DS.

MATERIALS AND METHODS

Participants

This nationwide survey was a descriptive study which was conducted during May-June 2007. The survey included 47 child psychiatrists, who were specialists from child and adolescent psychiatric clinics of various medical schools, state hospitals and private practices. There is a shortage of child psychiatrists in Turkey. The participants were about one-fourth of child psychiatric specialists in Turkey. Nine of 47 surveys were excluded from the analysis due to various reasons, including missing and inappropriate responses.

Measures and Procedure

We prepared a questionnaire, which was modified from the treatment items of the questionnaire constructed by Yairi and Carrico (6), to assess views and practices of the child psychiatrists regarding management of DS. The final form contained 19 questions with a total of 65 sub-items. The questionnaire form consists of multiple-choice questions and some statements where the participants are asked to indicate the extent of their agreement or disagreement. The questions were related to their opinions about the therapeutic approaches to early DS, first-choice of management, choice of medication, and their opinions about efficiency of pharmacological interventions, behavioral management, speech therapies, anti-stuttering devices, and alternative options.

The questionnaire, a letter, and instructions were e-mailed to 47 child psychiatrists in Turkey. Participants responded to the survey via e-mail as well. The survey asked the participants to rank how successful they think a stuttering treatment would be. The survey presented participants with a case scenario with a hypothetical frame, and then asked them to rank their response on a scale of 1 to 5.

Analysis

Descriptive analysis was applied to the data. The data evaluated by combining similar categories, such as the two agreement categories and the two disagreement categories in Table 1.

Table 1: Percentage distribution of the child psychiatrists' responses concerning major issues in early DS treatment (n=38).

Issues	Strongly Agree	Agree	Disagree	Strongly Disagree
Ignore stuttering and no intervention	2.8%	40.5%	45.9%	10.8%
No direct intervention because of being potentially harmful	18.9%	29.7%	43.2%	8.2%
Therapy directed primarily towards parents	51.4%	45.9%	2.7%	-
Medication may be helpful	10.8%	75.7%	13.5%	-
High cure rate with treatment	10.8%	45.9%	29.7%	13.6%

RESULTS

Thirty-eight of 47 child psychiatrists completed the questionnaire. 71.1% of the participants were from child

Table 2: Percentage distribution of the child psychiatrists' responses (n=38) to "Assume that you examine a two- to five-year-old child. The mother complains that the child began stuttering approximately 15 days or a month ago. Your own diagnosis also indicates stuttering of a moderate degree. Your approach to such a case would be to:"

Approaches	Always	Sometimes	Seldom	Never
Postpone action, a "wait and see"	31.5%	34.2%	13.1%	21.2%
Immediately prescribe a drug	5.3%	15.7%	55.3%	23.7%
Immediately refer to a speech pathologist	7.9%	21.1%	34.2%	36.8%
Immediately refer to a non-medical professional (hypnosis, yoga etc.)	-	-	2.6%	97.4%

Table 3: Percentage distribution of the child psychiatrists' responses (n=38) to "when do you prefer to prescribe medication to children who stutter?"

Options	Number n	Percent %
All the time	5	13.2
Presence of overanxious	37	97.4
Presence of secondary behaviors (grimaces, tremor, jerks etc.)	24	63.2
Presence of avoidance behaviors	22	57.9
Co-occurrence of a psychiatric disorder	36	94.7

Table 4: Percentage distribution of the child psychiatrists' responses (n=38) to "which drug would you choose for DS?"

Choice order	First	Second	Third
Sedative antihistamines	36.8%	21.1%	-
Selective serotonin reuptake inhibitors	34.2%	39.5%	18.4%
Tricyclic antidepressants	10.5%	13.2%	23.7%
Risperidone	15.8%	18.4%	26.3%
Haloperidol or asepromazine	2.6%	-	21.1%
Benzodiazepines	-	7.9%	5.3%
Others	-	-	5.3%

and adolescent psychiatric clinics of medical schools, 18.4% were from state hospitals, and 10.5% were from private practices. They have been working as specialists for 7.61 (± 4.65) years (median 8.5 yrs). Mean number of patients with stuttering referrals received per month by child psychiatrists was 7.32 ± 6.69 (median 5, range from 1 to 30 per month). 65.8% of them had no opportunity to consult with a speech pathologist.

The degrees of child psychiatrists' agreement about the therapeutic approaches to early DS are shown in Table 1. There is no common consensus among the child psychiatrists on ignoring stuttering and having no need of intervention to early DS. When the two agreement categories and the two disagreement categories in Table 1 were combined, 43.3% agreed and 56.7 % disagreed that early DS should be ignored. The combined agreement and disagreement that direct intervention should not be applied because of being potentially harmful was about the similar rate (48.6% and 51.4, respectively). An appreciable majority (97.3 %) of the child psychiatrists agreed with the indirect therapy, which is aimed primarily at the parents. A minority of them (13.5%) disagreed that stuttering may be helped with medication. For the opinion of "stuttering can be completely cured through treatment", the combined agreement and disagreement rates were 56.7% and 43.3, respectively.

When a case scenario with a hypothetical frame was presented in order to determine which of the optional approaches child psychiatrists would prefer (Table 2), when the "always" and "sometimes" responses were collapsed, 65.7 % of the child psychiatrists preferred at least initially, the "wait and see" strategy. When the "seldom" and "never" responses were combined, large number of the child psychiatrists (79%) were not immediately inclined to prescribe drugs. Also a similar rate of them (71%) didn't prefer to refer to a speech pathologist immediately. Almost all of them chose to "never refer to a non-medical professional."

Percentage distribution of the child psychiatrists' responses to the given duration options "If you preferred postpone action, namely a "wait and see" approach, how long would you recommend the waiting period should be?" were as follows: 21 percent of them never preferred the "wait and see" strategy, %31.6 of them would recommend up to 3 months waiting, 31.6% of them would recommend up to 6 months waiting, and the rest (10.5%) would recommend longer or unspecified waiting periods.

Table 5: Percentage distribution of the child psychiatrists' responses (n=38) to the question "to what extent therapeutic approaches for DS might be helpful?"

Therapeutic options	Helpful	Partial helpful	No helpful	Harmful	Not familiar with
Drug Therapy	31.6%	68.4%	-	-	-
Behavioral Therapies					
Relaxation techniques	36.8%	52.6%	2.6%	-	7.9%
Family-focused treatment	60.5%	36.8%	2.6%	-	-
Lidcombe method	2.6%	6%	5.3%	-	76.3%
Voluntary stuttering	5.3%	26.3%	5.3%	-	63.2%
Shadowing	34.2%	47.4%	2.6%	-	15.8%
Speech Therapies					
Fluency shaping therapy	50.0%	21.1%	-	-	28.9%
Regulated breathing	57.9%	28.9%	-	-	13.2%
Metronome/Rhythm	44.7%	31.6%	-	-	23.7%
Computerized assisted voice and prosody therapy	26.3%	18.4%	5.3%	-	50.0%
Computerized assisted diadochokinesia therapy	15.8%	7.9%	7.9%	-	68.4%
Anti-Stuttering Devices					
Delayed auditory feedback, speech-easy etc.	5.3%	21.1%	5.3%	2.6%	65.8%
Alternative Options					
Hypnosis	-	13.2%	28.9%	10.5%	47.4%
Yoga	-	7.9%	31.6%	5.3%	55.3%
Acupuncture	-	-	34.2%	7.9%	57.9%

When the child psychiatrists were asked to which professional the treatment of early DS would be best undertaken, their responses were 55.3% by a child psychiatrist, 31.6% by a speech pathologist, and 2.6% by a child psychologist.

Table 3 displays the percentage distribution of the child psychiatrists' responses to when they apply to drug therapy (alone or combined behavioral approach) in DS. The child psychiatrists almost always prescribed medication in presence of overanxious and co-occurrence of a psychiatric disorder (97.4% and 94.7%, respectively).

The child psychiatrists were asked to which drug class they would prescribe frequently in DS treatment. Sedative antihistamines and selective serotonin reuptake inhibitors were preferred frequently as first-choice drug classes (36.8% and 34.2%, respectively). Risperidone was prescribed by 15.8 percent, while 2.6 percent preferred haloperidol or asepromazine as first-choice drugs (Table 4).

When asked to what extent therapeutic approaches for DS might be helpful (Table 5), drug therapy was often marked as "partially helpful" (68.4%). The dominant view among the child psychiatrists was that family-focused treatment approach of behavioral therapies (60.5%) was the most helpful for improving the speech of young children who stutter. Also, a substantial number of child psychiatrists were not familiar with Lidcombe method and the shadowing technique, and they had little information about those. About half of the child psychiatrists think that speech therapies were helpful. While most of them were not familiar with anti-stuttering devices, alternative medicine was accepted as non-effective and no helpful (Table 5).

DISCUSSION

The management of DS has been described as a controversial and perplexing issue (7), and recent concerns have been expressed about the absence of adequate documentation regarding timing of interventions and efficacy of particular therapies (8,9,10). Especially, starting therapy of early DS, as early as preschool years, is more controversial. Likewise, the results of our survey show a heterogeneous picture. So, some of the child psychiatrists agree on some therapeutic approaches, but there is no agreement on the others.

In traditional views, professionals show some reluctance to treat stuttering during the preschool years. This reluctance stemmed from at least two sources. First source comes from the evidence of natural or untreated recovery in this age group. Yairi and Ambrose reported

that 74% of 147 preschoolers who stuttered had recovered without treatment within 4 years after onset (3), and even the most conservative authors estimate that 30%-50% of preschoolers will improve without treatment (11,12). Second source is the belief that therapy heightens a child's awareness of fluency difficulty, which in turn increases the child's risk for persistent stuttering (13). In our survey, nearly half of the child psychiatrists have the traditional views that early DS should be ignored, and they shouldn't recommend any intervention because of being potentially harmful. However, in a similar study performed by Yairi and Carrico, fewer pediatricians (27%) agreed with the traditional notion and 28% of pediatricians agreed or strongly agreed that speech therapy should not be used, thinking it potentially harmful (6), when compared our survey. However, there is also not yet a generally accepted consensus among speech pathologists about the need for, and timing of, for direct intervention for preschool children who stutter. The current thinking among speech pathologists is somewhat different from the traditional views and there is growing inclination to employ direct speech intervention with young children who stutter (6,14). These changing views appear to be associated with a growing belief that stuttering is particularly tractable in its incipient stages (15).

Yairi and Carrico showed that 79 % of pediatricians were to opt, at least initially, for "wait and see" strategy for the case scenario with a hypothetical frame (6). Likewise, in our survey, 65.7% of the child psychiatrists are in favor of "wait and see" strategy. Whereas in the study of Yairi and Carrico (6), 29% of the pediatricians would recommend up to 3 months waiting and 43% would recommend 3-6 months waiting periods, in our study approximately one third child psychiatrists recommended waiting up to 3 months and one third of them suggested waiting for 6 months. However, speech pathologists view all children suspected of early stuttering should receive a comprehensive speech-language-hearing evaluation and their parents should be counseled (6).

There are several differing views about preschool stuttering treatment in the literature (16). Many clinicians and researchers have favored so-called “indirect” approaches to therapy, which aim to facilitate children's development of fluent speech primarily through changes in the child's communication environment and modifications to the parents' speech patterns (17,18,19). Other clinicians have favored more direct speech modification techniques (20,21). On the other hand, family-focused approaches can vary according to degree of direct intervention of parent (from ignoring the stuttering to the Lidcombe method). In a study of Yairi and Carrico, 58% of pediatricians agreed to perform family-focused approaches for early DS (6), however an appreciable majority (97.3%) of the child psychiatrists recommend family-focused approaches in our survey.

In our survey, about two-third of child psychiatrists did not prefer to send preschool child with DS to a speech pathologist immediately in the hypothetical case scenario. Because some clinicians believe that treating every child who stutters is wasteful as it addresses children who would recover on their own and diverts resources from those who would benefit. However, for older children, it is not possible to say the same. In addition, in our survey, about half of the child psychiatrists think that the treatment of early DS is undertaken best by themselves, besides around two-third of them had no opportunity to consult with a speech pathologist because the number of speech pathologists is limited in Turkey. These might also be the factors that reduce their inclination to refer those children to speech pathologists. Costa and Kroll suggest that physicians need to be aware of the indications for referral of children with DS to a speech pathologist (22). These authors point out indications for referral to a speech pathologist if a child has three or more stuttering-like dysfluencies per 100 syllables uttered, appears tense and uncomfortable, exhibits reactions of avoidance or escape, and/or changes the nature of the child's speech (22).

Currently there are no therapeutic approaches or medications proven to completely cure DS, but some can significantly reduce its symptoms (23). In literature, many approaches have been reported as successful in the treatment of DS. Nevertheless, it is unfortunate that few firm conclusions can be drawn about most treatments because there has been little attention paid to assessing long-term outcomes, a reliance on single-subject designs without replications or larger numbers, and group research lacking adequate controls. All of these may create false impressions and beliefs (10). Especially, treatment efficacy studies of early DS reveal more complicated and confusing findings, because spontaneous recoveries occur in a relatively large proportion of young children within the first year of onset (1,24). These

undermine confidence of the findings reported by treatment efficacy studies. In our survey, around half of the child psychiatrists believe that cure of DS could not be at this high rate or completely cured with therapeutic approaches. The study of Yairi and Carrico (6) also revealed similar results.

Speech therapy remains the main treatment choice for DS; however, pharmacological approaches can be useful in selected cases (22). There have been many attempts to identify effective pharmacological approaches to the treatment of stuttering, with variable success. But, none of the pharmacological agents tested for stuttering have been shown in methodologically sound reports to improve stuttering frequency to below 5%, to reduce stuttering by at least half, or to improve relevant social, emotional, or cognitive problems (5). Yairi and Carrico showed that an appreciable majority of pediatricians disagreed that medication may help for stuttering in young children (6). However, in our survey, the child psychiatrists' view is usually that medication may help many children with stuttering, but majority of the child psychiatrists do not immediately opt to prescribe drugs for early DS. Among the child psychiatrists, there is generally consensus on prescribing medications in presence of overanxious and co-occurrence of a psychiatric disorder, however, there was no consensus in cases that presence of secondary behaviors and avoidance behaviors.

Many medications have been used in stuttering children. Haloperidol, risperidone, olanzapine, fluoxetine, sertraline, paroxetine, clomipramine, desipramine, clonidine propranolol, and carbamazepine have all been investigated for stuttering treatment. However, most of drugs have not been found to be successful (5). The results of Bothe colleagues' systematic review of pharmacological treatments for stuttering are also straightforward and are overwhelmingly negative (5). In these authors' review, of the 31 articles, one study provided data showing that stuttering frequency was reduced to below 5% [risperidone, studied by Maguire et al. (25)], and four others provided data showing that stuttering did not meet the 5% criterion but may have been reduced by at least half [haloperidol, studied by Rosenberger et al. (26), Wells and Malcolm (27); propranolol, studied by Cocores et al. (28); and sertraline, studied by Costa and Kroll (29)]. In our survey, sedative antihistamines were preferred the most frequently used as first-choice drug class to soothe anticipatory anxiety, this means that the child psychiatrists prefer more conservative drugs for early DS. Selective serotonin reuptake inhibitors are effective in many different anxiety disorders, and decrease anticipatory anxiety in developmental stuttering (30). In our survey, selective serotonin reuptake inhibitors are preferred by the child psychiatrists and were prescribed more frequently than tricyclic antidepressants.

Neuroimaging research data and the effectiveness of dopamine receptor antagonists in DS seem to support the theory of a hyperdopaminergic origin (22). Haloperidol may be the most comprehensively studied pharmacological agent for stuttering. The review of Bothe and colleagues concluded that haloperidol is ineffective in improving both stuttered speech and other variables (5). The oft-repeated claim that haloperidol reduces stuttering severity or the duration of blocks but not stuttering frequency was not supported by these relatively well-designed studies, nor was the common claim that haloperidol reduces secondary or associated features of the disorder (5,31). In practice, atypical antipsychotic agents have essentially replaced conventional agents, because newer agents have been regarded as resulting in fewer side effects, improved tolerability, and improved effectiveness; however, some have questioned this conclusion (32). Risperidone has been shown to be more effective than placebo in decreasing the severity of stuttering (22). In our survey, antipsychotic agents were preferred by some child psychiatrists, more frequently risperidone than haloperidol or asepromazine.

Speech pathologists use many different therapeutic techniques, including behavioral approaches, speech therapies, anti-stuttering devices to treat DS. But, none of these will have a lasting impact, unless the child is motivated and willing to make some actual changes in his/her behaviors. The first approach is counseling techniques for building self-esteem, attitude change, and avoidance reduction. The second approach relies on the direct manipulation and modification of stuttering. Behavioral programs that reshape fluency have gradually replaced the older counseling procedures (22,33). Recently, several efficacy studies have shown that prolonged speech treatment not only resulted in noticeable differences in stuttering frequency, but it was also shown that the resulting speech behavior in most cases received naturalness ratings that were in the same

range as those typically assigned to people who have never had a stuttering problem (34,35,36). Although treatment variants of prolonged speech have produced high success rates, but many studies failed to obtain long-term outcome data (34), and lacked matched control groups and replication support (5,37). In our survey, the half of child psychiatrists view was that fluency shaping therapy was helpful.

In our survey, majority of child psychiatrists have little information and are not familiar with some therapeutic approaches, including the Lidcombe method, the shadowing technique, computerized assisted voice therapy, anti-stuttering devices, and voluntary stuttering. Some authors (38,39) suggest that Lidcombe method, which is treatment based on parental-administered, operant, and non-programmed instruction, is an efficacious treatment for stuttering in children of preschool age. There are conflicting evidence about metronome-conditioned speech retraining, regulated breathing and airflow, and shadowing, best-controlled data do not support these approaches (4). Ladouceur and Martineau reported that regulated breathing was more effective in a combination treatment program than as a single treatment procedure (40). Voluntary or fake stuttering is one of the techniques used in the desensitization phase of therapy that is common in stuttering modification approaches. Voluntary stuttering may have negative consequences on communication (18). A variety of assistive devices help individuals who stutter speak more smoothly. The effectiveness of these devices in real life settings continues to be studied. Preliminary findings suggest that some speakers find some auditory feedback devices very helpful, while others do not (41). In addition, Craig and Kearns showed that acupuncture did not improve stuttered speech or other variables (such as, anxiety) in stuttering (42). In our survey, almost all the child psychiatrists were against referral to a non-medical professionals.

As a limitation of this present study the data are only based on perspectives of child psychiatrists in Turkey; therefore there is a need to compare with those that will be obtained from speech pathologists and other professionals in Turkey as well. In addition, the study sample size should be enlarged. Due to the different locations of child psychiatrists, face to face interviews were not doable.

In conclusion, among the child psychiatrist, there is a heterogeneous picture regarding the beliefs on therapeutic approaches of DS. We suggest that child psychiatrists in Turkey preferred more conservative therapeutic approaches. Child psychiatrists showed a demand for more information about the efficacy of therapeutic approaches and should require extensive collaboration with speech pathologists. This study provides representative descriptive information about the therapeutic approaches to developmental stuttering in Turkey. The results of our survey will contribute to planning the management of developmental stuttering.

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