

**A SURVEY ON SPEECH LANGUAGE PATHOLOGISTS' OPINION
ON DIAGNOSING STUTTERING IN PRESCHOOL CHILDREN**

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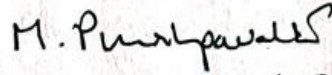
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CERTIFICATE

This is to certify that this dissertation entitled "**A survey of speech-language pathologist's opinions on diagnosis of stuttering in preschool children**" is a bonafide work submitted as part of fulfilment of the degree of Master of Science (Speech Language Pathology) of the student with Registration Number P01II24S123012. This has been carried out under the guidance of a faculty of this institute and has not been submitted earlier to any other university for the award of any other Diploma or Degree.

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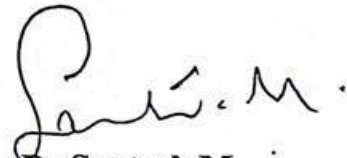
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DECLARATION

This is to certify that this dissertation entitled **“A Survey of Speech language pathologists’ opinion on diagnosing stuttering in Preschool children”** is the result of my own study under the guidance of Dr. Santosh M., Professor, Department of Speech-language Sciences, All India Institute of Speech and Hearing, Mysuru and has not been submitted earlier to any other university for the award of any other Diploma or Degree.

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CHAPTER 1

INTRODUCTION

1.1 Background

Involuntary disruptions in the forward flow of speech, such as part-word repetitions, sound prolongations, audible or silent blocks, and related secondary behaviours reflecting communicative struggle, are characteristics of stuttering, a neurodevelopmental fluency disorder (Guitar, 2019; Smith & Weber, 2017). Although stuttering can occur at any stage of life, it usually begins in the preschool years, usually between the ages of two and four. During this time, phonological, lexical, morphosyntactic, and narrative domains develop quickly and simultaneously (Bloodstein & Bernstein Ratner, 2008; Yairi & Ambrose, 2005). Children with underlying neurological or genetic susceptibilities may be more vulnerable to fluency breakdown due to the convergence of these rapid language demands on speech motor networks that are still developing (Smith & Weber, 2017).

Stuttering is not merely a disorder of speech mechanics; it is a condition with far-reaching consequences for a child's emotional, social, and communicative development. Even at the age of two or three, children who stutter may exhibit increased physiological reaction during speaking activities, communicative frustration, and knowledge of their speech challenges (Tumanova et al., 2014; Vanryckeghem & Brutten, 2012). These early behavioral and affective repercussions highlight how important it is to identify. Furthermore, the preschool period is recognized as a critical window during which the probability of natural recovery is highest, and during which evidence-based intervention, when indicated, is most likely to yield beneficial outcomes (Yairi & Ambrose, 2005; Onslow et al., 2003).

Early identification of stuttering in preschool children is therefore of considerable clinical importance. However, early identification is not straightforward. Disfluencies are a natural part of language learning for all young children, and it takes substantial clinical expertise and judgement to differentiate between typical developmental disfluency and clinically severe stuttering (Ambrose & Yairi, 1999). The early diagnosis of stuttering in young children is very difficult because many children recover without any intervention. 65 to 80% of children do stop stuttering within a few years (Yairi & Ambrose, 1999). So therapists have to think long and hard about whether to start treatment or not and weigh that against the possibility of helping a kid. Stuttering itself is unpredictable; it varies depending on who the kid is talking to, where they are and how they feel (Yaruss, 1997).

1.2 Diagnostic Approaches in Preschool Stuttering

Numerous diagnostic frameworks, each with its own theoretical direction, clinical utility, and limitations, have been put forth and examined in the literature. Given the inherent variability of stuttering across contexts and occasions, the frequency-based approach, which calculates the percentage of syllables or words stuttered against normative cutoffs, provides quantitative precision but may be insufficient when taken into consideration alone (Ambrose & Yairi, 1999; Jani et al., 2013). Frequency measurements alone do not capture the qualitative nature of the disruptions, the level of associated tension, or the child's behavioural and emotional response to speaking, even though a threshold of roughly 3% of syllables stuttered is frequently used to distinguish stuttering from typical disfluency.

The type-based approach, which attends to the qualitative characteristics of disfluencies, particularly the presence of stuttering-like disfluencies (SLDs) such as part-word repetitions, dysrhythmic phonations, and single-syllable word repetitions, has demonstrated diagnostic utility in differentiating children who stutter from those who do not, as well as in

predicting persistence risk (Ambrose & Yairi, 1999; Walsh et al., 2021). The seminal contributions of Conture (1990, 1997) and Yairi and Ambrose (1999) established the theoretical and empirical basis for type-based diagnosis. More recent work by Walsh et al. (2021) demonstrated that a weighted SLD index assigning greater clinical weight to dysrhythmic phonations such as blocks and prolongations significantly discriminated between children who persisted and those who recovered.

Both dimensions are integrated into combined frequency-and-type techniques, which are widely considered the best current practice (Ambrose & Yairi, 1999; Riley, 2009). To account for within-child variability, event- and context-based approaches stress sampling fluency across different communicative settings (Yaruss, 1997; Yaruss et al., 1998). This recognizes that a child's fluency in the clinic may look quite different from that in free play or natural conversation. The most comprehensive framework currently available is an eclectic one, for example, the Multifactorial Dynamic Pathways Theory by Smith and Weber (2017). This theory considers the many factors that are part of a complete clinical assessment, including disfluency characteristics, parental concerns, family history, the child's temperament, their language skills, and environmental risk factors. Walsh et al. (2023) supported this finding by showing that a combination of different risk factors phonological skills, family history, frequency of SLD, and child's nonword repetition skills predicts persistent stuttering better than any individual factor. Such practical issues may hinder full implementation in many therapy settings. However, this multifactorial approach provides a gold standard for evidence-based stuttering evaluation.

These frameworks do exist, but investigations indicate that there are larger differences in how speech-language pathologists (SLPs) diagnose preschoolers. Clinicians do not consistently identify stuttering even when presented with the same speech sample. Younger

clinicians and students detect less stuttering than do more experienced judges (Brundage et al., 2006).

1.3 Need for Studying SLP Perspectives

The views of SLPs about stuttering diagnosis are really important for a number of key reasons. First of all, they are the primary experts in diagnosing and treating stuttering in young children. Based on evidence, their methods can tell if kids get help that is timely and appropriate. So, what SLPs think really counts. Second, as the literature reviewed above shows, SLP perspectives on stuttering are influenced by a complex set of factors, including academic training, clinical experience, exposure to persons who stutter, attitudinal beliefs, cultural context, and the theoretical frameworks encountered during professional preparation. Understanding which of these factors influence diagnostic decision-making, and in what direction, is essential for designing effective pre-service and continuing professional development programmes. There is no universally accepted set of diagnostic standards for stuttering in preschoolers, so SLPs have to use a great deal of professional judgement when integrating the available data to reach a diagnosis. This is often not the case as the literature documents (Erickson et al., 2023), but it is not a problem per se if clinicians are well-trained, well-resourced and armed with comprehensive frameworks for assessment. Children receiving stuttering assessments from different clinicians may receive different diagnostic conclusions even when their speech profiles are comparable, a situation with direct implications for equitable access to services and timely intervention. Therefore, the current study addresses a recognised need to methodically record and comprehend SLPs' diagnostic methods and viewpoints in the context of preschool stuttering assessment.

1.4 Aim of the Study

The present study explored diagnostic approaches and criteria and how SLPs' professional experience and training affect their decisions about whether to diagnose stuttering in preschoolers. It studies their belief and practices to enable the development of reliable and evidence-based assessment methods which are suited to the clinical environment. The intention is to give a thorough overview of the existing SLP diagnostic procedures in India, which hopefully will result in better, more individualized approaches to the diagnosis of stuttering.

1.5 Objectives of the Study

The present study has some specific purposes:

1. To identify the diagnostic procedures and specific criteria used by speech-language pathologists in the assessment of stuttering in preschool children.
2. To establish the degree of agreement and variability among SLPs in the use of frequency-based, type-based, parent concern-based, context-based, and multifactorial diagnostic approaches to preschool stuttering.

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction to Stuttering in Preschool Children

2.1.1 Definition and Nature of Stuttering

Stuttering is characterized by overt behavior such as prolongations, repetitions and blocks that interrupt the forward movement of speech (Guitar, 2013). According to DSM-5 (2013), this disorder occurs in childhood, during the most important milestones of speech development. So it shows the developmental aspect of the stutter as well as the tricky surface-level symptoms. Over the decades, theoretical perspectives have evolved considerably, moving from psychosocial and environmental explanations toward neurodevelopmental and multifactorial accounts. Among the most influential early theories was Johnson's diagnosogenic theory (Johnson, 1942, 1946), which proposed that stuttering was not a disorder in the child's speech but rather a disorder in the listener's perception, specifically, that stuttering began in the ear of the listener and not in the mouth of the speaker. While the diagnosogenic theory had wide clinical influence for several decades, evidence in support of it has been largely absent, and it is now regarded as theoretically untenable (Manning & DiLollo, 2018). The emphasis of later theoretical frameworks switched to the child's verbal traits. According to Bloodstein's continuity hypothesis (Bloodstein, 1960, 1995), there is no underlying qualitative difference between the disfluencies of children who stammer and those who do not, and stuttering exists on a continuum with normal disfluency.

In contrast, Van Riper (1971) emphasized the importance of effort and tension in stuttering and highlighted the progressive nature of the disorder. By focusing on the evaluation of particular disfluencies, especially within-word disfluencies such as part-word repetitions and sound prolongations, as main indicators of stuttering in young children, Conture (1990, 1997) made a substantial contribution to the area. In setting standards for disfluency norms and stressing the importance of certain stuttering-type disfluencies that differentiate children who stutter from those who do not, the research team led by Yairi (Yairi & Ambrose, 1999, 2005; Yairi et al., 1996) made important contributions to our knowledge about the development of stuttering in young children. The Multifactorial Dynamic Pathways Theory, which was put forth more recently by Smith and Weber (2017), places stuttering in the context of quickly evolving and interacting neurobehavioral systems during the preschool years.

2.1.2 Characteristics of Preschool Stuttering

The majority of stuttering occurs during the preschool years, with the peak age of onset occurring between the ages of two and four (Bloodstein & Bernstein Ratner, 2008; Yairi & Ambrose, 2005). This timing is not coincidental; rather, it falls during a time of exceptional and quick development in a number of speech and language domains, such as the growth of vocabulary, phonological repertoire, morphosyntax, and narrative discourse skills (Bloodstein & Bernstein Ratner, 2008; Reilly et al., 2009). During this developmental period, the brain's centers that control speech, language and emotion change significantly (Smith & Weber, 2017). These major changes and hidden neurological problems can add stress to speech fluency. The disfluency profile of preschool children who stutter is characterized primarily by stuttering-like disfluencies (SLDs), a term introduced and

operationalized in the seminal work of Ambrose and Yairi (1999). These include part-word repetitions, single-syllable word repetitions, and dysrhythmic phonations such as audible and inaudible blocks, prolongations of sounds, and broken words. Children who stutter have much higher frequencies of SLDs than their usually fluent classmates, according to normative data developed by Ambrose and Yairi (1999) from a carefully examined cohort of young children at or near stuttering onset. Important benchmarks were provided by their data: in normal conversational contexts, preschoolers who stutter produce at least 3% stuttered syllables, and SLD counts are frequently significantly higher than the 3 syllables per 100 syllables threshold that is frequently used in clinical settings. The importance of tracking the number of repetition units, that is, how many times a syllable or sound is repeated within a single instance, has also been underscored, as children who stutter tend to produce more repetition units per instance compared to normally fluent children (Ambrose & Yairi, 1999; Yairi et al., 1996).

Beyond the frequency of disfluencies, preschool stuttering is also characterized by secondary behaviors including eye blinking, head movements, limb movements, and other accessory movements reflecting the child's struggle to overcome moments of stuttering. These secondary behaviors tend to emerge as the disorder progresses and are relatively uncommon in the very early stages of stuttering (Van Riper, 1971). Awareness of stuttering in young children has also been documented, with even very young children showing signs of communicative frustration and distress associated with it. Another characteristic that sets stuttering apart from other disorders is its variability, which is likely to differ substantially in relation to speaking situations, speaking partners, language complexity, and emotional environments (Yaruss, 1997; Yaruss et al., 1998)

2.1.3 Typical Developmental Disfluencies Versus Stuttering

One of the most clinically challenging aspects of early stuttering is the differentiation of stuttering from the typical disfluencies that are a universal feature of young children's speech development. All children produce disfluencies as they acquire language, and these typical disfluencies, often termed other disfluencies (ODs), include revisions, multisyllabic whole-word repetitions, interjections, and phrase repetitions (Ambrose & Yairi, 1999; Carlo & Watson, 2003). Unlike SLDs, ODs reflect the normal process of language formulation and are considered developmentally appropriate. The challenge for clinicians lies in identifying the point at which disfluencies exceed typical developmental norms and cross into clinically significant stuttering.

One of the more thorough frameworks for differentiating these types was offered by Ambrose and Yairi (1999). The type and frequency of within-word disfluencies are the primary differentiators, according to their research, even though both groups of kids create ODs. While ODs like interjections and revisions occur at similar rates in both groups, children who stutter create much more part-word repetitions, sound prolongations, and blocks than children who do not stutter. Some researchers have warned against relying too much on this categorical strategy, despite the SLD/OD distinction's intuitive appeal. Einarsdóttir and Ingham (2005) conducted a comprehensive analysis of the data supporting the usage of disfluency-type measures and argued that the behavioral difference between stuttering and normal disfluency is fundamentally related to the amount of observable stuttering rather than type-based categorization per se. The majority of clinicians continue to support the SLD/OD paradigm as clinically helpful for making diagnostic decisions, notwithstanding this criticism (Conture, 1997; Yairi & Ambrose, 2005).

2.2 Challenges in Early Diagnosis

Diagnosis of stuttering in preschoolers can be considered as one of the most challenging tasks within the domain of speech-language pathology. There are several reasons for this. First, stuttering is characterized by inherent variability, meaning that a child's speech fluency may be markedly different across sampling occasions, speaking situations, and communicative demands (Yaruss, 1997). Because of variability, a single speech sample might not accurately reflect the child's typical fluency profile; clinicians should be cautious when making diagnostic judgments based on scant observation. Second, as was previously said, it is not always easy to distinguish between early stuttering and usual developmental disfluency, especially in the early phases of commencement. Third, estimations indicate that between 65% and 80% of children who start stuttering will recover on their own during the first few years of commencement, indicating a high natural recovery rate from early stuttering (Yairi & Ambrose, 1999; Yairi & Ambrose, 2005). This presents a clinical conundrum: children who are at risk of persistent stuttering may benefit from early intervention, while children who are likely to recover on their own may benefit from a period of watchful waiting.

A set of risk variables must be taken into account in order to determine which children are more likely to be persistent. A weighted stuttering-like disfluency (SLD) index that included the frequency, kind, and repetition units of SLDs was shown by Walsh et al. (2021) to be strongly associated with persistent outcomes by the ages of four and five years, providing therapeutically useful recommendations. It is also noted that according to Walsh et al. (2023), positive history of the disorder in the family, worse results during the nonword repetition test, poor phonological abilities, and presence of a higher number of SLD cases were predictors for development better than each of these aspects independently. The significance of employing multivariate protocols of diagnosis instead of relying only on

single criteria becomes obvious in light of these results. The process of diagnosing is further complicated by the shortcomings in the clinical education that most speech-language pathologists receive concerning fluency disorders.

1.5 Importance of Early Identification and Intervention

It is difficult to exaggerate the significance of early detection of stuttering. Stuttering has serious detrimental effects on the affective, behavioural, and cognitive domains if it is not treated during the preschool years. Also, as reported by Eggers et al. (2013) and Vanryckeghem & Brutten (2012), stuttering children are susceptible to developing negative attitudes about talking, avoiding talking, producing fewer verbalizations, and experiencing higher levels of emotional distress associated with speech acts. The preschool age stammerers show a greater activation of the sympathetic nervous system while talking, which signifies that emotional susceptibility related to stuttering is evident physiologically, even at very young ages, according to findings by Tumanova et al. (2014). Thus, the benefits of early intervention include not only reducing stuttering but also preventing other negative consequences.

Early access to evidence-based intervention is therefore of considerable clinical and societal importance. However, effective intervention depends critically on timely and accurate diagnosis. The child may miss the crucial window for the best intervention results if the diagnosis is delayed, whether due to professional confusion, family assurances that kids will "grow out of it," or insufficient referral paths.

2.3.1 SLP Perspectives on Stuttering: An Overview

Over the past thirty years, there has been an increase in scholarly interest in the viewpoints, attitudes, and methods of speech-language pathologists with reference to stuttering assessment. Significant variation in clinical practice, low confidence in stuttering assessment and therapy, and persistent difficulties in converting research findings into clinical action have all been repeatedly shown by this body of research. In the past, general perceptions and training sufficiency were the main topics of research on SLP views concerning stuttering.

2.3.2 Diagnostic Variability Among Clinicians

Therapists' differing assessments of stuttering in identical speech samples are well documented. The accuracy of stuttering assessments performed by students, practicing clinicians, and highly experienced stuttering judges was examined by Brundage et al. (2006). Their findings revealed that while students and clinicians demonstrated similar and relatively high levels of intrajudge agreement (indicating consistency in their own judgments across repeated exposures), both groups identified substantially less stuttering than did highly experienced judges. In particular, compared to the highly experienced judges, students and clinicians identified less than half as much stuttering. This finding confirms and expands on previous findings of high agreement coexisting with poor accuracy (Cordes & Ingham, 1994; Curlee, 1981). Clinicians may be accurately recognizing something that deviates significantly from expert opinion due to this mismatch between consistency and accuracy, which is clinically significant.

2.3.3 SLP Confidence, Perceptions, and Decision-Making in Stuttering Assessment

. Byrd et al. (2020) noted that adults who stutter report that the absence of direct discussion of their condition during childhood significantly contributed to feelings of fear, shame, avoidance, and anger. This evidence suggests that diagnostic avoidance, however well-intentioned, may have adverse long-term consequences for the child and family. The study called for systematic exposure to persons who stutter across the lifespan as a means of improving SLP comfort and, by extension, the transparency of diagnostic communication.

2.3.4 Survey-Based and Qualitative Studies on SLP Practices

Survey-based methodologies have been widely employed to document the diagnostic practices of SLPs in the domain of stuttering. These studies have yielded important insights into the criteria that clinicians rely upon, the degree of consensus or disagreement among practitioners, and the contextual factors that shape clinical decision-making. Studies examining SLP practices have documented considerable heterogeneity in the specific measures and criteria employed in stuttering assessment. Some therapists use frequency measures such as per cent syllables stuttered, some focus on the type of dysfluencies shown by the child, and others focus on parental concerns, ecological validity or more general qualities of life issues. The difference is a couple of things. Of course, individual factors such as the amount of training and experience play a part. But so do theoretical issues yet to be resolved in the field regarding diagnosing stuttering (Conture, 1997; Yairi & Ambrose, 1990).

2.4 Diagnostic Approaches and Criteria in Preschool Stuttering Assessment

2.4.1 Frequency-Based Approach

The frequency-based approach to stuttering diagnosis is among the oldest and most commonly utilised tools in clinical practice as well as scientific research studies. In the case of this measure, one calculates the ratio of disfluent speech units, which may include syllables, words, or speaking time, and compares this ratio against certain normative data or criteria. As for the clinical measurement method, it includes the percentage of syllables stuttered (%SS) or the percentage of words stuttered (%WS). There exists a standard of three per cent syllables stuttered as an indicator of differential diagnosis of stuttering from normal disfluency (Ambrose & Yairi, 1999; Riley, 1994).

A fundamental theoretical underpinning of the frequency-based approach to stuttering derives from the fact that, by definition, stuttering is characterised by the presence of abnormalities in fluency of speech production that go beyond the expected norms for an individual's particular age group. This was first noted by Johnson and Associates (1959) through the presentation of normative data, suggesting that children who stutter show significantly more instances of disfluencies when compared with their peers who have normal fluency. Ambrose and Yairi (1999) later developed more accurate normative data from a well-defined group of stutterers around onset age.

Their results showed that, on average, preschool children who stutter emitted roughly three times as many SLDs compared to normally fluent control participants, whose SLD rates were more than 10 SLDs/100 syllables. The frequency-based method has a number of strengths. The procedure is fairly simple to perform, involves a quantitative measure which can be compared to standard values, and includes standardized assessment tools like the Stuttering Severity Instrument (SSI; Riley, 1994), in which frequency is included. On the

other hand, there are several weaknesses associated with this method as well. One weakness is associated with the variable nature of stuttering.

Jani et al. (2013) evaluated methods involved in assessing frequency and duration in stuttering with emphasis on methodological problems encountered in frequency determination with respect to sampling context, duration of speech samples, and types of utterances considered. Frequency by itself is insufficient since, for instance, two children may score similarly when it comes to frequency while being quite different in terms of disfluency type, seriousness, and associated characteristics. In the opinion of Einarsdóttir and Ingham (2005), undue emphasis has been placed on frequency with regard to stuttering at the expense of other elements of this complex condition.

2.4.2 Type-Based Approach

The type-based approach focuses on the qualitative characteristics of disfluencies rather than, or in addition to, their raw frequency. Central to this approach is the distinction between SLDs, which include part-word repetitions, single-syllable word repetitions, and dysrhythmic phonation and ODs such as revisions, interjections, and multisyllabic whole-word repetitions (Ambrose & Yairi, 1999). The premise of the type-based approach is that the occurrence of within-word disfluencies, particularly in multiple repetition units and with audible tension, is diagnostically more informative than disfluency frequency per se.

The work done by Conture (1990, 1997) made him one of the leading proponents of type-based diagnosis, contending that stuttering should be diagnosed among children if the number of within-word disfluencies reaches three out of every 100 words, especially part-word repetitions and prolongations. His three per hundred rule gained popularity in the field and was included in clinical practice. The SLD model developed by Ambrose and Yairi (1999) offered a conceptual basis for using this approach since it proved to be effective in

distinguishing stutters from normally fluent children. Walsh et al. (2021) further developed this work with a weighted SLD index. This weighted certain types of speech-language disorders more heavily, particularly dysrhythmic phonations such as blocks and prolongations, as these are more likely to predict persistent stuttering. They found that their weighted approach could clearly differentiate between kids who would recover and those who wouldn't. Thus, it really shows that paying attention to these specific types of disfluencies can be very beneficial in predicting long-term outcomes.

A type-based method gives us some important advantages in understanding the details of stuttering, which may be missed by counting its frequency. So think about it this way – you have two kids, who are both doing a lot of repeat sounds, but one is repeating whole units, and sounds strained, and the other is not straining and is only repeating shorter bits – they need different types of help. But those who take issue with this approach fear that the kind of stutter that will be diagnosed in a check-up can be unpredictable.

However, Einarsdóttir and Ingham (2005) argued that disfluency-type measures are not very reliable because the perceptual boundaries between categories are inherently ambiguous, which means that the same utterance may be categorized differently by different listeners. High variability between judges with different levels of experience was also found by Brundage et al. (2006) in the exact identification of stuttering vs. non-stuttering intervals, indicating that type-based identification is subject to high perceptual variability

2.4.3 Event/Context-Based Approach

It takes into account who the child is speaking to, how familiar the topic is, the child's emotions and the complexity of what they are saying (Yaruss, 1997; Yaruss et al., 1998). Stuttering can vary greatly based on these factors. Assessments that do not include these details or only consider one scenario may not accurately reflect the child's fluency. Therefore, it is important to include different contexts to better understand stuttering. Event-based measurement (as reviewed by Valente et al. (2015)) is the identification and counting of disfluency events in speech samples. Nor is it an interval-based measurement, where you judge parts of the sample as fluent or disfluent based on pre-determined time intervals. Both types are used in research and clinics, but there are issues of data reliability and validity with both. On the one hand, interval-based methods help track the presence over time of disfluencies in speech. On the other hand, event-based measures provide a fine-grained perspective on the real occurrences of disfluencies. Jani et al. (2013) found that even the measures that clinicians use to assess stuttering vary across settings. This non-standardisation results in a different view of diagnosis by specialists. The event-context approach explains looking at a child's speech across settings, clinically. Yaruss et al. (1998) exhibited the range of variation in stuttering across situations. Children could do quite differently in one task scenario than another. So this big difference means we need more than one kind of evaluation.) It's really important to get speaking samples from lots of different situations to really understand what's going on.

2.4.4 Eclectic and Multifactorial Approach

The eclectic approach offers the most detailed diagnosis of stuttering in preschoolers because it contains a wide range of information, such as the frequency of disfluencies, emotional status, and parental concern. It also considers the individual profile of each child. It includes things like linguistic skills, family history and things that may maintain stuttering. This strategy understands that stuttering is not simple – it is influenced by speaking problems, feelings and where you grow up (Smith & Weber, 2017; Yairi & Ambrose, 2005). Smith and Weber explain why they do with the Multifactorial Dynamic Pathways Theory. They think the cause of stuttering is speech movement problems, but that it actually is generated by feelings and language throughout your life. The theoretical framework has important clinical implications in that it predicts that risk factors for stuttering persistence are likely to be distributed across multiple domains and that effective investigation must sample each of these domains. Walsh et al. (2023) offered empirical support for this position, demonstrating that a combination of risk factors, including family history, phonological ability, SLD frequency and nonword repetition performance, offered the most accurate predictions of stuttering persistence and significantly outperformed any single-variable model.

Because of the limitations of either frequency or type criteria, several investigators have suggested a combined approach as the most comprehensive diagnostic strategy (Ambrose & Yairi, 1999; Conture, 1997; Yairi & Ambrose, 2005). This method combines measures of stuttering frequency with qualitative information on the type of disfluency, repetition units, associated tension and secondary behaviors to provide a holistic assessment of stuttering severity. The combined approach is operationalized in formal assessment tools such as the SSI-4 (Riley, 2009), which weight both the frequency and severity of physical tension in their scoring algorithms.

This approach looks at how often a person stutters and what kind of dysfluency they are using, such as what words they are repeating, where tension occurs and what other movements they are making. . It combines all this info to determine a stutter's severity. Instruments such as the SSI-4 (Riley, 2009) have been utilized to investigate the frequency of occurrence and severity of stuttering to create scores. Ambrose and Yairi (1999) recommended that both the frequency and the types of stuttering should be measured. They demonstrated that the combination approach was better than either alone. These scientists even defined how much stuttering was too much, depending on how often it occurred and what words were repeated. This idea was the basis of the weighted SLD index developed by Walsh et al. (2021). This approach combines the type of stutter and frequency of occurrence into a single overall score. It differentiates between part-word repeats and dysrhythmic phonations – in other words, different stuttering patterns.. Their weighted SLD was immensely helpful because they could predict who would continue to stutter better than if they just used one measure. So all these factors combined really help to make accurate judgments in real cases. This combined approach is viewed as the gold standard for the evaluation of stuttering currently (Conture, 1997; Yairi & Ambrose, 2005). Frameworks proposed by Clark et al. (2015) follow suit and recommend that clinicians record the frequency, type and conditions of stuttering occurrence during assessments. However, this combined approach isn't uniformly applied everywhere. Additionally, there's an inconsistency in how many clinicians consider each bit of information when making an accurate diagnosis. Clark et al. (2015) provided an evidence-based review of multifactorial stuttering assessment, organizing relevant factors within a carer interview and direct child assessment framework. Caretaker interviews included factors such as the gender of the child, the age of onset of stuttering, the time since onset, the family history of stuttering, the caregivers' thoughts about stuttering, and the levels of worry of the carers.

This elaborate setup has been designed to compare theories of stuttering with clinical scenarios that clinicians face. It offers a handy guide for carrying out evidence-based assessments. Importantly, one factor alone is not enough to diagnose stuttering in young children. So there are many aspects of the child's situation that the approach needs to consider. The multifactorial approach is limited more by practical than theoretical considerations. “Performing a comprehensive assessment takes time, resources and expert knowledge, which is not always available, in particular in a low-budget clinic.

Erickson et al. (2023) note that many speech language pathologists in Australia struggle with heavy caseloads, limited time with each client and a lack of professional development in fluency disorders. These challenges highlight the need for simpler, more user-friendly tools for assessments. We need methods that address all the important aspects without increasing the already overwhelming workload of clinicians. Parent concern has been increasingly recognized as a significant and clinically relevant part of the stuttering diagnosis process in preschool children. The parent concern report does not replace a clinical assessment but rather provides a complementary and clinically meaningful source of diagnostic information. There are several studies that provide empirical support for the validity of parent concern as a diagnostic indicator. Conture et al. (using the

Test of Childhood Stuttering (TOCS; Gillam et al., 2009) demonstrated that parents who expressed concern about their child's speech fluency, independently of formal assessment, produced significantly higher scores on the TOCS Speech Fluency and Disfluency-Related Consequences rating scales. Convergent support for the correctness of parental observation could be seen in a structured child-examiner conversation, where children of parents who scored higher on the TOCS Speech Fluency rating scale produced more stuttering disfluencies.

This study also found that some children with high levels of Disfluency-Related Consequences scores indicated a shorter mean length of utterance (MLU), suggesting that they may reduce their verbal output to minimize instances of stuttering, a clinically significant finding that standard frequency-based assessment might miss if MLU is not considered. Parental concern has been included as a factor in assessing young children who stutter by Yairi and Ambrose (1999, 2005). They found that concern expressed by parents shortly after stuttering onset is often correlated with the child's level of disfluency, and can be predictive of whether the stutter will persist. Standardized parent-report tools, such as the TOCS rating scales, help ensure that parents' perspectives are consistently included in the diagnostic process. But there is a downside. Parents can become anxious and blow problems out of proportion, or they can minimize problems because their child's speech sounds normal to them. Plus, things like culture might prevent them from seeking help. However, the majority of the evidence suggests that parent concerns need to be included as part of the overall assessment for stuttering.

The challenge is to develop frameworks that retain the context and expertise of expert judgements, but make these judgements more systematic and accountable. Standardized assessment protocols, training in the measurement of stuttering and clear criteria for diagnosis will improve the reliability and validity of these judgements. The evaluation of two training programs for the measurement of stuttering (Bainbridge et al., 2015) led to substantial improvements in accuracy and consistency. This demonstrates the influence of structured training on professional judgement and the importance of such programmes.

2.5 Gaps in Existing Literature

Notwithstanding the large body of research examined above, substantial gaps exist in the understanding of how speech language pathologists diagnose stuttering in preschool children. Most survey research on SLP practices and perspectives has been conducted within Western, English-speaking contexts, primarily the United States, Australia, and Western Europe. The existing literature is critically lacking in the perspectives of SLPs working in culturally and linguistically diverse contexts such as South Asian contexts including India. target language linguistic properties, cultural perceptions of stuttering, and health care systems in which SLPs operate may all influence diagnostic practices, the generalizability of findings from Western samples to the Indian context cannot be assumed.

Furthermore, although research has investigated variability in stuttering judgements and the role of experience in clinical decision-making, relatively little research has investigated the specific diagnostic criteria and methods used by SLPs in their everyday practice when assessing preschool children. Most existing studies have focused on SLP comfort, self-efficacy, or general attitudes rather than on the specific operational criteria, such as frequency thresholds, disfluency type criteria, or parent concern ratings that clinicians use to arrive at a diagnosis. Understanding which diagnostic approaches are endorsed and employed by SLPs in practice is essential for identifying areas of consensus and divergence, and for developing training and support resources targeted at improving diagnostic consistency.

2.6 Lack of Consensus in Diagnosis

As the foregoing review has demonstrated, there is currently no universally agreed-upon set of diagnostic criteria for stuttering in preschool children. The field is characterized by a plurality of approaches — frequency-based, type-based, parent concern-based, context-based, multifactorial — each with empirical support and clinical utility, but also with limitations and potential sources of error. Research has shown that diagnostic cutoffs vary, resulting in different diagnoses for children with similar speech difficulties. Here, for example, the clinician's knowledge of the child's language and their own attitudes are relevant. Inconsistencies matter. Kids who are mildly disfluent may not get the early help they need. We need to understand the particular standards they apply, how they reason through cases, and what influences their decision-making. This knowledge is critical to enhancing the consistency and equity of stutter treatment.

2.7 Need for Studying SLP Perspectives

The Importance of SLP Input to Stuttering Diagnosis for Several Reasons First, SLPs are the primary professionals for identification and management of stuttering in children. And what they do determines whether children are given the right help early on. Secondly, we find that many factors influence SLPs' thoughts about stuttering, from their training in school to the amount of their work with people who stutter. Their beliefs and culture and the theories they study also shape their thoughts on this, so all these bits are part of their views and practices. Knowledge of the factors that influence diagnostic decision making and the direction of their influence is critical to the design of effective pre-service and continuing professional development. The results of this study are anticipated to provide an overview of the SLP diagnostic practice and attitudes of preschool stuttering assessment, identify areas of agreement and disagreement with evidence-based guidelines, and produce practical recommendations for training and professional developme

CHAPTER III

METHOD

The goal of this study was to look at how Speech-Language Pathologists (SLPs) see the diagnostic processes and decisions involved in diagnosing stuttering in preschool kids. Specifically, it aimed to explore what approach SLPs use in their clinical practice and to think about the importance of stuttering-like disfluencies (SLDs) and other disfluencies (ODs) in assessing young kids who stutter, as well as the role of other factors, such as child and parental factors, in diagnosing stuttering in preschool children. As the focus was on clinicians' thoughts and reasons for diagnosing stuttering, researchers used a survey along with qualitative methods to get in-depth information from SLPs who have directly worked with fluency issues and preschool children.

3.1 Research Design

The current study used surveys along with qualitative methods. They applied a semi-structured questionnaire to understand Speech-Language Pathologists' views on diagnosing preschool stuttering. The mixed approach—combining quantitative and qualitative data—was appropriate for examining subjective judgments, decision-making, and professional experiences, not just objective performance metrics.

Participants were selected using purposive sampling, as this method helps identify individuals with direct and relevant experience in the assessment of preschool stuttering. In addition, snowball sampling was used to achieve the desired sample size and to reach clinicians with relevant expertise through professional referrals. Invitations describing the research study and requesting participation were sent to eligible SLPs via email.

3.2 Participants

The participants in the present study were Speech-Language Pathologists involved in diagnosing preschool children who stutter. The study intended to recruit clinicians with appropriate professional qualifications and substantial experience in fluency disorders so that the information collected would reflect informed clinical opinions and diagnostic practices. A total of 100 SLPs were targeted for participation in the study. Participants were expected to be working in hospitals, clinical settings, rehabilitation centres, academic institutions and schools where they routinely encounter preschool children who stutter.

3.2.1 Inclusion Criteria

1. Speech-Language Pathologists having at least a master's degree in Speech-Language Pathology.
2. Speech-Language Pathologists who have experience with fluency disorders and have diagnosed preschool children who stutter in the last year.
3. Speech-Language Pathologists working in hospitals, rehabilitation centres, schools, academic institutions with clinical services, and private clinical settings.

3.2.2 Exclusion Criteria

1. Speech-Language Pathologists working exclusively with adult populations.
2. Speech-Language Pathologists with no experience with preschool stuttering cases in the past 12 months.

3.3 Ethical Considerations

The study was conducted after obtaining ethical approval from the relevant institutional authority. The ethical committee clearance report was obtained with the reference number SH/IRB/M.5/SLP.11/2025-26. The participation of the subjects was voluntary, and written consent was sought prior to data gathering. The purpose of the study, the procedures involved, and the use of survey data were clearly explained to participants

before obtaining consent. All information collected from participants, including demographic information and survey responses, was kept confidential and used only for research purposes.

3.4 Procedure

The present study was carried out systematically and in a structured manner. The study was conducted in four phases:

Phase 1: Development of Questionnaire

Phase 2: Validation of Questionnaire

Phase 3: Administration of Questionnaire

Phase 4: Statistical Analysis of Data

3.4.1 Phase 1: Development of Questionnaire

Phase 1 involved the development of the questionnaire for the study. The questionnaire was developed based on a review of relevant journal articles, books, and other available literature on the diagnosis of stuttering in preschool children and SLP perspectives on preschool stuttering diagnosis. The objective of this stage was to develop a set of questions that would successfully help get the clinicians' point of view and experience on diagnosing stuttering among preschoolers. Semi-structured questions were used since this kind of question helped gather clinically relevant data consistently from the participants. The inclusion of both closed-ended and open-ended questions would give room for participants to voice their opinions without limitations. The questions were formulated following a focus group discussion with SLPs working in the field of stuttering. Initially, 25 questions were designed; however, following the focus group discussion, the questionnaire was reduced to 21 questions. (Questionnaire attached in Appendix A). The final questionnaire, titled “A Survey on Speech-Language Pathologists’ Opinions on the Assessment of Stuttering in Preschool Children,” was administered as an online Google

Form comprising 33 items. The questionnaire was organized into the following sections:

- a) Informed Consent
- b) Demographic Details
- c) Approach I: Frequency-Based Diagnosis
- d) Approach II: Type-Based Diagnosis
- e) Approach III: Event-Based Diagnosis
- f) Approach IV: Eclectic Approach
- g) General Queries

Each section was prefaced by a brief explanatory introduction to orient participants to the conceptual framework underlying that set of questions.

Section 1: Informed Consent

The first section of the questionnaire presented the informed consent statement. Participants were required to read a description of the study's purpose, the voluntary nature of participation, the right to withdraw at any time without penalty, and assurances of data confidentiality. Only participants who selected "I Agree" were permitted to continue to subsequent sections of the questionnaire.

Section 2: Demographic Details

The second section collected demographic and professional background information from participants. This section comprised 11 items (Questions 2–12) and was designed to characterise the sample in terms of clinical experience, professional qualifications, and work context.

Section 3: Approach I – Frequency-Based Diagnosis

This section consisted of three questions and introduced participants to the frequency-based diagnostic approach and examined their opinions on its clinical utility (Appendix A). In this approach, all disfluencies, regardless of type, are counted

together to calculate the total percentage of disfluencies in a speech sample. A diagnosis of stuttering is typically made when the overall percentage of disfluent syllables or words exceeds a specific threshold, such as 3% of syllables (Yairi & Ambrose, 1999).

Section 4: Approach II – Type-Based Diagnosis

This section consisted of six items that examined SLPs' views on the type-based diagnostic approach, which focuses on the qualitative nature of disfluencies rather than their overall frequency. Diagnosis is primarily based on the presence of stuttering-like disfluencies (Yairi & Ambrose, 1999). In this approach, clinicians consider a specific type of 'stuttered' disfluency as a distinguishing feature between children who stutter and those who do not. Diagnosis is done primarily based on the presence of stuttering-like disfluencies (Part-word repetition, Single syllable word repetition, Prolongations, Blocks, Broken words), and not other disfluencies (Phrase repetitions, Revisions, Interjections, Multisyllabic word repetitions, Incomplete phrases). Other disfluencies are generally considered typical and are not included in the diagnostic percentage. In this approach, the frequency of disfluency is not taken into consideration. The mere presence of stuttered disfluency is itself enough for labelling the child with stuttering.

Section 5: Approach III – Event-Based Diagnosis

Event-oriented stuttering identification is based not on quantification but on the perception of stuttering as made by the clinician and not by means of calculation of numbers and percentages of disfluencies. The impression made by clinicians concerning severity is global in nature and generally consists of classifying stuttering severity into mild, moderate, and severe categories, based on perception of speech breaks rather than quantification. The basis of this classification method lies in the episodic nature of stuttering. From the perspective of a listener, stuttering speech becomes perceptually normal between episodes and stuttering becomes noticeable at certain perceptible points in time (Van Riper, 1982;

Wingate, 1964). A stuttering episode may consist of repetition, fixation, and/or superfluous movement.

Section 6: Approach IV – Eclectic Approach

This part of the survey covered the opinions of the SLPs regarding the eclectic method that combines several criteria for diagnosis, such as the nature of the stuttering, frequency, secondary symptoms, the degree of conspicuousness of the stuttering, and parental issues.

Section 7: General Queries

Finally, the last section of the survey included questions on more general topics related to practice. The participants had to say whether they found the current criteria for the diagnosis of stuttering adequate when applied to preschoolers.

3.4.2 Phase II: Validation of Questionnaire

For Phase II, the questionnaire generated in Phase I had to be validated. This process was carried out based on the methods set out in Yusoff's (2019) recommendations on content validation, which include calculating the Content Validity Index (CVI). Five Speech-Language Pathologists actively researching fluency were sent the questionnaire for its evaluation regarding content clarity and relevance. In addition, a pilot study was conducted using two Speech-Language Pathologists not included in the process of expert validation.

3.4.3 Phase III: Administration of Questionnaire

The research was conducted using an online survey approach through Google Forms to facilitate remote data collection. The estimated sample size for the study was 100 participants. The researcher developed the questionnaire in Google Forms and distributed it using a unique survey link. A total of 730 invitation emails were sent to Speech-Language Pathologists globally. These emails contained a brief description of the study topic, purpose of the study, duration of the study, confidentiality of data, and the voluntary nature of

participation. The survey URL link was sent using purposive and snowball sampling techniques. Participants had to give their consent prior to taking the survey. Those who failed to do so were excluded from the study. The total number of participants was 106, leading to a response rate of 14.52%. The response rate was higher than the recommended sample size and, therefore, adequate for further analysis. Out of 106 responses, 14 participants were excluded from the study because they did not have a Master's degree.

3.4.4 Phase IV: Analysis of Data

Phase IV involved analysing the data obtained from the questionnaire. The two types of analysis techniques have both been applied. The quantitative approach to analysis was used to analyse the demographic and background information collected through Google Forms. In this case, the frequency tabulation approach was employed to summarise the information. The Friedman Test was performed to find out whether there were differences in the responses to the seven diagnostic approaches. The qualitative information was analysed by using Reflexive Thematic Analysis (RTA). This analysis was done on the basis of the six-step process recommended by Braun and Clarke (2006).

I. Becoming familiar with the data

The responses collected from the open-ended questions were analyzed. The data was read multiple times to become more familiar with it, as the data set was in the form of unstructured answers provided by SLPs. This step required close examination of the data in terms of its content and recurring themes in each individual answer, and developing an extensive awareness about what type of reasoning was expressed by SLPs before moving to actual coding. Familiarization with the data was an important prerequisite for conducting meaningful coding and identifying themes in the data.

II. Generating initial codes

Coding of the data followed familiarization. The interesting aspects of the data were coded systematically, with all data related to a particular code being collected. Every significant piece of information, whether a word, phrase, or even a sentence expressing some clinically or theoretically important meaning, was assigned an appropriate descriptive code. These codes were based on semantics, which is what people explicitly stated in their justification of the issue. All the data related to a specific code were brought together such that no meaningful data remained unnoticed. Coding was done systematically, considering the amount of data related to four themes.

III. Searching for themes

After the initial coding and collection of the data, a list of different codes was identified. In this step, the re-focusing of the data analysis at the comprehensive level was carried out by grouping the various codes into potential sub-themes by gathering all the relevant coded extracts inside the identified themes (main themes). In this phase, the generated codes were reviewed by two other SLPs, who validated the codes and grouped them into potential subthemes, and all data relevant to each potential theme were gathered. Since the four overarching themes were predetermined based on the research framework, this phase focused on identifying subthemes that captured distinct and meaningful patterns of reasoning within each theme. Codes with conceptual similarity or shared clinical relevance were grouped together, and a preliminary theme was constructed to visualize the relationships between codes and subthemes within each of the four themes

- a) Theme 1 frequency-based approach
- b) Theme 2 type-based approach
- c) Theme 3 event-based approach
- d) Eclectic approach approach

IV. Reviewing themes

In this step, the data within the themes were examined for coherence and clear and identifiable differences between subthemes that relate to the codes and the full data set was checked. After determining potential sub-themes, the process continued to assess how coherent and distinct they were both within themselves and from other sub-themes. Some sub-themes had to be combined since they were too similar, whereas some sub-themes had to be divided because they included too many distinct ideas within one category.

V. Defining and naming themes

By recognizing the essence of each theme's actual content and deciding the aspect of data that each theme captures. The task of naming sub-themes was more than descriptive; the names assigned to each sub-theme were designed to represent the analytic core of the phenomenon. In this way, each of the four broad themes was defined based on SLPs' reasoning for frequency, type, event, and eclectic methods of diagnosing stuttering among preschoolers.

VI. Producing the report

The final report of the analysis within and across the themes was concise and non-repetitive. Frequency count refers to the number of times a particular code occurs. This was calculated by summing up the number of participants who shared similar kinds of content/ideas under specific themes. The overall percentage of participants having similar perspectives toward a particular theme was identified. The last stage consisted of documenting the results of the thematic analysis into a well-constructed analysis. This was achieved through the use of the extracts from the participants' statements in the process of demonstrating the subthemes, while at the same time using the researchers' interpretations

to link these subthemes with the literature on stuttering assessments. The systematic method used in the thematic analysis helped ensure that all the details of the qualitative data were captured. The results were presented in accordance with the four themes identified, with each subtheme being explained within the context of its relevance to the diagnosis of preschool stuttering. This analysis aimed to identify recurring patterns, major ideas, and key themes reflecting how Speech-Language Pathologists interpret disfluency patterns and make diagnostic decisions regarding preschool stuttering.

CHAPTER IV

RESULTS

The present study surveyed Speech-Language Pathologists' (SLPs) perspectives on the diagnosis of stuttering in preschool children. A total of 92 SLPs completed the online questionnaire. The results of the questionnaire are discussed in the following sections

- I) Demographic details
- II) Frequency-Based Diagnosis
- III) Type-Based Diagnosis
- IV) Event-Based Diagnosis
- V) Eclectic approach
- VI) General queries

4.1 Demographic Characteristics of Participants

Demographic characteristics of the participating SLPs are shown in Table 1. Sample was diverse in age, gender, educational qualification, clinical experience, work settings and geographical distribution, providing a broad representation of clinicians involved in stuttering assessment and management in preschool children

Table 4.1

Demographic Characteristics of Participants (N=92)

Variable	Category	n (%)
Gender		
	Female	74 (80.4%)
	Male	17 (18.5%)
	Prefer not to say	1 (1.1%)
Highest Qualification		
	Master's Degree in SLP	56 (60.9%)
	Ph.D. in SLP	30 (32.6%)
	Other	6 (6.5%)
Total Years of Experience		
	1–5 years	26 (28.3%)
	5–10 years	17 (18.5%)
	10–20 years	23 (25.0%)
	More than 20 years	26 (28.3%)
Work Setting		
	Academic + Clinical Services	40 (43.5%)
	Private Clinic	24 (26.1%)
	Rehabilitation Centre	7 (7.6%)
	Hospital	6 (6.5%)
	Other / Multiple	15 (16.3%)
Preschool Caseload (Past 12 Months)		

1–4 children	42 (45.7%)
5–10 children	23 (25.0%)
11–20 children	7 (7.6%)
More than 20	15 (16.3%)
None / Other	5 (5.4%)
Age (years)	M = 39.5; SD = 14.1; Range = 24–81; Mdn = 36.0

Note. SLP = Speech-Language Pathologist; n = frequency; % = percentage.

The total number of SLPs included in the study was 92. The sample was predominantly female (80.4%), 18.5% were male, and one participant did not want to disclose their gender. Regarding qualifications, the majority of the sample had a Master's Degree in SLP (60.9%), followed by a PhD in SLP (32.6%), while 6.5% had other qualifications. Clinical experience was evenly distributed with about equal proportions in 1–5 years (28.3%) and more than 20 years (28.3%) of experience, with the remaining in the 5–10-year (18.5%) and 10–20-year (25.0%) ranges.

The mean age of participants was 39.5 years (SD = 14.1; range: 24–81; median: 36.0), representing a mix of early-career and experienced clinicians. Work settings varied, with most in a combined academic and clinical service role (43.5%), followed by private clinics (26.1%), and smaller proportions in rehabilitation centres, hospitals and other or multiple settings. Regarding preschool caseload over the past 12 months, almost half (45.7%) reported seeing 1-4 preschool children, 25.0% saw 5-10 children, and 16.3% had caseloads of more than 20 children, suggesting broad clinical exposure to preschool stuttering across the sample.

Table 4.2

Frequency Analysis of SLP Ratings for Each Diagnostic Approach (N = 92 unless otherwise noted)

Approach / Statement	Agree n(%)	Slightly Agree n(%)	Neither n(%)	Slightly Disagree n(%)	Disagree n(%)	Total N
Frequency-Based	21	13	8 (8.7%)	19	31	92
Approach: Total	(22.8%)	(14.1%)		(20.7%)	(33.7%)	
disfluency frequency as primary criterion						
Type-Based Approach:	61	15	5 (5.4%)	0 (0.0%)	4 (4.3%)	92
The type of disfluency	(66.3%)	(16.3%)				
should be considered						
Type-Based (ODs):	19	13	9	18	17	76
Other disfluency types	(25.0%)	(17.1%)	(11.8%)	(23.7%)	(22.4%)	
should be considered (n=76)						
Event-Based Approach:	38	20	14	11	9 (9.8%)	92
Clinical judgement of	(41.3%)	(21.7%)	(15.2%)	(12.0%)		
stuttering events/moments						
Event-Based	18	22	13	0 (0.0%)	6	59
Reliability: Event-	(30.5%)	(37.3%)	(22.0%)		(10.2%)	
based is more reliable than type/frequency						

(n=59)						
Eclectic – Type +	71	15	2 (2.2%)	2 (2.2%)	2 (2.2%)	92
Frequency: Both should	(77.2%)	(16.3%)				
be considered						
Eclectic – Other	72	14	4 (4.3%)	0 (0.0%)	2 (2.2%)	92
Factors: Duration,	(78.3%)	(15.2%)				
secondary behaviours,						
etc.						
Eclectic – Parental	68	13	2 (2.2%)	2 (2.2%)	4 (4.5%)	89
Concerns: Should be	(76.4%)	(14.6%)				
incorporated (n=89)						
Eclectic – Child's	65	14	6 (6.7%)	1 (1.1%)	3 (3.4%)	89
Awareness: Child's	(73.0%)	(15.7%)				
reaction should be						
considered (n=89)						
Guidelines Sufficiency:	18	23	12	29	10	92
Existing guidelines are	(19.6%)	(25.0%)	(13.0%)	(31.5%)	(10.9%)	
sufficient						

Note. n = frequency; % = percentage of valid responses for each item; Neither = Neither Agree nor Disagree.

4.2 Coded Category Analysis

Likert scale answers were used to determine clinician opinion for each diagnostic method. We categorised these into positive, neutral and negative perceptions. See Table 3

for a summary of the coded answers for each method. The Likert responses were collapsed into three categories; Code 1 is positive (Agree or Slightly Agree), Code 2 is neutral (Neither Agree nor Disagree), and Code 3 is negative (Slight Disagree or Disagree)

Table 4.3

Coded Category Analysis: Distribution of Agreement Responses Across All Diagnostic Approaches (N = 92)

Diagnostic Approach	Code 1:	Code 2:	Code 3:	Positive	Neutral	N
	Positive	Neutral	Negative	%	%	
	n(%)	n(%)	n(%)			
Frequency-Based Approach	34	8	50	37.0%	8.7%	92
Type-Based Approach	76	5	11	82.6%	5.4%	92
Event-Based Approach	58	14	20	63.0%	15.2%	92
Eclectic – Type + Frequency	86	2	4	93.5%	2.2%	92
Eclectic – Other Factors	86	4	2	93.5%	4.3%	92
Eclectic – Parental Concerns	81	2	6	91.0%	2.2%	89
Eclectic – Child's Awareness	79	6	4	88.8%	6.7%	89

Note. Code 1 = Positive agreement (Agree + Slightly Agree); Code 2 = Neutral (Neither Agree nor Disagree); Code 3 = Negative disagreement (Slightly Disagree + Disagree).

Throughout, non-parametric statistical tests were used as the response data were measured on ordinal Likert scales, and visual inspection of the distributions indicated non-normality. The event-based approach came in with moderate support, around 63.0%, but the frequency-based method received the least positive feedback at just 37.0%, along with the highest rate of disagreement, 54.3%. Neutrals weren't common for any category, only ranging from 2.2% to 15.2%, indicating participants usually had strong views on each approach.

4.3 Inferential Statistical Analyses

Given that the response data were measured on ordinal Likert scales and visual inspection of distributions revealed non-normality, non-parametric statistical tests were applied throughout. Responses were numerically coded (Agree = 1, Slightly Agree = 2, Neither = 3, Slightly Disagree = 4, Disagree = 5) for analytical purposes, such that lower scores reflect greater agreement.

4.3.1 *Friedman Test: Comparison Across Approaches*

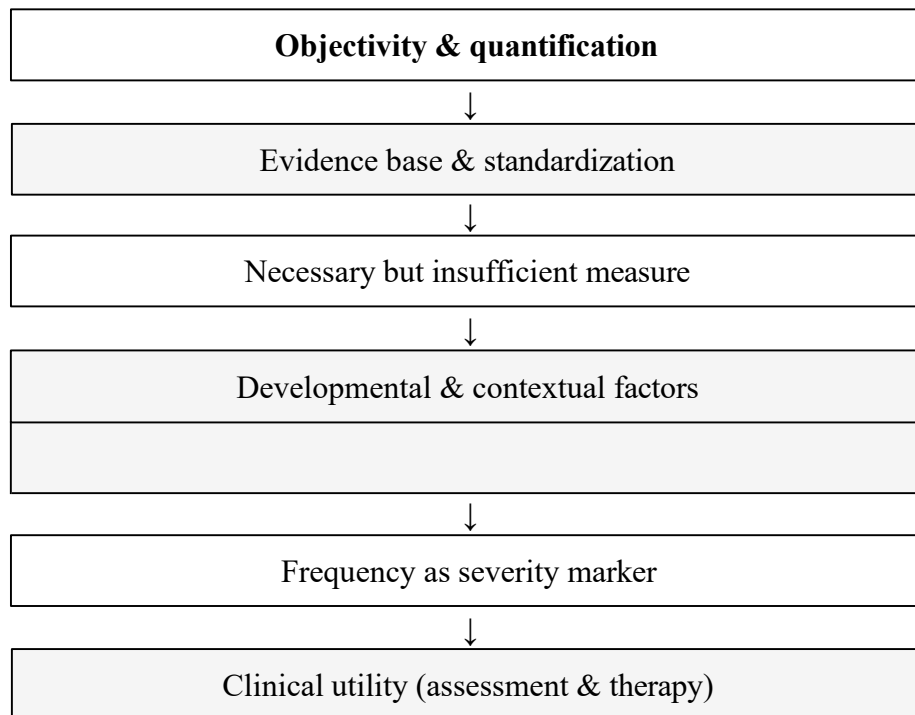
A Friedman test was conducted to examine whether participant ratings differed significantly across the seven diagnostic approach items for the 82 participants who provided complete responses. The test revealed a statistically significant difference: $\chi^2(6) = 161.803$, $p < .001$. This indicates that SLPs did not rate all diagnostic approaches equivalently, and that their opinions were significantly more favorable toward some approaches (particularly the eclectic sub-items and the type-based approach) than others (particularly the frequency-based approach).

4.4 Descriptive Analyses

Participants rated their agreement with each of the four diagnostic approaches using a five-point Likert scale (Agree, Slightly Agree, Neither Agree nor Disagree, Slightly Disagree and Disagree). Frequency counts and percentages for each item are reported below.

4.4.1 Frequency-Based Approach

Participants were asked whether the total frequency of all disfluencies (combined) should be the primary diagnostic criterion for diagnosing stuttering in preschool children. Of 92 respondents, 31 (33.7%) disagreed, and 19 (20.7%) Slightly Disagreed, indicating that a majority ($n = 50$; 54.4%) did not endorse a purely frequency-based approach. Only 21 (22.8%) Agreed and 13 (14.1%) Slightly Agreed, yielding a combined positive agreement rate of 37.0%. Eight participants (8.7%) remained neutral. These findings suggest that the frequency-based approach alone is not widely accepted among clinicians as the primary criterion for diagnosing preschool stuttering.

Figure 4.1*Frequency Analysis of Frequency-Based Approach Ratings***Theme 1 — Frequency-based approach**

Note. Data based on frequency analysis of 92 survey respondents' agreement with the frequency-based diagnostic criterion.

Subtheme 1: Frequency as an Objective and Quantifiable Indicator of Stuttering

The dominant theme that kept coming up was how the use of frequency as a measure of stuttering makes assessments more objective and quantifiable. They said that this method is reliable and consistently shows how severe the disfluencies are. They called this “more reliable” and mentioned the well-known “3%” threshold from the research. In addition to severity, participants also noted the role of frequency in differentiating Normal Non-Fluent (NNF) speech from stuttering-like disfluencies (SLDs). The researchers said the number of disfluencies offers an objective way to figure out if the speech disruptions are just run-of-the-mill or signs of stuttering. Some people said that frequency-based rules were helpful in treating the overlap that we see between NNF and stuttering. Participants viewed frequency measurement as an objective, reliable, and clinically meaningful way to quantify

the severity of stuttering and distinguish the disorder from normal disfluency patterns.

Subtheme 2: Evidence-Based Thresholds and Clinical Variability

Participants had much to say about the use of evidence-based frequency thresholds to diagnose stuttering and standardize clinical practices. They most often cited nationally and internationally recognized criteria, with the 3% syllables stuttered (%SS) figure most often occurring. As one person said, "3% frequency is the standard nationally and internationally, so I find frequency measurements very important for my assessments." The 3% threshold is apparently a big deal because it helps to differentiate normal disfluencies from stuttering-like disfluencies (SLDs), making diagnoses more objective. It was agreed by all that a standardized frequency criterion would help different clinicians become more consistent and lead to more unified diagnostic decisions. People do support the set thresholds, but they also acknowledged there's still a lot of discussion about what cut-offs to use in clinical settings. Some clinicians like the 3% rule. Others say it depends on the situation and the types of slip-ups they are considering. They estimated the numbers were somewhere between 3% and 10%.

They were also unsure whether guidelines should apply only to stutter-like disfluencies or to every. They also weren't sure if the guidelines should only cover stutter-like disfluencies or if every type of stumbling counted. When looking at all disfluencies, one expert claimed this naturally boosted the totals, differing from tracking just the stutter-related ones. Another added, "With each and every stumble included, 3% doesn't quite fit; a 5% benchmark would work better" for correctly diagnosing kids who struggle with their speech.

Subtheme 3: Frequency is a Necessity, but Not Sufficiency

There were fewer participants who specifically warned about using only frequency. One of the participants declared that she "would not use a frequency approach," and another said that there are "many factors [to consider] and a high percentage is one of them." It should be noted that participants who fell into this theme emphasized the importance of holistic assessment that involves observing struggle, tension, functional involvement, and secondary behaviors besides frequency.

Subtheme 4: Developmental and Contextual Issues in Stuttering Assessment of Preschool Children

Many participants discussed the way the development of preschool children impacts the frequency-based assessment of stuttering. As secondary behaviors were uncommon at this stage of development, frequency was regarded as the key measure that could be used. According to one participant, "secondary behaviors in preschoolers are minimal, so they can rely on the frequency"; however, another participant maintained that hesitations and interjections should not be regarded as stuttering behaviors. Participants acknowledged the importance of assessing stuttering behaviors in different contexts as well. Some suggested a lower cut-off level of 5% was more appropriate for preschoolers, which could help improve "clinical sensitivity" and ensure that "at-risk cases" are picked up early for proper monitoring.

Subtheme 5: Frequency and Its Clinical Relevance for Diagnosis, Treatment and Communication

Frequency measurements can be used not only for the initial diagnosis, but also as a helpful tool for setting goals, evaluating progress, counselling parents and performing screenings. One participant commented on the utility of using frequency to "identify the types of dysfluency, severity and frequency of dysfluency, helps to set the goals, helps to

track progress. "The simplicity of measurement is mentioned as an important practical aspect, with one participant calling frequency an easy and measurable approach, which "is meaningful especially when there is a high caseload." Finally, the usefulness of measuring frequency in screening is described as a tool to see whether "the child needs further investigations or not," giving a quantifiable parameter, whereas diagnosis will have individual variability. The communicative nature of using percentages was observed: one of the participants commented that the use of frequency can help in "counselling parents easily" because it gives them a "concrete, communicable figure."

Subtheme 6: Clinical Utility of Frequency Across Assessment, Therapy, and Communication

Participants viewed frequency-based measures as clinically useful across assessment, intervention and communication. Although frequency alone was not generally considered sufficient for diagnosis, clinicians reported using it to establish baselines, set therapy goals and monitor treatment progress over time in their routine assessment. Frequency measures are also of great value for parent counselling, as numerical indicators provide a clear and easily understandable way to communicate a child's speech difficulties and progress. Additionally, some participants described frequency counts as a useful screening tool for identifying children who may require further assessment. Overall responses suggested that frequency measures continue to play an important role in clinical decision – making, despite their recognized limitations as standalone diagnostic indicators.

4.4.2 Type-Based Approach

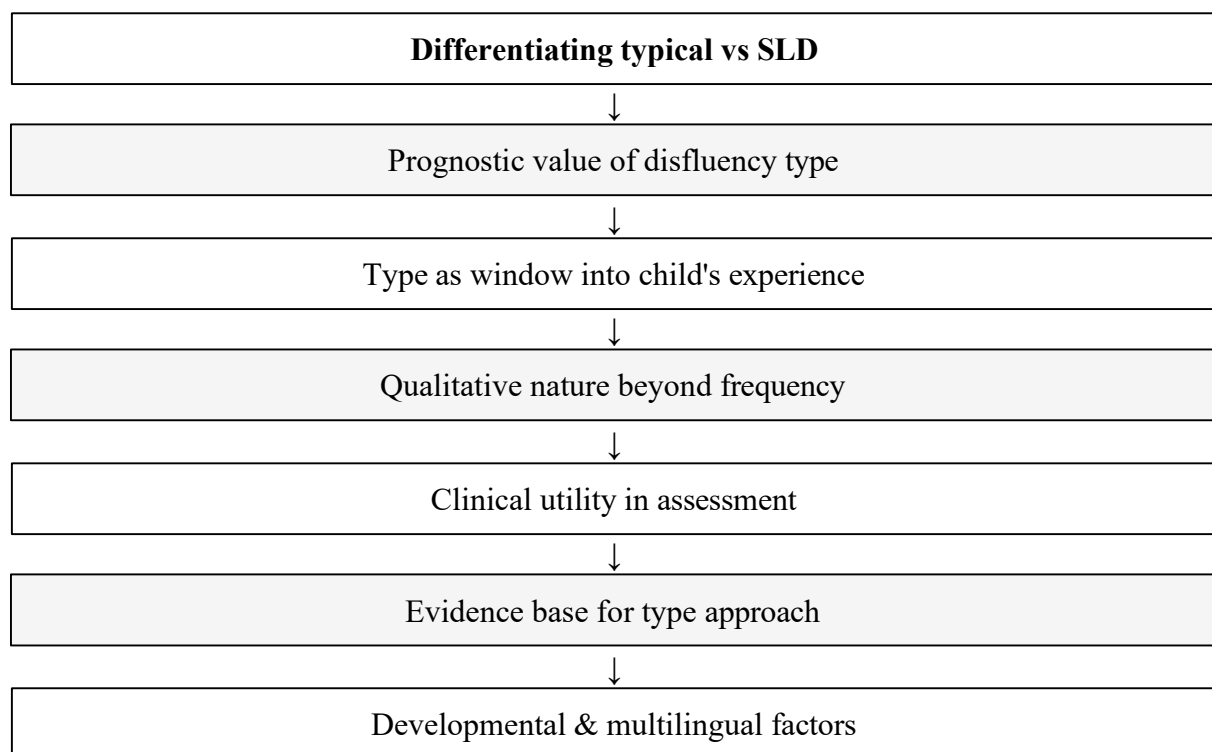
Regarding whether the type of disfluency should be considered when diagnosing stuttering, 61 participants (66.3%) Agreed and 15 (16.3%) Slightly Agreed, producing a combined agreement rate of 82.6%. Only four participants (4.3%) Disagreed, and none Slightly Disagreed. Five (5.4%) were neutral. The type-based approach thus received the

strongest consensus of any standalone diagnostic approach in the study. A sub-item querying whether other disfluency types (ODs, such as interjections or revisions) should also be considered ($n = 76$) showed more divided opinion: 19 (25.0%) Agreed and 13 (17.1%) Slightly Agreed, while 17 (22.4%) Disagreed and 18 (23.7%) Slightly Disagreed, with 9 (11.8) remaining neutral.

Figure 4.2

Frequency Analysis of Type-Based Approach Ratings

Theme 2 — Type-based approach



Note. Data based on frequency analysis of 92 survey respondents' agreement with the type-based diagnostic criterion.

Subtheme 1: Differentiating Typical Disfluency from Stuttering-Like Disfluencies

The most frequently mentioned theme was how different types of disfluency serve to help draw the line between regular bumps in speech and stuttering in young children. SLPs said that not all disfluencies are created equally in terms of diagnosis; identifying the

type of disfluency is critical for early stuttering detection. Many said that using this type-based method really helps to tell apart normal speech problems from something more serious. Participants repeatedly pointed out that SLDs and non-SLDs need to be assessed together and not in isolation. Participants also pointed to the importance of type in distinguishing stuttering from other fluency disorders, specifically cluttering, with one participant stating that type analysis assists in "distinguishing stuttering from cluttering and atypical disfluency." A further sub-theme was the use of type categorization as a safeguard against overdiagnosis, with SLPs noting that separating other disfluencies from SLDs prevents clinicians from "overidentifying children who only exhibit typical verbal planning disruptions.

Subtheme 2: Prognostic Value of Disfluency Type

A second theme centered on the prognostic significance of disfluency type, particularly its value in predicting whether a child's stuttering is likely to persist or resolve over time. Participants said the type of stuttering provides additional clues that the frequency data does not. Several speech-language pathologists referred to studies that show that it's not just how often someone stutters, but what the stutter looks like that can predict whether it sticks around or goes away. One SLP mentioned research by Yairi, Walsh 2021, and Singer 2020 that the type of stuttering matters when predicting chances for recovery.

Disfluency type was also helpful for SLPs to assess stuttering severity so they can determine who needs intensive treatment immediately and who can be monitored. "Tightness or tension is a major red flag," they said. They hypothesized that the more tension with disfluent speech, the more risk for chronic stuttering. One clinician said, "It is really useful to know the difference between the regular stumbles of a child and the tense stutters, in terms of the long-term risk of stuttering.

Subtheme 3: Type as a Window into the Child's Experience of Stuttering

Participants learned that determining the type of disfluency may be useful in evaluating the effect of stuttering on a child's behavior and communication. They looked at avoidance, escape, and other problematic behaviors instead of just looking at basic speech issues. These factors demonstrate how stuttering impacts the child in ways beyond speech alone. The experts saw signs of the child avoiding conversation and becoming increasingly self-conscious in the form of incomplete phrases and revisions. As one of them put it, such disfluency "signals awareness and avoidance, and thus shows how the child feels about." They shared the same opinion regarding avoidance and escape actions, stating that these behaviors indicate that something is seriously affecting the child's communication. If a child is trying to dodge certain words, or to avoid sounding stuttered, this needs to be taken seriously. Moreover, many noted that speech-like disfluencies are often present when children struggle in their attempts to avoid stuttering. Other kinds of broken flow in their speech may indicate similar evasion tactics. So, when they see these bigger trends, speech pros can see how big a problem stuttering is for a young person.

Subtheme 4: Qualitative Nature of Disfluency Beyond Frequency

For a number of participants, it was more revealing to look at the nature of disfluency than to just count its frequency. They said that the types of stuttering tell you things that numbers can't. Others agreed, saying that a type-based approach is more valuable for diagnosis. One interesting angle was provided by someone linking this to neuroscience. They thought that if you look at what kind of disfluency is happening, it might give some insight into the actual brain differences that are causing the stuttering. It tells you so much more about the neurological stuff going on underneath," they said. So yeah, understanding how stutters manifest can tell us a lot about the disorder and the brains of those who have it.

There was a practical issue raised by a few speech-language pathologists: all disfluency types combined can inflate severity estimates. They argued for separating other disfluencies from core stuttering behaviors to avoid this. One person said that self-management of other disfluencies helps to maintain accurate estimations of severity.

Subtheme 5: Clinical Utility of Type-Based Approach in Assessment and Intervention

Participants highlighted the clinical utility of a type-based approach to structuring assessment and directing intervention beyond diagnosis. This theme highlights the utility of type analysis downstream throughout the clinical workflow, from initial assessment to therapy planning and outcome monitoring. At the level of assessment, one SLP described the approach as providing a "systematic and structured framework for both assessment and intervention." Type was also reported to directly influence decisions about when and whether to begin therapy, with participants drawing clear distinctions between disfluency profiles that warrant monitoring and those indicating an immediate need for support. However, the same participant noted that blocks or frequent sentence abandonment are a stronger indication that support may be needed. Several participants described type data as adding an important dimension to personalized therapy planning, with one noting it "gives a dimension to develop a therapy plan" and another emphasizing its role in helping clinicians understand the disfluencies a child predominantly demonstrates and planning to address them in therapy. Participants also described the approach as yielding better clinical results in pediatric assessment contexts.

Subtheme 6: Evidence-Based Supporting Type-Based Approach

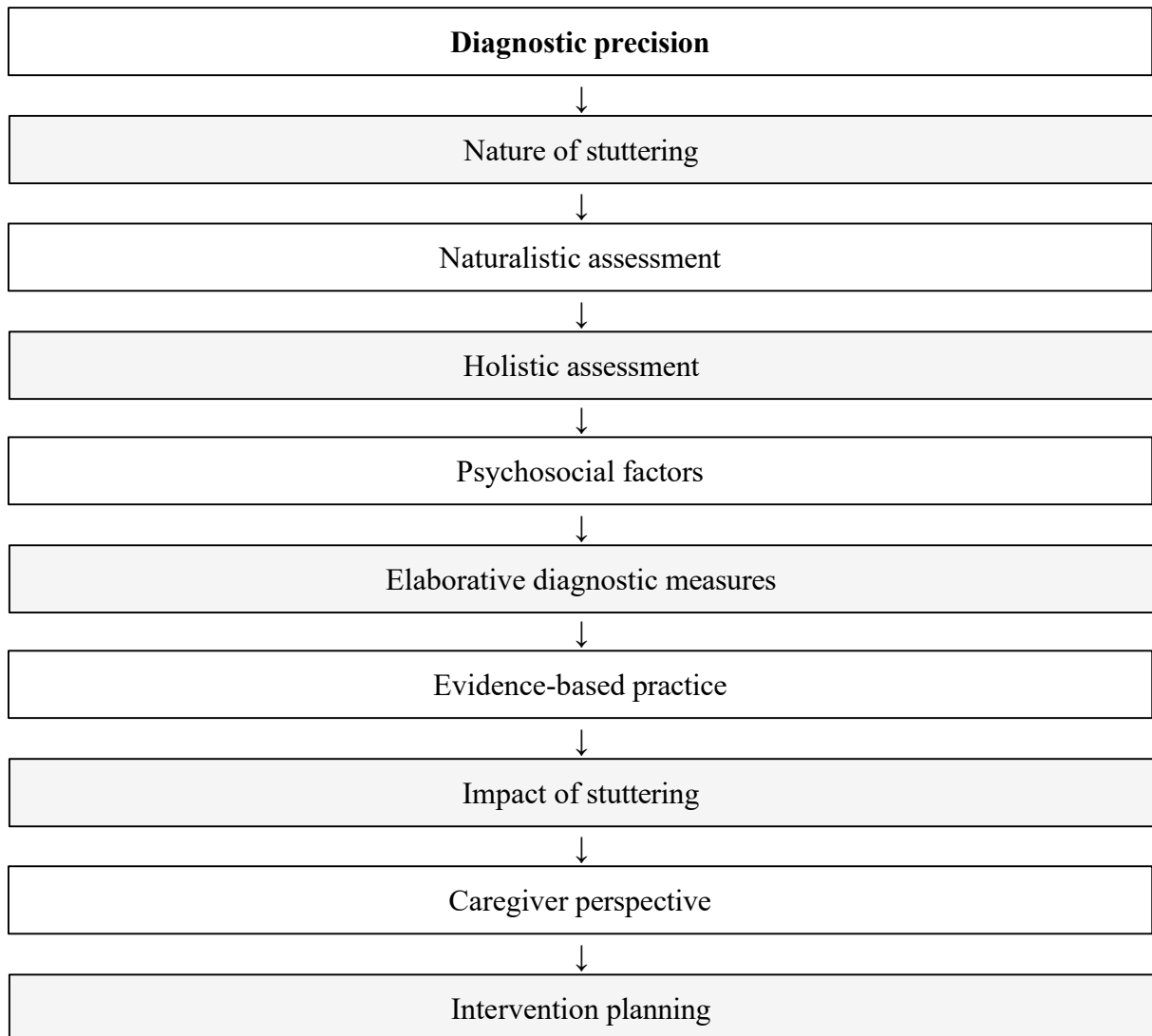
A number of SLPs grounded their justification for a type-based approach in the existing research literature, citing empirical evidence indicating that SLDs are disproportionately prevalent in children who stutter and therefore constitute a more diagnostically valid category. Consistent with this evidence base, participants indicated that only core stuttering behaviors including blocks, part-word repetitions, single-syllable word repetitions, and dysrhythmic prolongations should be included in percentage-syllables-stuttered (%SS) calculations. Participants elaborated that interjections, revisions, incomplete phrases, and phrase repetitions "can sometimes be considered avoidance strategies" and therefore should not be added to the stuttered count, though they may still inform diagnosis by characterizing the behaviors caused by stuttering.

Subtheme 7: Developmental and Population-Specific Considerations

A smaller but clinically important theme concerned the relevance of disfluency type for specific populations, particularly multilingual children and those with co-occurring language or learning difficulties. SLPs noted that these groups tend to produce elevated rates of other disfluencies, making type-based classification essential to prevent misattributing language-related disfluency to stuttering. Participants described this, noting that, "children who learn more than one language are using more 'other disfluencies'" and that "children with learning disabilities or language difficulties may also use more other dysfluencies." The finding underscores the importance of applying type-based diagnostic frameworks with cultural and linguistic sensitivity and suggests the need to consider population-specific disfluency profiles in defining typical versus atypical fluency in diverse pediatric populations.

4.4.3 Event-Based Approach

When asked if diagnosis should be based on overall clinical judgement of stuttering events/moments rather than specific counts, 38 participants (41.3%) Agreed and 20 (21.7%) Somewhat Agreed, resulting in an overall agreement rate of 63.0%. Nine participants (9.8%) disagreed and 11 (12.0%) Slightly Disagreed while 14 (15.2%) were neutral. A follow-up item (n = 59) asked if the event-based method is more reliable than type or frequency methods. 18 (30.5%) Agreed, 22 (37.3%) Slightly Agreed, and 13 (22.0%) were neutral; thus, a majority of responders (67.8%) viewed the event-based method positively in terms of reliability.

Figure 4.3*Frequency Analysis of Event-Based Approach Ratings***Theme 3 — Event-based approach**

Note. Data based on frequency analysis of 92 survey respondents' agreement with the Event-based diagnostic criterion.

Subtheme 1: Diagnostic Precision

The most salient theme emerging from participants was the ability of the event-based approach to achieve greater diagnostic precision than either frequency or type measures alone. The SLPs consistently claimed that tracking every moment of stuttering, rather than counting totals or types of stuttering, leads to better, more accurate assessments.

Their priority was to avoid diagnostic errors. “The event-based method helps us avoid over- or underestimating stuttering and allows us to create precise, tailored plans,” one SLP said.” Many others agreed, pointing out that lumping all disfluencies together only inflates numbers and makes the real issue harder to see.

Related to this, participants highlighted that event-based assessment allows for the delineation of precise event boundaries, with one noting that it “focuses more on exact boundaries of stuttering events than fixed time intervals” and is therefore “clinically precise and reliable.” Several participants also underscored the limitations of overall severity impressions, with one stating that “quantitative measures such as calculating the percentage of stuttered syllables are of little significance” and that it is “far more valuable to assess the overall severity of the stuttering.” The risk of false-negative diagnosis from single speech samples was raised as a further precision concern, with participants noting that if stuttering does not occur within a brief clinic observation, a frequency count alone would lead to the incorrect conclusion that the child does not stutter. A smaller number of participants acknowledged that the precision of event-based assessment depends on clinician expertise, noting it is “a quick and reliable tool during an experienced SLP’s busy practice” but requires “a trained ear” that newer clinicians may not yet have developed.

Subtheme 2: Nature of Stuttering

A second major theme concerned how the event-based approach reflects the fundamental nature of stuttering more accurately than approaches that count or categories in the abstract. Participants characterized stuttering as occurring in discrete, often clustered, moments, a characterization that lends itself to event-based recording that is more ecologically representative. Several participants described preschool stuttering as a moment-specific phenomenon, as opposed to a continuous or uniform pattern, with one noting that “speech behaviors often occur in specific, observable moments rather than continuous

patterns” . One of the key features was the clustering of stuttering behaviors, with one SLP arguing that because 'stuttering behaviors often occur in clusters rather than as isolated events, it is more meaningful to evaluate the integrated experience of a stuttering episode rather than counting individual disfluencies. “It was also noted by participants that the presence of effort or secondary behaviors within any stuttering moment makes it clinically significant irrespective of measured severity. “If a stuttering moment has any effort or secondary behaviors, it counts for the diagnosis at any severity level,” said an SLP . Frequency is not the only thing in diagnosis. The pattern and timing of disfluency episodes is important too. Furthermore, everyone agreed that each case is different, so not all stuttering cases have the same clinical significance. But several people offered a note of caution. Stuttering is such an individual problem that a child may be perfectly fluent at the time of an evaluation. This reinforces the need for parents’ observations to always back up findings from direct assessments.

Subtheme 3: Naturalistic Assessment

The event-based approach appealed to the participants as it is based on natural, real life situations. SLPs felt it was much more reflective of how stuttering occurs in everyday life compared to structured methods, especially for young children whose talking is very context-dependent. The most cited advantage was that this approach is well suited for real life situations. The tool was discussed as a way of enabling real communication, based on a client’s actual experiences and normal conversations, and putting assessments directly into real life contexts. Another big one was situational variability. The participants felt that event-based methods are useful in pinpointing the specific contexts in which stuttering is more problematic, as well as the specific triggers that make it more frequent.

Some participants reported that this method “mirrors how listeners naturally perceive stuttering severity.” This highlights the ecological validity of event-based approaches, which are more reflective of the real-world communicative impact of stuttering than structured frequency counts. A smaller number of participants added that event-based observation is also simply more naturalistic, describing it as offering a “hands on situational understanding” of stuttering.

Subtheme 4: Holistic Assessment

All participants consistently described the event-based approach as providing a more holistic understanding of stuttering. Instead of focusing on the mechanics of disfluency production, it incorporates the fullness of the experience of a moment of stuttering, including physical, emotional, and social dimensions. Several SLPs noted the opportunity to document the complete impact of stuttering as a significant benefit. One SLP noted it “looks at the whole impact of stuttering rather than just how it occurs”. Event documentation includes “visible tension, blocks, avoidance and also will tell you about what strategies the child has to overcome that period of disfluency”. Others framed holistic assessment as a clinical imperative, arguing that “beyond purely numerical data, it is very important to consider how individuals stutter during stuttering moments, the presence of secondary and avoidance behaviors, and the responses or reactions of people in the individual's family and social life. Several participants articulated a broader philosophy of clinical assessment in which all features of the stuttering event, rather than any single dimension, must be considered together. One SLP stated that the approach is valuable “because it covers the overall feature, not only one,” while another argued that “therapy is created on the whole picture of the child's communication skills versus stuttering frequency/counts.” A small number of participants expressed a strong preference for holistic clinical judgment over counting-based approaches, with one stating their opposition to “counting the obstacles” and describing their

practice as relying on interview-based clinical judgment of whether therapy or counselling is warranted.

Subtheme 5: Psychosocial Factors

Many participants valued the event-based approach for its ability to highlight psychosocial aspects of stuttering that are not captured by frequency or type-based measures. SLPs repeatedly stressed that stuttering is not only a speech behavior, but an experience that results in emotional responses, avoidance behaviors and communicative conditioning that needs to be captured to obtain a complete clinical picture. Identifying the moments at which speaking is most difficult was described as one of the core clinical advantages of the approach, with one participant noting that it "would adequately identify the need the child has when speaking is most difficult" and provide "a window into developing conditioning related to feelings around stuttering." Evasion and escape behaviors were highlighted as clinically meaningful components of stuttering events that are specifically captured by an event-based lens, with participants noting that these behaviors reflect the child's developing negative relationship with speech. The child's fear and emotional responses to stuttering moments were identified as clinically important data, with multiple participants arguing that revealing these responses through event-based assessment directly informs intervention planning. Anxiety-driven fluency variability was also described as a key rationale for the approach, with one SLP noting that "fluency might vary depending on situation, speaker, event, or anxiety," making a context-sensitive, event-based method particularly appropriate. Several participants introduced the important finding that even a small number of distress reactions during stuttering events may be sufficient for diagnosis, regardless of overall frequency, a position grounded in evidence that "a child's reaction of distress may be apparent perhaps only a couple of times, but be enough to detect the struggle."

Subtheme 6: Elaborative Diagnostic Measures

The main theme is that the event-based approach works best in conjunction with other diagnostic tools, not on its own. Speech-Language Pathologists (SLPs) think that a mix of different methods gives the fullest and most reliable results. Many participants highlighted how event-based assessments become more useful when paired with other techniques. One person noted, "Using it along with other methods gives a better overall view of the kid's difficulties and more trustworthy results." Several practitioners said they blend event-based and type-based strategies in their work.

For instance, one mentioned mixing the two depending on the type of disfluencies and the number of stuttering events. Ultimately, SLPs consider how well the listener understands the speaker as the key factor. As one put it, event-based assessments should support other evaluation methods and focus on "how clear and effortless the CWS's speech sounds to the listener. Several participants made the point that for preschool children specifically, counting stuttering events provides better diagnostic direction than either frequency or type measurement alone, as it captures the developmental reality of how disfluency presents at this age. Reducing diagnostic noise by concentrating on specific stuttering instances rather than all disfluency types was described as a particular strength of the event-based approach for speakers with diverse and varied disfluency profiles.

Subtheme 7: Evidence-Based Practice

A number of participants grounded their endorsement of the event-based approach in evidence-based considerations, including research on the validity of clinical severity impressions and the cross-linguistic limitations of frequency norms. These participants argued that the evidence base supports a shift away from strict frequency counting toward more holistic, event-level clinical judgment. Several SLPs cited Yaruss' work in support of

the position that overall impressions of severity are as valid as, or more valid than, frequency-based counts, with one stating that "online measurement of stuttering and overall impressions of severity ratings are equally, if not more valid than, a very small sample count that may or may not be representative." The cross-linguistic inapplicability of frequency norms was raised by participants as further evidence for the event-based approach, with one noting that "the same threshold for frequency of types is not appropriate across languages", a finding that undermines universal reliance on percentage-based criteria. A balanced position was articulated by several participants who acknowledged the value of the event-based approach while noting its limitations. One SLP stated clearly that while the approach "is valuable as a complementary tool, it can be used along with the type-based and frequency count approaches," but that "when used solely, it does not provide more reliable outcomes."

Subtheme 8: Impact of Stuttering

Participants consistently framed the event-based approach as uniquely positioned to capture the functional and communicative impact of stuttering on the child's daily life. SLPs argued that measuring impact rather than merely quantifying disfluency is the most clinically meaningful goal of stuttering assessment, and that event-based approaches are better suited to this purpose than frequency or type measures. Several participants described the event-based approach as yielding an overall severity and life-impact judgment that is directly translatable into therapy goals. One SLP stated that it "will give overall judgement about the child's severity and impact on life" and that this enables clinicians to "work on goals accordingly rather than focus on each type of disfluency." Listener perception was identified as the most fundamental measure of communicative impact, with one participant arguing that whether disfluencies affect daily communication depends ultimately on whether they are perceived by listeners and that disfluencies that are not perceived may not be clinically significant regardless of type or frequency.

A number of participants emphasized that the event-based approach centres assessment on functional impact, but noted that this focus is insufficient on its own. One SLP stated that while it "allows us to focus primarily on the impact of stuttering," it "is not sufficient to be considered in isolation for diagnosis", reinforcing the broader theme of complementary multi-method assessment.

Subtheme 9: Caregiver Perspective and Concerns

A smaller but clinically meaningful theme concerned the relevance of the event-based approach for caregivers and teachers, both as reporters of stuttering in natural settings and as stakeholders in the child's communication development. Participants identified several ways in which event-based assessment facilitates parental and caregiver involvement in the diagnostic and monitoring process. One distinctive sub-theme was the value of acknowledging and positively labelling fluent moments, not just stuttered ones. One SLP noted that event-based assessment "allows moments of counting or appreciating non-stuttering events too," and that acknowledging these fluent moments "helps the listeners develop a positive attitude regarding the fluency of the child," a psychosocially meaningful dimension of assessment that reframes the clinical encounter. Parents and teachers were described as well-positioned to recognize and report events that influence fluency in everyday contexts, with one participant noting that the approach "allows for clearer communication with parents and teachers, who can easily recognize and report events that influence fluency. The applicability of event-based methods for parent-implemented real-world monitoring was also highlighted, with participants describing this as a strength particularly relevant to preschool assessment, where a single clinic observation is rarely sufficient to capture the full range of the child's stuttering. Event-based frameworks were seen as providing parents with a concrete, accessible observation tool that extends the assessment beyond the clinical setting into the child's natural daily environment.

Subtheme 10: Intervention Planning

The last theme to emerge was regarding the downstream clinical utility of event-based assessment for planning of intervention. Participants frequently mentioned how the detailed information obtained through event-based assessment directly informs therapy targets, goal-setting and progress monitoring, and how this makes it not only a diagnostic tool but a therapeutic one. Situation-specific intervention strategies were described as a direct product of event-based assessment, with participants noting that identifying the specific communicative contexts in which stuttering is most severe enables therapy to be precisely tailored to the child's needs. One SLP described strategies being “designed around the specific situations that provoke stuttering,” while another noted the value of understanding the child's own coping strategies during stuttering events: an event-based diagnosis would tell you about what strategies the child has to overcome that period of disfluency. This is often great information you can incorporate into therapy. The dual function of event-based data for both initial assessment and ongoing progress tracking was highlighted by several participants, who described it as useful for “assessment and tracking the progress” over the course of intervention. The urgency of accurate diagnosis at the preschool stage was returned to in this context, with participants emphasizing that preschool is “a highly sensitive developmental stage where accurate identification and timely intervention are crucial,” and that misdiagnosis at this age “can be more harmful than the stuttering itself”, making the precision of event-based identification a direct intervention-planning imperative.

4.4.4 Eclectic Approach

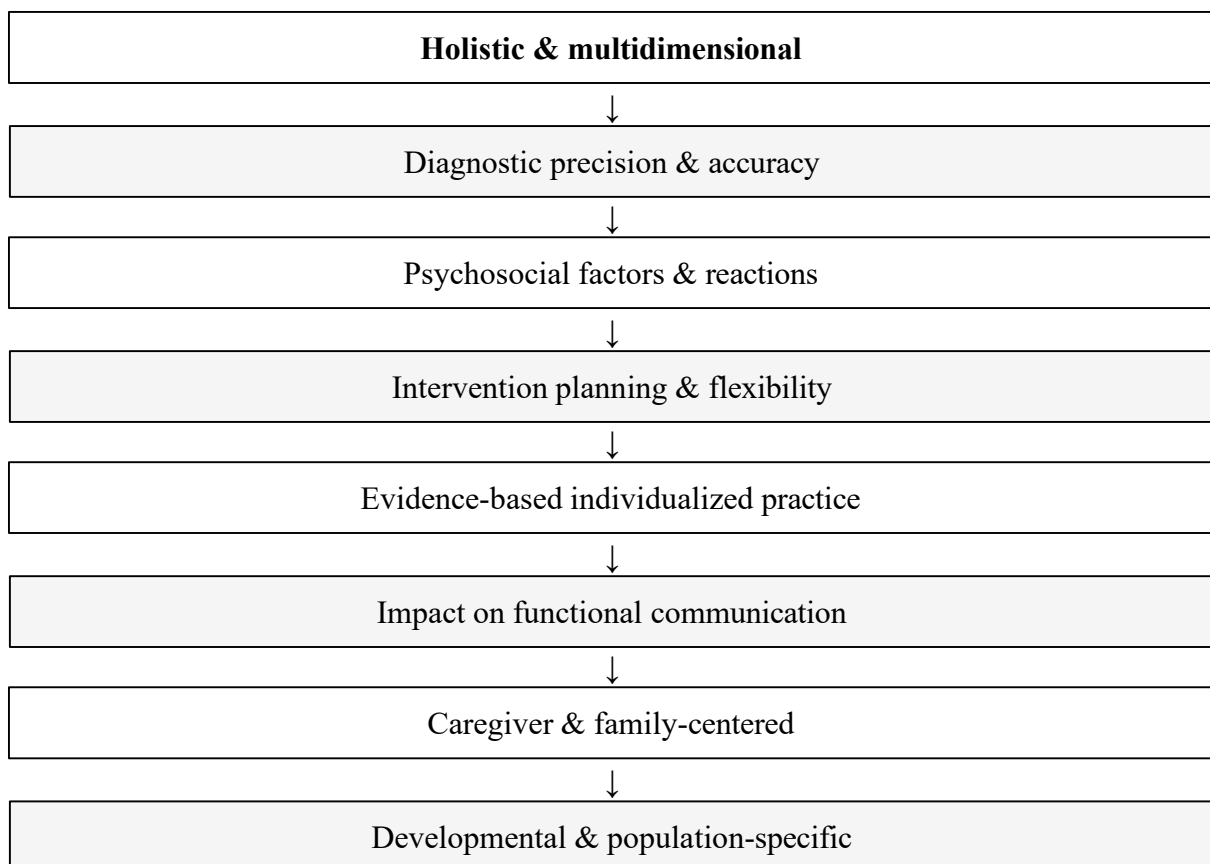
The eclectic approach encompassed four sub-items. First, concerning whether both type and frequency should be considered in diagnosis, 71 (77.2%) Agreed and 15 (16.3%) Slightly Agreed (combined = 93.5%); only 2 (2.2%) each Disagreed or Slightly Disagreed.

Second, regarding other contextual factors (e.g., duration, secondary behaviors), 72 (78.3%) Agreed, and 14 (15.2%) Slightly Agreed (combined = 93.5%), with only 2 (2.2%) expressing disagreement. Third, on the incorporation of parental concerns (n = 89), 68 (76.4%) Agreed, and 13 (14.6%) Slightly Agreed (combined = 91.0%), while 4 (4.5%) Disagreed. Fourth, regarding the child's reaction to disfluencies (n = 89), 65 (73.0%) Agreed and 14 (15.7%) Slightly Agreed (combined = 88.7%), with only 3 (3.4%) Disagreeing. Across all four eclectic sub-items, combined positive agreement rates ranged from 88.7% to 93.5%, indicating an overwhelmingly favorable view of the eclectic approach.

Figure 4.4

Frequency Analysis of Eclectic Approach Ratings

Theme 4 — Eclectic approach



Note. Data based on frequency analysis of 92 survey respondents' agreement with the eclectic diagnostic criterion.

Theme 1: Holistic and Multidimensional Assessment

The most dominant theme to emerge across participant responses was the recognition that stuttering is an inherently multidimensional and variable disorder that cannot be adequately captured through any single assessment method. SLPs consistently argued that the eclectic approach is justified precisely because it matches the complexity of the disorder it seeks to assess, and that combining multiple tools and measures is not merely preferable but clinically necessary. Participants kept stressing that there is no one-size-fits-all for stuttering. It is complicated, so one SLP called it “multidimensional and variable.” They also said that the combination of standardized tools, speech sample analysis, interviews and observational data is the key to an accurate diagnosis and personal treatment plans. Others felt an eclectic approach covers most aspects of dysfluency comprehensively. Plus, one person said it simply: “It involves most of the aspects of dysfluency.”

A strong sub-theme was the importance of looking beyond observable speech behaviors to the whole child. The ICF framework was mentioned by several participants as a guiding structure, with one noting that “children do not grow up in isolation” and that their SLP diagnostic approaches

A strong sub-theme was the importance of going beyond observable speech behaviors to consider the whole child. Multiple participants cited the ICF framework as a guiding structure, with one noting that “children do not grow up in isolation” and that their development is shaped by both personal and environmental factors that must all be included in the diagnostic process. This view was supported by some speech language pathologists who used Sheehan's iceberg metaphor. One of them said you have to consider all parts of the iceberg, the seen and the unseen. A few people talked about how this approach improves quality of life and outcome measures too. An eclectic approach “provides a more complete picture of the child’s overall struggle, demonstrates differences in their quality of life,

enhances reliability and helps to develop more personalized plans. One participant really spelt out the detail, naming a whole bunch of factors: type, frequency, duration, linked behaviors, everyday impact, avoidance, self-confidence, parents' experiences. They think all these things together are essential to really understand stuttering.

Theme 2: Diagnostic Precision and Accuracy

The second point was about how an eclectic approach gets better diagnosis than just using one method. Early stuttering is very complex, especially when you have to differentiate it from normal speech problems in young kids. One person said, "you can't make a diagnosis on one single factor" and everyone agreed that you can't make a diagnosis based on one thing. Another expert said that to count symptoms or to define types of symptoms does not give the whole picture.

SLPs said the big issues are only looking at frequency or types of symptoms.

If you don't look at all the factors together you could miss a lot or mislabel children affecting self-esteem and social life. But go eclectic and you'll get a more accurate view - less false positives, more true positives. It was pointed out that there is a way to diagnose stuttering without experiencing any distress. Many experts said that it was not always necessary in the diagnostic process. Some SLPs described awareness and struggle as confirmatory when they do occur, but their absence does not rule out stuttering: "reactions of distress are not an obligatory diagnostic, so as each case is different, there must be an eclectic approach with multiple observations. One participant noted that awareness or struggle, if present, uniquely confirms a diagnosis of stuttering because "no other childhood communication condition has such self-awareness." Furthermore, many people stated that although child awareness is useful for planning interventions and predicting outcomes, it is not necessary for diagnosis. A few also highlighted the importance of perceived severity in treatment plans. One person said, "So if you have a kid who stutters mildly but is very

anxious, the kid may show overall improvement just by feeling better, even if the actual stuttering frequency doesn't change."

Theme 3: Psychosocial Factors and Child Reactions

Psychosocial factors and kids' feelings about stuttering were mentioned a lot. Everyone was saying how these things are super important in therapy. I can't just view stuttering as a speech problem," Speech-Language Pathologists say. "It's about the child's experience. A few people said those same feelings tend to pop up before kids form more complex behaviors or start avoiding things. As one SLP noted: "Awareness and frustration come first often, then the secondary behaviors and avoidance. Recognizing those early feelings can make a big difference." In support of this, participants cited research evidence from the Kiddy CAT and CAT studies which show that 'children as young as three, as a group, already think negatively about their speech' and that this negative attitude worsens with age, a finding that makes psychosocial assessment of preschoolers not only useful but urgent.

Several participants raised the bidirectional relationship between emotions and stuttering, noting that emotional responses to stuttering influence the frequency of stuttering and the child's wider social participation. Play contexts were identified as a particularly valuable elicitation tool, with one SLP noting that "during play, you find they are aware their voice is different and are able to share thoughts and feelings about their speech." Negative self-awareness was identified as a significant prognostic risk factor, with participants warning that it can lead to poorer treatment outcomes if left unaddressed. One participant described anxiety and confidence as the main prognostic factors that should be measured before targeting fluency itself, saying that these variables "can greatly impact the prognostic factors

Theme 4: Intervention Planning and Flexibility

Participants really appreciated the practical value of eclecticism in intervention planning. SLPs said a flexible, multi-method approach is key, given the wide variation in stuttering among kids, situations and even developmental stages. They think this way they can draw on the ideas of motor, linguistic and emotional models, and combine fluency shaping techniques, indirect methods and parent-focused tactics. The combination can then be adapted to suit each child's individual needs.

Several SLPs mentioned that treatment should not be started unless the child is somewhat motivated. As one person reported "If the child or their environment does not ask for help, there is no point beginning therapy because the motivation will be too low." But if a child gets frustrated or anxious, or if the stuttering gets really bad, then something should be done pronto. In those harder cases, SLPs emphasized addressing both the psychological pieces and the speech components. "You've got to reinforce psychological support and speech techniques together," one put it. Eclectic assessments had been based on holistic goal-setting. Participants felt that goals should take into account the impact of daily life on social, emotional and mental factors rather than just speech impairments. One SLP felt that treating only the surface level issues such as disfluency is superficial. "If we don't treat underlying anxiety, relapse is quite likely," he said. ." The team also stressed that kids' reactions shape both the type and duration of the therapy needed. Because of this, constant psychosocial evaluations are crucial for the therapy, not just a one-time deal.

Theme 5: Evidence-Based and Individualized Practice

A number of participants grounded their endorsement of the eclectic approach in evidence-based principles, arguing that the convergence of research evidence, professional opinion, and accumulated clinical experience collectively supports its use as the preferred standard for preschool stuttering assessment. Several SLPs described the eclectic approach

as making clinical sense on research grounds, with one stating directly that "it makes perfect sense, based on research, professional opinion, and experience." Others emphasized the inherently individualized character of eclectic practice, with one participant noting that it is "individualized and tailored therapy" that addresses the complexity of speech disorders due to its flexibility and adaptability. Participants also noted that the eclectic approach uniquely achieves both individualisation and standardisation simultaneously, with one SLP stating that it "can be both child specific as well as have standardised results", a clinical strength that enables comparison across cases while still honouring individual differences.

One participant raised a philosophically important issue about the difference between statistical and clinical significance. They argued that "a statistically significant difference that does not disrupt communication or impact quality of life may not be relevant to treat". This position grounds the eclectic approach in a disease versus illness perspective and prioritizes functional relevance over numerical thresholds. The finding that comprehensive domain assessment allows for individual-specific therapeutic planning was reinforced by multiple participants who described the successful use of the eclectic approach to design personalized therapy programmes across all relevant dimensions of the child's stuttering profile.

Theme 6: Impact of Stuttering and Functional Communication

Participants consistently identified communicative impact as the primary clinical concern in stuttering assessment, and argued that the eclectic approach is uniquely suited to capturing this dimension. SLPs emphasized that the purpose of assessment is not to count behaviors or categories types but to understand how stuttering is affecting the child's communication, quality of life, and daily functioning. The most direct statement of this position came from a participant who said: "Why would you want to change a child's speech if they're not worried about it and it's not causing them any trouble?" This framing brought

the child's own concerns about communication, rather than any official speech measurements, to the fore as the main reason to initiate treatment. An SLP with 21 years of experience stressed the same idea when they stated, "How much someone stutters doesn't tell you how it affects their communication or how they feel about speaking."

The essay also discussed the families and how they are affected. Participants felt that the approach shows how the stutter influences the child's communication and considers how the whole family experiences it too. Many participants felt that it would be better to consider the effects, rather than the diagnosis, to determine how therapy is needed. As one of them put it: "Whether or not they need therapy depends on how it is affecting the child and/or parents. "This approach is more about improving quality of life, not just the numbers from speech tests."

Theme 7: Caregiver Perspectives and Family-Centered Practice

Participants strongly supported the eclectic approach because it includes caregiver viewpoints and works in a family-centered way. SLPs mentioned that parents' worries and family dynamics should be key parts of both assessments and interventions, not side issues. They see the perfect eclectic assessment as mixing views of the kid, their surroundings, and their guardians' concerns. One SLP summed it up as a holistic approach considering "the child, their environment, and the concerns of their guardians." Another added that best practices mean looking at "the child's attitudes, parent concerns, along with speech behaviors." This shows how these parts can't be separated. Parents' input makes assessments better, especially if the child won't cooperate or isn't stuttering during the session.

Several participants said that family-centered practice meant doing diagnosis and treatment planning at the same time, not one after the other. One speech-language pathologist talked about assessing parents' concerns and the child's issues right from the start. It is recognized only by voice features. People also mentioned the role of context and

personal history in diagnosis, and the assessment of the fluency of a child's speech. Of all the different things, the worries of the parents seemed the most helpful. They explained how the problems started, how they evolved and what effect they had on the kid. This is part of the study and is discussed in the next section.

Theme 8: Developmental and Population-Specific Considerations

The final theme to emerge concerned the particular relevance of the eclectic approach for preschool children and for diverse clinical populations. Participants argued that the developmental characteristics of preschool-aged children, including the variability of early disfluency, the overlap between typical and atypical patterns, and the influence of language development and cultural background, make a multi-method approach especially necessary at this stage. Cross-linguistic and cultural variability was raised by participants, particularly in the Indian context, with one SLP noting that "India being a multicultural multilingual country, the type of disfluencies may vary across languages" and that no single approach is universally applicable. Comorbid conditions were identified as a further reason for eclecticism in preschool assessment, with participants noting that stuttering frequently co-occurs with phonological disorders, language deficits, and motor delays, and that differentiating these profiles requires a flexible, multi-factor framework. One SLP provided a particularly detailed account of how different underlying causes produce qualitatively different stuttering presentations, reinforcing the need for an individualized, eclectic approach rather than a standardized one.

Several participants specifically highlighted the developmental appropriateness of the eclectic approach for children whose language is still emerging, noting that it is "especially suited to preschool children when language fluency is not yet developed" and that parental counselling plays a critical role at this stage. The high variability of preschool stuttering, which encompasses both typical developmental disfluencies and emerging

stuttering-like patterns, was described by participants as the core reason why multiple parameters are necessary, with one SLP concluding that "considering multiple parameters would provide the most reliable diagnosis and facilitate timely intervention planning." It is identified by the voice features only. People also emphasized the importance of context and personal history in making diagnoses, as well as evaluating the fluency of a child's speech. Parents' worries seemed to be the most helpful of all the different things. They revealed when the problems began, how they developed and the effect they had on the child. This is part of the study and is discussed in the next section.

4.4.4.1 Parental Concerns in the Diagnosis of Preschool Stuttering

In addition to looking at how smoothly a kid speaks, people also stressed the importance of context and personal history when making diagnoses. Of all the different factors, parents' concerns proved to be super helpful. They illuminated when problems began, how they progressed, and how they impacted the child. The next section deals with this part of the study. Preschool stuttering is marked by high situational variability and frequent discrepancy between home and clinic presentation. Parental reports were described as essential not only in capturing the onset, progression and severity of stuttering in everyday life but also in detecting subtle disfluencies, identifying contextual triggers and providing longitudinal case history data, including family history of stuttering and developmental milestones that are directly relevant to prognosis. Participants stressed that parents' concerns should be considered as legitimate diagnostic clues rather than subjective guesses. They said such concerns correspond to the severity of a child's stutter and could even reveal what a quick clinic glance might miss.

Parents do more than pass along information; they shape the way their child communicates. Their feelings matter too. If moms and dads feel guilty, anxious or preoccupied with future concerns, these feelings can influence the child negatively, possibly

causing them to avoid or fear speaking up.

In the discussions, it was revealed how parents sometimes transfer those stresses onto their kids without even knowing it. It was also noted that what parents do when their child is stuttering is important, and getting it wrong there might increase avoidance or fear in children. All of this highlights that dealing with parental concerns is much more than a tick in the box; it's a core part of the diagnosis that needs to be managed from the start.

Parents viewed the psychosocial and emotional health of the child as equally important as the other clinical domains. The mental cost of stuttering can be seen in decreased self-confidence, fear of talking, avoidance of certain situations and withdrawal from social groups. Parents see these signs before formal testing, and they feel these signs are important, especially in very young children.

These points clearly highlight the need for clinicians to embrace a family-centred approach where mum and dad's concerns are not secondary, but fundamental to a complete evaluation. It's not just about collecting information, healthcare providers need to be proactive and offer support and guidance through education, encouragement and practical advice on how to correct the situation. And fitting the whole plan around what parents want is key to getting an accurate picture and setting up helpful interventions early on. So, really, putting parents at the centre of care is not some extra add-on; it's absolutely necessary for success.

4.4.4.2 Other factors

The present study suggests there is a strong consensus among professionals that simply counting the frequency of children's word disfluencies in speech does not give the full picture, particularly for young children who stutter. Speech-Language Pathologists (SLPs) believe strongly that looking at other things is key. Things like secondary behaviors and how long the kid's been doing this all add info that just numbers can't.

Secondary behaviors were the most common. So these are not the core stuttering moments. These are some other things that the kid might do. Tighten up their face, blink a lot, or even attempting not to use certain words.. SLPs think these show the kid is struggling and putting in extra effort that you don't see with typical speech bumps. It's not a clear sign, though their absence doesn't rule anything out. So, combining all this info gives a fuller picture than just word-by-word stumbles. Together, secondary behaviors and the duration of stutters showed the unique qualities of the disorder that just counting how often someone stutters doesn't tell us. Participants thought that knowing certain risk factors really helps in deciding who gets treated and how. Things like family history, age when stuttering started, the kid's gender, and whether they have other speech, language, motor or cognitive problems all affect how you read their fluency issues and predict if they'll outgrow it or not. Some folks mentioned research-backed signs, too, such as more repeat units per stutter, suggesting a higher chance of long-term issues.

These prediction clues, they argued, go together with a proper diagnosis. Early help is most effective for the kids who need it most, high-risk kids. Plus, it's so important to think about how the child feels about their own stuttering. Things like the fact they stutter, get frustrated, embarrassed or panicked, and how that impacts their overall thinking and actions all deserve more attention in assessments. Participants said that stuttering has visible and invisible sides, and it is not enough to look only at what you can see. If we don't deal with the hidden issues of fear and negative thoughts, treatment is going to be hard. Kids stutter by three, so we have to measure this even in the really little ones because their ideas about talking change. And the big picture of how stuttering affects a kid's everyday life, their communication and their friendships is really important too. It gives us a better idea of whether our therapy works or not than just counting how many times they stutter."

People also talked about how stuttering changes depending on when and where it happens, who they are talking to, and what they are doing. To get it right, you have to look at all these different factors. Also, consistency across many settings is important in differentiating between all the time stuttering and nervousness in certain spots. The child's language development, sensorimotor skills, temperament, executive function, and multilingual background were identified as providing important context for understanding disfluency. Without this information, accurate interpretation is difficult, especially among the linguistically diverse groups in the sample. "The study found it's important to look at these multiple factors. This is not only good clinical practice but an ethical imperative, especially for preschoolers. This comprehensive approach helps prevent major mistakes, such as over- or under-diagnosis of children who stutter. Getting it right early can prevent the disorder from becoming lifelong and more serious. SLP Recommendations for Improving Diagnostic Consistency of Stuttering in Preschool Children

The research showed that speech-language pathologists suggest a more systematic and comprehensive way to diagnose stuttering in preschoolers. They are focused on three core areas in their suggestions. First, they want to use evidence-based guidelines in their assessments. Second, they believe it is important to include the environment and emotions of the kid, along with input from parents. Third, they think clinicians need better training and to check their diagnoses with each other. All parties agreed that the key to correctly diagnosing stuttering in young kids lies in the use of a multi-dimensional assessment. They really like the idea of an eclectic approach that mixes methods as needed. Some even went so far as to say it should be promoted officially by professionals.

They discussed some specific tools such as the CSSP, Kiddy CAT and weighted stuttering-like disfluency measures. They also emphasized the importance of protocols to assist in distinguishing normal non-fluency from early stuttering problems.. Participants saw

an overreliance on how often kids stutter as a big problem, pointing out that focusing just on the percentage of syllables stuttered lets some at-risk kids fall through the cracks. Those same folks suggested using more dynamic methods that look at how stuttering changes in different situations. They said one-time assessments aren't enough for something as changeable as preschool stuttering. Plus, some participants talked about AI's future role in better classifying types of stuttering beyond what we can do now. Participants saw an overreliance on how often kids stutter as a major problem, pointing out that focusing solely on the percentage of syllables stuttered can let some at-risk kids fall through the cracks. Those same folks suggested using more dynamic methods that look at how stuttering changes in different situations. They said one-time assessments aren't enough for something as changeable as preschool stuttering. Plus, some participants talked about AI's future role in better classifying types of stuttering beyond what we can do now.

Many participants stressed the need for assessment to be multi-contextual (multiple natural contexts, sittings and time points). The majority considered one clinical observation to be inadequate. Several recommendations were proposed such as multiple observation sessions, home-video recordings, school-based observation and systematic follow-up evaluations to monitor progression over time. Closely related was the call for greater integration of carer input into the diagnostic process. Participants identified parental concerns, observations by carers of the child's communication across natural settings, family history, and emotional responses to stuttering as diagnostically important components that are often underutilised in current practice. Family-centred, solution-focused assessment approaches were described as leading to meaningfully different outcomes for children and families than protocol-driven, box-checking interactions.

Current assessment practices were found to systematically under-represent psychosocial aspects of stuttering, which participants argued should be formally included in

diagnostic frameworks. Recommendations included the child's emotional responses to stuttering events (fear, distress, avoidance and communicative shame), as well as more general contextual factors (family attitudes, cultural stereotypes, parental guilt and the child's neurophysiological state, including sleep quality). Child-centred expressive methods, such as drawing, were proposed as accessible strategies for eliciting psychosocial information from preschool-aged children for whom formal self-report measures may be developmentally limited. In this context, a number of participants argued for a fundamental. Child-centred expressive methods, such as drawing, were proposed as accessible strategies for eliciting psychosocial information from preschool-aged children for whom formal self-report measures may be developmentally limited. Related to this, a number of participants argued for a fundamental reorientation of diagnostic criteria toward the speaker's lived experience, criticizing the listener-centred standpoint of existing frameworks as inadequate and potentially ableist. These participants advocated for the inclusion of speaker self-report measures and markers of communicative well-being, such as the child's sense of freedom and enjoyment in speaking, in assessment from the earliest age. Participants underscored the importance of qualitative clinical observations as well as quantitative data, noting that numbers do not fully describe an expert's insights on tension, effort and avoidance.

People said the main problem is not a lack of appropriate frameworks or guidelines. Brundage et al. (2021) and ASHA guidelines were mentioned positively. We're calling for better dissemination of evidence-based guidelines, including standardising training and having regular calibration workshops. There is also a significant need for adaptation of diagnostic tools for different languages and cultures, particularly in non-Western communities, where existing norms may not be applicable to local contexts.

The most common response across all responses was professional training and competency development as the most important lever to improve diagnostic consistency.

Specific training needs identified were counselling skills for working with children who stutter and their families, culturally sensitive assessment practice, differential diagnosis for preschool populations and inter-rater calibration. A systemic training barrier was the variation in attitudes at the supervisory level toward stuttering in the preschool, including the continued existence of outdated views warning against calling attention to stuttering in young children, with direct consequences for early identification.

The overall message was that enhanced, consistently delivered, and practically oriented training is a necessary precondition for the diagnostic consistency that current practice lacks. Overall, these results indicate that clinicians make use of an eclectic strategy in terms of assessment of stuttering, using a variety of markers as opposed to depending on one single marker alone. However, although this strategy affords some degree of adaptability to fit the individual patient, there is a clear requirement for practical training for consistency in diagnosis.

CHAPTER V

DISCUSSION

5.1 Overview of Key Findings

The present study investigated the perspectives of 92 Speech-Language Pathologists (SLPs) on four diagnostic approaches to stuttering assessment in preschool children: frequency-based, type-based, event-based, and eclectic. The Friedman test confirmed that participant evaluations varied significantly among diagnostic approach items, with a statistically significant result of $\chi^2(6) = 161.803, p < .001$. This result confirms that the observed diversity in practice represents real and organized clinical preferences, which is fundamental to understanding all subsequent comparisons. Eclectic sub-items had the greatest scores, followed by the type-based approach, the event-based method, and the frequency-based strategy, which got the lowest acceptance, according to the data's pattern of mean ranks. Collectively, the findings reveal a clinically significant pattern: SLPs do not support all diagnostic approaches equally and demonstrate a clear, statistically significant preference for multidimensional, eclectic assessment over single-parameter methods. These results speak to an ongoing debate in fluency disorders research about what a rigorous assessment of stuttering in young children should actually include.

This ordering reflects what the wider literature has increasingly argued that clinical practice should draw on multiple assessment dimensions rather than a single measure (Brundage et al., 2021; Yaruss & Quesal, 2006). The eclectic approach received the strongest approval across all sub-items, with combined positive agreement rates ranging from 88.7% to

93.5%. The type-based approach achieved an 82.6% positive agreement rate, the highest of any standalone approach, while the event-based approach received moderate approval at 63.0%. The frequency-based approach was the least supported, with only 37.0% of participants endorsing it as a primary diagnostic criterion and 54.3% expressing disagreement. These results suggest that clinicians are less persuaded by counting approaches and more interested in understanding the broader communicative picture of each child's context, quality of disfluency, and clinical judgment, all of which factor in. These findings are examined in detail in the sections that follow.

5.2.1 Frequency-Based Approaches

Frequency counts have been a major part of stuttering assessment for a long time, partly because they offer therapists a quantifiable and communicable number that fits nicely into reporting frameworks based on impairments. The Stuttering Severity Instrument (SSI4; Riley, 2009) is often used because it includes both frequency and duration of stuttering and physical symptoms. Clinics have also used the 3% threshold of stuttering-like disfluencies proposed by Yairi and Ambrose (2005) to discriminate between normal disfluencies and stuttering in young children.

A study revealed that looking at frequencies alone was the least favoured method among pros. Only 37.0% believed that the main thing for diagnosis should be the total frequency of disfluency. Moreover, 54.3% were dissatisfied with this method. These results are consistent with what other research is showing: frequency numbers, while helpful, do not tell the whole story in identifying early stuttering (Tichenor & Yaruss, 2019; Yaruss & Quesal, 2006).

Nonetheless, the qualitative findings suggest that not all SLPs dismiss the use of frequency as a diagnostic tool. They just don't think it should be used in isolation. Participants

said the frequency can offer objectivity and quantifiable data, which helps with standardized comparisons. And, this info is still super helpful for a larger, more comprehensive assessment.

It's very helpful to have the frequency data in terms of setting goals, tracking progress, and counselling parents," one person said. It provides them with hard numbers to work with and share. This finding aligns with the practical role given to frequency measures in current guidelines, which maintain frequency as part of a comprehensive evaluation, but recommend against using it as the sole criterion (Brundage et al., 2021). The main debate that came up a lot in participants' replies—ranging from 3% to 10%, based on whether they were counting SLDs or all disfluency types—shows there's no clear consensus in the literature about using empirical data versus clinical judgment. While the 3% SLD threshold established by Yairi and Ambrose (2005) is the most frequently mentioned and supported, study participants argued that case-specific factors also need to be considered. We do not see this threshold as a definition but as a decision guide. This is consistent with Yairi and Seery's (2015) view not to use frequency thresholds rigidly, and to consider other risk factors as well. Another issue raised in participants' responses concerning frequency-based approaches relates to the potential for false-negative diagnoses when assessment is based on one speech sample from one context

. Because preschool stuttering is characterised by high situational variability, a child may appear fluent during a brief clinical observation while stuttering significantly at home or at school. Several participants noted that frequency counts from such samples are therefore potentially misleading and that the absence of observable stuttering in the clinic cannot be interpreted as an absence of the disorder. Frequency measurement is not irrelevant; participants were clear that it has a place in assessment, but the data suggest it belongs alongside other tools rather than at the center of diagnostic decision-making. The strong disagreement with frequency-only approaches observed in the present study reflects a professional clearly in favor of more holistic assessment models.

5.2.2 Type-Based Approaches

The term "type-based assessment" describes the categorization and analysis of disfluency based on the type of speech disruption. Typically, this is done by differentiating between stuttering-like disfluencies (SLDs), which include prolongations, blocks, and part-word repetitions, and other disfluencies (ODs), which include interjections, phrase repetitions, and revisions (Ambrose & Yairi, 1999). Theoretically, this distinction is based on the idea that SLDs are qualitatively different from ODs and have more diagnostic significance. This claim is backed by a large body of longitudinal research showing that SLDs are more common in stuttering children than in their typically developing peers (Yairi & Ambrose, 2005).

The type-based approach received the strongest acceptance among standalone diagnostic methods in the present study, with 82.6% of participants reporting positive agreement. This finding is consistent with the research literature, which has consistently identified disfluency type as one of the most diagnostically informative variables in early stuttering assessment (Ambrose & Yairi, 1999; Yairi & Seery, 2015). Participants offered several reasons for this preference. The most common was that analyzing disfluency type helped them distinguish typical developmental speech from stuttering, a distinction that remains one of the important aspects in preschool stuttering assessment. This is in line with the well-known worry expressed by Johnson (1959) and developed by other researchers that type analysis offers one of the most accurate methods of distinguishing in the diagnostic zone created by the overlap between typical disfluency and early stuttering.

The influence of Yairi and Ambrose's (2005) longitudinal research showing that type, specifically the predominance of SLDs relative to ODs and the presence of within-word repetition units, predicts whether stuttering will persist or recover, was evident in the prognostic value of disfluency type, which was a particularly prominent theme in participants' qualitative responses. That participants in the present study independently identified these same features

as clinically meaningful suggests a high degree of coherence between their clinical practice and the empirical literature.

The finding that type-based analysis was viewed as providing a window into the child's experience of stuttering, capturing avoidance, escape behaviors, and emerging negative communication attitudes, represents an important extension of the traditional type-based framework. Participants explained how some OD patterns, such as partial phrases and revisions, are deliberate avoidance strategies that indicate the child's growing awareness of and concern about their speech rather than just accidental disfluencies. This interpretation is consistent with the iceberg model of Sheehan (1970) and recent research by Tichenor and Yaruss (2019). They say that if you only look at outward speech behaviors when you assess stuttering, you miss important hidden aspects such as avoidance, fear and shame, which are all essential to effective treatment

5.2.3 Event-Based Approaches

Event based assessment is a clinical approach that is concerned with the quality of individual instances of stuttering rather than simply the frequency or type of disfluency. This approach does not count the number of stuttered syllables, but rather looks at what actually happens in each stutter. This includes the duration, the effort, the physical tension, any avoidance behaviours, and the whole emotional and communicative situation (Manning & DiLollo, 2018). It views stuttering as a dynamic aspect of communication rather than a static behaviour to measure. This orientation lines up well with frameworks such as the OASES (Overall Assessment of the Speaker's Experience of Stuttering; Yaruss & Quesal, 2006) and the ICF from the World Health Organization (2001), which consider how stuttering affects a person's daily life and their quality of life, along with the actual speech traits.

The event-based approach received moderate support in the present study, with 63.0% of participants expressing strong agreement. The strongest argument in favour of the event-

based approach is that it can reduce the incidence of diagnostic error, both by overestimation, by excluding disfluencies that are not stuttering and inflate frequency counts, and by underestimation, by identifying the clinical impact of individual stuttering events regardless of their overall frequency. The concern about false-negative diagnosis from single speech samples, several participants noted that if no stuttering occurs during a brief clinic observation, a frequency count leads to the incorrect conclusion that the child does not stutter, is addressed directly by the event-based approach's emphasis on qualitative characterisation of each event, rather than reliance on representative sampling.

The theoretical alignment of the event-based approach with the lived experience of stuttering was reflected in participants' descriptions of its psychosocial utility. Several participants noted that even a small number of distress reactions during stuttering events may be sufficient for diagnosis, regardless of overall frequency, a position that challenges the primacy of numerical thresholds and that aligns with Tichenor and Yaruss's (2021) argument that the speaker's subjective experience of stuttering, including moments of loss of control, fear, and shame, is clinically essential. This finding is of particular importance in preschools.

Research using tools like the Kiddy CAT (Vanryckeghem & Brutten, 2007) suggest that children are capable of forming negative perceptions about their communication as early as three years of age. So understanding the psychological side of things is important from the beginning, not just when other behaviors show up. That said, the event-based approach was believed to be best when combined with other methods, not on its own. It provides clinicians with a window into how stuttering impacts a person, but “it’s not sufficient enough to use in isolation for diagnosis,” someone said plainly. This perspective is consistent with the view of stuttering assessment as a multi- dimensional process as proposed by Yaruss and Quesal (2006). Overall, the event-based approach appears to complement existing type- and frequency-based data, improving rather than replacing assessments

5.2.4 Eclectic Approaches

An eclectic approach to stuttering assessment means using lots of different methods, such as pulling info from many sources and mixing various theories, to make a diagnosis personal for each kid and their family (Manning & DiLollo, 2018). This is not about following one approach; it is about integrating the best aspects of measuring the frequency of stutters, analyzing the types of stutters, and taking into account clinical judgement and psychosocial factors.

Doing this helps build the most complete picture possible. Qualitative feedback from participants supports this approach. Stuttering is complicated, super diverse and difficult to measure with one measure. So, connecting some dots makes absolute sense and is really important for good treatment. The eclectic approach is thought to enable each type of data to make a contribution without dominating the others. This prevents any one element from dominating and skewing the situation in the clinic. The higher ratings of the eclectic approach are consistent with the findings in current stuttering assessment research. In their large survey, Yaruss et al. (1998) sought the opinions of expert SLPs and researchers about what they considered important. ‘Speech sample analysis, case history, standardized measures, self-reports, those are all important things to look at,’ they said. The range of tools they mention is consistent with what the participants in our study support.

And, Brundage et al. (2021) released some official guidelines to support that. They suggest that speech samples from a range of contexts should be supplemented by psychosocial assessments, parent interviews and risk factor analysis. Our study confirms these guidelines with real data, showing that although the professional community is very enthusiastic about this approach, its implementation can still be challenging. The inclusion of parental concern and child awareness as specific sub-items within the eclectic approach reflects the recognition that families are not peripheral informants but central participants in the diagnostic process,

both of which garnered acceptance rates above 88%.. This finding is consistent with Tumanova et al.'s (2014) evidence that parental concern correlates with stuttering severity and carries predictive validity, and with the broader family-centred practice framework that has gained traction in pediatric speech-language pathology. The acceptance of child awareness as a diagnostic variable, even among preschool-aged children, aligns with research using the Kiddy CAT (Vanryckeghem & Brutten, 2007), demonstrating that negative communication attitudes are measurable from age three and are clinically meaningful even when overt secondary behaviors have not yet developed.

A potential concern regarding the eclectic approach is standardization. If each clinician selectively draws on different combinations of assessment methods and weights them differently, the eclectic approach may contribute to the diagnostic variability it seeks to address. Several participants in the present study acknowledged this tension, with one noting that the consistency of diagnosis depends significantly on who is applying the framework and in what clinical context. This concern points to the need for structured, eclectic frameworks, such as those proposed in the Brundage et al. (2021) guidelines, that specify minimum standards for which domains should always be assessed, while retaining the flexibility to individualize the specific tools and procedures used within each domain, and the terms are not clear.

5.3 Relationship of Findings to Existing Stuttering Assessment Guidelines

One important aspect of the context of the present study is the current status of clinical guidelines for stuttering assessment. Participants were asked if existing guidelines were sufficient to achieve consistency of diagnosis: only 19.6% agreed, 42.4% disagreed and 13.0% were neutral. Fewer than one in five participants found the existing guidelines adequate, a striking finding that deserves careful discussion of what the available guidelines do and do not provide.

The ASHA (2023) Practice Portal for Fluency Disorders recommends a pretty comprehensive assessment including disfluency characteristics, case history, standardized tests and the child's general communication. The guidelines are quite inclusive and do not subscribe to one specific diagnostic rule intentionally. That makes sense because stuttering can look different from person to person. But in giving a framework without specific how-tos, there's a lot of room for interpretation. This can lead to different practices as seen in current studies. For clinicians who want more direct guidance, especially those who are new to dealing with fluency issues, ASHA's guidance may seem too vague. Comprehensive as it is, it does overlook some of the issues they encounter.

The three per cent Speech Language Disorder threshold (Yairi & Ambrose, 2005) is the most specific and frequently used guideline. We've discussed this before and it's become very common in clinics. In our current study it was mentioned by several people as their go to starting point for making decisions. But the thing is, people use different percentages, from three to ten per cent, and they see it more as a guide, not hard rules.

This suggests that even seemingly concrete guidelines can be very inconsistent in practice. It gets even trickier because these criteria often have to be tweaked to account for different languages and cultural groups. Guidelines of Brundage et al. (2021) provide the most recent and comprehensive treatment of these issues. They propose guidelines based on a wealth of evidence and take into account many aspects of the issue, including fluency issues, risks, parental perspectives and social effects. But these guidelines – and ASHA's, too – have their own catch. While they stress the need to look at multiple factors, they don't always explain how to actually pull all this info together to reach a diagnosis. Disfluency levels, disfluency types, parental concerns, and psychosocial factors often show conflict in preschool assessment. And existing guidelines don't sufficiently address these issues. Perhaps this is why even when clinicians know the frameworks, they still feel unsure of making consistent diagnoses. It is

therefore not surprising that in the current study, only 19.6% of the people found the guidelines adequate. This isn't just knocking what's out there; it's really underscoring how hard it is to translate big-picture ideas into clear clinical choices

We need not only better guidelines, but also better training in their use, better mechanisms for their dissemination, and better structured decision support tools, operationalizing multidimensional assessment in a way that reduces uncertainty without sacrificing the individualization that preschool assessment demands. Addressing this gap requires not only better guidelines but better training in how to use them, better mechanisms for their dissemination, and better structured decision-support tools that operationalize multidimensional assessment in a way that reduces uncertainty without sacrificing the individualization that preschool assessment demands.

5.4 Implications for Clinical Practice

The findings of the present study have direct and actionable implications for clinical practice in preschool stuttering assessment. Most fundamentally, they provide validation for a multidimensional, eclectic approach as the clinical standard, grounded not in theoretical preference but in the expressed and statistically confirmed preferences of a diverse international sample of experienced SLPs. This finding should encourage clinicians who have been uncertain about whether their integrative practice aligns with professional standards to recognize that it does, and should provide a basis for challenging institutional or system-level pressures to reduce assessment to frequency counts or single-criterion diagnosis.

5.5 Training and Professional Development

The present study's findings have significant implications for the training and professional development of SLPs working with preschool children who stutter. The consistent

finding that existing guidelines are considered insufficient, that diagnostic practice varies considerably between clinicians, and that event-based and psychosocial assessment are underrepresented relative to frequency-based approaches all point to gaps in pre-practice training that have direct consequences for the children and families who depend on accurate diagnosis.

Structured inter-rater calibration workshops, shared case examples recommended by multiple participants, and evidence that collaborative training reduces diagnostic variability constitute an accessible and effective mechanism for professional development that does not require major curriculum reform. Such workshops could be organised through professional bodies and specialist SIG groups. They could focus specifically on those dimensions of assessment that the present study has found to be most variable: the distinction between SLD and OD, the application and interpretation of frequency thresholds, the evaluation of psychosocial indicators, and the integration of multiple data sources into a common diagnostic conclusion

5.6 Recommendations for Future Research

The present study identifies several directions for future research that could build on and extend its findings. First, the study documents the professional preferences and perspectives of SLPs. However, it does not directly examine diagnostic outcomes, that is, the extent to which different assessment approaches result in accurate identification of stuttering and appropriate intervention decisions.

Second, the development and validation of structured, eclectic assessment frameworks that operationalise the multidimensional approach accepted by participants in the present study into a structured, reproducible, and clinically feasible protocol represent an urgent research priority. Such frameworks would need to specify not only what domains to assess but also how to weight and integrate information across domains when formulating a diagnostic conclusion.

Decision analytic methods and clinical consensus techniques, such as those applied in the Brundage et al. (2021) process, may be useful for developing and validating frameworks for different clinical groups. The next step is to study the assessment of preschool stuttering in different languages and cultures. Research in this area, especially in developing norms for disfluency, validating existing tools and making assessments culturally sensitive would really enhance clinical practice. And it would bring help to those so often left behind.

Another avenue to pursue is the study of emerging technologies such as AI and machine learning that might help develop more standardized and reliable stuttering assessments. One of our participants in the study said that AI may help to better classify types of stuttering and to better understand diagnostic factors. This points to an exciting path that researchers should start to dig into seriously. Finally, longitudinal research examining the developmental trajectories of preschool children assessed using different approaches and the relationship between assessment approach, diagnostic accuracy, and intervention outcomes would provide the highest-quality evidence for establishing which components of assessment carry the most prognostic and therapeutic value. Such research, conducted prospectively with representative samples and validated assessment protocols, would represent a significant advance on the cross-sectional survey methodology of the present study and would provide the empirical foundation for the next generation of stuttering assessment guidelines.

CHAPTER VI

SUMMARY AND CONCLUSION

The present study investigated the perspectives of 92 Speech-language pathologists on four diagnostic approaches to stuttering assessment in preschool children: frequency, type, eclectic and event-based approaches. Data was collected through a structured questionnaire comprising Likert-scale items and open-ended qualitative responses. Quantitative analysis involved frequency tabulation and the Friedman test, while qualitative data were analyzed using reflective thematic analysis (RTA) following Braun and Clarke (2006).

The Friedman test confirmed statistically significant differences in SLP ratings across the seven diagnostic items, $\chi^2(6) = 161.803$, $p < .001$, indicating that clinicians did not evaluate all approaches equally. The eclectic approach received the highest endorsement (88.7%–93.5%), followed by the type-based approach (82.6%), the event-based approach (63.0%), and the frequency-based approach, which received the lowest agreement (37.0%), with 54.3% disagreeing with its exclusive use. Parental concern and child communicative awareness, embedded within the eclectic sub-items, were also strongly endorsed (>88%), reflecting recognition of psychosocial dimensions from the preschool years. Only 19.6% of participants found available clinical guidelines sufficient to enable consistent diagnostic decision-making, suggesting a gap between available frameworks and their practical operationalization.

The findings indicate that SLPS demonstrate a clear preference for multidimensional, eclectic assessment over single-parameter approaches. Frequency-based methods, while knowledge is a useful component, are not supported as a standalone approach, consistent with their strong empirical base. Psychosocial factors, including parental concern and child awareness, are widely recognised as diagnostically relevant from preschool age. Existing

guidelines are perceived as sufficiently operationalised, underscoring the need for structured decision support frameworks to reduce variability in clinical practice.

This paper provides support for the fact that SLPs generally favour a multidimensional eclectic paradigm when diagnosing stuttering in preschool children, and that frequency-only assessments no longer hold any sway among them. Statistically significant differences in the ratings between different diagnostic approaches are indicative of systematic decisions aligned with the available body of evidence. Nevertheless, the fact that most practising speech-language pathologists regard the currently existing guidelines as inadequate sheds light on a major discrepancy between supporting multidimensionality and providing relevant frameworks. Addressing this issue through improved training, standardised assessment procedures, and appropriate guideline development is vital to bridging this discrepancy. Allowing adequate and equal access to stuttering assessment for all preschool children is an ultimate obligation of the profession.

6.1 Limitations

The present study has few limitations that should be noted. The first being that data was collected through an online questionnaire distributed via email and professional networks. Despite follow-up efforts, a considerable number of invited SLPs did not respond to the mailed invitations, resulting in a response rate that may limit the representativeness of the sample. Second, the study relied on self-reported perspectives rather than direct observation of clinical practice, and social desirability effects may have led participants to accept evidence-based approaches more strongly than they consistently apply them in practice. Third, the cross-sectional design provides a snapshot of current perspectives but cannot capture how practices evolve over time with training or experience. Fourth, the study did not evaluate diagnostic outcomes or accuracy, which would require prospective clinical observation and longitudinal

follow-up. Fifth, contextual variables such as caseload size, institutional setting and access to specialist supervision were not systematically examined, although these may have a significant impact on the implementation of preferred approaches in practice.

6.2 Significance of the Study

The present study is expected to have important clinical and educational implications. The study has systematically mapped the diagnostic approaches currently accepted and used by SLPs in the assessment of preschool stuttering, in order to identify areas of clinical consensus that can be reinforced and areas of divergence that warrant further attention through targeted training, guideline development or further research. In addition, understanding the degree to which SLPs incorporate parental concern as a diagnostic criterion has direct implications for the clinical encounter between SLPs and families. If parental concern is systematically underweighted in clinical decision-making, this may contribute to diagnostic delays and the exclusion of valuable ecological information from the assessment process. Conversely, if parental concern is weighted too heavily in the absence of corroborating clinical evidence, this may result in over-identification and unnecessary family anxiety. Elucidating how SLPs balance these competing considerations will contribute to the development of more nuanced and evidence-aligned guidelines for incorporating parent report into preschool stuttering assessment.

More broadly, the study responds to the growing recognition that research in speech-language pathology must be conducted within diverse linguistic and cultural contexts if the profession is to move toward truly equitable, evidence-based practice. An investigation of SLP perspectives in the Indian clinical context contributes a distinctive and important voice to an international literature that has, to date, been shaped predominantly by Western clinical experiences and assumptions. The findings of this study are thus relevant not only to

practitioners and policymakers in India but also to the broader international community concerned with improving the early identification of stuttering and the quality of care available to preschool children who stutter and their families.

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Appendix A

Survey Questionnaire

A Survey on Speech-Language Pathologists' Opinion on Assessment of Stuttering in Preschool Children

SECTION 1: DEMOGRAPHIC DETAILS

Q1. Gender

Mark only one oval.

- ☐ Male
- ☐ Female
- ☐ Prefer not to say

Q2. Age

Q3. Highest Educational Qualification

Mark only one oval.

- ☐ Bachelor's degree in Speech-Language Pathology
- ☐ Master's degree in Speech-Language Pathology
- ☐ Ph.D. in Speech-Language Pathology
- ☐ M.Phil. in Speech-Language Pathology
- ☐ Other: _____

Q4. Total years of experience

Mark only one oval.

- ☐ 1–5 years
- ☐ 5–10 years
- ☐ 10–20 years
- ☐ More than 20 years

Q5. Years of experience specifically in fluency disorders

Response:

Q6. Current work setting

Mark only one oval.

- ☐ Hospital
- ☐ Private clinic
- ☐ Rehabilitation centre
- ☐ Academic institution with clinical services
- ☐ Other: _____

Q7. Number of preschool children with stuttering caseload in past 12 months

Mark only one oval.

- ☐ 1–4
- ☐ 5–10
- ☐ 11–20
- ☐ More than 20

Q8. Nationality

Response:

Q9. City of practice

Response:

Q10. Primary language used in clinical practice

Response:

Q11. Contact email address

Email:

SECTION 2: APPROACH I – FREQUENCY-BASED DIAGNOSIS

In this approach, all disfluencies—regardless of their type—are counted together to calculate the total percentage of disfluencies in a speech sample. A diagnosis of stuttering is typically made when the overall percentage of disfluent syllables or words exceeds a specific threshold (e.g., 3% of syllables; Yairi & Ambrose, 1999).

Q12. The total frequency of all disfluencies (combined) should be considered as the primary diagnostic criterion for diagnosing stuttering in preschool children.

Mark only one oval.

- ☐ Disagree
→ *If Disagree → Skip to Q15*
- ☐ Slightly disagree
→ *If Slightly disagree → Skip to Q15*
- ☐ Neither agree nor disagree
→ *If Neither agree nor disagree → Skip to Q15*
- ☐ Slightly agree
- ☐ Agree

Q13. If you slightly agree/agree, what percentage of total disfluency do you consider clinically significant for diagnosing stuttering?

Mark only one oval.

- ☐ 3%
- ☐ 5%
- ☐ 7%
- ☐ 10%

☐ Other: _____

Q14. Please provide a brief justification for the reasons for using the frequency-based approach and the percentage threshold you use. (150 words)

Justification:

SECTION 3: APPROACH II – TYPE-BASED DIAGNOSIS

In this approach, clinicians consider a specific type of ‘stuttered’ disfluency as the distinguishing feature. Diagnosis is made primarily based on the presence of stuttering-like disfluencies (part-word repetitions, single syllable word repetitions, prolongations, blocks, broken words), and not other disfluencies. The mere presence of stuttered disfluency is considered sufficient for labelling the child with stuttering.

Q15. The type of disfluency should be considered when diagnosing stuttering in preschool children.

Mark only one oval.

☐ Disagree

→ If Disagree → Skip to Q21

☐ Slightly disagree

→ If Slightly disagree → Skip to Q21

☐ Neither agree nor disagree

→ If Neither agree nor disagree → Skip to Q21

☐ Slightly agree

☐ Agree

Q16. Which of the following disfluency types do you consider indicative of stuttering? (Check all that apply)

Check all that apply.

☐ Blocks / Broken words

☐ Monosyllabic repetitions / Single syllable repetition

☐ Part-word repetitions

☐ Prolongations

☐ Other: _____

Q17. Other disfluency types (such as interjections or revisions) should be considered in the diagnosis of stuttering in preschool children.

Mark only one oval.

☐ Disagree

→ If Disagree → Skip to Q21

☐ Slightly disagree

→ If Slightly disagree → Skip to Q21

☐ Neither agree nor disagree

→ If Neither agree nor disagree → Skip to Q21

- ☐ Slightly agree
→ *If Slightly agree → Continue to Q18*
- ☐ Agree
→ *If Agree → Continue to Q18*

Q18. If you slightly agree/agree with the above statement, which of the following disfluency types do you consider most significant? (Check all that apply)

Check all that apply.

- ☐ Incomplete phrases
- ☐ Interjections
- ☐ Multisyllabic word repetitions
- ☐ Phrase repetitions
- ☐ Revisions
- ☐ Word repetitions
- ☐ Other: _____

Q19. Should the frequency of "other disfluencies" be added to the total disfluency count or considered separately?

Mark only one oval.

- ☐ Add to total disfluency count
- ☐ Consider separately

Q20. Please provide a brief justification for the reasons for using the type-based approach. (150 words)

Justification:

SECTION 4: APPROACH III – EVENT-BASED DIAGNOSIS

In this approach, clinicians rely on perceptual judgement of “stuttering moments” or “stuttering events” during speech rather than counting specific types or percentages of disfluencies. The clinician may classify stuttering severity as mild, moderate, or severe without quantitative measures.

Q21. The child should be diagnosed based on overall clinical judgement of stuttering events/moments rather than specific counts.

Mark only one oval.

- ☐ Disagree
→ *If Disagree → Skip to Q24*
- ☐ Slightly disagree
→ *If Slightly disagree → Skip to Q24*
- ☐ Neither agree nor disagree
→ *If Neither agree nor disagree → Skip to Q24*
- ☐ Slightly agree

☐ Agree

Q22. Compared to the type of disfluency or frequency count-based approaches, the event-based method provides more reliable outcomes.

Mark only one oval.

- ☐ Disagree
☐ Slightly disagree
☐ Neither agree nor disagree
☐ Slightly agree
☐ Agree

Q23. Please provide a brief justification for the reason for using the event-based approach. (150 words)

Justification:

SECTION 5: APPROACH IV – ECLECTIC APPROACH

In this approach, clinicians prefer to consider a combination of type, frequency, secondary behaviours, markedness of stuttering, and parental concerns in diagnosing preschool children with stuttering.

Q24. Both type and frequency should be considered in diagnosis.

Mark only one oval.

- ☐ Disagree
☐ Slightly disagree
☐ Neither agree nor disagree
☐ Slightly agree
☐ Agree

Q25. Other factors (e.g., duration of disfluency, secondary behaviours) should be considered along with frequency and type in diagnosis of stuttering in preschool children.

Mark only one oval.

- ☐ Disagree
 → If Disagree → Skip to Q27
☐ Slightly disagree
 → If Slightly disagree → Skip to Q27
☐ Neither agree nor disagree
 → If Neither agree nor disagree → Skip to Q27
☐ Slightly agree
☐ Agree

Q26. If you slightly agree/agree with the above statement, please specify what factors should be considered along with frequency and type in diagnosis of stuttering among preschool children, and the reasons for your choice.

Factors and Justification:

Q27. Parental concerns should be incorporated into the diagnostic process.

Mark only one oval.

- ☐ Disagree
→ *If Disagree → Skip to Q29*
- ☐ Slightly disagree
→ *If Slightly disagree → Skip to Q29*
- ☐ Neither agree nor disagree
→ *If Neither agree nor disagree → Skip to Q30*
- ☐ Slightly agree
- ☐ Agree

Q28. If you slightly agree/agree with the above statement, which specific parental concerns do you consider in your diagnostic process?

Response:

Q29. The child's reaction to their disfluencies (e.g., frustration, awareness) should be considered for diagnosing stuttering in preschool children.

Mark only one oval.

- ☐ Disagree
→ *If Disagree → Skip to Q31*
- ☐ Slightly disagree
→ *If Slightly disagree → Skip to Q31*
- ☐ Neither agree nor disagree
→ *If Neither agree nor disagree → Skip to Q31*
- ☐ Slightly agree
- ☐ Agree

Q30. Please provide a brief justification for the reasons for using the eclectic approach. (150 words)

Justification:

SECTION 6: GENERAL QUERIES

Q31. Do you believe existing diagnostic guidelines are sufficient for assessing stuttering in preschool children?

Mark only one oval.

- ☐ Disagree
- ☐ Slightly disagree
- ☐ Neither agree nor disagree
- ☐ Slightly agree
- ☐ Agree

Q32. Please provide any additional comments or recommendations to improve diagnostic consistency of stuttering in preschool children among SLPs. (150 words)

Comments / Recommendation

APPENDIX B

Summary of meaningful units, codes, number of participants, sub-category and category of All the approaches

Table 2: Summary of meaningful units, codes, number of participants, sub-category and category of Frequency-Based Approach

Category	Sub-category	n	Example of codes	Example of Condensed Meaningful unit	Example of meaningful unit
Objectivity and Quantification	Reliability and Consistency	5	Reliable and consistent results	Yields repeatable, dependable results	<i>"It's more reliable and gives consistent results on the severity of disfluencies"</i>
	Quantitative Measure	6	Objective and quantifiable	Removes subjectivity by generating a measurable value	<i>"It is more quantitative, gives better understanding"</i>
	Limited Child Output	2	Limited child output favours frequency	Limited child output favours frequency over observation	<i>"As most of the time, child's verbal response will be poor"</i>
Frequency as a Diagnostic Boundary Between Typical and Atypical Disfluency	Differentiating NNF from Stuttering	7	Frequency distinguishes typical from atypical	Frequency draws the clinical boundary between normal and disordered	<i>"The number of dysfluencies provides an objective indicator of whether a speaker's disfluencies fall within the range of normal non-fluency or are more characteristic of stuttering"</i>
	Threshold-Based Diagnosis	9	3% / 5% / 7% threshold used	Specific percentage cut-off anchors clinical decision	<i>"A 3% stuttering frequency is widely recognized as the clinical threshold to differentiate between normal disfluencies and stuttering-like disfluencies"</i>
	Speech-Motor Stability	2	Disfluency rate reflects motor control	Disfluency rate reflects underlying motor control stability	<i>"Frequency of stuttering reflects the stability of the speech-motor control system of an individual"</i>
Evidence Base and Standardisation	Literature-Aligned Threshold	4	Literature-aligned threshold	Threshold reflects national and international	<i>"In both national and international literature, a 3% frequency threshold is accepted for stuttering"</i>

	Uniformity Across Clinicians	3	Uniformity across clinicians	consensus Counting all disfluency types promotes consistent diagnosis	<i>"Considering all the errors will result in uniformity of diagnosis"</i>
The Threshold Debate	Threshold as Flexible Guideline	4	Threshold as flexible guideline	Cut-off used as a clinical guide, not a rigid rule	<i>"3% SLD but frequency is not the only measure, and stuttering is variable. It is rather a guideline than a strict cut-off point"</i>
	Higher Threshold for Total Disfluency	3	Higher threshold needed for all disfluency types	CWS and CWNS share all disfluency types; threshold must be higher	<i>"Since all types of dysfluencies are being considered here, the percentage should be relatively high for diagnostic purposes"</i>
Frequency as a Necessary but Insufficient Measure	Multi-Factorial Diagnosis	5	Multi-factorial diagnosis	High frequency is one factor within a broader diagnostic process	<i>"I believe many factors need to be considered and a high percentage is just one of those factors"</i>
	Frequency Not Used Alone	4	Frequency-only approach rejected	Frequency-only approach explicitly rejected	<i>"I would not use an approach based solely on frequency for the reasons described above"</i>
Developmental and Contextual Considerations in Preschool Children	Secondary Behaviours	3	Secondary behaviours	Frequency is the primary indicator when covert features are absent	<i>"In preschoolers, secondary behaviours will be less, so can go with the frequency"</i>
	Minimal in Preschoolers		minimal in preschoolers		
	Situational Variability	4	Situational variability	Stuttering frequency fluctuates across contexts and interlocutors	<i>"The child's response can vary based on situation, people and task given. The frequency of stuttering needs to be consistent"</i>
	Language and Developmental Variation	3	Developmental variability across contexts	Disfluency type and frequency vary across developmental phases and languages	<i>"Every language can show different type of error predominance or predisposition"</i>
Frequency as a Marker of Severity and Functional Impact	Severity Indicator	5	Frequency and severity relationship	Higher frequency corresponds to greater severity	<i>"Because it helps how frequently people stutters and also helps to diagnose the severity"</i>
	Listener	3	Listener	High frequency is	<i>"At 7%, the frequency of disruptions is high enough to impact speech"</i>

	Perception and Functional Impact		perception	perceptible and disruptive to the listener	<i>flow and listener perception"</i>
Clinical Utility of Frequency Across Assessment, Therapy, and Communication	Goal-Setting and Progress Tracking	5	Goal-setting and progress tracking	Frequency data informs specific therapy goals and measures change	<i>"It helps us to identify the types of dysfluency, severity and frequency of dysfluency, helps to set the goals, helps to track progress"</i>
	Parent Counselling	3	Parent counselling	Percentage provides a concrete, communicable figure for families	<i>"Considering frequency of disfluency irrespective of type for assessment/diagnostic criteria useful to quantify and counsel parents easily"</i>
	Screening Tool	3	Screening tool	Frequency screens who requires further investigation	<i>"We can use it as a screening tool where we can define whether the child needs further investigation or not"</i>

Note: n = number of participants whose responses contributed to each sub-category. Participants may appear in more than one sub-category.

Table 3: Summary of meaningful units, codes, number of participants, sub-category and category of Type-Based Approach

Category	Sub-category	n	Example of codes	Example of Condensed Meaningful unit	Example of meaningful unit
Differentiating Typical Disfluency from Stuttering-Like Disfluencies	Differentiating normal from disordered	7	Type helps draw the boundary between normal and disordered fluency	Type draws the clinical boundary between typical speech and stuttering	<i>"We should use type-based approach because it helps us to differentiate normal stuttering from non-fluency"</i>
	Differential diagnosis	6	Separating stuttering behaviours from typical disfluencies supports differential diagnosis	Separating stuttering from typical disfluencies supports differential diagnosis	<i>"In terms of differential diagnosis, it is important to separately consider the stuttering behaviors from disfluencies that are 'typical'"</i>
	SLD and non- SLD distinction	5	Both SLD and non- SLD categories must be considered together	Both SLD and non-SLD types must be evaluated jointly for accurate classification	<i>"Stuttering-like and non-stuttering-like disfluencies should be considered"</i>
	Differential diagnosis across	4	Type differentiates stuttering from	Type-based analysis distinguishes stuttering	<i>"Helping to distinguish stuttering from cluttering and atypical disfluency as well as the presence of stuttering"</i>

	disorders		cluttering and other atypical disfluency	from cluttering and other fluency disorders	
	Prevents overdiagnosis	5	Type categorisation prevents overidentification of children with typical verbal planning disruptions	Categorising disfluency type prevents mislabelling typical verbal planning as stuttering	<i>"Clinicians can prevent overidentifying children who only exhibit typical verbal planning disruptions by categorising disfluency kinds"</i>
Prognostic Value of Disfluency Type	Type predicts recovery or persistence	4	Disfluency type has prognostic value for recovery or chronicity	Type of disfluency predicts whether stuttering will resolve or persist	<i>"Research by Yairi, Walsh 2021 and Singer (2020) that the type of stuttering is predictive of recovery or persistence"</i>
	Type as severity indicator	5	Disfluency type maps onto severity levels including borderline stuttering	Type reflects severity stage and guides urgency of intervention	<i>"Types of stuttering may indicate severity, which may include differentiation between borderline stuttering and a higher level which may warrant immediate treatment"</i>
	Tension in SLDs as risk factor	4	Presence of tension in SLDs signals risk for	Tension accompanying SLDs is a marker of risk	<i>"It is extremely beneficial to know the difference between a child's stuttering like disfluencies (tension present) versus non-stuttering"</i>

			persistent stuttering	for persistent stuttering	<i>like disfluencies when looking at risk factors for potential persistent stuttering"</i>
Type as a	Avoidance	4	Certain disfluency	Incomplete phrases and	<i>"Incomplete phrases and revisions may indicate awareness and</i>
Window into the	indicators		types signal avoidance	revisions indicate	<i>avoidance, making them highly relevant to the child's experience of</i>
Child's			and awareness	communicative avoidance	<i>speaking"</i>
Experience of				and self-awareness	
Stuttering	Struggle and	5	Avoidance and escape	Avoidance and escape	<i>"If the behaviors observed seem to be indicative that the child is</i>
	escape behaviours		behaviours identify	behaviours mark clinically	<i>struggling to communicate or the child is avoiding words, sounds...</i>
			clinically significant	significant stuttering	<i>then it should be counted as a stutter behavior"</i>
			stuttering	impact	
	SLDs linked to	4	SLDs are associated	SLDs co-occur with	<i>"SLDs come along with a lot of secondary struggle behaviours in</i>
	secondary		with secondary	secondary struggle	<i>the CWS. The reason behind most of the ODs could be escape and</i>
	behaviours		struggle behaviours in	behaviours, reflecting	<i>avoidance behaviours in the CWS"</i>
			children who stutter	broader stuttering impact	
Qualitative	Quality over	6	Qualitative nature of	The quality and character	<i>"The quality of the stutter is more important than the quantity"</i>
Nature of	quantity		stuttering matters more	of disfluency carries more	
Disfluency			than raw frequency	clinical weight than	

Beyond			count	frequency alone	
Frequency	Greater diagnostic value	5	Type-based analysis carries more diagnostic information than frequency alone	Type yields richer diagnostic information than frequency counts	<i>"Has more diagnostic value"</i>
	Neurophysiological insight	2	Disfluency type reveals neurophysiological variation underlying stuttering	Type of disfluency reflects the neurophysiological variation in stuttering presentation	<i>"It says so much more about the stuttering and the neurophysiological variation in which way the stutter occurs"</i>
	Prevents inflated severity estimates	3	Separating other disfluencies prevents severity scores from being artificially elevated	Excluding non-SLDs from severity scoring prevents overestimation of stuttering severity	<i>"Taking into account 'other disfluencies' independently... keeps severity estimations from being inflated"</i>
Clinical Utility of Type-Based	Structured framework	5	Type-based approach enables organised	Type provides a structured, systematic framework for	<i>"It facilitates a systematic and structured framework for both assessment and intervention"</i>

Approach in			assessment and	both assessment and	
Assessment and			intervention	intervention	
Intervention	Type informs therapy initiation	5	Disfluency type guides decisions about whether to begin therapy	The type of disfluency observed determines whether and when therapy should begin	<i>"When a child mainly shows repetitions, I usually do not start therapy immediately... However, when a child shows blocks or frequently abandons and restarts sentences, I consider this a stronger indication that support may be needed"</i>
	Therapy planning dimension	4	Disfluency type adds a dimension that shapes individualised therapy planning	Type data adds depth to individualised therapy goal-setting	<i>"It will give a dimension to develop therapy plan"</i>
	Better clinical outcomes	3	Type-based approach yields better clinical results in paediatric assessment	Type-based analysis improves outcomes in paediatric fluency assessment	<i>"This approach gives better results in children"</i>
Evidence Base	Research-supported diagnostic	5	Literature supports SLD predominance in stuttering; type is	Evidence consistently supports SLD prevalence in stuttering, justifying	<i>"There is abundant literature in support of SLDs being more in those who stutter. Hence, type of disfluency needs to be taken into account for the diagnosis"</i>
Supporting Type-Based					

Approach	importance of type		essential for diagnosis	type-based diagnosis	
	Core stuttering behaviours	4	Only core stuttering behaviours should be counted in percentage calculation	Only core SLDs should be included in percentage-based diagnostic calculations	<i>"Only blockages, repetitions of sounds, syllables or monosyllabic words, and dysrhythmic prolongations are typical of stuttering and should be taken into account in the %SS"</i>
Developmental and Population-Specific Considerations	Multilingual disfluency profile	3	Multilingual children show higher other disfluencies; type accounts for this variation	Type-based approach accounts for elevated other disfluencies in multilingual children	<i>"Children who learn more than one language are using more 'other disfluencies'. Children with learning disabilities or language difficulties may also use more other dysfluencies"</i>

Note: n = number of participants whose responses contributed to each sub-category. Participants may appear in more than one sub-category.

CWS = children who stutter; SLD = stuttering-like disfluency; OD = other disfluency; NNF = normal non-fluency.

Table 4: Summary of meaningful units, codes, number of participants, sub-category and category for Event based approach

Category	Sub-category	n	Example of codes	Example of Condensed Meaningful unit	Example of meaningful unit
Diagnostic Precision	Reduction of diagnostic error	12	Event-based approach reduces over- and under-estimation of stuttering compared to frequency or type alone	Event-based method reduces diagnostic over- and under-estimation compared to frequency or type alone	<i>"The event-based approach reduces overestimation or underestimation of stuttering and allows for individualized, reliable diagnosis and treatment planning."</i>
	Precise event boundary identification	7	Event-based approach delineates precise onset and offset of stuttering moments rather than time-interval sampling	Event boundaries are more precisely delineated than time-interval samples	<i>"This approach focuses more on exact boundaries of stuttering events than fixed time intervals. Also is clinical precise and reliable."</i>
	Clinical accuracy and severity identification	9	Event-based method supports clinical accuracy, severity identification and differentiation of normal	Event-based approach enhances clinical accuracy and enables severity identification alongside differential diagnosis	<i>"Event based approach help us to identify how much child is stuttering while speaking. Also it helps in clinical accuracy, finding severity, in differentiating normal non fluency and stuttering."</i>

		disfluency from stuttering		
Overall severity over quantitative metrics	8	Overall severity assessment holds greater clinical value than quantitative frequency metrics	Overall impression of severity is more clinically meaningful than percentage-based frequency counts	<i>"In my clinical experience, quantitative measures—such as calculating the percentage of stuttered syllables—are of little significance. It is far more valuable to assess the overall severity of the stuttering."</i>
Noise reduction in stuttering identification	6	Event focus reduces diagnostic noise from common disfluencies and measures actual stuttering cost	Event-based focus filters out common disfluency noise, measuring the actual cost of stuttering more accurately	<i>"By concentrating on specific instances of stuttering, event- based methods might lessen the noise produced by common disfluencies, measuring the actual cost of stuttering rather than inflating counts with less pertinent behaviours."</i>
Risk of false- negative from single sample	5	Single-sample frequency count risks false-negative diagnosis when stuttering is absent in that context	Relying on a single speech sample risks false-negative diagnosis when stuttering does not occur in that context	<i>"If you only look at the number of stuttering episodes in a single speech sample, it is possible that no stuttering episodes occur, and you may therefore come to the incorrect conclusion that the child does not stutter."</i>
Efficiency and expertise	5	Event-based approach is time-efficient for	Reliable event-based assessment is quick for experienced SLPs	<i>"It is a quick and reliable tool during an experienced SLP's busy practice. The SLP needs a trained ear to identify the</i>

	requirement		experienced clinicians	but demands a trained ear that	<i>errors — may be hard for a new SLP."</i>
			but requires trained	novice clinicians may lack	
			clinical expertise		
Nature of	Discrete	10	Preschool stuttering	Stuttering in preschool children	<i>"An event-based approach is valuable because their speech</i>
Stuttering	observable		occurs in specific discrete	presents as discrete observable	<i>behaviors often occur in specific, observable moments rather</i>
	stuttering		observable moments	moments rather than continuous	<i>than continuous patterns."</i>
	moments		rather than continuous	speech disruption	
			patterns		
	Clustered events	7	Stuttering behaviours	Stuttering behaviours cluster	<i>"Stuttering behaviors often occur in clusters rather than as</i>
	as integrated		often cluster together	rather than occur in isolation,	<i>isolated events, making it more meaningful to evaluate the</i>
	episodes		making integrated	making event-level evaluation	<i>integrated experience of a stuttering episode rather than</i>
			episode evaluation more	more representative	<i>counting individual disfluencies."</i>
			meaningful than		
			individual counts		
	Secondary	9	Presence of effort or	Any stuttering event	<i>"Nature of the event — if effort or secondaries is associated</i>
	behaviours		secondary behaviours	accompanied by effort or	<i>with any stuttering moment, it qualifies for stuttering</i>
	qualifying		within a stuttering event	secondary behaviours qualifies	<i>diagnosis of any severity."</i>

stuttering events		qualifies it for clinical diagnosis regardless of severity	for clinical diagnosis irrespective of severity level	
Distribution and occurrence patterns	5	Event-based approach maps distribution and occurrence patterns of disfluency episodes beyond simple frequency counts	Mapping how disfluency episodes are distributed across speech provides richer information than simple frequency tallies	<i>"They account for the occurrence and distribution of disfluency episodes within speech rather than merely quantifying their frequency."</i>
Individual variability in event severity	6	Stuttering events differ in severity and event-based approach accounts for this individual variability	Event-based approach captures the variability in severity across individual stuttering moments	<i>"Not all stutters are the same. Some may be mild, while others are more difficult or noticeable. By looking at each event, we can better understand the type of stuttering and what the person is experiencing."</i>
Variability limits observational reliability	5	High variability means a child may appear fluent in any assessment method including event-based	Stuttering variability means no assessment approach guarantees observation of disfluency in a given session	<i>"Stuttering in young children is variable; in both these methods the child may be fluent. It is more important to listen to the parents' description rather than pay too much attention to what is observed clinically."</i>

Naturalistic Assessment	Real-life	13	Event-based assessment	Event-based approach captures	<i>"It uses the client's real life experiences and familiar scripts</i>
	communicative		is grounded in real-life	stuttering as it occurs in natural	<i>to support natural communication. It places language</i>
	context		communicative contexts	everyday communication rather	<i>learning within everyday social situations."</i>
			and everyday familiar	than artificial sampling	
			situations		
	Situational	10	Event-based methods	Event-based assessment maps	<i>"Event based methods helpful to assess variation across</i>
	variability and		assess stuttering variation	situational variability and	<i>different situation and different person. Also find out trigger</i>
	trigger		across different situations	identifies specific triggers that	<i>factors influence on increasing frequency."</i>
	identification		and identify contextual	increase stuttering frequency	
			trigger factors		
	Situational	7	Fluency observed in	A child appearing fluent in	<i>"Because the child might speak fluently in comfortable</i>
	fluency does not		comfortable contexts	comfortable situations cannot be	<i>situation/people it doesn't mean that the child has normal</i>
	equal normal		does not rule out	assumed to have normal fluency	<i>fluency. So we should see in all situations as well as before</i>
	fluency		stuttering; assessment	without multi-context assessment	<i>diagnosing them."</i>
			must span multiple		
			situations		
	Activity-	6	Stuttering is triggered by	Event-based approach captures	<i>"Stuttering episodes are triggered by events such as</i>

	triggered stuttering events		specific activities such as speech initiation responding to questions or play	the specific communicative activities that trigger stuttering moments	<i>initiating speech, responding to questions, or engaging in play. By focusing on these discrete events, clinicians can capture the exact contexts in which disfluencies arise."</i>
	Ecological validity	8	Event-based approach aligns with how listeners naturally perceive stuttering severity enhancing ecological validity	Alignment with natural listener perception gives the event-based approach stronger ecological validity than structured counting	<i>"It reflects how listeners naturally perceive stuttering severity (e.g., mild, moderate, severe), thereby enhancing ecological validity."</i>
	Hands-on situational understanding	4	Event-based approach provides a direct practical situational understanding of stuttering	Event-based assessment yields a direct hands-on understanding of stuttering in context	<i>"It provides hands-on situation that will help to understand the stuttering properly."</i>
Holistic Assessment	Whole-impact documentation	11	Event-based approach captures the whole impact of stuttering	Event-based documentation captures the full impact of stuttering including tension,	<i>"This is more accurate because it looks at the whole impact of stuttering rather than just how it happens. An event based diagnosis would then focus on what actually happens during</i>

		beyond its mechanics including tension avoidance and coping	avoidance, and the child's coping strategies	<i>stuttering. Includes visible tension, blocks, avoidance and also will tell you about what strategies the child has to overcome that period of disfluency."</i>
Secondary behaviours and social reactions as diagnostic targets	9	Qualitative features of stuttering moments secondary behaviours and social reactions extend beyond numerical data	Secondary behaviours and social responses to stuttering are diagnostically important dimensions beyond numerical counts	<i>"Beyond purely numerical data, it is very important to consider how individuals stutter during stuttering moments, the presence of secondary and avoidance behaviors, and the responses or reactions of people in the individual's family and social life to their stuttering."</i>
Multi-feature coverage of stuttering	8	Event-based approach encompasses all features of the stuttering event rather than a single dimension	Event-based approach covers all dimensions of the stuttering event rather than isolating a single measurable feature	<i>"Because it covers the overall feature, not only one."</i>
Holistic basis for therapy planning	7	Therapy planning requires a holistic view of communication rather than relying on counts	Effective therapy planning is grounded in a holistic picture of the child's communication rather than isolated counts	<i>"Therapy is created on the whole picture of the child's communication skills versus stuttering frequency/counts."</i>

			alone		
	Rejection of counting-based approaches	4	Clinicians oppose counting-based approaches in favour of holistic interview-based clinical judgment	Some clinicians strongly favour holistic clinical judgment over obstacle counting as the primary diagnostic method	<i>"I strongly condemn counting the obstacles. Based on what has been said and the child's age, I judge whether the child needs therapy or whether counseling is sufficient."</i>
Psychosocial Factors	Identifying peak difficulty moments and emotional conditioning	9	Event-based approach identifies when speech is most difficult and reveals emotional conditioning linked to speaking	Event-based assessment identifies peak difficulty speaking moments and the emotional conditioning associated with them	<i>"An event-based approach would adequately identify the need the child has when speaking is most difficult and allow a window into developing conditioning related to feelings around stuttering."</i>
	Evasion and escape behaviours	7	Event-based approach captures evasion and escape behaviors as part of the stuttering event	Escape and evasion behaviours are captured as integral components of each stuttering event	<i>"It could include events of evasions and escapes of stuttering."</i>
	Fear and emotional	8	Event-based approach reveals child's fear and	The child's fear and emotional reactions during stuttering events	<i>"Event-based approach may tell about the child's fear and emotions, and help in the intervention."</i>

	response to stuttering		emotional responses to stuttering informing intervention	are made visible through event- based assessment	
	Anxiety and situational fluency variability	6	Situational interpersonal and anxiety-driven variability in fluency justifies an event-based approach	Fluency variability driven by situation, speaker, and anxiety is best captured through an event- based framework	<i>"Fluency might vary depending on situation, speaker, event, or anxiety. So event based approach should be used."</i>
	Distress reaction as sufficient diagnostic indicator	5	A few distress reactions during events can be diagnostically sufficient regardless of frequency	Even a small number of distress reactions during stuttering events may be sufficient for diagnosis independent of frequency	<i>"The potential importance of the event-based approach is that a child's reaction of distress may be apparent perhaps only a couple of times, but be enough to detect the struggle regardless of frequency of types."</i>
Elaborative Diagnostic Measures	Multi-method approach for comprehensive assessment	14	Event-based approach gains validity when combined with other measures for a comprehensive clinical	Event-based approach is most valid when integrated with frequency and type measures rather than used in isolation	<i>"Pairing it with other methods will help give a fuller picture of child's overall difficulty and more reliable results for progress monitoring."</i>

			picture		
	Integrating type and event-based methods	9	Combined use of type-based and event-based approaches produces more complete diagnosis	Combining event-based and type-based approaches yields a more complete and nuanced diagnostic picture	<i>"I might mix the two approaches about type of disfluencies and about stuttering events."</i>
	Listener intelligibility and effort as ultimate criteria	7	Event-based approach complements type and frequency measures with listener intelligibility and effort perception	Listener perception of intelligibility and communicative effort should be the ultimate outcome of any diagnostic approach	<i>"Event based approaches should also be considered alongside type and frequency measures since what is eventually important is to what extent listeners perceive the CWS's speech as intelligible and effortful."</i>
	Event count as diagnostic guide for preschoolers	6	Event count provides better diagnostic direction than frequency or type alone for preschool stuttering	Counting stuttering events provides better diagnostic direction for preschoolers than frequency or type measurement alone	<i>"Taking into consideration the number of events or moments where stuttering-like disfluencies occur may give a better direction in diagnosing if it's normal non-fluency or stuttering — a better measure than just counting the frequency or just looking into the type alone."</i>
Evidence-Based Practice	Overall severity impression over	8	Evidence supports overall severity impressions as	Research evidence supports the validity of overall severity	<i>"According to Yaruss, online measurement of stuttering and overall impressions of severity ratings are equally, if not</i>

	small sample counts		valid or more valid than small frequency counts	impressions over reliance on small and potentially unrepresentative frequency counts	<i>more valid than a very small sample count that may or may not be representative."</i>
	Cross-linguistic inapplicability of frequency norms	5	Frequency thresholds are not universally applicable across languages supporting event-based approaches	Frequency norms for stuttering do not transfer across languages, strengthening the case for event-based assessment	<i>"It has also been shown that the same threshold for frequency of types is not appropriate across languages (e.g. a higher level is still within typical range for Spanish-speaking children)."</i>
	Complementary role alongside other measures	9	Event-based approach best serves as a complementary tool alongside type and frequency methods	Event-based approach is most effective as a complement to type and frequency methods rather than as a standalone tool	<i>"While the event-based approach is valuable as a complementary tool, it can be used along with the type-based and frequency count approaches. When used solely, it does not provide more reliable outcomes."</i>
Impact of Stuttering	Overall severity and life-impact judgment	9	Event-based approach yields an overall severity and life-impact judgment	Event-based assessment yields a holistic severity and life-impact judgment that drives meaningful	<i>"It will give overall judgement about the child's severity and impact of life. So we can work on goals accordingly rather than focus on each type of disfluency."</i>

			enabling goal-directed therapy	therapy goals	
			therapy		
	Listener	7	Listener perception	Whether disfluencies are	<i>"The observer's/listener's perception is what determines</i>
	perception as		determines	perceived by listeners determines	<i>whether the breakdowns in speech fluency are affecting</i>
	measure of		communicative impact;	their true functional	<i>communication. If disfluencies, though present, are not</i>
	communicative		imperceptible	communicative impact	<i>perceived by the listener, they may not affect day-to-day</i>
	impact		disfluencies may not		<i>communication."</i>
			functionally impair		
			communication		
	Event-based	6	Event-based approach	Functional impact of stuttering	<i>"The event-based approach allows us to focus primarily on</i>
	approach centres		centres on the functional	on the child's daily life is the	<i>the impact of stuttering, but it is not sufficient to be</i>
	on functional		impact of stuttering but	central focus of event-based	<i>considered in isolation for diagnosis."</i>
	impact		requires complementary	assessment	
			methods		
Caregiver	Positive labelling	4	Acknowledging fluent	Event-based recognition of non-	<i>"Event based diagnosis allows moments of counting or</i>
Perspective	of fluent		moments fosters positive	stuttered moments promotes	<i>appreciating non-stuttering events too and those non-</i>
and	moments		listener attitudes toward	positive attitudes toward the	<i>stuttered moments are considered Normal, which helps the</i>

Concerns			the child's speech	child's overall fluency	<i>listeners develop a positive attitude regarding the fluency of the child."</i>
	Caregiver and teacher reporting of fluency events	6	Parents and teachers can easily recognise and report events that influence fluency across daily contexts	Event-based approach enables caregivers and teachers to identify and report fluency-influencing events in natural settings	<i>"It allows for clearer communication with parents and teachers, who can easily recognize and report events that influence fluency."</i>
	Parent-implemented real-world monitoring	5	Event-based monitoring is applicable in parent-implemented and real-world follow-up contexts	Event-based assessment is well suited for parent-implemented monitoring and real-world follow-up beyond the clinical setting	<i>"Event-based monitoring is useful for tracking functional impact and for use in parent-implemented or real-world monitoring approaches."</i>
Intervention Planning	Situation-specific intervention strategies	10	Intervention strategies are tailored to specific triggering situations identified through event-based assessment	Event-based identification of triggering situations enables intervention to be precisely tailored to the child's specific needs	<i>"Event-based observation also supports individualized intervention, as strategies can be designed around the specific situations that provoke stuttering."</i>

Therapy-relevant event content	8	Detailed event content including tension avoidance and coping strategies directly informs therapy planning	The content of each stuttering event — including avoidance and coping — is directly translatable into therapy targets	<i>"An event based diagnosis would tell you about what strategies the child has to overcome that period of disfluency. This is often great information — you can incorporate that into therapy."</i>
Assessment and progress tracking	7	Event-based data supports both initial assessment and ongoing progress tracking across therapy	Event-based data serves both diagnostic and ongoing monitoring functions across the course of intervention	<i>"It helps in assessment and tracking the progress."</i>
Critical developmental window for accurate diagnosis	6	Preschool is a critical window where accurate event-based identification prevents harmful misdiagnosis	The preschool years represent a critical and time-sensitive window in which accurate event-based diagnosis prevents misidentification and inappropriate intervention	<i>"This is a highly sensitive developmental stage where accurate identification and timely intervention are crucial. A misdiagnosis at this age can be more harmful than the stuttering itself."</i>

Note: n = number of participants whose responses contributed to each sub-category. Participants may appear in more than one sub-category.

SLD = stuttering-like disfluency; CWS = children who stutter; SLP = speech-language pathologist.

Table 5: Summary of meaningful units, codes, number of participants, sub-category and category for eclectic approach

Category	Sub-category	n	Example of codes	Example of Condensed Meaningful unit	Example of meaningful unit
Holistic and Multidimensional Assessment	Multidimensional disorder requiring combined methods	18	Multidimensional and variable nature of stuttering necessitates combined tools for accurate and individualised diagnosis	Stuttering's multidimensional and variable nature makes a single-method approach insufficient and combined methods essential	<i>"An eclectic approach is essential in stuttering assessment because the disorder is multidimensional and variable. Combining standardized tools, speech sample analysis, interviews, and observational data ensures accurate diagnosis and individualized treatment planning."</i>
	Comprehensive	14	Eclectic approach	Eclectic assessment	<i>"As it involves most of the aspects of dysfluency."</i>

coverage of dysfluency aspects		captures most aspects of dysfluency comprehensively	ensures comprehensive coverage of all relevant dimensions of dysfluency	
Whole-child perspective beyond observable behaviour	13	Stuttering extends beyond observable behaviours; whole- child consideration essential in diagnostic assessment	Stuttering is not limited to observable behaviours and demands a whole- child approach including personal, environmental, and contextual factors	<i>"Stuttering is not limited to observable behaviour. It is therefore important to consider the child as a whole and to take as many aspects as possible into account in your diagnostic assessment."</i>
ICF framework guiding whole- child approach	7	Eclectic approach views child as a whole within ICF framework; personal	The ICF framework provides a guiding structure for whole- child assessment	<i>"An eclectic approach helps to view the child as a whole. Children do not grow up in isolation. Their development is influenced by both personal and environmental factors (see also ICF framework)."</i>

		and environmental factors included in diagnosis	incorporating personal and environmental factors	
Iceberg model — visible and covert dimensions	8	Sheehan's iceberg metaphor requires assessment of both visible and covert elements of stuttering	Sheehan's iceberg model demands that both overt surface behaviours and covert hidden features be assessed	<i>"I consider stuttering with the Sheehan's iceberg metaphore, so I think that it's important to consider each part of the iceberg (visible and not visible elements)."</i>
All dimensions of stuttering complexity assessed	11	Stuttering's complexity requires accounting for type, frequency, duration, behaviours, impact, avoidance, self-confidence, and parental experience	A comprehensive assessment must account for all dimensions of stuttering complexity including avoidance, self-confidence, and parental experience	<i>"Stuttering is a complex phenomenon in which the types of disfluencies, their frequency, duration, the presence of associated behaviours, the impact on everyday life, avoidance behaviours, self-confidence, the parents' experience of stuttering, etc. must all be taken into account."</i>

Comprehensive picture with QOL and outcome benefits	9	Eclectic approach provides fuller picture, improves QOL insight, reliability, and outcome measurement	Eclectic approach provides a fuller picture of the child's difficulty and improves quality of life insight, reliability, and treatment outcome measurement	<i>"Gives a fuller picture of child's overall difficulty. Also gives information on difference in QOL of the child. This increases reliability and helps make more personalised plans. Also helps with better outcome measurement."</i>
Observable and internal factors all requiring evaluation	8	Stuttering encompasses observable behaviours and internal reactions of child and environment; all factors must be	Stuttering includes not just observable behaviours but the internal reactions of the child and environment, all of which must be evaluated	<i>"I believe that stuttering encompasses not just observable behaviors, but the feelings/reactions of the child and those in the environment. I believe all of these factors should be evaluated and taken into consideration."</i>

			evaluated		
	Multifactorial	10	Gradual,	The gradual and	<i>"Stuttering is complex in its nature and presentation. The causes</i>
	gradual complexity		multifactorial,	multifactorial nature	<i>are multifactorial and the course of development of stuttering is</i>
	demanding eclectic		complex stuttering	of stuttering	<i>gradual. What may look as typical dysfluencies can turn into</i>
	detailed assessment		development cannot	development makes	<i>atypical stuttering like dysfluencies due to interplay of many</i>
			be assessed by	single-parameter	<i>factors."</i>
			frequency, type, or	assessment entirely	
			moments alone	inadequate	
Diagnostic	No single factor	16	No single factor is	Stuttering diagnosis	<i>"Because you can't make a diagnosis on one single factor."</i>
Precision and	sufficient for		sufficient for	cannot rest on any	
Accuracy	diagnosis		stuttering diagnosis;	single factor as all	
			all factors are	dimensions are	
			interconnected	interconnected	
	Reducing false	12	Comprehensive	Eclectic assessment	<i>"An eclectic approach can improve the accuracy of diagnosis and</i>
	positives and		eclectic assessment	reduces the risk of	<i>help in identifying true positive cases. A false positive diagnosis</i>
	protecting		reduces false	false positive and	<i>may lead to unnecessary concern and can negatively impact the</i>
	diagnostic accuracy		positives and	false negative	<i>child's social interaction and confidence."</i>

		improves diagnostic accuracy protecting child's social confidence	diagnoses, protecting the child's confidence and development	
Awareness as intervention influencer, not diagnostic prerequisite	9	Awareness influences intervention and outcomes but is not a prerequisite for stuttering diagnosis	Child's awareness of stuttering informs intervention planning but is not required for a diagnosis to be made	<i>"Awareness may or may not be present at a preschool age. It is possible that the child has stuttering, but still unaware. We cannot disregard the diagnosis in such a case. Their awareness will surely influence the intervention plan and outcomes; however, diagnosis is not dependent on it."</i>
Confirmatory but non-obligatory role of awareness in diagnosis	8	Awareness or struggle not obligatory for diagnosis but confirmatory when present; unique to stuttering	Awareness and struggle confirm stuttering when present but are not obligatory diagnostic criteria	<i>"Awareness or struggle is not critical to dx, but once you see it, you have a confirmed dx. No other communication condition of childhood carries such awareness."</i>

Non-obligatory distress reactions and individual case variability	7	Distress reactions are not obligatory for diagnosis; individual case differences require multiple observations	Distress reactions confirm but do not define stuttering; each case must be assessed individually across multiple observations	<i>"The reactions of distress are not an 'obligatory' diagnostic criterion. So because every case is different, there must be an eclectic approach involving multiple observations and considerations."</i>
Cautious use of all available information in preschool diagnosis	8	Caution warranted with preschoolers; all available information must be used to avoid undertreating persistent stuttering	Erring on the side of caution with preschoolers justifies using all available information since persistence cannot be reliably predicted	<i>"We need to err on the side of caution with preschoolers who stutter and use all information available. We need to treat all children who stutter that we are presented with."</i>
Emotional expression aiding differential diagnosis	7	Emotional responses differentiate NNF from developmental stuttering and aid	Emotional responses such as frustration and sadness distinguish stuttering	<i>"A child with NNF may not show frustration or sadness, whereas a child with developmental fluency disorder of stuttering may show these emotions associated with stuttering."</i>

		differential diagnosis	from normal non-fluency and support differential diagnosis	
Inadequacy of frequency and type alone	13	Neither frequency counts nor type categorisation alone provide a complete diagnostic picture	Frequency counts and type categorisation are individually insufficient; a comprehensive picture requires multiple parameters	<i>"Neither counting symptoms nor defining types of symptoms gives the whole picture."</i>
Perceived severity tracking therapy improvement	6	Perceived severity informs diagnostic conclusions and tracks therapy improvement beyond frequency counts alone	Perceived severity serves as a more sensitive measure of therapeutic progress than frequency counts	<i>"A child may have mild stuttering with severe anxiety. If after sessions they develop a more positive attitude towards stuttering such that their anxiety levels reduce, it may indicate progress. Therefore we can move past looking at frequency of disfluencies alone."</i>

	Multi-factor approach aiding differential diagnosis and parental stress	7	Multiple factors aid NNF-stuttering differentiation, intervention planning, and addressing parental stress to reduce child pressure	Eclectic multi-factor approach simultaneously aids differential diagnosis, intervention planning, and parental stress management	<i>"This method helps to differentiate between NNF and stuttering better. It also helps to plan better intervention. Clinician can address stress factors of parents which in turn might help in reducing child's awareness and pressure to attain normal fluency."</i>
Multidimensional evaluation ensuring no parameter missed		9	Multidimensional evaluation ensures no parameter is overlooked for accurate diagnosis	Multidimensional eclectic evaluation guarantees that no clinically relevant parameter is overlooked in the diagnostic process	<i>"Using eclectic approach provides multidimensional evaluation which helps in accurately diagnosing stuttering without missing a single parameter or aspect."</i>
Psychosocial Factors and Child	Emotional reactions as early diagnostic	13	Awareness and frustration precede	Emotional reactions including awareness	<i>"A child's awareness and frustration often precede the development of secondary behaviors and avoidance. Recognizing these</i>

Reactions

signals		secondary behaviors; and frustration		<i>emotional reactions is vital for early diagnosis, as they indicate that</i>
		emotional reactions precede secondary		<i>the child is no longer experiencing 'typical' disfluency but is</i>
		are vital early behaviours and serve		<i>actively struggling with their speech."</i>
		diagnostic indicators as early diagnostic signals		
Early emergence of negative speech attitudes	9	Negative speech attitudes emerge as early as age three and worsen; assessment must go beyond observable behaviours	Research shows negative communication attitudes emerge by age three and worsen over time, requiring assessment beyond observable speech	<i>"Research with the KiddyCAT has shown that children as young as three, as a group, already think negatively about their speech. That negative attitude just becomes more negative with age. We need to focus on more than only the observable, the stutters."</i>
Emotions influencing stuttering frequency and social well-	10	Emotional responses to stuttering influence frequency and social	Children's emotional responses to stuttering directly affect both the frequency of	<i>"The emotions that children express toward their stuttering affect the frequency of their stuttering. Additionally, these emotions also impact their overall well-being, including their participation in social environments."</i>

being		participation	stuttering and their wider social well- being	
Play-based elicitation of child's speech awareness	6	Young children demonstrate speech awareness during play; their feelings about speech drive therapy planning	Play contexts reveal preschool children's awareness of their speech and elicit feelings that directly inform therapy planning	<i>"During play you find they are aware their voice is different and are able to share thoughts and feelings about their speech which again drives therapy planning."</i>
Negative awareness as prognostic risk factor	7	Unaddressed negative self- awareness leads to poorer treatment prognosis	Negative self- awareness about stuttering that goes unaddressed is a significant risk factor for poorer treatment outcomes	<i>"Negative awareness about CWS's own stuttering could lead to poorer prognosis during treatment process if left unaddressed."</i>

Participation, anxiety, and confidence as primary prognostic factors	9	Child's participation impact and confidence must be addressed first; anxiety and confidence greatly influence prognosis	The child's anxiety, confidence, and communicative participation are primary prognostic factors that must be assessed before targeting fluency	<i>"The child's impact on participation and their own feelings about it is the first step before even tackling the fluency issue. Their anxiety and level of confidence can GREATLY impact the prognostic factors."</i>
Frustration and awareness contributing to secondary behaviors and severity	7	Heightened awareness and frustration lead to more secondary behaviors and should inform severity assessment	Elevated awareness and frustration increase secondary behaviours, making them important contributors to overall severity assessment	<i>"Child's frustration may be considered for assessing the severity as heightened awareness and frustration leads to more secondary behaviors."</i>
Child reaction linked to	7	Child's reaction linked to stuttering's	The child's reaction to disfluency shapes	<i>"A child's reaction to their speech disfluencies should be taken into account as it is related to the impact that stuttering has on their life"</i>

communicative	life impact;	communicative	— an impact that influences their attempts to communicate or their
impact and	influences	impact, avoidance	avoidance of communication."
avoidance	communicative	patterns, and	
	attempts and	physiological tension	
	avoidance	under stress	

Intervention	Flexible	15	Wide variability in	Preschool stuttering	<i>"By combining frequency counts, type analysis, event-based</i>
Planning and	intervention		preschool stuttering	variability demands	<i>observations, secondary behaviors, parental concerns, and the</i>
Flexibility	strategies tailored		makes single-method	flexible integration of	<i>child's reactions, clinicians obtain a holistic and accurate picture.</i>
	to child needs		approach	fluency-shaping,	<i>This approach also allows flexibility in intervention, drawing on</i>
			insufficient;	indirect, and parent-	<i>direct fluency-shaping techniques, indirect approaches, and parent-</i>
			integration of	focused intervention	<i>focused strategies tailored to the child's needs."</i>
			multiple strategies	strategies	
			required		
	Child motivation	8	Therapy must be	Intervention should	<i>"If there is no request for help from the child or their environment,</i>
	and willingness as		guided by the child's	only proceed when	<i>it is not necessary to start therapy, as the intrinsic motivation will</i>
	therapy drivers		intrinsic motivation	the child	<i>be low. Therapy should be guided by the child's own motivation and</i>
			and willingness to	demonstrates intrinsic	<i>willingness to engage in the process."</i>

		engage	motivation; therapy guided by the child's own willingness	
Severity and emotional distress warranting combined therapy	9	Emotional distress, poor self-confidence, and severe stuttering require combined psychological and speech therapy reinforcement	When severity is combined with anxiety and poor confidence, intervention must address both psychological and speech dimensions simultaneously	<i>"If the fact of stuttering fills them with anxiety, they have poor self-confidence, they stutter severely, in that case therapy and both psychological and speech technique reinforcement are very important."</i>
Holistic goal- setting beyond impairment-based approaches	9	Broader picture of disorder and daily impact supports holistic goal-setting beyond impairment-	Eclectic assessment supports goal-setting that encompasses daily life impact rather than restricting	<i>"It provides a broader picture about the child's fluency disorder and its impact in the child's daily life. This helps clinicians to set goals covering all the aspects rather than impairment-based approaches."</i>

		based approaches	focus to speech impairment alone	
Anxiety intervention to prevent relapse	6	Treating only surface disfluency without addressing anxiety leads to high relapse risk	Intervention that addresses only surface disfluency without targeting underlying anxiety carries a high risk of relapse	<i>"Treatment of just disfluency is superficial. Unless we intervene in anxiety, high chances of relapse occurs."</i>
Goal-setting informed by social, emotional, and mental impact	7	Eclectic approach supports goal-setting by illuminating stuttering's social, emotional, and mental impact	Understanding stuttering's social, emotional, and mental impact through eclectic assessment enables meaningful therapy goals	<i>"Helps in goal setting and in understanding the impact of stuttering on social, emotional and mental domains."</i>
Child reactions	6	Child's reactions	The child's reactions	<i>"Child's reactions will influence intervention approach and may</i>

	influencing intervention approach and duration		shape the nature and duration of intervention	to stuttering directly determine the focus and expected length of intervention	<i>also affect length of intervention."</i>
Evidence-Based and Individualised Practice	Research and experience supporting eclectic approach	11	Eclectic approach is supported by research, professional opinion, and clinical experience	The eclectic approach is grounded in the convergence of research evidence, professional opinion, and accumulated clinical experience	<i>"It makes perfect sense, based on research, professional opinion, and experience."</i>
	Individualised flexible therapy addressing speech complexity	13	Eclectic therapy is individualised, flexible, and adaptive to the complexity of speech disorders	Eclectic therapy is inherently individualised and flexible, making it uniquely suited to the complexity and	<i>"It is individualized and tailored therapy; it addresses the complexity of speech disorders due to its flexibility and adaptability."</i>

			variability of speech disorders	
Combining child-specific and standardised outcomes	7	Eclectic approach offers both individualised child-specific and standardised measurable outcomes	The eclectic approach achieves the dual goal of individualisation and standardisation in clinical outcomes	<i>"Eclectic approach can be both child specific as well as have standardized results."</i>
Clinical relevance beyond statistical significance	5	All factors relevant to diagnosis and treatment; statistical significance alone does not determine clinical relevance	Clinical relevance cannot be reduced to statistical significance; all factors bearing on quality of life and communication must be considered	<i>"All factors are relevant to both diagnosis and treatment. Using the disease vs. illness perspective, a statistically significant difference that does not disrupt communication or impact quality of life may not be relevant to treat."</i>
All-domain	8	Comprehensive	Comprehensive	<i>"Eclectic approach was very helpful to assess stuttering in all</i>

assessment for
individual-specific
therapy

domain assessment
enables individual-
specific therapeutic
planning

assessment of all
stuttering domains
provides the
information needed
for truly
individualised
therapeutic planning

domains to come up with individual specific therapeutic plans."

Impact of	Child's	10	Child's concern and	Whether the child is	<i>"This is what matters. Why would you try to change a child's speech</i>
Stuttering and	communicative		functional impact	concerned about their	<i>if they are not concerned about it and it's not causing them any</i>
Functional	concern as		determine necessity	speech and whether it	<i>difficulty?"</i>
Communication	intervention trigger		of intervention	causes functional	
				difficulty determines	
				whether intervention	
				is necessary	
	Communicative	12	Stuttering's impact	The primary clinical	<i>"How much someone stutters does not tell you the impact that</i>
	impact as primary		on communication is	concern in stuttering	<i>stuttering is having on their communication or their internal</i>
	clinical concern		the primary clinical	is its impact on	<i>feelings towards speaking."</i>

		concern; frequency alone does not reveal this	communication, which frequency counts cannot adequately capture	
Representing communicative impact including family experience	8	Eclectic approach best represents communicative impact of stuttering including family experience	The eclectic approach most accurately captures the communicative impact of stuttering and acknowledges the family's experience	<i>"This approach seems to leave the most room to accurately represent the impact of the stutter on the child's communication and acknowledges that their family's experience impacts them as well."</i>
Impact on child and parents determining therapy necessity	7	Therapy necessity is determined by functional impact on child and/or parents, not diagnosis alone	Whether therapy is needed is determined by the functional impact on the child and parents, not by diagnosis alone	<i>"Whether they need therapy depends on the impact for child and/or parents."</i>

Caregiver Perspectives and Family-Centred Practice	Child, environment, and guardian as integrated assessment components	11	Holistic approach integrates child, environment, and guardian concerns as assessment components	A holistic eclectic approach treats the child, their environment, and their guardians' concerns as equally important integrated components	<i>"An eclectic approach, or what I would define as a holistic approach, takes into consideration the child, their environment, and the concerns of their guardians."</i>
	Best practice integrating child attitudes, parent concerns, and speech behaviours	13	Best practice integrates child attitudes, parent concerns, and speech behaviours in conjunction	Best clinical practice integrates the child's communication attitudes, parental concerns, and speech behaviours as inseparable components	<i>"Stuttering is much more than disruptions in the forward flow of speech. Any approach that takes into account the child's attitudes and parent concerns in conjunction with speech behaviors is best practice."</i>
	Family-centred	8	Family-centred	In family-centred	<i>"My approach would be diagnosis with focus on holistic treatment."</i>

concurrent diagnosis and treatment planning		diagnosis rates parental concerns and child awareness; diagnosis and treatment planning are concurrent	practice, diagnostic assessment and treatment planning occur concurrently with parental concerns and child awareness formally rated	<i>Parental concerns and child awareness need to be rated and subsequently addressed, for a family centred and family directed approach."</i>
Parental insights strengthening multi-perspective assessment	9	Multiple perspectives including parental insights provide stronger assessment framework	Parental insights about the child's behaviour and challenges strengthen the multi-perspective assessment framework	<i>"This approach integrates multiple perspectives, including parental concerns. Parents have valuable insights into their child's behaviors and challenges, which should not be overlooked, especially when the child is uncooperative or not exhibiting specific issues during the assessment."</i>
Ease of implementation	5	Eclectic approach is easy to implement,	The eclectic approach builds on parents'	<i>"It is easy to implement and is based on the parents' natural parenting techniques."</i>

building on natural	building on parents'	existing natural
parenting	natural parenting	parenting skills,
	techniques	making it practically
		accessible

Developmental and Population-Specific Considerations	Cross-linguistic and cultural variability in disfluency	7	Disfluency profiles vary across languages; single approach inapplicable in multicultural contexts	In multicultural and multilingual contexts, disfluency profiles vary across languages making a single universal approach inapplicable	<i>"India being a multicultural multilingual country — type of disfluencies may vary across languages. No one approach is applicable for all clients."</i>
	Comorbid conditions requiring eclectic differential assessment	8	Comorbid conditions underlying preschool stuttering require eclectic approach for identification	Comorbid conditions such as phonological disorders, language deficits, and motor delays co-occurring with stuttering require	<i>"Stuttering in preschoolers may be due to several underlying conditions, such as language or motor deficits. Stuttering will also be seen with comorbid conditions like phonological disorders, speech sound disorders. So, to identify these features, an eclectic approach is more suitable for preschoolers."</i>

			an eclectic approach	
Age-appropriate eclectic approach and parental counselling	7	Eclectic approach suited to developing language in preschoolers; parental counselling crucial in early disfluency stages	The eclectic approach is developmentally suited to preschoolers whose language is still developing, and parental counselling is critical at this stage	<i>"Eclectic approach works especially for preschool children when language fluency is not yet developed. Parental counselling plays an important role in the early stage of disfluencies."</i>
Developmental comprehensiveness of combined methods	6	Combined methods cover all developmental aspects; no single approach fits all children	Combined methods are necessary to cover the full range of developmental aspects since no single approach suits all preschool children	<i>"It covers all the child development. No single approach is apt for children; combined methods address all other problems irrespective to dysfluencies."</i>

Note: n = number of participants whose responses contributed to each sub-category. Participants may appear in more than one sub-category.

NNF = normal non-fluency; CWS = children who stutter; ICF = International Classification of Functioning; SLD = stuttering-like disfluency;

OD = other disfluency; SLP = speech-language pathologis

