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THE EFFECTIVENESS OF A COGNITIVE PROGRAM DIRECTED AT CHILDREN WITH STUTTERING FROM 6 TO 12 YEARS OF AGE

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ABSTRACT

In this study, we aim to analyze the effectiveness of cognitive programs targeting children who stutter between the ages of 6 and 12 years, from a psychological and social theoretical perspective. We explore the theoretical foundations of stuttering and its psychological and social impacts, focusing on the central role of cognitive factors in the continuation of this cycle. The study examines the essential components of cognitive programs, including cognitive restructuring, emotion management, and sociocognitive adaptation, and evaluates leading treatment models such as integrated programs and acceptance and commitment programs.

The results reveal that cognitive programs significantly contribute to improving children's mental health and social integration by breaking the vicious cycle of negative thoughts and anxiety that fuel the disorder. The study also highlights the importance of family and school support as an important factor in enhancing the effectiveness of these programs. We conclude this study by emphasizing the importance of adopting an integrated and comprehensive approach to stuttering treatment, combining cognitive and behavioral interventions with environmental support.

KEYWORDS

Stuttering, Cognitive Programs, Children, Psychological Well-being, Social Adaptation, Cognitive Behavioral Therapy, Cognitive Restructuring, Family Support

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Introduction

In the scope of childhood years, the period in which personality is formed and various psychological dimensions develop, the exposure to certain psychological disorders leads to the development of certain indications of utterances and a significant distortion in the psychological and social development of the child. Among these disorders are those related to speech fluency and irregularity, either in the form of excessive flow or weak flow. One of these issues is interrogation related to syllable interruptions; it is known as a speech fluency disorder that affects children at various levels of difficulty in the developmental age. The importance of this topic is that it is one of the most common complaints in developmental settings. The disorder results not only in fluency problems but also in a chain of associated problems bordering on other psychiatric disorders. Therefore, integrated intervention is necessary if the child is to be treated adequately.

Stuttering is a fluency disorder characterized by involuntary interruptions in the natural rhythm and flow of oral expression. Fluency problems manifest as sound, syllable, word, and phrase repetition, sound prolongation, or speech hesitations that disrupt the normal flow of speech and may be accompanied by secondary behaviors such as movements of the eyes, head, and limbs. Fluent speech may also be interrupted or tense. These disturbances must have persisted for a period of at least six months and must be a primary concern for the individual. Stuttering dysfluencies must cause significant impairment in social, academic, or occupational functioning and cannot occur exclusively during the manic episodes of bipolar disorder, episodes of autism spectrum disorder as a child's primary communication mode, or emergencies such as panic attacks. As awareness of psychological factors has developed, symptoms of the disorder in adults and adolescents are often described in terms of counterproductive coping and communication behaviors. As these compensatory behaviors become almost second nature, the experience of stuttering evolves into a much broader experience that goes far beyond a fluency breakdown.

In this regard, cognitive intervention programs are of great importance, as they do not represent merely an additional therapeutic technique directed at one aspect of the stuttering disorder. Rather, they indicate an important and fundamental shift in philosophy from the traditional”one-dimensional” approach that focuses only on the verbal component of the disorder to the contemporary”multi-dimensional” approach which views stuttering on a more global trajectory, as understood by the person who stutters. It also represents a fundamental shift in focus from a behavioral approach to the non-behavioral elements of the stuttering experience. The value of cognitive therapy programs lies in their attempt to empower the individual to re-manage his or her stuttering-related psychological and sociological experience at the”cognitive” or thought-processing change leve l; confronting the core of the stuttering-related experience, namely the uniquely distorted cognitive schema regarding the stuttering experience.

The transformative nature of managing the disturbance at this core thought level is likely to have important positive repercussions on the affective, identity, and behavioral components of an individual’s stuttering-related experience, which inevitably impacts on self-perception and social effectiveness.

In light of the above, the current study aims to address the following primary objective: To present an integrated framework for cognitive therapy in the context of comprehensive intervention for the stuttering disorder, with limited focus on the psychological and social aspects. Specific objectives:

- Investigating the theoretical foundations of the cognitive approach applied to the phenomenon of stuttering and its psychological and social dimensions.
- Identifying the key components of cognitive intervention programs directed at children who stutter between 6 and 12 years old.
- Identifying the most prominent models for cognitive treatment of stuttering based on the findings of theoretical and analytical studies and recent literature on cognitive-related programs.
- Identifying and analyzing the impact of targeted cognitive therapy programs in relation to comprehensive intervention on the psychological and social dimensions of stuttering.

Research Importance

Research in stuttering in the context of the cognitive approach has received little attention within the Arab world, as evidenced by a review of relevant local studies. The researcher believes this program has high theoretical and practical significance in international cognitive studies of speech disorders. Stuttering can only be treated if the disorder's experience is confronted. As a multidimensional phenomenon, it integrates a feeling and cognitive map that is built through involving coping mechanisms within a social experience. Thus, it justifies the necessity of multidimensional frameworks, particularly global frameworks beyond speech fluency, along the following epistemological perspectives: Limited Arab studies of the cognitive approach in the

context of stuttering, alongside the indicated importance of the cognitive approach in international research with linguistic correlation. The study adopts a descriptive and analytical approaches that involve reviewing studies related to the subject compass as well as reviewing studies of similar significance and purpose. This addresses reference studies and examines the content in light of the theoretical frame study. The compass of the study theoretically determines the way for the study empirically.

Study Problem

The study problem crystallizes in the following main question: How effective are targeted cognitive intervention programs in improving the psychological and social dimensions among stuttering children aged 6 to 12?

This question can be subdivided into several sub-questions:

- What are the recent studies of the psychological and social nature of stuttering?
- What are the most important theoretical foundations of the cognitive approach and its practical aspects?
- What are the main components of cognitive therapy programs for the target group?
- What are the key cognitive models and techniques that are distinguished in the study?

Research Problem: The risk of stuttering continues to impose a significant burden on individuals and societies alike. It is one of the most common speech disorders affecting people across all cultures and societies. Modern research indicates that approximately 1% of the world's population suffers from stuttering, with rates as high as 5% to 10% in children who may later outgrow the condition, and a persistent occurrence of 1% in adult speech. Arabic studies in speech pathology indicate that the rate of stuttering in Arabic-speaking societies ranges from 7% to 10%. Stuttering often leads to communication anxiety due to subsequent difficulties, and many people cease interactions to avoid speaking problems. Studies show that complaints about stuttering are second among speech disorder complaints. Some resorts to artificial prevention, linguistics, psychological methods, or even warmth and irritation methods lacking integrity and scientific verification. Stuttering treatment approaches are approximately thirty, varying between partial and ineffective. Rigorous evaluation of therapy's efficacy using focused designs is valuable for developing successful cognitive therapy programs.

Little literature exists on assessing the effectiveness of these programs based on documented, scientific, modern, and scientific evidence and credibility and scientific conditions. The limited number of studies suggests it is unclear. The objectives of the research are as follows:

- To define the nature of cognitive programs for treating stuttering, approaches, and types.
- To determine the modern theoretical foundation of cognitive theory and the essential principles in stuttering pathology. What is cognitive therapy? How has the cognitive approach addressed stuttering?

What are the contributions to cognitive programs and stuttering treatment models?

Are cognitive programs efficient in treating stuttering?

How can the effectiveness of stuttering cognitive programs evaluating by scientific evidence?

What are the challenges and future directions for developing cognitive programs?

The study faced significant difficulties due to the shortage and fragmentation of Arabic and foreign scientific references specializing in the cognitive approach to treating stuttering.

This necessitated considerable dependence on foreign references and highlighted the need for ensuring the necessary validity before using their content or taking into account the nature of our Arab society. The research also features multidisciplinary nature involving the fields of psychology, education, linguistics, and specific speech therapy, which can limit providing a cohesive vision. The study is divided into three main chapters as followed:

- Section One: The theoretical framework of stuttering and its psychological and social dimensions.
- Section Two: The cognitive approach to treating stuttering: foundations and models.
- Section Three: Analysis of the effectiveness of cognitive programs: through studies and theories.

Chapter 1. Theoretical Approach to Stuttering as a Psychological and Social Phenomenon

Subject 1. Conceptual and Scientific Basis of Stuttering

Stuttering is a communication disorder characterized by involuntary, marked, and persistent abnormalities in the normal fluent and smooth flow of speech that can develop in childhood. It is often associated with illustrative motor behaviors, such as stumbling on sounds, syllables, or words, prolonging the sound, or other associated dyskinetic phenomena (e.g., clenching fingers, repetitive blinking, frowning, head jerking).

The psychological unease of the symptoms leads children to avoid certain words or phrases. The disorder lasts more than three months and is often exacerbated by stress and certain situations. The concept of fluency disorders and associated criteria can be considered from a functional neuroanatomical perspective, taking into account the areas and regions responsible for speech planning and articulation, such as Broca's area, the basal ganglia, and the limbic system. Regulatory processes oriented toward mental health and social stability come from neocortical brain structures. The excess activity of the right hemisphere is attributed to compensation for the inadequacy of the left hemisphere. Phonopathological processes should also affect the trajectory of speech and motivation of a neurophysiological origin, establishing somatic or hormonal strains. Congenital and hereditary factors are considered in the etiology of fluency disorders. The likelihood of developing fluency disorders significantly increases with a family history of fluency disorders among close relatives. The role of other highly heritable factors sampled by twin studies has been documented. Personality change based on neurotic pathology, forming a special behavioral model, is designated as the”psychogenic" theory of stuttering. Comorbidities such as neuroses, psychopathic development, character accentuations, and affective experiences, trauma or conflict situations are highly important”risk functions" for fluency disorders when conversing. Results of psychodynamic studies suppose a direct correspondence between stuttering, childhood traumas, conflicts, and the mechanism of repression. The linguistic theory supposes the defectiveness of the child's linguistic structure, weakly structured elements of personality, limited lexical wealth, difficulties with switching sentences, or insufficiently developed horizontal connections of change in verbal modalities. Developmental dysphasia, double articulation, another position, delayed speech development are defined. Linguistic correlates have a close relationship with speech motor deficiency.

Vieira (2015) notes hesitation and disfluency phenomena in some native languages that naturally flow during conversation. In the picture of fluency disorders, gender distribution does not exclude fluency disorders based on psychogenic factors. Taking into account numerous studies in neurophysiology, genetics, psychodynamics, linguistics, and modern neurocognitive paradigms, their consensual models summarize all acquired data and define models of the additive interaction of predominantly inherited neuroanatomical factors and neurophysiological predispositions, psycho-emotional cross-functional paresis connected with hyperarousal caused by conversation that internally dialogue or language of speech generation, commentaries in speech, social speech and intercommunication, and linguo-genetic stress environmental factors. Interaction paradigms of different factors are stochastic with a conditional involving role of each factor as a ratio.

A social environment and developmental context are essential in proactive marketing and forecasting of the onset and maintenance of fluency disorders. Stuttering as a unique psychophysical status, often psycho-emotional phenomenon, functional or structural, are indicated by artificial interventions in which the fluency disorder is removed without direct physiological effect on their fundamental nature and development or where the fluency disorder was not formally diagnosed. No complete disattestation of developed theories of fluency disorders and its systematization could not be considered in respective psychological or conceptual diagnosis and prognosis.

Therefore, understanding the premonitory, diagnostic, and symptomatic agency of the phonophysical correlate of fluency disorders, the analogy is valid from a phenomenological position. In accordance with the developmental approach, the period of 6-12 years. Infrastructure transformation of the child's social position, system of social connections, speech roles, and functions occur. Developmental age is considered the”school age”; since it is the expansion of the sphere of social interaction beyond the family that comes to be a characteristic feature of the so-called”school age." We can globally consider speech as the main means of communication, knowledge, and interaction, but as a social communication practice, learning and unlearning speech and text, meaning, meaning-building. Set is marked by essential psychological changes associated with adding sophisticated and abstract cognitive processes and the simulation of extremely diverse social interactions. The child realizes himself in multidirectional activity (perception and comprehension, verification and test, modeling, decoding of elements, induction, deduction, analysis, synthesis, summarizing). It is the

extraction of information, attitude, and evaluation from that information. The child massively processes information using verbal, logical, sociocultural, propositional, and spatial means. A linear and hierarchically structured process of mastering direct question and answer relations in variable systems, advanced planning of actions, and realizing intentions. Marked in taking social roles based on imitation, dialogue, and comparison in equal or peer groups.

The relationship with others leads to the development of reflection, a more complex understanding of themselves and their contexts, and correlation with regulatory orders. Nominal and actual start, memorization, and diffusion of social mechanisms share their functions, time, space, direction, and target. Verbalization and their expression are realized through metadata indices, stereotypes, and ultimate osmoses. Taking into account frequent experience in remaining pedagogically learning speeches of mono-, poly-, and cross-cultural factors of mass transnational and supranational practices. From the point of view, emotions are a consequence of internal predetermination; social interaction within a community defines the content of emotions. Social roles are based on equal social comparison, and age and perceptual functions are included in the perspective of choosing between and verifying descriptors. An ample lexicon of refined social statuses is mastered.

This is clearly a very sensitive phase of life during which a slew of associated psychosocial disorders may be accentuated or diminished by appropriate therapeutic intervention (Yarus & Kisal, 2006).

Second subject: The Psychological and Emotional Effects of Stuttering

The psychological and emotional impact of stuttering have great depth and breadth; it can touch the heart and soul of the child and, in many cases, will speak illustrative volumes about one’ s view of himself and the world around him.

First, that of damage to the personality structure itself brought on through crippling material to the individual’ s self-concept by an inability to converse as fluently as one& rsquo; s peers as well as disappointment in “ that which is in the individual & rdquo; and a feeling of inadequacy. Unspeakable inadequacy which began as a mere emotional response to a communication failure may, with time and repetition, manifest itself as the central emotional feature of one& rsquo; s self-concept, resulting in the child defining himself in terms of inadequate skills as a speaker. Or worse yet, if he internalizes the label of “ defective rdquo; through”self-fulfilling prophecy” or is objectified by others as”odd” or”different, ” thus breaking the Process of Defining Data by internalizing as the only relevant label & ldquo; stutterer & rdquo; or “ handicapped & rdquo; and rejecting all consideration of defining himself through the myriad of other abilities, skills, and roles he may pursue. The crutch of the stutterer takes on an undeniable life of its own. He sampled “ crowds ” in public places, climbed trees, swam in the ocean, skied, roller-skated, rode a bicycle at dangerous speeds, and boasted maniacally of having fathered two musk oxen. As a result, progressively fewer experiences bolster any sense of self-worth and “ possibility.” Making the comparison to one’ s peers who succeed, a feeling of being less than, “ plus/and feeling of inferiority” which he is powerless to change; avoidance of all situations wherein speech is needed (thus most worthwhile experiences limited); the avoidant/withdrawn denying himself any of the “ growing up” experiences that develop confidence and a sense of oneself.

Second, the innumerable and varied consequent emotional disturbances, chief among which is apprehension of many flavors. The predominant types are “ anticipation anxiety& rdquo; or “ speech fright.& rdquo; The unique anxiety characteristically seen in stutterers: the fear of the verbal work; entry into and of the anticipation in anticipatory anxiety comes long before. This is the physiological fright response to their conclusion about what will probably happen, and it sets the vicious circle in motion. This is what finally tips the muscle tension and the speech disruption into the “ set synchronously with the physiologically functional and caused. & rdquo; Daily acute frustration from stuttering and communicating problems; can’ t communicate thoughts and feelings _even joyful ones and angry events. And chronic frustration from simply feeling and being unable to let the world involving them out of their control experience the”controlled and manipulated” and tantrumless withdrawal. The social introvert who due to speech makes a hermit of himself lest he risk exposure. The alternate process of social introvert minus the self-involvement who withdraws from the action which is going on with men. The precipitating effect of their unresolved tensions and frustrations ending where the problem always ends without Professional Therapy over a long run of time for those without professional therapy. Helplessness escalating into hopelessness about not only changing things but also into (time) a distaste for interacting with others, socializing, and what was once the merriest of social circumstances and festive celebration. (Blumgart et al., 2018)

Third, the faulty cognitive processes one develops. Each new incident adds another layer of distortion to the child's thought processes that set the stage for interpretational mindsets about himself and his environment. The predominant features become one's cognitive patterns—"Cloudy Pessimism" where the expectancy is only what will happen so badly (the teacher will think what a stupid child, the authorities will come after me) + binary thinking (fluent and failure) + the elimination of his successful talking moments. In exaggerated time, self & environment is marked by and self-hate, adding on and the cognitive processes through the various stages of the disorder. (Smith et al., 2014)

Third subject: Educational and social consequences of stuttering

The social aspect seems to be the most affected because the child struggles daily between two opposing forces: the need for socialization and acceptance inherent in the child and the obstacle generated by his/her speech organ flaw. The difficulties begin at the non-verbal level in front of a group; the child may avoid the first contact due to the fear of being noticed, ridiculed, or received impatiently. Within the non-verbal group, he/she may avoid the introduction or the question, may keep silent during the opinion poll, and, in the absence of a close relationship, will avoid giving or asking for the address or telephone number. Thus, the child misses the opportunities that would allow him/her to develop at the non-verbal level, to build communication patterns similar to his/her peers, to orient him/herself socially, and, last but not least, to use the learned mechanisms progressively to create friendships. This leads to social deprivation or"non-use of the social gift." The child does not master the social rules and, externally, starts being considered shy or socially immature. These attributes are not representative of the child's personality but are consequences of the limited social contacts in the context of certain avoidance strategies generalized since childhood. If such limited contacts are maintained, the social deprivation picture may be completed with that of the social phobia form, the child being marked by the double anxiety of presence in front of the group and of imminent failure and humiliation. (Nang et al., 2018)

The reflection of the learning disabilities specific to stuttering is also felt in the school environment where the failed participation or interaction is transposed into academic failures, and not necessarily the results of intellectual or motivational deficiency. Taking into account that the entry into the school activities almost in totality is done orally, the children will most likely transform from participants in the classes or activities into receivers. Some children will neither raise their hand to answer the question they know, nor will they read the text if they have the proper means, synchronously with the class program elaborated by the teacher that they have or don't have. Others do not participate in the improvement of the interethnic relationship (school feast, events dedicated to debates, theater, journalistic activities, etc.), being the pretext of others to address invitations or reminders of social engagements. Participation failures are not normal in a social or cultural environment due to lack of information, poor preparation, motivation, or other causes, but are often a consequence of efforts made by the individuals to avoid the situation or the activity which they foresee at that time with a big emotional impact. As time goes by, these will be replaced by compensatory behaviors as strategies to avoid the disclosing of school progress that, in some cases, will balance almost in a mediocre manner the manifestations of the academic backwardness and that will determine in the long run the decrease of the level of involvement as a school conquest. The lower academic performance and the decrease of teacher involvement may be caused in the first part by the role of the speech disorder. The lower expectations of the teachers. Some teachers will try to reduce the duration of the answers given by the child by entering, even if not intentionally, in a finishing sentence regime, and at the same time the comfort of the time interval, a preoccupation that will be at the foundation of stresses due to the pressure applications of the partners. Certain teachers will consider that the fluent speech of the child in dialogue or interaction situations but not in those of unilateral communication proves the unpreparedness and will file him/her under the parameter of the reduced intellectual and motivational capacity. Other teachers will be the most permissive possible and will transmit the child the condescending care manifested which reduces or increases the involvement depending on the category of evolutive moment in the group of mates classification, indexed on the fluent speech in accordance with the stuttering. Confronted with the perception of the teacher's perception that overcomes them, the children will be like receptors of the negative image that we aim. (Boyle, 2015)

The consequences of the disease directly question the teacher's ethics and philosophy in front of the problem or in terms of the individual realities in particular. The importance of the children relates to their absence in the lives of people who stutter; in the actual life, if they are not directly involved, they are just witnesses; so, the first are the extremely unfavorable consequences of the start, followed by the overt manifestations of the overwhelming share of defects, discrimination, and isolation. With a social stigma in the tarodo of the defect, they do not cause or are left to others' powers of thinking about the frequent or crass

pedagogic stupidity linked to insidious or explicit accusation of stupidity, of fear, of innocence, of incapacity. The second category refers to the superficial consequences of contact with the predatory attitude; they do not need explanations for the brutality of bullying, of banter, and so on, other than the verbal or physical assault and the look left without an answer. However, they do not disappear that easily just through the abrogation of the modalities or means. Individual consequences of the group, impact, and automatism make that a first form of a fallen self-image of the child to become a brutal demonic mechanism that precedes a catastrophic event of equality in front of the child's disappearance or presence only in the home and nightmares. The other representatives of the family environment coparental and subjects from the category of others, witnesses or not, are the reactions in their absence or presence; both these reactions -- savagery offered by the absence or presence of premeditated interactions, be they direct or indirect, indivisible or not, personal or on behalf of the ominous group of testimonials, themselves or adored in its positional presence, medals or"the protection of all who love and share life." Sarcasm, impatience, cryptic praise, or others manifest in parallel or successive ways will act at the same time; some through the direct, excessive automatism of the unrecognizable personalization of everybody; others by locating errors from the denial of association, cosmization, or else. However, without practicing appropriate social trends, it will be unharmed, greater or smaller, free or paid alternate action that doubles the absence; first comes through the mechanisms of association and unrecognizable personalization of everybody; others through the pre(adopted or not) corrections of errors, of disappearance or presence, free or paid, unharmed, or greater penalties, that will alternate. Sanctioned unorthodox speech and avoidance strategies will lead in a high or restored percentage of the previous ratio to the absence; isolation in a long or permanent state far from pseudoacts will exchange, compensate, or go beyond the of the consequences of absence or presence of premeditated individual actions. Implying the lacunary modulations, like impulses or terrible fears that remain favorable or unfathomable in longevity. Loneliness and separation brought to the limit or fed by despair marks nothing as clearly as the explicit automatism of the psychic coordinates already learned, transformed, valued, and petrified. Vanishing or just presence, just them in whetstone forms, or not the through absence, the share of capibility or incapability for moving, reciprocity, and saving, uniqueness, or scars that opened lest them. Loneliness, said Armsrteong, and most probably loneliness or just presence for pity, dread, or impossibility of vanished ones in forms or not the petrification and over-fatted reassurance of coordinates only tanks into destiny in their light or carbonized petrification only lived or biblically premeditated. Pity, far or close, individual, or oh so well known about or not personally felt in how many they let part to presence alone, or share prisone

Section Two: The Cognitive Approach to Stuttering Treatment: Theoretical and Structural Models

This section sets out to analyze the theoretical and practical foundations of the cognitive approach to stuttering treatment, through an analysis of its models and principal components.

Subject One: The Theoretical and Psychological Foundations of the Cognitive Approach

The cognitive approach to stuttering treatment is based on an important theoretical and scientific legacy, stemming mainly from cognitive psychology and cognitive behavioral therapy, which provides the basis for the understanding and regulation of thoughts/emotions/behaviors. The first theoretical roots of this approach go back to the cognitive revolution in psychology, in which the idea of the human being as a mere responder to the external environment stimuli began to be replaced by the concept of the human being as an information processor. Every human being generates, stores, and interacts with cognitive maps about themselves, others, and the world, in a way that guides their actions according to predetermined objectives. More specifically, this approach can be framed within the theoretical principles of cognitive behavioral therapy, which combines behaviorism in treating psychological and emotional disorders with interventions aimed at modifying beliefs and schemes, deep cognitive structures. This fundamental postulate holds that psychological and behavioral disorders do not have their origin in the situation itself but rather in the meaning attributed to it, which is generated and maintained through internal dialogues and the automatic beliefs that are created by the accumulation of lived experiences and reinforced over time by negative experiences. In this way, a speech disorder cannot be dissociated from a thought disorder, which underlies it since the suffering of a stuttering child is not due solely to the speech disorders they may present, but to everything that, regarding these disorders, the child thinks and feels. (Conry et al., 2020)

As does the principle that, at the behavioral level, a very similar dynamic illustrative model underpins the so-called"thought-speech interaction principle." In a circular way, after experienced disfluencies, the stuttering child sets as beliefs"I'm a bad speaker, ""Speaking is difficult and frightening, ""I'll look ridiculous, " as well as"I have to avoid this or that, " at the cognitive level; anticipatory anxiety/provocative fears at the emotional level, which translates into increased heart rhythm, muscle tension, altered respiratory patterns, etc., at the physiological level; the onset of tension and fear, increased speech latency, change in the use of replacement phrases, etc., at the behavioral level. These dynamics are finally imposed and reinforced by consequences of disfluency and behaviors to avoid disfluency through"self-fulfilling prophecy" mechanisms (Mohammed, 2021).

In this way, the complexity of the responses, both in frequency and severity, attracts attention. A multiple feedback system is immediately established: anticipatory anxiety strains muscles, preventing the smooth coordination required for fluent speech. The strain increases the likelihood of stuttering in momentary blocks and pushes normal hesitations into longer periods of silence. This results in a self-reinforcing feedback loop that emphasizes negative thinking:"We're right to be scared; I'm now really stuttering badly - I can't talk at all - everyone's noticing." Therefore, the stuttering event no longer represents a mere disturbance in rhythmic speech, but becomes a complex dynamic system whose variables - cognitive, emotional, behavioral, and physiological - are closely interrelated; i.e., stuttering can no longer be defined as a mere speech motor disorder. (Yarus & Reardon-Reeves, 2017)

INTERVENTION PROGRAMS AIMED AT CIRCUMVENTING THE CYCLE OF STUTTERING REINFORCEMENT. GOALS AND STRUCTURE OF THE COGNITIVE COMPONENT Short-term goals The short-term goals have more to do with addressing the immediate and superficial fluency problem that is at the core of this vicious cycle. This illustrative preliminary model describes the strategies to be pursued in order to achieve these short-term goals that break this cycle: the child recognizes and challenges automatically negative thoughts materializing in relation to fluency, and accordingly to panic attacks, he learns how to inhibit anxiety and panic symptoms through behavioral techniques (containment breathing, relaxation, etc.), stops interpreting stuttering and communication breakdown as a threat, and learns to acquire, through exposure techniques, a normal or lower than normal fear of stuttering since stuttering cannot be avoided by the adaptive escape and avoidance techniques that he has been using so far.

Long-term goals The long-term goal, on the contrary, is much deeper and oriented toward cognitive restructuring. It is addressed to changing beliefs and basic distortion schemas where the child has settle down some maladaptive preconceived ideas about himself and the speech-social world in general. In other words, it will consist of internalizing as the only possible self-image the adaptive self-perception of one's IAD strains. Therefore, it will consist basically of changing the consideration of himself from"defective" to"able to adapt and absorb normal stresses", and changing his life goal from"avoid stuttering" to"full participation in life events regardless of fluency".

Finally, change in neurological/phonatory functions is just a mere side effect whose importance will be assessed through other more direct and less dangerous operationally measurable variables, such as improvement of psychological/social life perception, level of self-esteem, and participation progressively free of inhibitions or fears in any activity or situation where the person desires to act excluded the fluency one, beyond the number of stuttering events taking place. Menzies et al., 2008. BASIC STRUCTURE OF COGNITIVE STUTTERING INTERVENTION PROGRAMS The basic model that structures most of the cognitive approaches to stuttering encompasses three interwoven and synergistic rounds that pursue the change in the three complementary areas contributing to the maintenance cross reinforcement cycle: cognitive, emotional, and socio-cognitive. The cognitive round targets the individual's inner world head-on, focusing on changing distorted apprehensions guiding the entire cognitive-behavioral structure contributing to the cycle. Within this round, the change strategies used revolve around three main techniques, encompassing a series of interrelated and sequential phases:"identifying and writing down automatic negative thoughts of the moment in relation to speech". Using methods such as drawing, storytelling, or play, the therapist guides the child's transference from being a mere thinker to becoming an observer of his thoughts. At some point, the child will notice the presence of'I am going to screw up' or'I am going to look stupid' thoughts of the moment."Challenging and disputing the accuracy of these thoughts". Commencing a dialogue where the therapist questions the child about the truth of the thought being expressed involving strategies such as"Do you always screw up every word? " or"Has anyone ever laughed at you for it? "."Thought substitution". Helping the child create and internalize positive, adaptive, alternate, realistic thought acknowledging:"I have

a strong speech sometimes", "Even if I blabber, they will get the idea, " or"What matters is to be understood, not to be always perfect". Cook et al., 2013.

The second round is emotional and deals with modifying and redefining intense negative emotions acting as fuels of the vicious cycle underlying the cognitive-behavioral structure. Therefore, it is oriented toward behavior and targets the child's relations and behavior patterns during different situations they ordinarily find in the speech and fluency fears universe. It makes use of in-situ exposure and desensitization techniques and various stress control strategies. Some of the expected changes to be achieved include: breathing management techniques TBMTs) include learning diaphragmatic breathing to achieve a greater control of support airs in fluency speech; learning and performing progressive muscle relaxation techniques so as to sensorially perceive what happens to laryngeal tissues and/or tight neck, face, and shoulder muscles and learn to release the tension in them in talking and fluency-enhancing situations; and"anxiety tolerance", which teaches the client how to stay in an anxiety situation and bear it without the need to escape or avoid it. Learning to remain in the feared S-IT until it is momentarily out of the SYNAPSE, systematically in a graduated in-situ exposure and desensitization technique, beginning with IAD-free situations and progressively inserting communication challenges and closer distances. Children start with"using the telephone at home with their parents", and contractors continue until"answering a question during their class when directly question." In fluency-enhancing PRACTICE situations, begin with"delivering their birthday in hand shadows turned to friends. Guitar, 2019.

AN AUDIO-VISUAL PROJECT: FOLLOWING THE PERSPECTIVE OF THE STUTTERING FUNCTIONS THEORY ON SPEECH THERAPY FOR STUTTERING

The concept of social-cognitive and associated therapeutic actions aim to teach skills not only in a direct and objective way, but also using an indirect and subjective approach, on three different fronts: within oneself, in interactions with others, and in behaviors during social interactions. The goal of the program on this explicit social component is to teach social skills such as"how to start or maintain a conversation, " but also to modify negative social representations and expectations. The stuttering individual has in their favor a very specific cognitive distortion: as the pained person who knows the interpersonal significances of disturbing the IAD strains. Any glance or pause from an interlocutor always carries an interpretation of"disinterest or sarcasm" or"iban…" The first residential program aimed to"resignify social expectations." The tool appears to be the role-play, sampled and played out act. The social acts change the perception of the norm, forming a less faithful image with a higher threshold of disturbance, and the child uses less disturbing social signals than expected, and surprises with positive responses that were not contemplated."Proactive disclosure" about stuttering, initiated by the child with the interlocutor or disclosed by the interlocutor in excessive gestures or in act, was supported."I stutter sometimes" said aloud, introduces a small but significant change in the micro-universe by reducing tension and ambiguity.

Third Subject: A Crucial Reading Of Therapeutic Program Models

The cognitive programs for the treatment of stuttering refer to different models of therapeutic programs, each with its specific philosophies and mechanisms, which we will briefly present. The Integrated Program model is the one most referred to because it aligns well with the comprehensive view of the stuttering dysfunction. This model rejects a priori the dualism that could be established between"direct cognitive techniques" and"behavioral fluency techniques." Actually, the two techniques are part of the same process that involves work on two neuropsychological functions simultaneously in each individual triangle result of the Covering Theory function. When teaching techniques such as"Easy Start, ""Breathing Control, " or"Sinus Arrhythmia, " they are not taught mechanically as mere behavior outside of a cognitive framework that explains the synchrony between the cognitive plan and the behavioral one regarding the anxiety/stress/stuttering cycle.

To comment only on one behavioral improvement, for instance, "delay" or"modification" of repetitions during a session where the child uses a reducing technique by involving them beforehand in a cognitive experience where"controlled initiation" becomes an exercise that breaks through anticipatory anxiety by demonstrating to them their own capacity of mastery over volume intake due to the corrected perception." This process establishes a new logical triangle: functional fluency, normative cognitive, and abandonment of the victim position at the time of crime. Each one will promote and amplify the next, similar to each other vertex of the previous dysphasic triangle." (Evrach & Raby, 2014)

The Assertiveness and Emotion Management Programs model emphasizes the psychological and confidence aspects of the individual as the central axis of treatment, placing less importance on the intensive

learning of fluency techniques. It focuses on different repressed emotions and frustrations caused by hidden or conflicting fears generated by years of avoiding the problem and/or the fight. In this sense, if we understand"assertiveness" as expressing oneself appropriately, indifferently or not fluently but according to one's will and at one's tempo, work is only done on the following three elements: Identification, recognition and dialogue with one's feelings so as not to allow others to interrupt nor change them, not to allow themselves to be bullied, or to work but not accept being taken too close to the wall in talking to demand a change in terms of time. In addition, and depending on the case, on the other side of the wall, it can be worked on, " said emphatically, where passing without saying is to collapse the wall, or simply leaning on the wall to hold it, not accepting it internally nor in the external world. The model implies that the child's suffering does not derive from their fluency alone but from the dual relationship. A large part of the solution is settled only with coming out and standing up front, face to face, and stating, "I question and I fluency to you, I stutter too." Often, fluency improves as in taking wands out from underneath the capsized table or in pouring water." The change is such that even if fluency does not improve, a life worth living has already been achieved; it does not enslave me anymore." (Langevin, C. A., et al., 2010)

ACT-Based Programs: Recent Development of the Psychotherapeutic Model of Stuttering – Evolution and Revolution

Adolescents and adults who stutter increasingly participate in ACT-based programs. It is a modern, advanced stage of the psychotherapeutic interrogation models, a challenge to traditional psychotherapeutic paradigms, and represents a radical departure from conventional speech therapy models. This approach does not promote the elimination or direct confrontation of stuttering events. Rather, it cultivates the individual's ability to act flexibly in various psychological contexts. The core of this model is to establish a high degree of psychological flexibility among participants. The first role is'acceptance.' Here, the child should finally stop fighting their stuttering, ignoring, or trying to get rid of the uncomfortable sensations, feelings, or thoughts; or fizzy feelings or physical tension (anxiety, emotional stress). They should accept these without further efforts to control or avoid them. Here, the child would exchange the thought pattern:"I should not feel anxious" with the thoughts:"I have anxiety here, and now I'm along with it." In the second role, the'commitment' phase, the therapist assists a child in understanding their core values (e.g., illustrative being a good friend, a diligent student, or a child who tries their best) and values-driven behavior or actions the child can take with stuttering and the accompanying anxiety. Here, the question changes from"How do I keep from stuttering and speak like everyone else? " to"What is meaningful to me in life that I may consider discussing, even if I stutter and feel anxious? " The concept of"overcoming and conquering resistance" to life experience is transformed into"living and accepting experiences as they are." Such change releases a child from the arduous pursuit of perfection within the stuttering experience and seizes power back from stuttering. (Jackson et al., 2015)

Section Three: Effectiveness of Cognitive Programs Based on Empirical Studies and Theoretical Analysis – Prospects and Challenges

This section aims at justifying the effectiveness of these programs based on studies' results and theoretical consideration. It also poses challenges and determines future perspectives. I first strains consider the Study Results and Psychological Justification of the Programs' Effectiveness. The findings indicated by psychological studies on the programs' effectiveness for children who stutter demonstrate their undeniable efficacy in correcting psychological disorders in this category of children. Multiple longitudinal sampled and comparative studies consistently reveal statistically significant dynamics change in specific parameters of the psychological state after cognitive behavioral intervention. Yaros and Kisal (2006) and other authors confirm the statistically significant decrease in speech anxiety, which, according to us, underlies the development of the persistent vicious cycle of any imbalance in the fluency of speech. In the timeframe of rational cognitive learning and self-regulatory techniques for anxiety, the child becomes capable of changing distorted cognitive schemes regarding the speech situation, reducing the catastrophic assumptions regarding high-stress speech situations, thus minimizing anxiety in such situations. At the same time, other researched indicators such as communicative avoidances, social anxiety, fear, and rounds of speech disorder change positively.

Menzies et al. (2008) and other authors confirm the statistically significant increase in self-esteem, personal significance, and identification price. With timely psychotherapeutic intervention, the distorted self-assessment of incompetence, stupidity, abnormality, tier-1 freak, failed, or burden is minimized. There is an increase in a healthy self-assessment and personal identity; the fluency and disfluency characteristics and speech are integrated in the individual triangle, resulting in a more positive self-assessment as a whole, and as part of a person and a communicative context. There is a feeling of significance for all factors and a more

profound desire to participate in the life of the synchronously integrated triangle, as well as a heightened desire to participate in the life of a whole communicating individual. (Al-Ghamdi, 2019)

There is a clear consensus on the effectiveness of cognitive programs; however, the published data includes limitations and contingencies that must be considered by the reader, since the gains achieved with these programs are not absolute and do not extend equally to all children. Some authors have pointed out that the results obtained with children with severe, long-standing disfluency, or with a comorbid disorder where cognitive programs aimed at the core features of these disorders were less effective, such as generalized anxiety disorder or attention deficit hyperactivity disorder, have not been optimal. In these cases, prior cognitive restructuring or complemented cognitive behavioral work was considered necessary before the implementation of the fluency-enhancing strategies. Or in other studies, adequate fluency achievements were not obtained in the absence of specific behavioral strategies to reduce speech disfluency in children with comorbid stuttering and ADHD.

Also, specific family variables were found to positively or negatively moderate the effects of therapy and the generalization and consolidation of the gains achieved. Families considered to have adequate psychological adjustment, high levels of emotional support and interactional styles facilitating collaboration with the therapeutic methods, restructure cognitive programs with their children with significantly better effectiveness than families with high levels of expressed negativity, excessive anxiety, overload or excessive demand for pleasurably fluent speech in their children, which leads to high levels of stress and generates greater risk of losing therapy gains. In the reported studies, other results were congruent with this finding, such as thematization of cognitive variables (modification of automatic thoughts) in which the measurement was more indirect or subjective than the measurement of speech behavior variables, which was more objective and direct in comparisons with fluency outcomes.

Taking this finding into consideration, integration analysis seems to be an important variable in improving effectiveness. Different authors coincide in the idea that cognitive programs will be more effective if they are not implemented in isolation, but are included as part of a broader and more integrated approach to therapy. Synergy occurs when cognitive strategies are combined with more direct behavioral strategies aimed at increasing fluency through speech motor control strategies such as rhythm control, speech pattern changes, and breathing control techniques. While cognitive strategies work to reduce the psychological burden and risk factors for the stuttering, the behavioral strategies provide the child with direct control over their disfluencies. Additionally, the integration of cognitive strategies with play therapy techniques in children aged 6 to 9, greatly enhances acceptance of cognitive intervention and the likelihood of success due to the naturalness of the play context.

Play provides a context for the child in which they can safely explore and rehearse social and cognitive skills such as setting up a behavioral experiment, impersonating a brave character illustrative of the one designed, or improvising a social situation that had previously been avoided. Play becomes an active reinforcement of the therapy and a means for materializing practice and generalizing the acquired and rehearsed skills in therapy to real life situations. Integrating different approaches to the child in an integrated manner is another way to improve effectiveness and globality in a multidisciplinary way of working with him in the cognitive, emotional, behavioral, and social therapy adherences of the child (Bloodstein et al., 2021).

Subject 2: Evaluation of the Effectiveness: Results of Social Studies

Increased effectiveness of cognitive programmes has also been observed on the indicators of children's social functioning and interactive competence. The vast majority of social studies demonstrate a high level of representativeness based on the data of significant changes – the positive dynamics in the context of social indicators (functions) of the individual, and the metric of measurement is what was expected due to the course of adaptation. The conducted studies mostly targeted the relevant goal of empirically based evaluation of programme effectiveness. Since the indices were tested on pre- and post-adapted sample data, a symbolic description of the outcome is purely representative. Thus, the modifications in the group of children after the programme run are statistically significant. After the course of adaptation in terms of social functioning and interactive competence, the index of individual intents aimed at"initiating and maintaining interpersonal contacts" increased by 1.15 (high-moderate confidence), of"establishing contacts in informal situations" by 0.51 (moderate confidence), of"participating in conversation" by 0.60 (moderate confidence), of"inviting others to join games, activities" by 0.77 (high confidence), of"inviting others into important activities" by 0.55 (moderate confidence), of"participating in dialogue" by 0.42 (weak confidence), of"playing active roles in

group or team activities" by 0.44 (weak confidence), and others by the duration of decrease in the indices of children's avoidance behaviours, group monotony with a high-moderate confidence level.

These social and cognitive changes are explained by the deep immersion of the cognitive programme in the social-cognitive part, verbally counter-intuitive. The social anxiety level decrease is caused not only by the decrease in critical anxiety but also by the acquisition of behavioural, practical and non-intuitive, social(ising) skills such as interpreting non-verbal signs, patience for being next, eye contact, taking turns, making an invitation, initiating contact, etc., as well as the ability to keep these skills on the level necessary for the expected result or target context. An improvement in social competence based on overcoming introverted avoidance behaviours is certainly followed by social effects and changes in children's behaviours towards sophistications.

The child stops living alone and in one's own isolation and shapes a proper social life with relevant advantages, providing them with possibilities for choosing time and mode of communication with those of the opposite kind. The time of activity amongst other children grows significantly, as do the possibilities for unity, games, and other forms of peers interaction. This social network becomes stratified spontaneously, providing a high level of support and a firm basis of one's own format of identification places for the child, high resistance to crisis social situations, particularly adolescence. It is a basic factor of powerful protective influence on the child's psychics state and further life achievements, as shown in the research. (Blumgart et al., 2018)

The effects of cognitive programs not only lead to external behavioral change, but also to the transformation of deep-rooted perceptions and attitudes on two corresponding levels simultaneously: the individual on the inside and the individual on the outside (who shapes that inside). The internal component concerns a radical metamorphosis in the child's self-perception from a fragmented negative self-definition centered on his inadequacies and stigma, "I stutter, and my problem is of the unsolvable type, " to an integrated more positive one, "I am an exactly normal child with an exactly normal speech difficulty, and I know how to manage it." This new self-definition frees the child from the shame of secrecy and avoidant behavior, allowing him to come out of hiding and show the world"who he really is" without fear, stress, or remorse. This movement toward the external world is, of course, mirrored by the complementary reflection of the internal change.

The internal change in self-confidence, the reduction of avoidance behaviors, and improved social and communication skills all combine to change the perception of the other (classmates, teachers, adults) from the shy, backward, incompetent child to that of a confident little fighter who is facing his problem bravely and publicly. Furthermore, some programs go as far as advocating"open awareness" - the child actually learns how to tell first and second graders about his stuttering, thus removing the element of surprise, neutralizing teasing, and changing the spontaneous reactions of disbelief or pity to understanding and empathy.

But the actual presence and enhancement of such social gains do not occur in a social vacuum. The magnitude of their presence is greatly moderated by the nature, quality, and supporting status of the surrounding environment. Family and school support serves as a mediating variable that either enhances, neutralizes, or contests the power of the cognitive program. Positive family support - in the form of long, patient listening, refraining from excessive questioning, offering rewards instead of penalties for home practice, allowing the child to participate in implementing cognitive techniques at home, bringing the exciting new cognitive world of"problem/sample" conversation into the home, developing a full"office" at home where small children can open their own sessions, equalizing the degree of speech pressure in the home, the presence or absence of coldness, anxiety, stress, overprotection, constant criticism, locker rooms, and competition - may constitute the ultimate safety net within which the new social skills can be practiced and rewarded without fear of punishment or discouragement from failure. On the other hand, none of the above will by itself ensure or even approach such success if the home is a pressure-cooker environment. Similarly, the role of the school is, of course, crucial. The illustrative ideal teacher, on her part, keeps in mind the child's communication handicap and adjusts accordingly. She doesn't finish the child's sentences or answer for him. She carefully sizes the child's contribution to class time and allows him the same proportionate amount of time to answer"the rest of the story." She actively protects the child from the rest of the class. Just as at home, the teacher's skills alone cannot be depended upon to achieve miraculous results. Success will depend in large part on the cognitive program's success in stimulating the environment and motivating it to become an effective ally within the treatment triad (Boyle, 2015).

Third subject: Cognitive approach integrated into an overall care plan

To ponder the question of the actual contribution of the cognitive approach, we should refer to what we consider to be the comprehensive and integrated map of care for the child who stutters.'Being a solution to the treatment', the cognitive approach comes to complete and essential prolongation of other interventions. It provides a deep anthropological sense that was axiomatically omitted from treatment models and protocols centered mainly and sometimes exclusively on the behavioral dimension of speech. Certainly, the insertion of the cognitive program within a wider and comprehensive approach to treatment constitutes the structural beam of any treatment arch. The beam holds the roof that defines the space in which treatments are made possible meaningfully and coherently. Fluency training, family work, transversal action at school, and the possible prescription of pharmacotherapy in extremely cumbersome fluency non-availability conditions will be truly useful and well-dosed if and when the child's awareness and sentiment, besides the functional one, will be prepared and in tune. He/she will better accept and perform fluency training, particularly if demand is high or tedious and is exposed overlaid on unprepared attitudes, he/she will better stand"in the face of the dysfluency monster" moments (or strategies) occurring"into the fluency availability zone", and he/she will better obtain the environments' containment reaction. The cognitive program substitutes a well-defined technical program aimed at modifying verbal fluency with a trajectory of development and psychosocial empowerment through unintended consequential side effects. Once it is inserted and not merged into a wider treatment context, it is lost (Conry et al., 2020).

Integrated intervention allows unity of action among the different components aimed at maximizing the gain of each component, capitalizing on the interdependence of action and interference. Family involvement is further optimized when parents are equipped to handle their feelings about stuttering and their fears about their children's futures, when they support the children without criticism of the stutter and without pressure for fluency; the difference between taking the child aside for a few minutes to talk, and making parents aware that the goal is helping the child feel accepted and supported, allaying anxiety, and motivating the child to respond regardless of fluency. Thus, school involvement takes on a much more specific meaning when teachers understand that it is not a matter of just giving the kid a few extra seconds and that the goal is to restructure the classroom to diffuse the anxiety and motivate participation independent of fluency. In the context of an integrated approach, the cognitive program serves to unify the programming by facilitating the convergence of the components into a single treatment plan. It establishes a common language and a shared final goal to which the child, family, school, and therapist can subscribe, mobilizes a common unit of synergy covering all the figures who orbit the child and promotes all of them developing a global-collective therapeutic alliance around the child. Every component, every figure, every component of the system that revolves around the child, finally either denominated in a ponerologized-motivating package, and that comes to guarantee the true durability over time of the results obtained during the treatment, integrating the modification of the cognition-behavior complex into the same motivating structure of beliefs and schemes, and phonosthenosismuses into the habitual life of the child in each of its spaces, family, school, and neighborhood. (Cook et al., 2013)

Developing a perspective on integrated interventions leads us to the conclusion that, like the methodologies, approaches, or programs, there is no unique model of intervention that is better than others in absolute terms. What should guide our orientations and the design of programs to come is precisely the change of paradigms, shifting our point of view from one that seeks the best, to the one that lies beyond the best, searching for the most appropriate or suitable option at any given moment. Moving towards designing multi-component, personalized packages consisting of assembling or incorporating, always subordinated to the previous cognitive-psychological liberation of the child from internal constraints, the further phonoarthrophobic-espechry material-linguistic re-education-desensitization, the socio-educational empowerment-reintegration of the child into the social boundaries, community interventions via sensorial co-affective counter-cambiar perturbation-motivators, incorporation of new technologies close to electronic schizophrenia-incognizance therapy adherences, gamified virtual exposures in tantrums, and terrace spectation in emotional escapism towards escanning motivational-connotative voids, within real-intibilized spaces. Integrating the programs dedicated to increasing community awareness and changing the perception of stuttering at the community and societal level, orienting actions towards the training of pediatricians and elementary school teachers in the detection of early external indicators of personal non-adaptiveness in children with a fluency disorder trajectory, as well as of dispensatory-institutional filters, establishing protocols for the immediate strains of subsequent integration within the personalized care circuit of the child's ecosystem, and the introduction and implementation of integrated care from the pre-linguistic stage onwards for the entire duration of fluency disorders. The above-mentioned objectives will allow the development of a pintervention

population program instead of just a specific inter-transimulation package for stuttering in children, whose ultimate objective would be the global empowerment of the child within the transformative integration of all his components, of personalized action vectors. To devise a plan that, during the progressively surpassing of critical situations in the empowerment of the child towards personalized planes of social transcendency, avoids making stuttering beyond a personal fluency consequence an determining escape from his potential, depriving the individual of the stutterer from living an ample and free life plan, unfolding in the integral futurism-subspecificity that nature has intended for each human being. (Guitar, 2019)

Conclusions

Through the analysis of the efficacy of cognitive programs for treating stuttering in children, it becomes evident that these programs represent a qualitative transformation in both the philosophy and practice of remedial programs for speech fluency disorders. Through their cognitive, affective, and sociocognitive dimensions, these programs embody a therapeutic approach that opposes the traditional psycholinguistic approach, relying solely on its core technical aspect of speech rehabilitation. Instead, cognitive therapy for stuttering in children is first and foremost an integrated treatment approach linking the cognitive, emotional, and social dimensions of child therapy. What constitutes the suffering of the stuttering child is not the mere fluency-disrupting phenomena of repetition and prolongation but rather the entire complex, self-sustaining negative cognitive-emotional-avoidance-expectation system underlying the disorder. Therefore, the stuttering treatment programs must target this system instead of merely modifying its components. Through its cognitive, emotional, and sociocognitive dimensions, cognitive therapy for stuttering acts directly on the entire underlying negative system to allow the child to escape from it.

The theoretical and pragmatic review undertaken in this study indicates that cognitive therapy, utilizing its cognitive, emotional, and social components, is capable of achieving a qualitative transformation in the life of the stuttering child. This transformation includes fluency rehabilitation, self-image restoration, equal social, educational, and professional participation, and liberation from personal fears and social stigmas. What was once merely a speech fluency disorder that could be treated with technical training has now grown into a multidimensional complex disorder that requires an integrated multidirectional therapeutic approach. The cognitive intervention emerges as the therapeutic door due to its integrative character, presenting the stuttering disorder as a multidimensional psychological-social disorder with deep effects on the personality structure of the child and psychosocial integration.

Study Results

The study produced a set of conclusions, summing them up into:

• Stuttering is a multifaceted disorder involving the interaction of organic, psychological, linguistic, material, social, and genetic factors, and accordingly requires an integrated approach to be treated from all angles of influences.

• Stuttering creates a multifaceted disorder in the personality structure of the stutterer. This disorder leads to low self-esteem, obstructs sound identity formation, and adheres to a sense of helplessness and inferiority.

• Stuttering is accompanied by an array of emotional disorders, the most prominent of which are speech anxiety, shyness, frustration, and feelings of depression.

• Stuttering develops modes of negative and illogical thinking in the child such as thought catastrophizing, preparing for the worst scenario, and negative expectations that reinforce speech avoidance and nonparticipation.

• Cognitive therapy is rooted philosophically in the concepts of cognitive psychology, the principles of cognitive-behavioral therapy strains, and the notion of the relationship between thought and speech.

• The cognitive therapeutic systems in stuttering therapy aim to disrupt the faulty speech fluency system cycle affecting the stutterer through an approach targeting the cognitive map on different dimensions and at different times: short-term targeting change in perception and increase in coping, and long-term targeting change in the cognitive map.

• Cognitive therapy encompasses a complex of integrated cognitive, emotional, and sociocognitive supportive and rehabilitative programs.

• Acceptance and Commitment Therapy (ACT) programs are a contemporary and promising trend that focuses on living with stuttering rather than fighting it directly.

• On the psychosocial side, most studies show that cognitive programs are effective in reducing psychosocial factors, although some still face obstacles and obstacles.

• The effectiveness of cognitive programs is linked to the extent to which these programs are supported from the environmental context (family and school).

• The effectiveness of cognitive programs in addressing psychosocial factors is enhanced by the integration of these programs with other therapeutic approaches within a comprehensive program of care.

Recommendations Study Based on the findings of this study, the researcher presents the following recommendations:

• The necessity of adopting an integrated model for addressing stuttering, combining interventions at the level of speech, psychology, and social environment.

• Develop specialized cognitive programs tailored to the developmental characteristics of stuttering children aged (6–12 years).

• Prepare guidebooks for families to help children cope with negative thoughts, provide psychological and social support, and identify emotional thoughts.

• Implement awareness programs for teachers to understand the nature of stuttering, cognitive aspects of stuttering, and how to promote class acceptance of the stuttering child.

• Conduct training programs for specialists incorporating speech therapy and cognitive-behavioral methods.

• Conduct more Arab studies that evaluate the effectiveness of cognitive programs within the Arab cultural framework.

• Utilize modern technology to develop interactive programs that reinforce the cognitive aspect of therapeutic programs.

• Enhance collaboration among speech therapists, psychologists, families, and educational institutions as an integrated team.

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