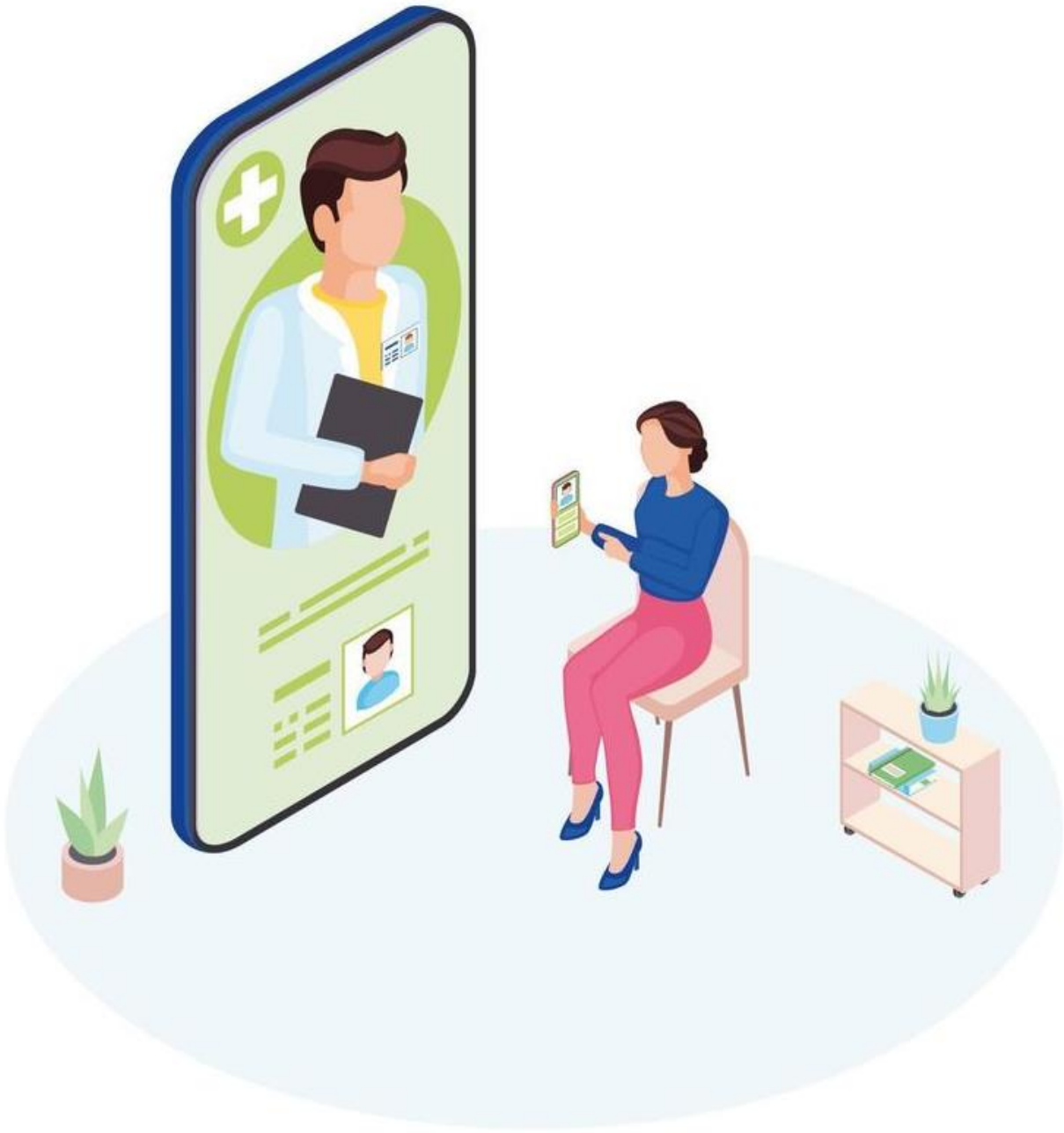
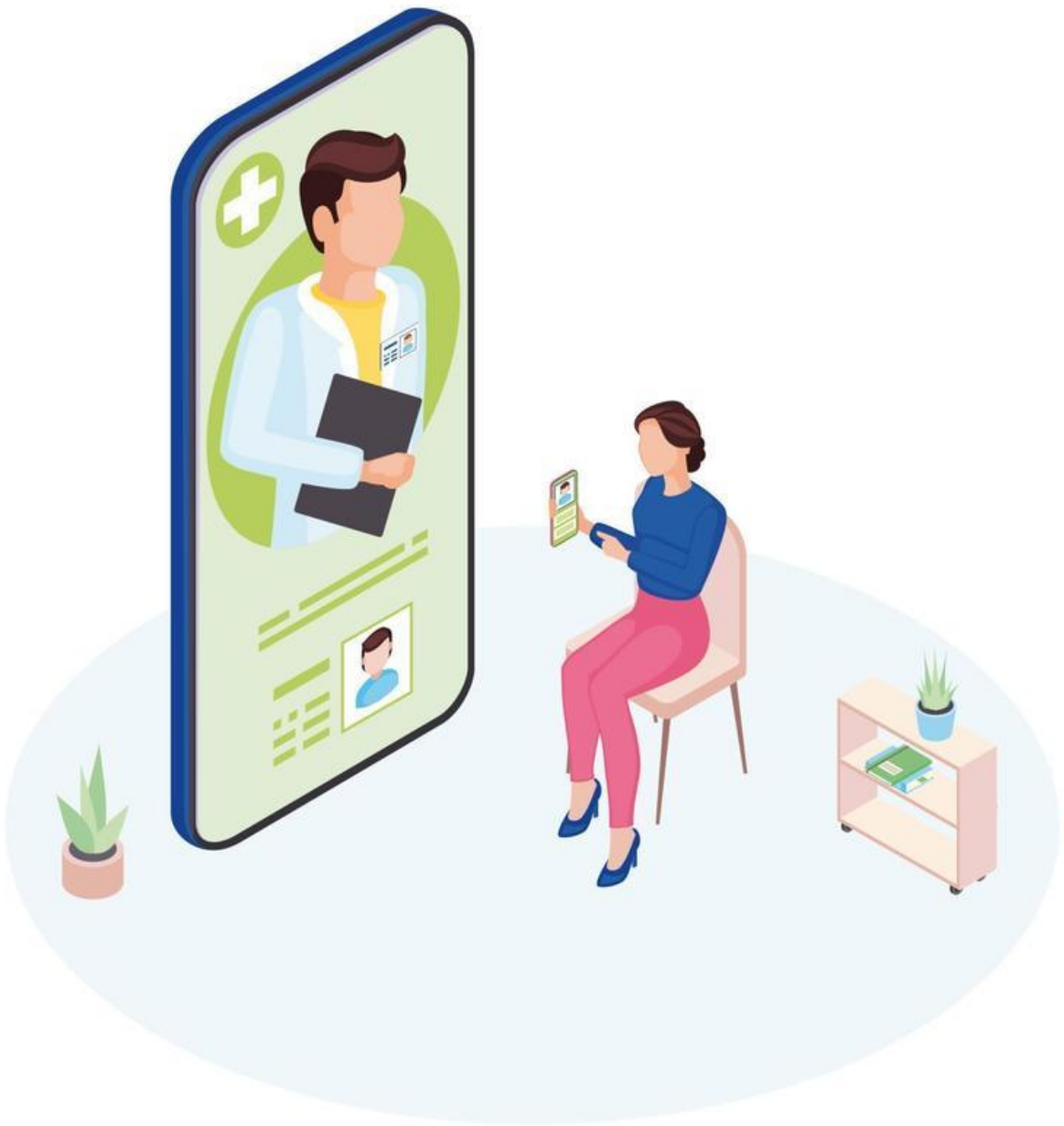
Online Rehabilitation





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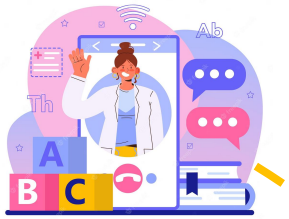
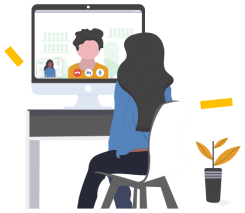


Introduction



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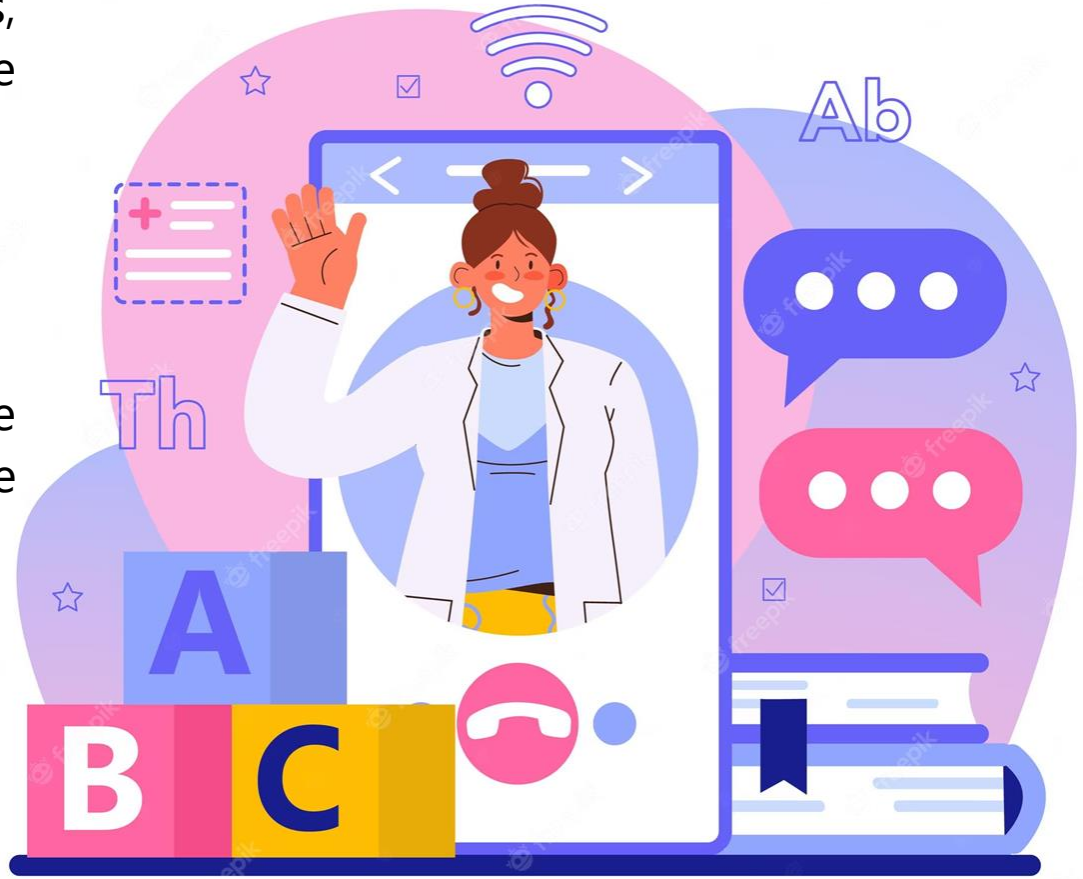
Introduction:

Online speech therapy is a form of teletherapy that uses video conferencing technology to deliver speech therapy sessions remotely. It has become increasingly popular in recent years, particularly during the Covid-19 pandemic when many people were forced to seek virtual ways of accessing healthcare.

In this presentation, we will look at the benefits of online speech therapy, the potential drawbacks, and some of the research behind its effectiveness.

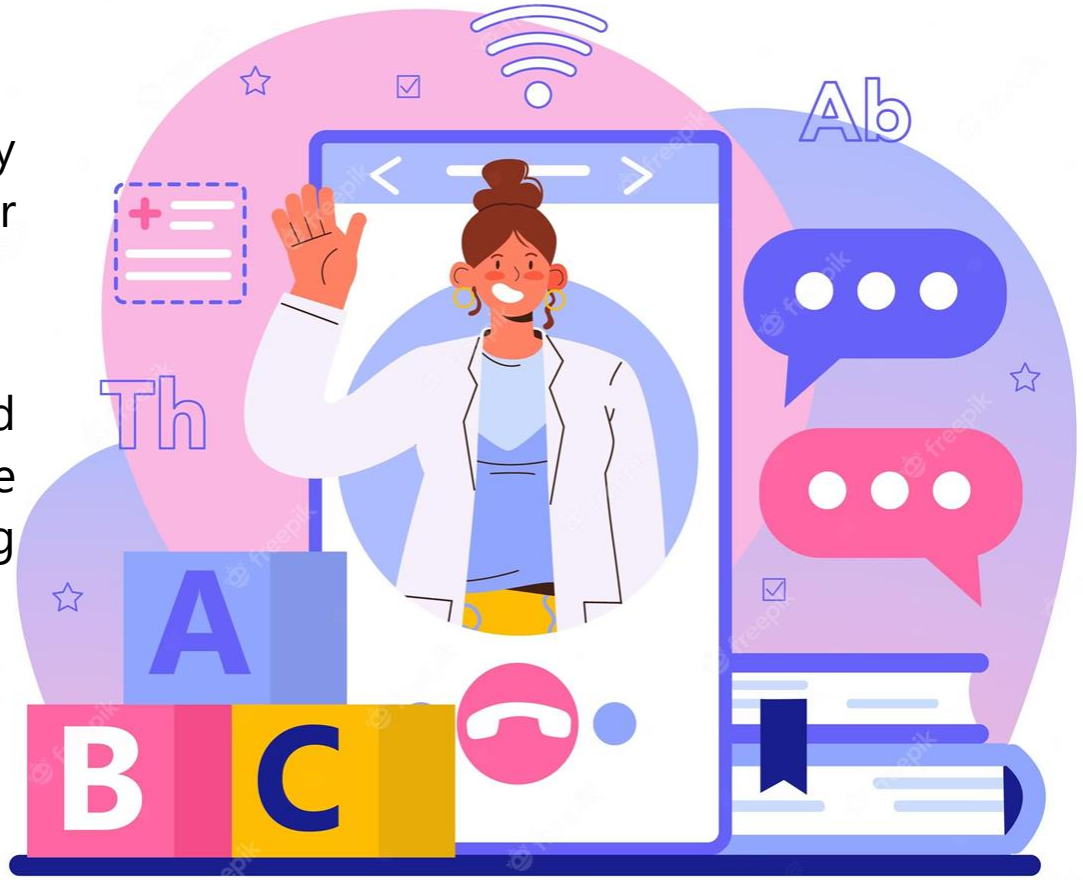


What disorders is online speech therapy suitable for?:

Online speech therapy has demonstrated promise in addressing a wide range of speech and language disorders, including but not limited to:

1. Articulation Disorders: Online speech therapy can effectively target articulation challenges, helping individuals improve their speech sound production and clarity.

2. Fluency Disorders (Stuttering): Therapeutic techniques and strategies delivered through online platforms have shown to be beneficial for individuals with fluency disorders, promoting smoother, more fluent speech.

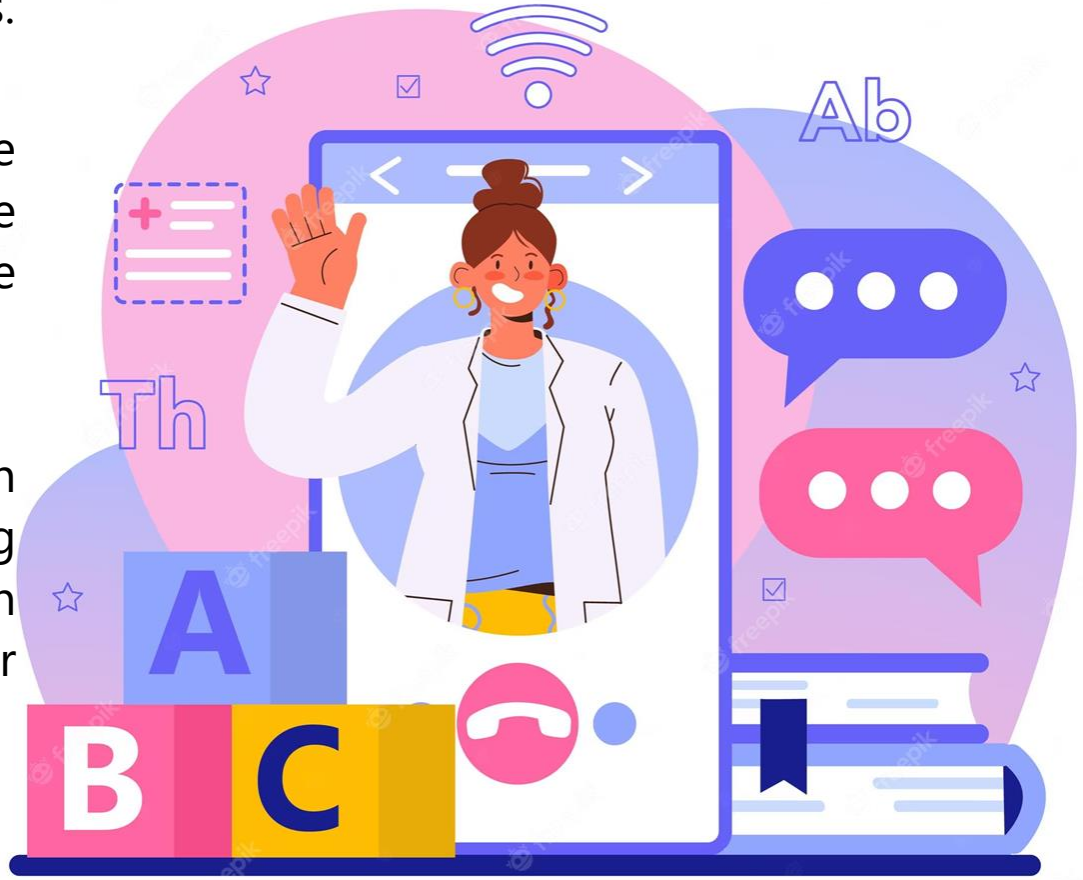


What disorders is online speech therapy suitable for?:

3. Voice Disorders: By leveraging digital tools and tailored exercises, online speech therapy can support clients in developing healthy vocal habits and addressing voice disorders.

4. Language Disorders: The tailored, interactive nature of online therapy allows for the effective treatment of various language disorders, encompassing expressive and receptive language skills, grammar, vocabulary, and pragmatic language abilities.

5. Cognitive-Communication Disorders: Individuals with cognitive-communication challenges, such as those resulting from traumatic brain injury or neurological conditions, can benefit from targeted online interventions to improve their communication abilities.



Benefits of Online Speech Therapy Sessions:

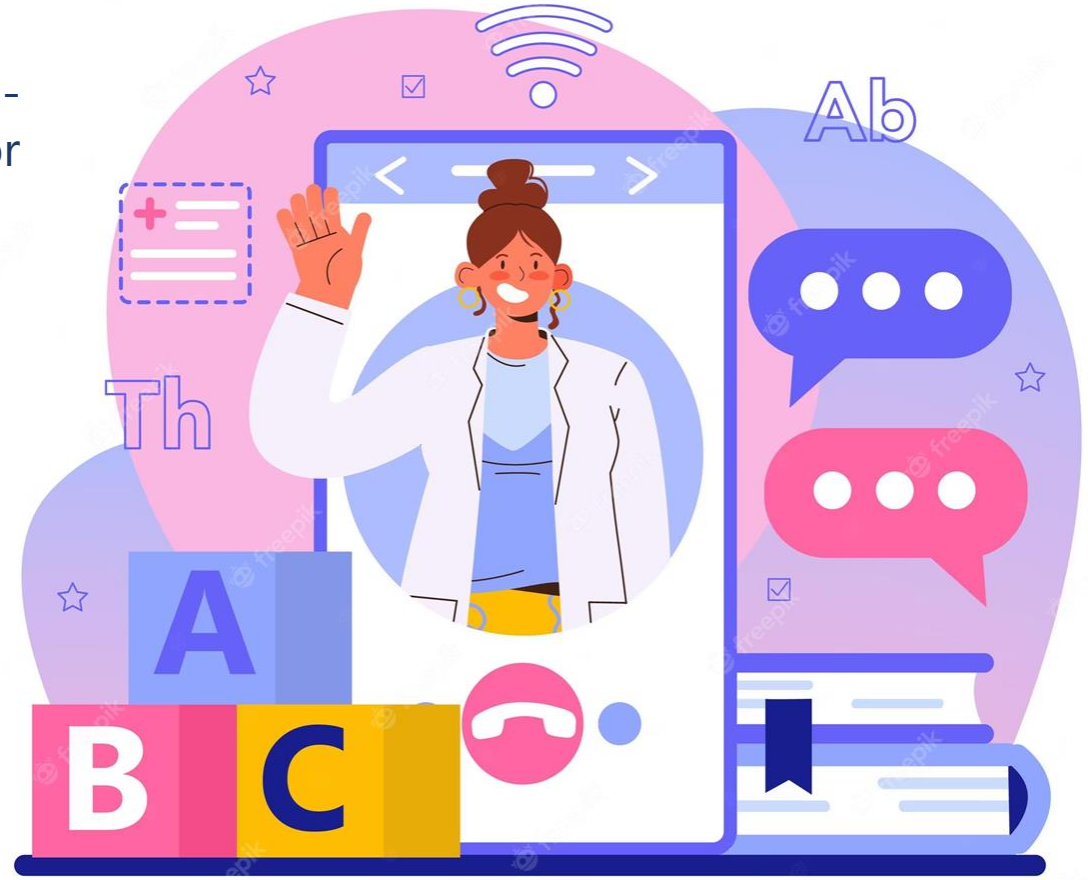
1. Flexible Scheduling

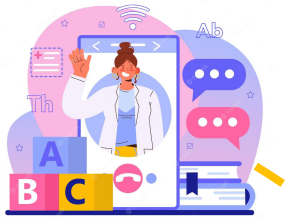
2. Obtain Better Results

Research shows online therapy can be more effective than in-person sessions, especially for children with autism or neurodiverse conditions.

3. Cost-Effective and Convenient

4. Parental Involvement





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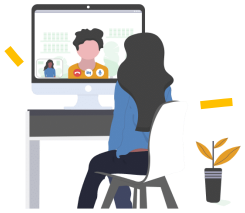

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Evaluating Interactive Videoconferencing for Assessing Symptoms of Autism

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Maura Wendland, PhD,[1] Kandace Fleming, PhD,[2]
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Materials and Methods:

Participants:
•11 children with a diagnosis of autistic disorder (autism) according to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV).
•10 children with a diagnosis of developmental delay.
•All participants were between the ages of 3-5 years old, with 3 girls and 18 boys
•Participants were diagnosed at a university medical center in the Midwest within the past 2 years.

Materials and Methods:

Measures:

•**ADOS (Autism Diagnostic Observation Schedule):** A semi-structured observation tool used for diagnosing autism. It assesses communication and social behaviors in various contexts. The ADOS consists of four modules, and Module 1 was used in this study.

•**ADI-R (Autism Diagnostic Interview-Revised):** A caregiver interview that gathers information for diagnosing autism. It assesses language/communication, reciprocal social interactions, and restricted, repetitive, and stereotyped behaviors and interests.

•**Satisfaction Survey:** Parents completed a survey using a 7-point Likert scale to evaluate their satisfaction with the diagnostic procedure and the experience of using IVC (Interactive Video Conferencing) technology.

Materials and Methods:

Procedures:
•5 Research clinicians, who were trained on the ADOS, ADI-R, and DSM-IV-TR criteria for autism, assessed the participants.
•clinicians were blinded to which diagnosis the participant had actually received
•The study took place at a university medical center, with assessments conducted in one room connected via IVC to another observation room.
•Participants were randomly assigned to either the InP (In-Person) administration condition or the IVC administration condition. **InP** administration condition (autism = 6; developmental delay = 5) or the **IVC** administration condition (autism = 5; developmental delay = 5)

Materials and Methods:

Procedures:
•For each participant, a total of four research clinicians (**two IVC, two InP**; one of whom was always the first author) observed and scored assessments
•Caregivers completed a brief satisfaction survey in all conditions
•1) comparison of agreement among clinicians who were in the same and different settings and (2) comparison of agreement among clinicians who were in the InP and IVC conditions

Materials and Methods:

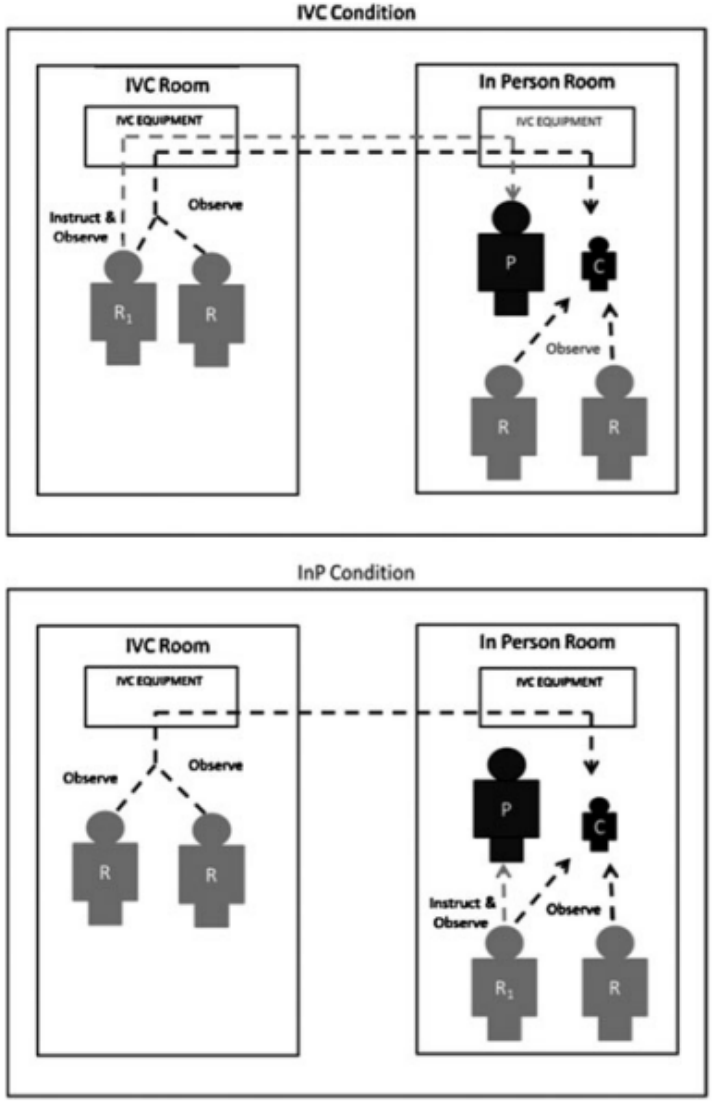


Fig. 1. Location of instructor and observer for interactive videoconferencing (IV) and in-person (InP) conditions. C, child; P, parent; R, rater; R_1, first author instructing parent.

Results:

1.Diagnostic Accuracy:

- **No significant difference** was found in the **reliability of diagnostic accuracy** between the in-person and interactive videoconferencing (IVC) conditions.
- The **agreement between clinicians** in diagnosing autism was **adequate** regardless of the observational condition (in-person or IVC).

Results:

2.ADOS Observations:

•There was **no significant difference** in item-by-item reliability on the Autism Diagnostic Observation Schedule (**ADOS**) between the in-person and IVC conditions.

•Clinicians were able to observe and score ADOS items with **comparable reliability** in **both conditions**

Table 1. Mean Percentage Agreement on Autism Diagnostic Observation Schedule Items by Condition

ITEM	% AGREEMENT			
	IN-PERSON	IVC	SAME SETTING	DIFFERENT SETTING
ADOSA1	76	80	78	78
ADOSA2	57	80	69	73
ADOSA3	67	65	66	67
ADOSA4	67	70	69	73
ADOSA5	71	75	73	78
ADOSA6	86	80	83	83
ADOSA7	86[a]	35[a]	61	69
ADOSA8	48	65	57	43
ADOSB1	86	90	88	88
ADOSB2	71	70	71	71
ADOSB3	62	80	71	71
ADOSB4	67	63	65	65
ADOSB5	52	67	60	66
ADOSB6	76	80	78	71
ADOSB7	62	55	59	70

related to socially directed pointing

Differences in ratings of socially directed pointing could be due to difficulty in observing eye contact and approximations of pointing over IVC between the child and the parent who was eliciting the behavior

Results:

3.ADI-R Parent Report:

•There was **no significant difference** in ratings for the Autism Diagnostic Interview—Revised **(ADI-R) parent report** of symptoms between the in-person and IVC conditions.

•Clinicians obtained **reliable information** from parents using the ADI-R in both conditions.

Table 2. Mean Percentage Agreement on Autism Diagnostic Interview—Revised Items by Condition

ITEM	% AGREEMENT			
	IN-PERSON	IVC	SAME SETTING	DIFFERENT SETTING
ADI31	85	91	88	77
ADI33	76	86	81	81
ADI34	76	91	84	74
ADI35	81	76	79	74
ADI36	91	81	86	84
ADI37	76	86	81	67
ADI38	91	86	89	86
ADI39	86	86	86	86
ADI42	76	76	76	81
ADI43	100	90	95	95
ADI44	95	95	95	95
ADI45	91	91	91	86
ADI47	86	86	86	86
ADI48	91	95	93	88
ADI49	91	91	91	87

Results:

4.Parent Satisfaction:

•Parent satisfaction was evaluated using a 7-point Likert scale survey.

•All participants completed questions about their satisfaction with the overall experience, and those in the IVC condition answered additional questions about the technical aspects of the equipment.

•No significant difference in parent satisfaction was found between the in-person and IVC conditions.

Results:

Table 3. Mean Satisfaction Ratings by Condition					
CONDITION	*N*	MEAN	SD	*T* TEST	EFFECT SIZE (*D*)
Evaluation 1: comfort with talking to clinicians					
InP	11	6.82	0.41	$t_{19}=0.89$	0.38
IVC	10	6.30	1.89	$p=0.39$	
Evaluation 2: felt clinicians cared					
InP	11	6.73	0.47	$t_{19}=0.91$	0.39
IVC	10	6.20	1.87	$p=0.38$	
Evaluation 3: competent clinicians					
InP	11	6.91	0.30	$t_{8.30}=0.86$	0.41
IVC	9	6.33	2.00	$p=0.42$	
Evaluation 4: felt embarrassed					
InP	11	6.00	1.90	$t_{19}=0.95$	−0.10
IVC	10	6.20	1.93	$p=0.36$	
Evaluation 5: difficulty hearing					
InP	11	6.91	0.30	$t_{19}=0.70$	0.30
IVC	10	6.70	0.95	$p=0.50$	

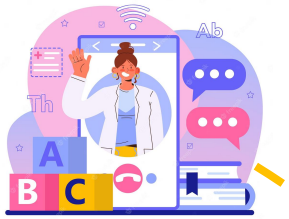
Results:

Evaluation 6: no trouble seeing					
InP	11	5.82	2.40	$t_{19}=0.81$	0.35
IVC	10	4.90	2.77	$p=0.43$	
Evaluation 7: overall satisfaction					
InP	11	6.82	0.41	$t_{10}=-1.49$	-0.62
IVC	10	7.00	0.00	$p=0.17$	
Mean satisfaction Items 1–7					
InP	11	6.57	0.49	$t_{19}=1.16$	0.50
IVC	10	6.23	0.82	$p=0.26$	

Evaluation questions 4 and 5 were reverse-scored to create high scores = high satisfaction.
InP, in-person; IVC, interactive videoconferencing; SD, standard deviation.

Conclusion:

In conclusion, the study suggests that IVC can be a **reliable and satisfactory method for assessing symptoms of autism**. The **diagnostic accuracy**, **reliability of observations**, and **parent satisfaction** were comparable between the in-person and IVC conditions. This highlights the potential of telemedicine, specifically IVC, in bridging the gap between the time of first **concern and diagnosis for children** with autism, particularly those in rural areas. Further research with a larger sample size and including children without existing diagnoses is recommended.



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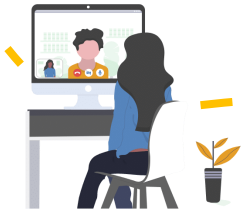

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Recent Advances in Telepractice Services in ASD

Neuropsychiatric Disease and Treatment

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REVIEW

Recent Advances of Telepractice for Autism Spectrum Disorders in Speech and Language Pathology

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Recent Advances in Telepractice Services in ASD

1. This thematic review article aims to highlight and acquaint practitioners and other stakeholders with relatively recent information regarding the advantages and disadvantages of the telepractice service delivery model in ASD.

Recent Advances in Telepractice Services in ASD

1. remote technologically based therapeutic interventions in the form of direct therapy and/or consultation and alternative means of rehabilitation. Overall, this framework is referred to as Teletherapy or Telepractice. The main goal of telepractice is to increase participation and improve the lives of disability affected individuals. In general, distance is a major obstacle for people with disabilities.

Recent Advances in Telepractice Services in ASD

1. The ultimate goal is to provide timely evaluation, appropriate intervention, and counseling for affected children and their families. Individuals who provide teletherapy require training in the use of specific platforms to offer a complete session that will consist of practice and creative programs via teletherapy

Recent Advances in Telepractice Services in ASD

1. children transfer successful strategies
2. timely and low-cost solution that focuses on ASD individuals mainly in remote areas
3. wider range of educated opinions motivated by “best practices”
4. developed telepractice guidelines
5. SLPs used numerous strategies to enhance the effectiveness of telepractice with ASD children and to partner and collaborate with them, learn from each other and assist them in becoming true
6. evidence-based interventions, it can therefore be considered as an appropriate medium for parent training and coaching in aiding the language and communication abilities of individuals with ASD as
7. telepractice as convenient, practical, suitable, useful, less stressful, and tend to augment their understanding of evidence-based intervention methods

Recent Advances in Telepractice Services in ASD

researchers concluded that various individuals such as

1. parents,
2. Applied Behaviour Analysts,
3. educators

were trained in delivering sessions to ASD affected individuals.

One of the limitations of online therapy was the growth of "so-called experts".

Potential Drawbacks of Online Speech Therapy:

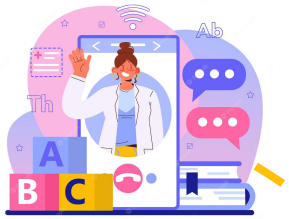
1. Technical Issues: Without a reliable, high-speed internet connection, difficulties in communication may arise or intermittent connectivity issues may cause a distraction, leaving the client with limited opportunity to participate in therapy sessions.

Potential Drawbacks of Online Speech Therapy:

2. Adapting to a Virtual Environment: Clients may find it challenging to adjust to the virtual environment, which may impede the effectiveness of therapy. The lack of face-to-face interaction may lead to barriers in communication, rapport building and facial cues that are often critical in making speech therapy effective.

Potential Drawbacks of Online Speech Therapy:

3. Limited Interaction: Online speech therapy doesn't provide for the degree of one-on-one interaction that can be achieved during in-person sessions. This may limit the therapist's ability to observe the client, engage in nonverbal communication, and make adjustments to their treatment plan.



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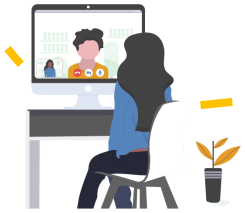

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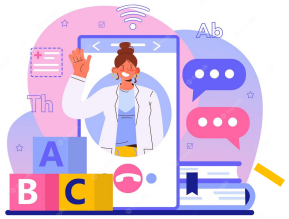
Conclusion:

Online speech therapy offers a viable alternative to traditional, in-person therapy sessions, which can be particularly beneficial to people with accessibility challenges. Although technical limitations can be problematic, evidence suggests that online speech therapy has been found to be a reliable and valid treatment option for speech and language services. As per the findings of several studies on the effectiveness of the telepractice for speech therapy, it has indicated promising outcomes and has been accepted as the alternative means of delivering speech and language services.



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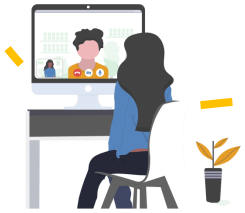

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I sincerely thank you for your attention