

Arab American University

Faculty of Graduate Studies

Department of Health Sciences

Ph.D. Program in Rehabilitation Science



**Acceptability, Feasibility, and Potential Impact of a Telecoaching
Intervention for Parents of Children with Autism Spectrum Disorder
in Palestine: A Mixed-Methods Pilot Randomized Controlled Trial.**

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**This Dissertation Was Submitted in Partial Fulfilment of the
Requirements for the Doctor of Philosophy (Ph.D.) Degree in
Rehabilitation Science**

Palestine, February/2026

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Faculty of Graduate Studies
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Dissertation Approval

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Declaration

I declare that, except where explicit reference is made to the contribution of others, this dissertation is substantially my own work and has not been submitted for any other degree at the Arab American University or any other institution.

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Dedication

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ (سورة البقرة، آية ٣٢)

I dedicate this achievement to all my Palestinian people, who have endured immense suffering for more than 78 years under occupation, and to the souls of the martyrs and their families, to the prisoners, and to the wounded and injured. To my dear brother, Saleh Salahat, and my uncle, Khaled Salahat, who have experienced the meaning of pain and the bitterness of imprisonment.

I dedicate this work to my beloved late mother and father, whose memory continues to inspire me every day. Your love, wisdom, and sacrifices laid the foundation for all my achievements.

To my family, my dear wife and children Hasan, Sama, and Ahmad, whose unwavering love, patience, and understanding made this journey possible - your support has been my strength through every challenge.

To my brothers and sisters, my in-laws, and my relatives, may God protect them, who were always by my side, encouraging me with their kind wishes.

To my friends, colleagues, and everyone who supported me and stood by me in accomplishing this work.

To Finally, I dedicate this research to all stroke survivors who courageously face their daily battles with determination and hope, with the sincere wish that this work contributes to improving your quality of life and restoring your independence.

Mohammad Hassan Saleh Salahat

Acknowledgments

My sincerest gratitude is offered to my supervisors, Dr Hassan Sarsak, Dr. Mohammad Nazzal, and Dr. Hikmat Hadoush, for their excellent guidance, caring, patience, and useful suggestions throughout this research work. I could not have completed this Ph.D. successfully without their infinite support and continuous guidance and supervision.

I would like to thank all parents and their children with autism who participated in this study.

My sincere thanks go to my colleagues Ms. Nelly AlHusari, Ms. Ameera Awda, Dr. Hisham Arab Kabyaa, and Ms. Suha Alnajar for their contribution and support throughout the research journey.

Last but not least, my sincere thanks go to all colleagues at the Allied Medical Sciences faculty, and special thanks to Ms. Susan Arda and her husband Mr. Abdulrazak Arda for their assistance and continuous support.

Acceptability, Feasibility, and Potential Impact of a Telecoaching Intervention for Parents of Children with Autism Spectrum Disorder in Palestine: A Mixed-Methods Pilot Randomized Controlled Trial.

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Abstract

Families of children with Autism Spectrum Disorder (ASD) in Palestine face barriers to accessing specialized early intervention services, including geographical, political, and economic constraints. This study evaluated the acceptability, feasibility, and potential impact of an Occupational Performance Coaching (OPC) based parent telecoaching intervention delivered remotely via Zoom and supported by the Sanad Al-Hayaa platform. The study examined changes in parental outcomes and children's achievement of parent-selected goals.

An explanatory sequential mixed-methods design was used, combining a pilot randomized controlled trial with a waitlist control group ($n = 24$) and post-intervention qualitative interviews. The study was conducted in the West Bank, Palestine, between February and July 2025. The intervention consisted of eight weeks of individual telecoaching sessions delivered via videoconferencing. Quantitative data were collected using the Canadian Occupational Performance Measure (COPM), Saudi Telehealth Acceptance Scale (STAS), Childhood Autism Rating Scale-2 (CARS-2), Autism Treatment Evaluation Checklist (ATEC), Parenting Competence Scale-ASD (PCS-ASD), Arabic Quality of Life in Autism (A-QoLA), and WHOQOL-BREF. Qualitative data were gathered through semi-structured interviews with parents in the intervention group and analyzed to explain and contextualize quantitative patterns.

Acceptability showed strong signals, with higher STAS total and facilitating conditions scores and very large gains in COPM satisfaction. Feasibility benchmarks

were met for retention (92.3%), platform account creation and library access, randomization integrity, questionnaire completion (baseline 100%, post 92.3%), intervention fidelity (88.9%–100%), and safety, with one moderate event that resolved without medical action. Recruitment was partially achieved within the planned timeframe. Signals of potential impact were strongest for child participation outcomes, reflected by large improvements in COPM performance and improved ATEC sensory and cognitive subscale scores, while changes in autism severity (CARS-2) were borderline. For parent outcomes, autism-specific quality of life improved (A-QoLA Part B), whereas parental competence and generic quality of life showed modest, mostly non-significant changes. Qualitative findings aligned with these patterns, highlighting privacy, reduced burden, routine-based implementation, and parent empowerment through reflective problem-solving under Palestinian constraints.

OPC-based parent telecoaching appears acceptable and feasible in Palestine, with signals of potential benefit. A larger, adequately powered trial with longer follow-up and strengthened recruitment procedures is recommended.

Keywords: autism spectrum disorder, telecoaching, occupational performance coaching, feasibility, mixed methods

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List of Definitions of Abbreviations

Abbreviations	Title
ADHD	Attention Deficit Hyperactivity Disorder
ALT	Adult Learning Theory
A-QoLA	Arabic-Quality of Life Autism
ASD	Autism Spectrum Disorder
ATEC	Autism Treatment Evaluation Checklist
CARS-2	Childhood Autism Rating Scale, Second Edition
CONSORT	Consolidated Standards of Reporting Trials
COPM	Canadian Occupational Performance Measure
EI	Early Intervention
EST	Ecological Systems Theory
FCP	Family-Centered Practices
OPC	Occupational Performance Coaching
PCS-ASD	Parental Competence Scale for Autism Spectrum Disorder
PMI	Parent-Mediated Interventions
QoL	Quality of Life
SCT	Social Cognitive Theory
SDT	Self-Determination Theory
STAS	Saudi Telehealth Acceptance Scale
TFA	Technology Feasibility Assessment
UNRWA	United Nations Relief and Works Agency
UTAUT	Unified Theory of Acceptance and Use of Technology
WHO	World Health Organization
WHOQOL-BREF	World Health Organization Quality of Life, Brief Version

Chapter 1: Introduction

1.1.Overview

Autism spectrum disorder (ASD) is globally recognized as one of the most serious neurodevelopmental disorders that negatively interfere with children's ability to participate in important daily activities, and it dramatically affects the quality of life (QoL) of the entire family (World Health Organization, 2023). The effect of the disorder is magnified for children and their parents who live in areas that lack access to essential early intervention (EI) and rehabilitation services due to geographical, social, health, cultural, and political reasons (Alnemary et al., 2017; Dababnah, 2018). To facilitate these children's access to needed services, telehealth has been adopted by many health professions as an alternative approach to service delivery. Telehealth gained momentum in the Coronavirus Disease 2019 pandemic and currently includes numerous services tailored to assist clients with various needs, including families of children with ASD (de Nocker & Toolan, 2021). One of the most commonly reported telehealth approaches utilized to support parents of this group of clients is telecoaching or coaching at a distance (Akhbari Ziegler & Hadders-Algra, 2020; Seruya et al., 2022).

In pediatric and EI programs, parent coaching delivered either in person or through telehealth has consistently shown positive effects on children's abilities and on caregivers' competence and QoL (Graham et al., 2024; Kessler & Graham, 2015). In the Palestinian context, telehealth-based parent coaching shows promise in supporting parents and their children with ASD by facilitating their access to important services. Yet, the feasibility and acceptability of this approach, and its potential impact on parents' competence, QoL, and children's achievement of parent-selected goals, have not been established. These issues formed the focus of the current study.

This chapter begins by discussing ASD and its prevalence globally and within the Palestinian context in particular. It follows by introducing parent telecoaching services within EI programs and the occupational therapy (OT) profession. The rest of the chapter highlights the research problem, research significance, aims and questions, overview of research methods, and the study chapters organization.

1.2. Autism Spectrum Disorders

Global literature defines ASD as a neurodevelopmental disorder with significant and persistent difficulties with social communication and social interaction as well as the presence of restricted patterns of behavior, interests or activities (Hodis et al., 2025). Despite the increasing prevalence rate of ASD globally, from 0.25% in the late 1990s to almost 1% between 2015 and 2019, these rates are an average, since there is a high heterogeneity in countries' population and resources, as well as in the methodology applied for reporting prevalence of autism (Talantseva et al., 2023). Boys are diagnosed with ASD more often than girls at a rate of 4:1. However, the proportion of girls diagnosed with autism increased gradually between 2000 and 2021 period, which is likely due to increased awareness that autism manifests differently in females than in males (Hodis et al., 2025). The disorder is present before the age of 3 years and continues throughout life, although symptoms may vary in the course of the illness (Hodges et al., 2020).

The cause of autism is still unknown but scientific evidence points to the combination of several environmental and genetic factors which may serve as risk factors for having a child with autism (Sauer et al., 2021). According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed., text rev.; DSM-5-TR), autism spectrum disorder is characterized by (A) persistent deficits in social communication and social interaction and (B) restricted, repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2022). Autism is a heterogeneous group of disorders with varying levels of function. This broad variation is highlighted by the term spectrum, as some children can function and live independently, or with minimal support whereas others may require intensive support and life-long care (Masi et al., 2017). The disorder can have a considerable effect on children's ability to perform simple daily living activities, such as toileting and dressing, and participate in school and other environments (Auld et al., 2022).

Children with ASD may additionally have other comorbid or associated conditions such as intellectual disability, sensory processing disorders, seizures, learning disorders, and attention deficit hyperactivity disorders, which further impact children's engagement

and participation in valued occupations and roles (Al-Beltagi, 2021). These challenges extend beyond the child, placing immense pressure on caregivers and families.

1.3. Impact of Autism on Parents' Quality of Life and Competence

Caring for children with ASD means that parents need to have sufficient knowledge and the required skills to effectively manage their children's challenging behaviors and support their daily needs. These caregiving demands may diminish parents' sense of competence and greatly influence their overall QoL (Dababnah & Parish, 2013; Papadopoulos, 2021; Shattnawi et al., 2021).

Parental competency is a complex concept that encompasses the ability to address the emotional and developmental needs of children (Alnasraween et al., 2023). It includes knowledge, skills and attitudes important for providing a nurturing and stimulating environment to children. Parental competency in children with ASD is associated with parents' awareness of their children and the ability to use effective strategies to help them develop and participate in everyday life (Mohammadi et al., 2020). A review on parental competence among ASD caregivers reported several factors that may influence parents' sense of self-competence and QoL. These include the parents' ability to understand children's reactions, their level of self-confidence, use of the EI services, professional relations, familial and social support, and physical and mental health (Mohammadi et al., 2019). This review clearly shows that there is a strong relationship between sense of self-competence and QoL particularly for parents of children with ASD.

QoL is an individual's self-perception regarding their psychological, social, emotional, and physical domains (Eapen et al., 2023). Children with ASD need constant care and require significant time and energy on the part of caregivers (Yesilkaya & Magallón-Neri, 2024). Mothers, in particular, are primary caregivers and often follow structured programs to support their children. This role requires a high level of psychological and physical abilities from the parents' side, who bear a heavy care burden, which in turn may lead to poor QoL and other psychological difficulties and mental health problems in the long term (Foster et al., 2013; Shattnawi et al., 2021). It

has been reported that parents of children with ASD are at high risk of reduced QoL compared to their peers who have children with typical development or other disabilities (Al-Jabri et al., 2022; Konowalek et al., 2025). Hence, QoL is considered to be a significant health concern for parents of children with ASD.

1.4. Autism in Palestine

As in many other low- and middle-income countries, the prevalence of children with ASD in Palestine is unknown. This is generally attributed to the lack of epidemiological studies, the unsatisfactory diagnostic system, and the limited infrastructures and resources that hinder the implementation of broad assessments and data collection systems (Dababnah, 2018). In the national disability report issued by the Palestinian Bureau of Statistics, children with ASD were grouped under learning disabilities or difficulties (Palestinian Central Bureau of Statistics [PCBS], 2020). According to unpublished estimates cited in Ghanim et al. (2024), approximately 5,000 of Palestinian children are on the spectrum, with a prevalence of 91 per 10,000.

Health services in Palestine are provided by various organizations, among them the government and the private sectors, non-governmental organizations (NGOs), as well as the refugee services of the United Nations Relief and Works Agency (Harb, 2020). One of the key contributors to the provision of services to children with intellectual disabilities and ASD in Palestine is NGOs and not-for-profit organizations, which constitute 11% of the total health utilization in the West Bank (Shawahna, 2021). For example, An-Najah Child Institute offers children with ASD and their parents the needed services using a comprehensive assessment approach and training. It also established a kindergarten for these children that covers both educational and therapeutic outcomes (Wahdan et al., 2023) .

The Friends of Autistic Children Society and the Autism Superhero Foundation were both established by parents of children with ASD. The primary aim of these societies is to raise community awareness regarding the disorder, provide autistic children with the needed support, and empower parents by training them on effective strategies to better support their children. Another important organization that provides

tailored services, speech and language therapy, special education, and OT, to children with ASD is the Jerusalem Princess Basma Center for Disabled Children. Although this center offers services that are supported by evidence-based (e.g., Applied Behavioral Analysis) and by well-trained personnel, many parents residing in the West Bank still find it difficult to access such services due to the travel limitations imposed by Israeli authorities (Human Act Foundation, 2023; Shawahna, 2021).

Despite these initiatives to enhance services provided for children with ASD in Palestine, in many instances, families have noted that access to and benefits from essential services continue to be hampered (Dababnah, 2018). The commonly reported barriers by parents include a lack of awareness about the disorder, concerns regarding quality of provided services, a shortage of specialized professionals and centers, and restrictions arising from the geographical, political, economic, social, and cultural factors (Dababnah & Bulson, 2015; Shawahna, 2021).

Taken together, these challenges can greatly affect children's development and place considerable strain on their families, and if not addressed, these individuals will continue to encounter major barriers to care and inclusion. Such systemic gaps underscore the need for service delivery innovations in EI that are family-centered. Telecoaching model shows potential to expand access to support services, develop parental capacity, and overcome many of the contextual constraints experienced by families in Palestine.

1.5. Telecoaching in Early Intervention

EI services and programs play an important role in helping children with a wide range of developmental conditions achieve the most optimal outcomes (Richardson et al., 2019). Additionally, caregivers would also benefit from these programs because they encourage them to develop key knowledge and skills necessary to support their children in natural environments, which can also enhance QoL for both (Estes et al., 2019; Liu et al., 2025). These EI services are provided in early childhood, which is considered a critical time of a child's development. New skills are more likely to be acquired during

this time as the child's brain is still developing and is more plastic than at an older age (Sullivan et al., 2014).

Literature has demonstrated that early access to EI services can have long-term beneficial effects on children's outcomes (e.g., adaptive and developmental skills) and on the QoL of their families (Sapiets et al., 2020). EI services are provided by professionals from various fields and are centered around the needs and priorities of clients and their families (Douglas et al., 2020). For example, the Individuals with Disabilities Education Act (IDEA, 1997 Amendments) made clear that, to the greatest extent possible, EI services must be delivered in natural environments, including the home and community settings where children without disabilities typically engage (U.S. Department of Education, 2011). Fulfilling such a need requires a high level of cooperation among healthcare providers and the parents of the child, who are considered the natural change agents (Carter et al., 2024; Lage et al., 2024). Thus, parent-mediated interventions (PMIs) and family-centered practices (FCP) are central to EI programs (Dunst & Espe-Sherwindt, 2016; Pan et al., 2023).

According to the principles of FCP and PMIs, parents are acknowledged as partners in the service planning and delivery, including the assessment of abilities and needs, identification of treatment goals, planning and implementation of treatment, and evaluation of outcomes (Kuo et al., 2012; Pan et al., 2023). Reviews have shown that when parents take an active role in the design and the provision of EI services, better outcomes for both the child and the family can be achieved (Jimenez-Arberas et al., 2024; Watling et al., 2023). Indeed, for more than two decades, professionals including OTs have been tasked to develop effective strategies for supporting young children and their families to meet their defined goals through intervention approaches that apply the principles of PMIs and FCP in natural contexts ((Lage et al., 2024; Townsend et al., 2007). Coaching as PMI is commonly used to support parents' involvement in the intervention process (Graham et al., 2009).

The emergence of parent coaching in the EI literature dates back to the late 1990s, and it has since been recognized by the community of allied health professions as an effective model in helping families of children with disabilities. (Kemp & Turnbull, 2014). Coaching principles rely on the reciprocal collaborative relationship between the coach (the provider) and the coachee (the parent or any caregiver who works directly

with the child) (Akhbari Ziegler & Hadders-Algra, 2020). Coaching draws upon adult learning strategies and provides caregivers with opportunities for reflection and problem-solving to acquire and refine the knowledge and skills they need to help children in typical family situations (King et al., 2024).

Coaching in EI lacks a clear, pragmatic definition, and the existing literature uses parent training and/or education and parent coaching interchangeably. However, according to Akhbari Ziegler & Hadders-Algra (2020), the two approaches should not be treated interchangeably as there are key differences between them. Unlike parent training/education, where the provider instructs or directs parents on how to implement the specific intervention to enable them to reproduce the learned strategies with their children in daily activities and routines, coaching implies that the provider guides and empowers parents on how to work with their children and help them achieve desired goals within their natural environments.

Parents' training includes the provider playing the role of the teacher who decides the intervention's what, how, and when, thus fostering the instructor-learner relationship between the professionals and the families. In contrast, parent coaching supports a relationship-directed approach between the provider and family based on the principles of FCP (Kemp & Turnbull, 2014). Child development is the primary focus of parent training or education programs. In coaching, the goal is to optimize children's potentials within their natural environment and empower families by helping them build on their existing skills, develop new skills, and, importantly, enhance their problem-solving skills to support their children in current and/or future goals (Akhbari Ziegler & Hadders-Algra, 2020). The definition of coaching by Rush et al is the most commonly cited in the EI and pediatric rehabilitation literature:

“An adult learning strategy in which the coach promotes the learner's (coachee's) ability to reflect on his or her actions as a means to determine the effectiveness of an action or practice and develop a plan for refinement and use of the action in immediate and future situations” (Rush & Shelden, 2011, p.8).

This definition indicates to collaborative and interactive relationships between family members and healthcare practitioners in the process of addressing beneficial goals for the child and the family. To achieve this collaboration in decision-making and facilitate desired outcomes, Rush and colleagues proposed key strategies of coaching

practices: joint planning, observation, action/practice, reflection, and reciprocal feedback (Rush M' & Shelden, 2020). Through shared decision-making process, these strategies are applied individually and flexibly. As a result, parent coaching in EI serves two purposes. The first is to enable the caregiver to take an equal and active role in the intervention process, and the second is to help them make informed decisions about the intervention. Family members are not instructed on what to do by the coach, but rather are given exploratory situations to learn how to implement development stimulation principles in daily life on their own. In this approach, the entire family is the focus, and the healthcare professional and family member work together in partnership (Akhbari Ziegler & Hadders-Algra, 2020; Graham et al., 2010; Tkach & Earwood, 2024).

In recent years, after the onset of COVID-19 and due to technological advancements, many EI providers have begun adopting telehealth as an alternative approach to coaching parents (Akemoglu et al., 2019; Childress & Schumaker-Murphy, 2024; Kronberg et al., 2021). Telehealth originates from telemedicine as a practice model and is defined as the use of telecommunication and online technologies to provide health care at a distance (World Federation of Occupational Therapists [WFOT], 2014). It encompasses two forms: synchronous (i.e., a live connection over the internet between the provider and the family using videoconferencing platforms such as Zoom) or asynchronous (i.e., a save and forward approach, where the family sends recorded audio or video materials, images or text files to the provider who in turn review them, and send their feedback to parents at a later time) (Cason, 2014) .

Telehealth in EI and pediatric rehabilitation is employed as an umbrella term to explain a variety of services offered remotely, such as assessment, diagnosis, treatment, prevention, consultation, education, training, counseling, monitoring, and coaching (Bravo et al., 2023). Such services are called teleassessment, teletherapy, telepractice, and telecoaching in literature (Cason et al., 2018). However, these terms are not alike since each entails a different purpose, focus, and implementation procedure. For example, in teletherapy, the provider uses online technologies to lead the intervention process and addresses specific developmental concerns through structured therapeutic activities. However, in telecoaching, the caregiver plays a more active role in the intervention process, and the role of the provider is to support and guide the caregiver in analyzing their child's needs, planning and implementing strategies with their child

during daily activities to facilitate development within natural contexts like home, school, and community (Sagui-Henson et al., 2022).

The increasing demand to facilitate children's access to EI services has resulted in a wealth of literature examining whether telecoaching is feasible, acceptable, and effective in providing EI services to families from different populations, including those raising children with ASD. This evidence comes from applied behavioral analysis (Barkaia et al., 2017; Ferguson et al., 2018), speech and language therapy (Hao et al., 2023; Sutherland et al., 2018), psychology (Kelson & Dorstyn, 2023), a(Little et al., 2018). In OT, coaching via telehealth has become increasingly prevalent as an approach to service delivery for different health populations and across the lifespan (Kistler et al., 2021) (Kistler et al., 2021). The following section discusses the use of coaching in OT field and the rationale for selecting occupational performance coaching (OPC) as a model to guide this research intervention.

1.6. Telecoaching in Occupational Therapy

Occupational therapy focuses on helping individuals across the lifespan to participate and engage in occupations they value (AOTA, 2014). Occupations are personal and largely shaped by social, cultural, and physical environments (Law et al., 1996). Occupational performance refers to the capacity of the individual to carry out chosen occupations which are products of the dynamic interplay of the individual, the occupation and the environment (Boop et al., 2020). The person's occupational performance improves with the increased fit between these three components. Since individuals carry out occupations within their unique combination of contexts, they are considered the experts in their occupational performance. Hence, to help individuals achieve optimal participation, OTs utilize various intervention approaches that facilitate the active involvement of clients and promote the achievement of indivi(Bin Zuair et al., 2025).

Coaching intervention is one such approach. It has gained popularity since 2007 and is increasingly recognized as a distinct model for engaging with clients in OT practice (Kistler et al., 2021; Simpson, 2015)l., 2021; Simpson, 2015). In the new

enablement-oriented framework for occupational therapy practice, OTs are expected to demonstrate competency in enabling individuals' occupations, and coaching is identified as one of the ten enablement skills within this framework (Townsend et al., 2013).

Coaching in this framework is defined as:

“is a specific conversational partnership for enabling occupational change that assists clients to clarify what is important to them, access their strengths, resources and creativity, choose goals and design and follow a plan of action to get what they want” (Townsend et al., 2013, p. 119)

Townsend and colleagues stated that this definition of coaching is closely associated with the definition of the International Coaching Federation (ICF) where life coaching is defined as an ongoing partnership with clients to help them produce fulfilling results in their personal and professional lives, improve their performance and enhance their quality of life. However, what makes coaching implemented by OTs different from the ICF definition is that OT coaching focuses on guiding clients toward occupational change or development (Townsend et al., 2013).

According to this definition, it is clear that the occupational therapy paradigm and coaching principles are closely aligned. In the OT paradigm, therapists are expected to design client-centered interventions to maximize participation in valued occupations by jointly analyzing clients' habits, routines, and roles within their physical and social environments and contexts (Tornebohm, 2014). Thus, parent coaching is an approach that operationalizes client-centeredness principles within OT practice (Graham et al., 2020). This approach highlights the centrality of the OT–family relationship while acknowledging clients' preferences, values, and perceptions in treatment planning (Boop et al., 2020).

In the last decade, the growing interest in coaching practices has prompted OTs to develop specific occupational therapy coaching approaches that support the delivery of effective interventions for different populations, including parents and caregivers (Kahjoogh et al., 2016). Coaching approaches within OT pediatric rehabilitation include, Occupation-Based Coaching (OBC), Occupational Performance Coaching (OPC), Coaching in Context, and Solution-Focused Coaching (SFC) (King et al., 2019, 2024). While the principles of these models focus on the importance of involving parents or caregivers as equal partners in the process of setting goals and creating

strategies that support children's participation in daily occupations across natural contexts (King et al., 2024). Among these, the OPC model is consistently reported as the most used by OTs in their coaching interventions with clients with different conditions (Graham et al., 2024).

The OPC model focuses in helping parents or caregivers achieve self-identified occupational performance goals for themselves and their children (Graham et al., 2020). Through therapist-caregiver collaboration and dynamic performance analysis of the child's and/or caregiver's occupational performance, caregivers can identify actions that facilitate goal achievement and develop transferable skills. With the help of practitioner-guided but parent-identified solutions to occupational performance barriers, OPC enables children and parents to participate in occupations at home and in the community. Practitioners use specific language, questions, and reflection cues within this problem-solving framework to help parents discover solutions and assess and apply them (Graham et al., 2020).

The OPC has been recognized as a practical intervention approach for a wide range of health populations, including children with ASD, to facilitate their participation in daily activities, routines, and roles (Kahjoogh et al., 2016). In a recent scoping review of coaching interventions in occupational therapy, OPC is rated as the most used intervention by OTs in pediatric rehabilitation ($n = 16$), followed by the OBC and the SFC (Graham et al., 2024). Ten studies in this review used coaching through telehealth to support clients with various disabilities, including children with ASD. This reflects the increasing popularity of this model in occupational therapy practice and its role in helping clients with diverse health needs, especially children and their parents.

Coaching parents of children with ASD and other disorders is traditionally delivered face-to-face in children's homes and natural environments as this allows for direct observation and application of strategies within typical daily routines (Graham et al., 2016; Kessler & Graham, 2015). However, after the COVID-19, several studies have been published examining the impact of using telehealth as an alternative approach to coaching caregivers and their children (Bravo et al., 2023; Kane & DeBar, 2023). One of the commonly utilized approaches is telecoaching. Telecoaching has gained prominence in OT literature as a means of guiding coaching interventions for caregivers

of children with ASD and other disabilities (Gerow et al., 2021; Ito & Inoue, 2022; Kunze et al., 2021; Little et al., 2018, 2023).

Adhering with the core principles of this model, OTs who employ OPC via telehealth follow three structured but interactive enabling domains when (Graham et al., 2020). These domains are: connect, structure, and Share/Information exchange. In each of these domains, OTs consider a series of steps that help in adjusting their coaching techniques based on caregivers' learning needs and responses. In addition, through the intervention process, the emphasis on each domain may vary depending on each caregiver's needs and priorities (Graham et al., 2020)s (Graham et al., 2020).

In the connect phase, the aim is to put parents at ease and to develop a strong collaborative relationship by promoting trust, showing empathy and demonstrating effective listening skills. This phase is particularly important and usually takes place in the first sessions, as parents may feel hesitant and uncomfortable sharing sensitive information via platform technologies like Zoom (Graham et al., 2020).

In the second phase, structure, the purpose is to encourage parents to identify goals and analyse children's performance in light of their current strengths and limitations, the environment where they live, and the tasks s/he must perform. This phase also entails developing an action plan based on parents suggested solutions, implement plan, evaluate the results and encourage the generalization of mastered skills (Graham et al., 2020).

Finally, in the Share/Information exchange, the coach provides and shares information with parents upon their request, to maintain the principles of coaching while delivering the sessions. All these stages are implemented while adhering to a fidelity framework to ensure consistent delivery and to facilitate replication in future trials (Graham et al., 2020)

Several studies have examined the use of the OPC delivered through telehealth for parents and their children with ASD (Angell et al., 2023; Bernie et al., 2023; Choi et al., 2023; Gerow et al., 2021; Panotes et al., 2024; Pijarnvanit & Sriphetcharawut, 2024; Wallisch et al., 2019). The focus of these studies varied and included aims like feasibility, efficacy, acceptability and parent or caregiver lived experiences. The majority of these studies showed that the implementation of OPC remotely is feasible, highly acceptable, and resulted with positive outcomes for both children and their

parents A detailed review of these studies is provided in the literature review chapter. However, despite the growing evidence on the use of this model for supporting parents and their children with ASD in Western and high-income countries, its implementation with the same population within low-resource, Arabic-speaking setting like Palestine needs to be examined.

Within the context of the current research, OPC model was adopted to coach Palestinian parents of children with ASD via telehealth. The coaching process was guided by the core principles of the OPC, while taking into account family dynamics and norms, and accessibility needs. The following sections provides insights of the research problem (i.e., why investigating the telecoaching intervention for parents of children with ASD in Palestine), its significance (i.e., theoretical, practical and methodological contributions), study aims and questions, and a brief explanation of the research methodology and methods used to achieve the study objectives.

1.7 Study Problem Statement:

Palestine, like the rest of the world, was affected by the COVID-19 pandemic, which had significant economic consequences, including changes to the healthcare system and reduced financial capacity of families to pay for services (Juzoor for Health and Social Development, 2021). The Palestinian Central Bureau of Statistics stated that during the pandemic the poverty rose to 27.8% (Palestinian Central Bureau of Statistics, 2020b), and the future of a whole generation of children and youth, especially in the West Bank and Gaza Strip remains at risk due to the escalation of political tensions and the recent outbreak of war in October 2023 (Mubarak, 2025)

These challenges have inevitably impacted the QoL of people with disabilities, especially children, who continue to experience marginalisation and stigma. For children with autism and their parents, the impact is even greater, as they continue to struggle with barriers to education, healthcare, inclusion, and acceptance within their communities (Dababnah & Bulson, 2015). Most of EI and rehabilitation services are provided in private clinics, and parents are required to cover therapy costs out of pockets (Wahdan et al., 2023). In addition, families have to travel long distances to access specialized centres, often facing checkpoints or unaffordable transportation expenses (Dababnah & Bulson, 2015). Considering that over half of Palestinian families are below the poverty line it is thought to be extremely difficult, if not impossible, to

pay for these services. As a result, many children are deprived of their right to receive therapy. Moreover, the ongoing political unrest consistently interrupts or even cancels numerous therapy sessions, leaving a significant number of children without therapy or support (Dababnah, 2018). As a result, delays in their abilities are expected to be observed. Other impediments include a shortage of professionals and specialized centers, cultural and geographical barriers, and time constraints arising from caregivers' work commitments (Dababnah, 2018; Dababnah & Bulson, 2015; Dababnah & Parish, 2013; Taslaq & Russo, 2016; Wahdan et al., 2023)

Parents of children with autism also face considerable difficulties in their effort to deal with the needs of their children in the natural environments, especially in the home context (Shawahna, 2017). These challenges may be attributed to a lack of knowledge and skills regarding the disorder and the most effective evidence-based strategies required to support their children (Dababnah & Parish, 2013). Existing literature indicates that the lack of parent-mediated and coaching interventions may adversely influence the self-competency of the caregivers and may lead to developing a feeling of dependency on service providers (Althoff et al., 2019; Pickard et al., 2016). In many pediatric settings in Palestine, parents rarely take an active role in therapy sessions and are usually instructed by therapists on what to do with their children (Shawahna, 2017; Wahdan et al., 2023). Such practices do not align with the best recommended EI approaches, which emphasize the importance of collaborating with parents as active partners in intervention and supporting functional outcomes within natural environments (Webster et al., 2017) (Webster et al., 2017).

Such challenges point to the pressing need for evidence-based and innovative approaches to service delivery for Palestinian children with ASD and their families. Coaching interventions and especially when delivered remotely have always been identified as effective interventions that not only enable access to needed services but also lead to positive outcomes on both children and parents (Choi et al., 2023; Gerow et al., 2021; Little et al., 2018).

Although the benefits of parents telecoaching intervention are increasingly reported, searching the literature reveals no research investigating its effectiveness for children with autism or other disorders in Palestine. The only related study was conducted by Wahdan et al., (2023) who targeted parents of children with autism in

Palestine. In this study, the authors examined the effect of a training program named (IY-ASD) on parents' stress levels and children's behavioral skills. Nevertheless, this program was offered face-to-face and did not comply with the concepts of coaching. The program emphasized instructing parents on predetermined strategies to use rather than supporting and empowering parents in the process of decision-making on functional activity and participation in daily life (Wahdan et al., 2023).

The lack of empirical research on interventions targeting children with ASD and their parents in Palestine, coupled with the impressing demands for innovative approaches to facilitate access to necessary EI services, underscore the importance of the current research. This study, therefore, aimed to evaluate the acceptability, feasibility, and potential impact of an eight-session telecoaching intervention for parents of children with ASD in Palestine, delivered using the OPC model via telehealth.

1.7. Study Aim and Objectives, Questions, and Hypotheses

This research addressed a number of objectives and questions that can provide important insights into the current research problem, the acceptability and feasibility of telecoaching for parents of children with ASD in Palestine. It also included three hypotheses that can provide answer to whether the use of such an intervention could have potential impact on both parents and their children.

1.7.1. Study Aim and Objectives:

The main aim of the current mixed-method pilot randomized controlled trial (RCT) is to explore and examine whether telecoaching intervention for parents of children with ASD in Palestine is acceptable and feasible. It also aims to provide preliminary evidence on the potential impact of telecoaching intervention on children's performance and parents' sense of self competence and QoL. This research was guided by a set of primary and secondary objectives and questions.

1.7.1.1. Primary objectives include

- 1.To explore whether telecoaching intervention is acceptable for parents of children with ASD in terms of their overall experience and perceived benefits, facilitators, and barriers.
- 2.To determine the feasibility of providing a parent telecoaching intervention, including (recruitment capability, enrolment and use of Sanad Al-Hayat website, randomization, retention, assessment completion, intervention fidelity, and safety).

1.7.1.2. Secondary objectives include:

- 3.To examine the potential impact of the telecoaching intervention on children's performance in parent-identified goals, as measured by the Canadian Occupational Performance Measure (COPM) from pre- to post-intervention.
- 4.To assess the potential impact of telecoaching on children's scores on the Autism Treatment Evaluation Checklist (ATEC) and the Childhood Autism Rating Scale–Second Edition (CARS-2) from pre- to post-intervention.
- 5.To evaluate the potential impact of the telecoaching intervention on parents' sense of self-competence and quality of life (QoL).

1.7.2. Study questions:

This study aimed to answer the following questions:

- 1.To what extent, and in what ways, is telecoaching intervention acceptable for parents of children with ASD in Palestine?
- 2.To what extent, and in what ways, is providing telecoaching intervention for parents of children with ASD in Palestine feasible?
- 3.What are the changes in parents' perceived satisfaction regarding their children's performance in goals they identified as important, from pre- to post-intervention?
- 4.Does telecoaching intervention for parents have the potential to increase children's performance in goals identified as important from pre- to post-intervention?

5. Does telecoaching intervention have the potential to improve children's outcomes as measured by the Autism Treatment Evaluation Checklist (ATEC) and the Childhood Autism Rating Scale–Second Edition (CARS-2)?
6. Does telecoaching intervention improve parents' overall sense of competence and quality of life (QoL)?
7. How do qualitative findings on acceptability and feasibility complement and extend the quantitative outcomes on children's performance and parents' competence and quality of life?

1.7.3 Study Hypotheses

Hypothesis testing is not recommended in a pilot RCT due to the lack of sufficient statistical power (Lancaster et al., 2004). However, inferential statistics can be used for exploratory purposes to estimate effect sizes of the telecoaching intervention on both children and their parents, thereby informing the design of future large-scale trials.

Based on the study aims, the following hypotheses were proposed:

1. Children whose parents participate in the telecoaching intervention are expected to show improvements in important goals identified using the COPM from pre- to post-intervention.
2. Children in the telecoaching group are expected to demonstrate greater improvements on the ATEC and CARS-2 compared to children in the waitlist control group.
3. Parents in the telecoaching group are expected to report higher levels of self-perceived competence in supporting their child's development (as measured by the PCS-ASD) compared to parents in the waitlist control group.
4. Parents in the telecoaching group are expected to report improvements in overall quality of life (as measured by the generic WHOQoL-BREF and the autism-specific AQoLA) compared to those in the waitlist control group.

1.8. Study Significance

This study is significant on several levels: scientific, practical, and policy-related. Scientifically, to date, this is the first study to investigate telecoaching for parents of children with ASD in an Arabic-speaking setting such as Palestine. By generating local evidence, the study adds to what is known about telehealth interventions in resource-limited and culturally distinct contexts. Much of the existing literature on telecoaching comes from high-income countries with well-established health and education systems. The present research therefore extends the reach of this body of work by offering findings from Palestine. It also contributes to understanding how OPC model can be applied across diverse contexts.

Exploring the acceptability and feasibility of this approach also provides useful benchmarks for planning a larger RCT with children with ASD in different regions of Palestine, including the Gaza Strip and Jerusalem. Beyond this, the study may encourage future investigations of telecoaching with other client groups who have different needs.

On a practical level, the study responds directly to service delivery challenges faced in Palestine. To access specialized centers, many families must travel long distances, often passing through checkpoints or incurring cost-prohibitive transportation expenses. Telecoaching, delivered through the commonly available platforms such as Zoom, can be a convenient, scalable and sustainable solution that can be integrated into the existing rehabilitation services. At the policy level, the results can be used to guide national disability and rehabilitation policy. They may also help stakeholders make better decisions about investing in telehealth infrastructure, workforce training, and appropriate regulatory frameworks.

1.9. Study Structure

This thesis is structured into five chapters. Chapter one introduces the study, outlining its background, problem statement, significance, aims and objectives, and key

definitions. Chapter two presents a comprehensive review of the literature, covering the study's theoretical and conceptual frameworks, ASD, EI, parent-mediated and coaching approaches, telehealth delivery, and the OPC model. The review highlights gaps relevant to the Palestinian context and provides the rationale for the current study. Chapter three describes the methodology, including the mixed-methods pilot RCT design, recruitment of participants, randomization, description of the intervention, outcome measures, data analysis procedures and ethical issues. Chapter four presents the results, combining quantitative and qualitative findings across the three main domains of acceptability, feasibility, and potential impact. Chapter five discusses the findings in relation to the existing literature, considers implications for practice and policy, identifies limitations, and makes recommendations for future research.

1.10. Summary

This chapter established the foundation for the current study, which examines the potential of using telecoaching interventions to support parents of children with ASD residing in the West Bank. The chapter began by introducing autism from global and national perspectives, emphasizing its impact on children's development as well as parents' QoL and sense of competence. Parent telecoaching was presented as an evidence-based EI and occupational therapy approach, with particular emphasis on the OPC model as a guiding framework. The need for adopting such innovative interventions in Palestine was justified through the research problem, which highlighted the significant challenges parents face in accessing autism-related services. The chapter also outlined the study's aims, objectives, research questions, hypotheses, and significance, before concluding with an overview of the study's scope, design, and thesis structure. Together, this introduction set the stage for the next chapter, which provides a detailed review of the literature on telecoaching for parents of children with ASD and identifies the knowledge gaps this study seeks to address.

Chapter 2: Literature Review

2.1. Introduction

Raising an autistic child places families at the intersection of developmental, emotional, and social demands, while they contend with fragmented, costly, and sometimes stig(Dababnah & Parish, 2013; Sapiets et al., 2020). In Palestine, these pressures intensify amid political instability and fragile infrastructures, leaving parents with limited specialized services, long waits, and travel burdens that make care inconsistent or unaffordable (Jones et al., 2017).

EI and pediatric rehabilitation help most when supports align with family priorities and are practiced in everyday contexts. This has accelerated a shift toward family-centered, parent-mediated approaches, particularly coaching, that build caregiver capacity through collaborative goal setting, guided reflection, and problem solving in natural routines (Akhbari Ziegler & Hadders-Algra, 2020; Malucelli et al., 2021). Telehealth widens access to coaching by reducing travel and scheduling barriers while preserving interactive, relationship-centered work when implemented with fidelity, and reviews suggest that outcomes can be comparable to in-person delivery when aligned with family goals (World Federation of Occupational Therapists [WFOT], 2014). Local work in Palestine indicates that structured parent programs can reduce stress and strengthen management skills despite resource constraints, which supports the plausibility of a culturally adapted coaching model in this context (Wahdan et al., 2023).

This chapter sets the conceptual and empirical groundwork for testing such a telecoaching intervention, synthesizing international, regional, and Palestinian evidence and identifying the gaps that motivate the mixed-methods pilot trial that follows.

2.2. Theoretical and Conceptual Foundations of Telecoaching

Theoretical and conceptual frameworks guide how an intervention is designed and interpreted. A theoretical framework is a collection of concepts or mechanisms that

could drive change (Grant & Osanloo, 2014). A conceptual framework helps in mapping those theoretical concepts onto concrete constructs, variables, and hypothesized relationships relevant to the study (Ravitch & Riggan, 2017). Integrating both strengthens rigor and coherence, which is especially important in pilot work that may guide a larger trial later.

This study aligns family-centered practice with Occupational Performance Coaching (OPC) and draws on Social Cognitive Theory (SCT), Self-Determination Theory (SDT), Adult Learning Theory (ALT), Ecological Systems Theory (EST), as well as two adoption lenses, the Theoretical Framework of Acceptability (TFA) and the Unified Theory of Acceptance and Use of Technology (UTAUT).

Family Systems perspectives position caregivers as the primary agents of their children's development (Dunst & Espe-Sherwindt, 2016), and OPC operationalizes that stance through collaborative goal setting, guided reflection, and problem-solving in daily routines (Graham et al., 2009). Evidence has consistently linked OPC with gains in parental competence and child participation in person and via telehealth (Alatar et al., 2025; Graham et al., 2024; Jamali et al., 2022; Wallisch et al., 2019).

SCT helps explain how self-efficacy supports parents to test and sustain strategies during everyday activities (de la Fuente et al., 2023). SDT adds the roles of autonomy, competence, and relatedness in maintaining engagement (Ryan & Deci, 2019). ALT supports a participatory, problem-focused pedagogy that fits the realities of family life (Knowles et al., 2020). EST situates change across nested contexts that are salient in Palestine, from home routines to socio-political constraints (Rosa & Tudge, 2013).

TFA and UTAUT inform how parents judge burden, coherence, and practicality and guided elements of the interview schedule and acceptability measures (Sekhon et al., 2017; Venkatesh et al., 2003). Together, these perspectives clarify how telecoaching is expected to function, where potential barriers may arise, and which outcomes should be prioritized for evaluation.

2.2.1 Study Conceptual Framework

Figure 2.1. summarizes the study's conceptual model. OPC, nested within FCP, is expected to improve parental competence and QoL by strengthening self-efficacy

(SCT) and meeting core needs for autonomy, competence, and relatedness (SDT). Parent-level changes are then expected to support child occupational performance on parent-selected goals and progress on autism-related measures. ALT shapes the coaching pedagogy, EST marks the multi-level context, and TFA and UTAUT inform how adoption and acceptability are assessed. Outcomes are measured pre- and post-intervention using Parental Competence Scale- Autism Spectrum Disorder (PCS-ASD), World Health Organization Quality of Life-BREF (WHOQOL-BREF), Arabic-Quality of Life Autism (A-QOLA), Canadian Occupational Performance Measure (COPM), Autism Treatment Evaluation Checklist (ATEC), and Childhood Autism Rating Scale - Second Edition (CARS-2), with feasibility tracked across recruitment, retention, fidelity, and assessment completion.

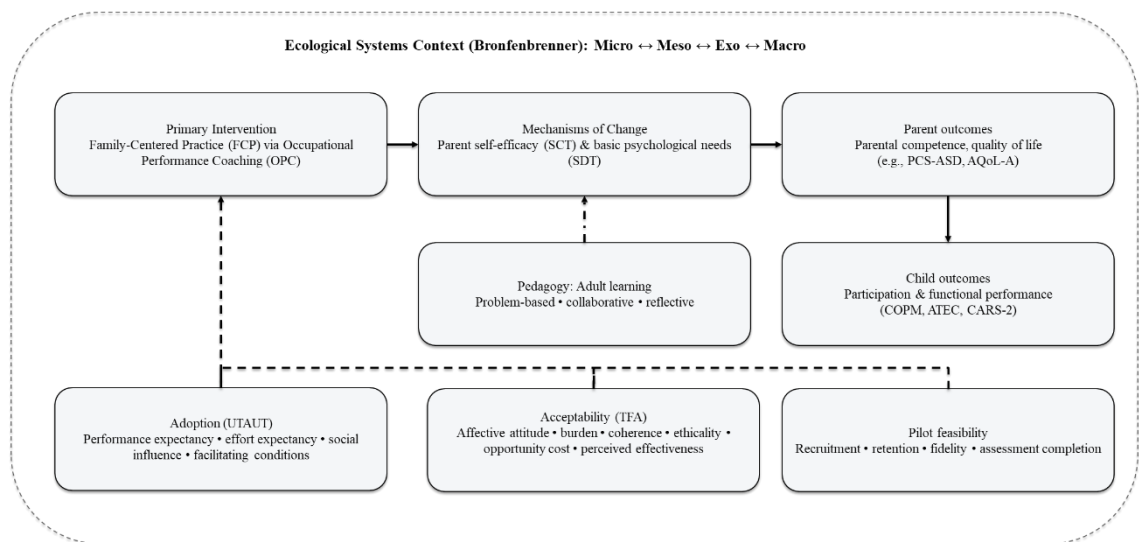


Figure 2.1.: Conceptual framework underpinning the telecoaching pilot randomized controlled trial.

Note: The dashed outer boundary represents the ecological context. Solid lines show the hypothesized pathway from OPC, through mechanisms of self-efficacy and basic psychological needs, to parent and child outcomes. Dashed lines indicate contextual and implementation influences, with Adult Learning shaping pedagogy and UTAUT and TFA informing adoption and acceptability. Feasibility is evaluated across recruitment, retention, fidelity, adherence, and assessment completion.

Table 2.1 translates the framework into practice. The OPC sequence: Connect, Structure, and Share is mapped to parent-selected COPM goals, routine-based action plans, tailored resources, guided reflection, and documentation with the OPC Fidelity

Measure (OPC-FM). Feasibility is monitored across recruitment, retention, fidelity, adherence, and assessment completion following guidance for pilot trials (Aschbrenner et al., 2022). A priori feasibility thresholds are specified in the methods chapter so that success criteria are clear before results are interpreted.

Table 2.1.: Operational Mapping of the Conceptual Framework.

Domain	Theoretical basis	Intervention components	Indicators/Measures
Intervention core	Family-centered practice (FCP); Adult Learning Theory (ALT)	OPC sequence (Connect, Structure, Share); parent-selected COPM goals; collaborative performance analysis; routine-based action plans; Sanad resources; in-portal feedback; OPC-FM case-note documentation	COPM (Performance, Satisfaction); OPC-FM; case-note audits
Parent mechanisms and outcomes	Social Cognitive Theory (SCT): self-efficacy; Self-Determination Theory (SDT): autonomy, competence, relatedness	Connect (trust, validation, priorities); Structure (goal-setting, planning, routine-based actions); Share (resources, reflection, problem-solving)	PCS-ASD; WHOQOL-BREF; A-QoLA
Child outcomes	SCT: participation shaped by parental competence; SDT: autonomy and engagement	Parent-led strategies in daily routines	COPM (child goals); ATEC; CARS-2
Contextual factors	Ecological Systems Theory (EST)	Attention to micro (home), meso (family-provider), exo (service access), macro (socio-political) levels	Recruitment/retention logs; adherence (session attendance, % action plans implemented)
Adoption & acceptability	Unified Theory of Acceptance and Use of Technology (UTAUT); Theoretical Framework of Acceptability (TFA)	Portal usability; booking and communication patterns; Arabic consent/orientation; resource access and utilization	STAS; TFA-aligned interview guide; usage logs

Domain	Theoretical basis	Intervention components	Indicators/Measures
Feasibility monitoring and feedback	Pilot trial feasibility framework (Aschbrenner et al., 2022)	Ongoing monitoring of recruitment, retention, fidelity, adherence, assessment completion	Recruitment and retention rates; fidelity metrics; assessment completion

Note. OPC = Occupational Performance Coaching; OPC-FM = OPC Fidelity Measure; COPM = Canadian Occupational Performance Measure; PCS-ASD = Parenting Competence Scale for ASD; WHOQOL-BREF = World Health Organization Quality of Life-BREF; A-QoLA = Arabic Quality of Life in Autism; ATEC = Autism Treatment Evaluation Checklist; CARS-2 = Childhood Autism Rating Scale-2; STAS = Saudi Telehealth Acceptance Scale; SCT = Social Cognitive Theory; SDT = Self-Determination Theory; ALT = Adult Learning Theory; EST = Ecological Systems Theory; UTAUT = Unified Theory of Acceptance and Use of Technology; TFA = Theoretical Framework of Acceptability. Benchmarks (e.g., ≥ 70 –80% retention; ≥ 2 -point COPM change; ≥ 80 % assessment completion) are specified in the Methods chapter.

2.3. Autism-Associated Challenges and Parental Outcomes:

ASD is common and carries wide effects on children’s development and on parents’ QoL and sense of competence (Zeidan et al., 2022). Many children struggle to participate in everyday routines, and parents often need clear guidance on how to support communication, behavior, and learning at home (Safi et al., 2022). These pressures add to family stress and can erode confidence, especially where services are scarce or fragmented (Shattnawi et al., 2021).

2.3.1. Autism Spectrum Disorder: Core Features and Associated Challenges

Children on the spectrum show varied profiles that can limit functional independence and participation. The World Health Organization defines autism as a neurodevelopmental condition marked by persistent difficulties in social communication and interaction, along with restricted and repetitive behavior and atypical sensory responsivity (World Health Organization [WHO], 2023).

In practice, many children have marked challenges in social interaction and in both verbal and nonverbal communication. These difficulties can reduce engagement

with people and environments, make play less flexible, and slow the acquisition and use of knowledge (Hodis et al., 2025). Restricted and repetitive patterns are also common. Hand flapping, rocking, or spinning may help a child regulate input and manage anxiety but can interfere with schoolwork, leisure, and peer relationships. When routines are disrupted, some children escalate to self-injury or aggression (Lung et al., 2024). Families in Arab countries often describe the practical side of this rigidity, such as insistence on the same route to school or the same mealtime ritual, with distress if anything changes (Shattnawi et al., 2021).

Sensory processing differences add another layer. Many children react strongly to sounds, textures, or lights, which can make eating, bathing, dressing, or classroom participation stressful (Randell et al., 2022). Parents in the region report ear covering in busy places, food refusal due to texture, or avoidance of brightly lit rooms, with occasional meltdowns that strain family routines (Ben Hassen et al., 2023; Kheir et al., 2012).

Etiology remains complex. Genetics play a central role, yet no single pathway explains autism. Many variants likely interact with environmental factors. Prenatal risks such as maternal infection or metabolic problems have been observed, while the vaccine hypothesis has been refuted repeatedly (Hodges et al., 2020; Hodis et al., 2025). Clinically, autism represents a group of related conditions with overlapping biology rather than a single disorder (American Psychiatric Association, 2013).

Co-occurring conditions are common. Intellectual disability, ADHD, epilepsy, anxiety, depression, and sleep disorders frequently accompany autism and increase care complexity across the lifespan (WHO, 2023). When combined with stigma and poor service access, these child and system factors can weigh heavily on parents' well-being and confidence. The next section focuses on those caregiver outcomes.

2.3.2. Impact on Parents' Quality of Life and Competence:

QoL is commonly described as an individual evaluation of their life status in relation to their culture, values, goals, expectations, standards, and concerns (WHO, 2012). Research on caregivers of autistic children has grown more careful in separating health-related QoL, broader well-being, and caregiver burden, yet notable measurement

gaps remain, especially in low- and middle-income countries (Alkhateeb et al., 2022; Turnage & Conner, 2022). A recent step for Arabic-speaking families is the translation and validation of the Quality of Life in Autism Questionnaire into Arabic, the A-QoLA (Alkhatib et al., 2024). This tool seems to be suitable to measure locally salient stressors, including public stigma, role expectations in extended families, and the particular pressures described by Palestinian caregivers. It clarifies how caregiving responsibilities shape both perceived QoL and broader well-being.

Evidence from the Arab region points in a consistent direction. Increased severity of autism symptoms and more challenging behaviors are often associated with poor parental QoL and increased stress levels, whereas social support and service access appear to be protective (Alkhateeb et al., 2022; Dardas & Ahmad, 2014). These patterns are probably intensified in contexts marked with ongoing political instability and poor healthcare systems.

In the West Bank, mothers report the logistics of care to be stressors in themselves, such as travel permits, difficulties commuting to specialty clinics, and missed workdays, and are often accompanied by fragmented or poorly coordinated services (Dababnah & Parish, 2013). A second West Bank study included interviews with 12 parents at the An-Najah Child Institute (nine mothers, three fathers), adds further insights. Families reported late or missed diagnoses, repeated clinic visits, social exclusion and labeling, and a grief process that often moved from denial toward acceptance. Some couples experienced strain, others reported strengthened relationships, and nearly all emphasized a search for clear and usable information (Taslaq & Russo, 2016).

These accounts map closely onto domains assessed by common QoL instruments. Experiences of psychological distress and grief, social stigma and relationship shifts, physical fatigue, and environmental barriers such as travel restrictions and fragmented services together illustrate why parental QoL may be particularly vulnerable in this setting (WHO, 2012)

At the regional level, a systematic review of 24 studies including 3,299 caregivers across ten countries reported elevated parenting stress, frequent depressive and anxiety symptoms, and poorer QoL among parents of autistic children compared with controls. Two studies also flagged caregiver physical-health problems (Alkhateeb

et al., 2022). However, most studies included in this review were cross-sectional, relied on self-report instruments such as the WHOQOL-BREF, DASS-21, PSI-SF, and HADS, and used non-probability samples concentrated in a few settings. This profile may underestimate burden in under-studied areas, yet the direction of effects appears stable.

Parental competence is related to QoL but conceptually distinct. Here, competence refers to the knowledge, caregiving and problem-solving skills, and self-efficacy that enable parents to meet their children's developmental and behavioral needs (Alnasraween et al., 2023). The increased self-efficacy is generally linked to reduced stress, improved mood, and more responsive parenting, which consequently promotes children's adaptive behavior and participation (Mohammadi et al., 2020). The Parenting Sense of Competence Scale is a generic measure that reflects global efficacy and satisfaction but, to a large extent, this instrument fails to index autism-specific demands, including communication barriers, sensory sensitivities, and repetitive or challenging behaviors (Althoff et al., 2019).

Two strands of recent work may refine the construct for regional use. Scale development in Iran suggests parents perceive competence both as adapting to current realities and as striving for excellence in care, with content spanning acceptance, emotion regulation, information seeking, mobilizing family support, and structured teaching in daily routines (Mohammadi et al., 2019). Psychometric results were strong, which indicates that competence is multifaceted and culturally embedded.

In Jordan, the Parental Competence Scale for Autism Spectrum Disorder (PCS-ASD) was developed and tested with a large caregiver sample using item response theory and showed a dominant underlying trait, good fit to a two-parameter logistic model, and expected known-group differences, including higher scores among mothers and among parents with postgraduate education (Alnasraween et al., 2023). These features suggest sensitivity to meaningful variation in Arab settings, although additional validation in Palestine would be valuable.

Literature across settings showed that three clusters of influences recur for both QoL and competence: child characteristics, caregiver attributes and coping, and the social and service environment (Alkhateeb et al., 2022; Eapen et al., 2023; Mo et al., 2025; Turnage & Conner, 2022; Yesilkaya & Magallón-Neri, 2024). International meta-analytic and review evidence highlights two child factors that most consistently predict

parental stress and QoL, namely overall functional impairment and the frequency or intensity of challenging behaviors such as irritability, aggression, and self-injury (Turnage & Conner, 2022; Vasilopoulou & Nisbet, 2016). Qualitative and observational studies, including work from Palestine and adjacent Arab countries, report similar associations but also high levels of heterogeneity, which highlights the importance of better measurement and cross-cultural validation (Dababnah & Parish, 2013).

The caregiver profile also appears to matter. Mothers often report higher day-to-day demands and stress than fathers, a gap that tends to widen when child behavioral difficulties increase or when family routines are disrupted (Alkhateeb et al., 2022; Hastings et al., 2005; Papadopoulos, 2021; Shattnawi et al., 2021). In addition, parental education may facilitate access to information and advocacy skills that strengthen competence and QoL. Yet evidence on this attribute remains mixed, with findings varying across contexts (Alkhateeb et al., 2022; Vasilopoulou & Nisbet, 2016). Literature also revealed that mental health and QoL are often associated with problem-focused coping, positive reframing, involvement in the family-based supports, and spiritual practices (Alkhateeb et al., 2022; Al-Oran et al., 2022; Sumbane, 2024; Vernhet et al., 2019). This relationship appears to be two-way: parents who feel more competent may be more likely to adopt active coping strategies, while active coping can, over time, build competence.

Social support and access to appropriate service environment can amplify or soften these risks. Support from spouses, extended family, other parents, and community groups is associated with better mood and QoL and can offset part of the impact of child severity (Alenezi et al., 2024; Russell & Ingersoll, 2021). At the same time, families frequently report long delays to diagnosis, uneven or poorly coordinated services, and inadequate school-based support, especially in fragile or overstretched systems. Such barriers are stressful and appear to lower QoL (Dababnah & Parish, 2013; Shattnawi et al., 2021).

Cultural dynamics are implicated. It has been reported that strong family relationships can be a source of emotional and material assistance, but stigma and unreliable data regarding disability can discourage early diagnosis and help-seeking (Emam et al., 2024; Ghanim et al., 2024). In qualitative work with West Bank families, mothers emphasized mistrust of information, persistent care needs, and logistical

hurdles that compounded burden (Dababnah & Parish, 2013). Regionally, social stigma, gaps in professional knowledge, and fragmented systems are common themes (Alkhateeb et al., 2022). These realities also raise a measurement concern, since generic caregiver QoL scales often miss stressors that are prominent in Arab contexts, including extended-family expectations and the weight of public stigma (Alenezi et al., 2024; Emam et al., 2024). The A-QoLA likely helps address this gap, although continued adaptation and testing across dialects and service settings would be prudent (Alkhateeb et al., 2024).

Taken together, the literature suggests that interventions are most effective when they operate at several levels. At the child level, efforts often focus on reducing challenging behaviors while promoting functional independence. For caregivers, the emphasis tends to be on building capacity and strengthening self-efficacy so they can better support their children in everyday contexts. At a broader level, interventions that help parents navigate and mitigate environmental barriers, such as access to essential services and therapy, appear particularly valuable. Family-centered, parent-mediated coaching, whether delivered in person or through telehealth, has frequently been employed with these aims in mind (Malucelli et al., 2021; Salomone & Maurizio Arduino, 2017; Tsami et al., 2023). The following section examines how EI coaching has been applied with families of children with ASD, both in person and via telehealth.

2.4. Coaching as Parent-Mediated Early Intervention for Families of Children with ASD: In Person and via Telehealth

The use of parent coaching is central to PMIs and FCP which are frequently characterized within EI programs as supportive and empowering approaches for families of children with disabilities (Pellecchia et al., 2023). In the last twenty years, these evidence-based approaches, implemented both face-to-face and through telehealth, have become leading as the focus in the mode of service delivery has shifted from a traditional model of professionals as the only providers of EI services to an approach that values the role of caregivers in providing support to their children in natural environments and everyday activities (Kronberg et al., 2021; Resua et al., 2020). Furthermore, the adoption of telehealth in coaching parents has increased the outreach

of these family-based interventions, allowing the benefit of continued guidance and support irrespective of geographical, logistic, or public health obstacles while upholding the pillars of naturalistic and relationship-focused interventions (Jimenez-Arberas et al., 2024). This shift from professionally driven treatment to parent-led and family-centered practices has been recognized by many regulatory and professional groups and evidenced by the fact that such approaches provide long-lasting, sustainable results for both children and parents (Bin Zuair et al., 2025; Sundarrajan & Franco, 2024).

Parents and caregivers are viewed as the primary agents of change in such practice models. They spend the most time with their children, understand their strengths and limitations, and can identify environmental facilitators and barriers that affect participation in daily activities. More importantly, they can incorporate realistic, naturalistic, and contextually applicable strategies that can aid in the achievement of child's developmental outcomes (Siller et al., 2018; Webster et al., 2017).

Parent coaching in EI was first introduced in the early 2000s and subsequently formalized and legally promoted through standards of practice and service guidelines of professional and policy entities (Kemp & Turnbull, 2014). For instance, in the United States, the Individuals with Disabilities Education Act (IDEA) highlighted family partnerships as a fundamental practice of EI services, reflecting the transition to a family-centered paradigm of care as opposed to the traditional child-focused approaches (Turnbull et al., 2007). Similarly, guidance commissioned by the Division for Early Childhood stressed the importance of including the whole family, not just the child, as one of the foundational principles of family-centered practices in Part C early intervention (Trivette & Keilty, 2017). Beyond policy, parent coaching is grounded in adult learning theories, which view caregivers as active, self-directed learners able to apply acquired experiences to real-life situations, strengthening the rationale for coaching methods, whether face-to-face or online (Cox, 2015).

Over time, a growing body of research and professional consensus has highlighted the limitations of traditional models such as parent training and parent education. These tend to promote a one-way exchange where an expert imparts information to passive recipients, instead of fostering collaboration with families (Akhbari Ziegler & Hadders-Algra, 2020). Such approaches can neglect family-centered principles that require decisions to be jointly made by professionals and families.

Parents have reported that didactic training can disrupt natural parent–child interaction, whereas coaching preserves roles and routines (Jeong et al., 2021).

To overcome these constraints, Rush and others developed the coaching process as a teamwork and relationship-oriented method of working with parents in natural environments (Rush et al., 2003). They emphasized the need to revisit the therapists' role from directing therapy sessions and instructing parents, to perceiving them as equal partners and engaging either at homes or via telehealth systems. This view acknowledges the fact that family members are typically interested in more than technical skill-building; they also appreciate coaching conversations that are emotional, informative, and offer a good deal of support (Kemp & Turnbull, 2014). Coaching involves not only an attempt to develop caregiver competence, but also to build partnerships on the basis of mutual respect and joint decision-making rather than hierarchical relationships (Liu et al., 2025; Siller et al., 2018).

Since its introduction, numerous initiatives have sought to develop, define, and evaluate coaching practices in EI. Literature has provided conceptual and operational definitions (Akhbari Ziegler & Hadders-Algra, 2020; Seruya et al., 2022), identified barriers and facilitators to implementation, including those unique to telehealth (Jordan et al., 2025; Jurek et al., 2023; Png et al., 2024), established fidelity frameworks (Dunn et al., 2018; Meadan et al., 2023), and measured impact on both parent and child outcomes (Alatar et al., 2025; Graham et al., 2013; Malucelli et al., 2021; Pan et al., 2023; Pijarnvanit & Sriphetcharawut, 2024; Tsami et al., 2019). A widely cited definition, offered by Rush et al. (2003) and refined over subsequent years, describes coaching as an adult learning approach where the coach helps the learner think critically about their own actions, assess how effective those actions were, and then plan ways to improve and apply them in both current and future contexts.

This definition underscores interrelated coaching practices: jointly developing plans to address particular routines, observing the coachee's actions to identify strategies, practicing skills in real-life scenarios, reflecting on what needs to change, and providing feedback based on direct observation or caregiver reports. When implemented with fidelity, either in person or via telehealth, the ultimate goal is to empower parents to be more confident and competent in promoting their children's development (Rush & Shelden, 2011).

The growing interest in coaching parents of children with ASD is reflected in the expansion of EI research examining its feasibility, acceptability, effectiveness and the lived experiences of families. Several interventions developed to support parents incorporated coaching elements delivered either in-person or via telehealth. Most are classified under the Naturalistic Developmental Behavioral Interventions (NDBIs), informed by behavioral and developmental science, and implemented through daily routines and play. These interventions entails common features, including promoting parent–child interactions during everyday activities, modeling language and other skills, using natural reinforcers to strengthen children’s attempts, and fostering turn-taking in shared activities (Althoff et al., 2019; Bin Zuair et al., 2025; Pan et al., 2023).

Examples of such PMIs include the “Treatment and Education of Autistic and Related Communication Handicapped Children” (TEACCH) (Mesibov & Shea, 2010), the “Joint Attention, Symbolic Play, Engagement, and Regulation Intervention” (JASPER) (Kasari et al., 2006), the “Developmental Individual-Differences and Relationship-Based” (DIRFloortime) (Boshoff et al., 2020), the “Hanen More Than Words program” (Sussman, 1999), the “Focus Parent Training program” (Oosterling et al., 2010), the “Improving Parents As Communication Teachers” (ImPACT) project (Ingersoll & Wainer, 2013), and the “Early Start Denver Model” (ESDM) (Dawson et al., 2009). These interventions vary in how explicitly they coach caregivers; effects may be smaller when programs emphasize instruction over in-vivo coaching (Conrad et al., 2021; Virues-Ortega et al., 2013). Despite differences in concepts, practices, and targeted skills, they share a common aim: empowering parents as primary agents of change.

Empirical evidence and reviews on these PMIs indicate consistent benefits for children with ASD as well as their parents. For children, reported gains include improvements in social and language skills, positive behaviors, sleep, reductions in ASD severity, and fewer repetitive behaviors (Alkinj et al., 2025; Cheng et al., 2022; Delemere & Dounavi, 2018; Harrop, 2015; Roberts & Kaiser, 2011). For parents, outcomes include skill acquisition, improved responsiveness and communication, ability to generalize strategies, greater self-efficacy, and enhanced well-being (Akemoglu et al., 2019; Roberts & Kaiser, 2011). Despite these positive results, one systematic review on PMIs for parents of children with ASD included 30 Randomized Controlled Trial and 1,934 participants reported relatively small effects on children’s adaptive functioning,

disruptive behavior, clinician-rated autism symptoms as well as on parent-rated core symptoms and parents well-being (Alkinj et al., 2025). A possible explanation is that some PMIs adopt education or training models rather than true coaching approaches.

(Kemp & Turnbull, 2014), for example, conducted a synthesis of eight empirical intervention studies published between 2011 and 2013 that examined coaching with parents in EI across disciplines. Two studies included children with ASD. Although positive child and family results were reported, most failed to isolate the effects of coaching, and uncertainty remained about how adaptations for individual families influenced outcomes. Similarly, Ward et al. (2020) reviewed EI programs for children at risk of developmental disability or delay and found coaching widely used and generally accepted, but with limited measurement of parent capacity building and fidelity. Pellecchia et al. (2023) also found that complete sets of caregiver coaching strategies were seldom utilized, with collaboration and in-vivo feedback observed in only a minority of sessions (Pellecchia et al., 2023). These findings suggest that, for in-person coaching programs delivered individually or in groups, fidelity is critical to achieving meaningful outcomes. The same expectations also apply to interventions delivered through telehealth.

Telehealth is defined as the delivery of services, education, and information through the use of telecommunication technologies, and it is currently viewed as a viable way of expanding access to services globally (Franz et al., 2022). It addresses typical obstacles of traditional model such as financial cost, time constraints, transportation, and geographic isolation (Douglas et al., 2020; Kunze et al., 2021). According to the WHO, digital health technologies should be used to improve the accessibility, quality, and affordability of health services. They are intended to strengthen existing service delivery systems and support integrated, person-centered care that contributes to improved health and equity outcomes (World Health Assembly, 2018).

Existing evidence supports the use of telehealth for children and adolescents with autism and their families. In a systematic review, Ellison and colleagues compared different forms of telehealth interventions and found that they at least as effective as in-person delivery and in some cases showed better outcomes (Ellison et al., 2021). Earlier reviews by Sutherland et al. and Boisvert et al., revealed similar findings where

caregiver reported high levels of satisfaction with telehealth intervention (Boisvert & Hall, 2014; Sutherland et al., 2018). Across studies, using telehealth to coach parents provides clear advantages and benefits. In addition to reducing cost and facilitating access to underserved families, telecoaching interventions facilitate personal gains to children with ASD and their parents (Ingersoll & Berger, 2015; Kunze et al., 2021; Pacione, 2022; Pickard et al., 2016; Tsami et al., 2023). For example, De Nocker and Toolan reviewed telehealth interventions for autistic children and found that outcomes for children were comparable to those achieved in traditional in-person delivery (de Nocker & Toolan, 2021). Pacia and colleagues identified that interventions delivered by caregivers with a focus on social communication and delivered via videoconferencing or e-learning had the same outcome as those delivered in-person (Pacia et al., 2022).

However, not all evidence generated uniformly positive findings. In a recent meta-analysis of eight randomized controlled trials that tested technology-assisted, PMIs (apps, websites, DVDs and computer-based programs), revealed no significant improvements in social communication, functioning, or language outcomes (Pi et al., 2022). Notably, these interventions were largely technology-only and did not involve caregiver coaching, which likely contributed to weaker outcomes. Many were also rooted in behavioral analysis, emphasizing systematic learning, whereas occupational therapy emphasizes active parental engagement in analyzing barriers and designing interventions in natural contexts. OT practitioners have therefore developed coaching models tailored to children with disabilities and their caregivers, including those with ASD.

2.5. Coaching in Occupational Therapy for Children with Autism: In-Person and via Telehealth

Occupational therapy coaching with families of autistic children has evolved from in-person practice to hybrid and virtual formats that preserve core mechanisms while adapting delivery (Ward et al., 2020). The most influential model in this literature is OPC, which orients practice around collaborative goal setting, guided parent reflection, joint problem-solving in everyday routines, and strategies shaped by parents to fit their environments and values (Graham et al., 2024). Early in-person coaching

studies described therapists adopting a deliberately non-directive stance, inviting caregiver observations, analyzing barriers with parents, and co-designing adaptations trialed between sessions; parents reported practical home changes and a growing sense of empowerment as their knowledge and context were centered (Graham et al., 2016).

Integrative and narrative reviews identify common ingredients across models such as OPC, COPing and CAring for infants with special needs (COPCA), and solution-focused coaching: shared goal setting, reflective facilitation rather than directive instruction, iterative problem-solving, and embedding strategies in natural environments under family control (Kessler & Graham, 2015; King et al., 2024; Miller et al., 2024). The same reviews critique variability in terminology, session description, and fidelity reporting, which complicates replication and training. This variability places a premium on manuals, session checklists, and observational fidelity tools when translating these practices to other settings.

With the expansion of telehealth, occupational therapy coaching mechanisms were adapted to video and online formats that allowed the home context to be addressed directly. One of the earliest autism-specific studies applied videoconference-based OPC with eighteen families of children aged two to six years. Parents reported significant improvements in their own efficacy as well as gains in children's participation in daily routines that they themselves had identified as meaningful (Little et al., 2018). Although the findings were encouraging, the study used a one-group pre–post design, which limited the ability to make comparisons and reduced the generalizability of results.

Subsequent studies employed a similar design but a domain-specific work with extended model, including a ten- to twelve-week toilet-training program. The study recruited thirty-four families of children aged two to eight years, in which twenty-five families completed the protocol and significant improvements were observed on toileting behaviors, COPM Performance/Satisfaction, and Goal Attainment Scaling (GAS) (Little et al., 2023).

Pilot randomization also suggests that videoconferencing coaching can perform comparably to in-person delivery. In a study with sixteen families awaiting diagnostic assessment (mean child age 3.6 years), 75% retention was achieved across both face-to-face and videoconferencing OPC arms and goal-level gains were seen in both formats;

service navigation was bundled to reflect real-world needs during waitlists (Bernie et al., 2023).

In Iran, a randomized trial with forty-three families recruited through the Iranian Autism Association and internet advertisements tested tele-OPC against waitlist using COPM, GAS, and CAPES-DD: the intervention group showed greater improvements in occupational performance, parental self-efficacy, goal attainment, and behavior problems, with no change on the prosocial behavior subscale and QoL gains not maintained at follow-up (Jamali et al., 2022).

Fidelity has remained a central concern across formats. OPC fidelity work demonstrated the practicality of monitoring 40% of sessions through transcription and coding for adherence and drift, confirming that systematic fidelity monitoring is feasible and informative; coding schemes that capture coach behaviors and indicators of parent engagement translate well to virtual sessions when recording is feasible and consented (Dunn et al., 2018). Across these studies, a ≥ 2 -point change on COPM Performance or Satisfaction is commonly treated as clinically important, which helps interpret goal-level effects (Carswell et al., 2004). Having outlined mechanisms and outcome signals, the next section addresses whether programs can be delivered as intended at scale, followed by how parents experience them.

2.6. Feasibility and Acceptability of Telecoaching for Parents of Children with Autism

2.6.1. Recruitment and Uptake

Feasibility here asks whether telecoaching can be delivered as intended in family settings and whether procedures are workable enough to justify a definitive trial. Following Aschbrenner and colleagues, pilot feasibility integrates quantitative indicators with qualitative explanations within defined domains and then draws meta-inferences to guide progression and refinement (Aschbrenner et al., 2022). Acceptability is parents' appraisal of the intervention, considered through the Theoretical Framework of Acceptability with attention to affective attitude, burden, perceived effectiveness,

ethicality, intervention coherence, opportunity costs, and self-efficacy (Sekhon et al., 2017).

In community offers of self-directed parent-mediated programs, about one quarter of eligible families enrolled; one study reported 25.8 percent at diagnostic feedback. Settings that provided a clear schedule and therapist contact achieved higher consent and commencement, which suggests that a coherent offer, early confidence with the format, and manageable time costs shape demand (Ingersoll et al., 2017; Pickard et al., 2016). Survey data align with this pattern: parents with limited internet skills were less likely to enrol, indicating that brief digital onboarding at recruitment can raise initial uptake (Salomone & Maurizio Arduino, 2017). Read through an acceptability lens, orientation supports coherence, basic tech support builds self-efficacy, and practical scheduling reduces perceived opportunity costs.

2.6.2. Implementation and Adherence

Short-phase Occupational Performance Coaching delivered face to face or by videoconference retained seventy-five percent of families, which met the predefined feasibility target, with no disadvantage for the virtual arm (Bernie et al., 2023). A telehealth toilet-training program retained twenty-five of thirty-four families over ten to twelve weeks and produced significant improvements on toileting behavior, Goal Attainment Scaling, and COPM performance and satisfaction (Little et al., 2018). Attendance patterns across related parent-coaching literatures are similar (Allen et al., 2021; Douglas et al., 2020; Liden & Rosales-Ruiz, 2024). Parents consistently describe live coaching as collaborative and useful, and they are less likely to use optional asynchronous materials unless these are tightly integrated into the live session flow and prompted clearly. This combination points to lower burden and higher perceived effectiveness when guidance is personalized in real time (Wallisch et al., 2019).

2.6.3. Practicality of Delivery

Families undertake substantial preparatory and in-session work to make video visits possible, including device setup, camera positioning, relaying observations, cueing, and assisting with safety or measurement. Feasibility improves when caregiver roles are stated clearly, when a short orientation and test call precede the first session, and when the platform and workflow are kept simple. These same adjustments reduce

perceived burden and support continued participation (Gately et al., 2023; Tkach & Earwood, 2024)

2.6.4. Data Capture and Fidelity:

Remote protocols typically capture caregiver-reported measures more reliably than child measures. Completion improves when child assessments are simplified, scheduled within sessions, or supported by the caregiver. Combining completion rates with brief probes about burden helps teams relocate or shorten instruments where needed. Light-touch fidelity monitoring of coach behaviors and parent engagement is workable in telehealth settings and helps prevent delivery drift that families experience as inconsistency (Bernie et al., 2023).

2.6.5. Linked Study Profiles:

Early telecoaching work with videoconference-based Occupational Performance Coaching enrolled eighteen families of children aged two to six years and reported gains in parent efficacy and child participation in parent-selected routines (Little et al., 2018). A companion qualitative study with families from the same program described convenience, fewer travel demands, and the value of embedding strategies in everyday routines. Initial concerns about technology and effectiveness tended to diminish over time, while reports of empowerment and more confident parent–child interaction increased (Wallisch et al., 2019).

Families awaiting autism assessment were assigned to usual care, videoconference coaching, or face-to-face coaching. Retention reached about seventy-five percent across both coaching formats and goal-level progress was observed without a virtual penalty, which supports implementation viability during waitlists (Bernie et al., 2023).

An Iranian randomized trial recruited forty-three families through the national autism association and internet advertisements and delivered tele-OPC. The intervention outperformed waitlist on occupational performance, goal attainment, parental self-efficacy, and behavior problems. Prosocial behavior did not change, and a parent quality-of-life improvement was not sustained at follow-up. Procedures held under typical connectivity constraints, which supports external practicality. Because the design was quantitative, day-to-day burden, privacy preferences, and camera use were not

described in depth; a brief qualitative strand would have clarified cultural fit and routine workability (Jamali et al., 2022).

2.6.6. Implications for Progression:

Organized by Aschbrenner's domains and interpreted with the acceptability framework, the literature points to a stable implementation recipe. A manageable dose of live sessions, commonly eight to twelve, is deliverable and aligns with what families find most useful. A short pre-session orientation and test call, clear caregiver roles, and simple platforms improve practicality and reduce burden. Any self-paced materials are best embedded within the live session and supported by clear, time-bound prompts. Measurement plans benefit from scheduling child assessments during sessions or simplifying their format, and light-touch fidelity checks help sessions remain coherent and collaborative. Under these conditions, retention commonly sits around seventy to eighty percent over two to three months, adherence is sufficient to support goal-level work, and parents describe telecoaching as collaborative, effective on goals that matter, and compatible with family routines.

2.7. Telehealth Services for Children with Autism and Their Parents in Arab Countries

Across Arab health systems, autism services have been clinic-centered, with fixed days and travel that make short visits hard to sustain; attendance is vulnerable to school schedules, seasonal work, transport costs, and staff turnover (AL Jabery et al., 2014). COVID-19 accelerated remote delivery, and regional reviews indicate that telehealth can extend parent-mediated support while preserving valued aspects of in-person care (Aljabri et al., 2021; Nizeyimana et al., 2022). Two evidence strands motivate a tele-coaching approach. Parent-mediated trials outside the region show that engaging caregivers directly can reduce disruptive behavior and improve toddler social communication when strategies are practiced and reinforced in daily routines (Althoff et al., 2019; Bin Zuair et al., 2025; Dubay, 2022; Sundarrajan & Franco, 2024). Home-based adaptations of the Incredible Years curriculum confirm that modelling, guided practice, feedback, and home tasks are workable without specialized equipment

(Dababnah et al., 2019). Training and education are largely didactic; coaching builds on this base by using collaborative goal setting, reflective facilitation, and problem solving inside everyday family routines, which suits telehealth and irregular clinic access. A second strand is operational: guidance emphasizes Arabic consent scripts, a brief technology orientation, short low-bandwidth visits, clear documentation and triage rules, and criteria to switch to in-person care when risk or diagnostic uncertainty arises (Almubark et al., 2022; Qureshi et al., 2021).

Regional syntheses show momentum and gaps. A review of Arab digital health found output concentrated in AI and big data rather than service-delivery telemedicine, with barriers relevant to family-facing care, including fragmented governance, limited attention to consent and home privacy, few effectiveness or cost trials, uneven training for remote assessment/coaching, and evaluations focused on uptake rather than outcomes (Waqas et al., 2021). A MENA telerehabilitation review reported uneven but growing implementation, with feasibility tied to bandwidth, governance, and training, and with programs faltering when supervision and fidelity were added late rather than designed in (Aljabri et al., 2021). A recent Arab-region systematic review of intervention studies with autistic children highlights fragmented methods and a tilt toward psychoeducation and training rather than collaborative coaching (Aladsani et al., 2025).

Initiatives are starting to emerge, highlighting potential directions for service development. In Saudi Arabia, telehealth guidance codifies consent, security, and technical requirements, and a prospectively registered feasibility study delivered eight weekly Arabic tele-coaching sessions with daily home practice and weekly short home videos; caregivers reported high usability and intention to use, parents showed partial to moderate fidelity, and child social-communication change was not significant in this small pre–post cohort (Alatar et al., 2025; Alatar & Loucas, 2024). In Tunisia, a hybrid eight-session parent training RCT improved child communication and behavior and reduced parental anxiety and depression, with maintenance at six months, demonstrating feasibility and benefit of parent-mediated work with online components in North Africa (Abid et al., 2024).

Country reports align on operational needs. Oman’s protocols address privacy in crowded homes, camera placement, and escalation pathways; caregivers value

convenience but need connectivity support and hybrid options for complex issues (Al-Mahrouqi et al., 2025). Jordanian clinicians cite home distractions, variable digital skills, and unstable connectivity and call for national guidance and training (Bani Hani et al., 2024). Commentaries and LMIC reviews recommend mobile-first, bandwidth-light design, Arabic materials, explicit consent and triage, and evaluation that includes caregiver burden and outcomes rather than adoption counts alone; outcomes in neurodevelopmental telehealth depend on supervision and implementation fidelity ((Abouzid et al., 2022; Waqas et al., 2021).

Equity considerations are central. Rural and crowded households, displacement, device sharing, and women's privacy norms argue for camera-optional policies, audio-first workflows when bandwidth is poor, and brief Arabic prompts via SMS or WhatsApp to support between-visit practice. Evaluations should track connection success and failure, caregiver "hidden work," completion of home practice, and family-centered goal attainment, in addition to attendance (Abouzid et al., 2022; Aljabri et al., 2021).

Taken together, the Arab-region evidence shows that telehealth for autistic children and their families is feasible when protocols are simple, culturally adapted, and supported by clear governance, yet it remains underdeveloped compared to other digital health domains. Tele-coaching stands out as a promising approach because it builds directly on family routines, reduces travel and cost barriers, and can be adapted to bandwidth and privacy constraints that shape daily life in Arabic-speaking households. These lessons provide a critical backdrop for understanding how telecoaching might operate in Palestine, where families face distinctive structural and political barriers that intensify service gaps and place added importance on remote, family-centered solutions.

2.8 Autism and Rehabilitation Services in Palestine: Context and Gaps

Research on autism services in Palestine describes a system shaped by structural and political constraints in which families navigate fragmented provision, high out-of-pocket costs, and uneven autism-specific services (Jones et al., 2017). Access is divided across the Ministry of Health, NGOs, private clinics, and UNRWA, and specialty

referrals are often permit-contingent, which disrupts continuity of care (World Health Organization, 2017). For refugees, UNRWA maintains a parallel network that serves approximately 912,879 registered refugees in the West Bank, including East Jerusalem, with services in 19 camps and 43 primary health-care facilities, although operational gaps remain (UNRWA, 2024; World Bank, 2019).

Empirical work documents how these system features play out for families. Qualitative interviews with 24 Palestinian parents report delayed or inadequate screening and diagnosis, heavy recurring costs, geographic and permit barriers, limited autism-specific options, and sociocultural burdens that complicate help-seeking (Dababnah & Bulson, 2015). Parents frequently described non-use of standardized tools, minimal psychoeducation, and long, unpredictable travel to reach appointments, especially in Jerusalem (Dababnah & Bulson, 2015; WHO, 2013). Surveys of Palestinian trainees and health professionals similarly identify knowledge and confidence gaps in autism identification and management, which helps explain uneven screening and variable advice in primary care and allied health settings (Shawahna et al., 2017, 2021).

Case descriptions show what concentrated capacity can achieve while also highlighting inequities in access. The An-Najah Child Institute in Nablus integrates Arabic-validated assessment tools, small-group formats, and mainstreaming when appropriate; the Jerusalem Princess Basma Centre has developed multidisciplinary autism and rehabilitation services with sustained staffing (Wahdan et al., 2023). These nodes demonstrate technical feasibility within Palestinian institutions but remain geographically bounded and permit sensitive (WHO, 2013).

Intervention studies are limited but informative. A pre–post adaptation of Incredible Years–ASD at An-Najah reported reductions in parental stress and improvements in parent management strategies, suggesting responsiveness to structured family-mediated work, while also underscoring the need for controlled designs to confirm effects (Wahdan et al., 2023).

In the wider Arab region, emerging trials illuminate delivery options that are relevant for Palestinian families. A prospectively registered feasibility study in Saudi Arabia delivered eight weekly Arabic telecoaching sessions with daily home practice and short caregiver-recorded videos; caregivers reported high usability and intention to

use, parents showed partial to moderate strategy fidelity, and child social-communication change was not significant in the small pre–post cohort (Alatar & Loucas, 2024).

In Tunisia, a randomized controlled trial of an eight-session hybrid parent-training program improved child communication and behavior and reduced parental anxiety and depression, with maintenance at six months (Abid et al., 2024). Together, these studies indicate that Arabic-language, parent-mediated interventions are workable and that remote or hybrid delivery is plausible, while leaving open questions about mechanisms, required fidelity supports, and transferability to bandwidth-limited, privacy-constrained households.

Taken as a whole, the Palestinian evidence base consistently points to fragmented and permit-sensitive access, inconsistent early identification, financial and travel burdens that erode adherence, and islands of excellence that are not yet systematized into equitable referral pathways. Empirical interventions show promise for parent-mediated approaches and feasibility for tele-enabled formats, but they do not yet test how coaching, as distinct from didactic training, functions under Palestinian conditions that include crowded homes, camera privacy concerns, intermittent connectivity, and unpredictable movement.

2.9. Literature Gaps and Rationale for the Current Study

Despite the steady expansion of telecoaching internationally, the evidence base remains uneven and underrepresents low- and middle-income contexts such as Palestine. Studies from high-income countries show that parents attend reliably and practitioners sustain fidelity, with parents frequently describing the approach as convenient and well-integrated into routines (Dunn et al., 2018; Little et al., 2018; Wallisch et al., 2019; Smith et al., 2023; Cheung et al., 2022).

Outside these settings, findings are more fragmented. Studies in South Africa and Mongolia demonstrate that adaptations such as cascading mentorship and bandwidth-light practices can maintain fidelity in resource-limited systems, yet no peer-reviewed research has tested telecoaching feasibility in Palestine, where political

instability, digital inequities, and fragile care pathways add further constraints (Lee et al., 2022; Makombe et al., 2019).

Acceptability evidence shows a similar imbalance. While parents in multiple cultural contexts report empowerment and convenience, few studies analyze acceptability using systematic frameworks such as the TFA (Sekhon et al., 2017) or the UTAUT (Venkatesh et al., 2003). In Arab countries, caregiving norms, stigma, and digital literacy shape parental attitudes, but most local studies have documented unmet needs and service fragmentation rather than evaluating structured telecoaching (Alkhateeb et al., 2022; Dababnah, 2013; Dababnah & Bulson, 2015; Dababnah, 2018). The few interventions that exist, such as Wahdan et al.'s (2023) parent training program, suggest willingness to engage with structured supports. However, these models were built on in-person, didactic training rather than reflective, problem-solving coaching, limiting their scalability and alignment with family-centered practice.

Evidence on outcomes is also mixed. Parent-mediated interventions embedded in daily routines have shown improvements in child participation, parental competence, and in some cases caregiver quality of life (Ingersoll & Berger, 2015; Jamali et al., 2022; Chien et al., 2024). In contrast, meta-analyses of technology-only programs often report weak or null effects on social communication and autism symptom severity (Pi et al., 2022). These inconsistencies highlight coaching as a mechanism that helps translate knowledge into sustained family-level change. Whether such mechanisms can be activated in Palestine, however, remains untested given fragmented access, financial strain, and intermittent availability of trained professionals.

Measurement also limits generalization. Widely used caregiver QoL and competence instruments often overlook context-specific burdens tied to stigma, extended family pressures, and political instability (Alenezi et al., 2024; Emam et al., 2024). Recent tools developed and validated in Arab contexts, such as the A-QoLA (Alkhatib et al., 2024) and the PCS-ASD (Alnasraween et al., 2023), provide better cultural fit but have yet to be applied in telecoaching research.

The literature demonstrates that telecoaching can be feasible and effective in high-income and some middle-income settings, but there is no empirical evidence on whether a culturally adapted coaching model can function under the political, economic, and infrastructural constraints of Palestine. The present mixed-methods pilot study is

designed to address this gap, extending the global knowledge base while generating context-specific evidence to guide future trials and service planning.

2.10. Summary

This chapter synthesized international, regional, and local evidence on autism-related challenges, the quality of life and competence of parents, and the role of parent-mediated interventions within family-centered EI. The literature demonstrates that coaching approaches, especially when grounded in occupational therapy and adapted for telehealth delivery, can empower caregivers, strengthen parental self-efficacy, and enhance children's participation in meaningful routines. At the same time, studies reveal feasibility barriers, variable acceptability, and heterogeneous outcomes, with fidelity, family engagement, and broader system constraints shaping effectiveness.

In Palestine, the evidence highlights a persistent mismatch between families' needs and the fragmented, under-resourced, and stigmatized system of care. Families report delays in diagnosis, limited coordination across providers, and scarce access to structured, family-centered support. Existing parent-focused programs remain rare, mostly center-based, and seldom reflect the principles of collaborative coaching or the potential of telehealth to overcome structural barriers. Regional studies echo these systemic gaps yet also show that families are receptive to digital health interventions when they are culturally relevant, affordable, and integrated into daily life. Collectively, these findings establish both the plausibility and the urgency of testing a telecoaching model tailored to Palestinian families.

The gaps identified in this chapter justify the present study: a mixed-methods pilot randomized controlled trial designed to assess the feasibility, acceptability, and potential impact of a telecoaching intervention for parents of children with autism in Palestine. Guided by family-centered practice, parental self-efficacy theory, and ecological systems perspectives, and informed by implementation science frameworks, the study aims to generate evidence for both local service development and the broader telehealth coaching literature. The following chapter details the methodological approach, including design, recruitment, randomization, intervention procedures,

outcome measures, and analytic strategies, thereby operationalizing the rationale established in this review.

Chapter 3: Methodology

3.1. Overview

This chapter presents the methods followed in studying the acceptability, feasibility, and potential impact of using a telecoaching intervention for parents and their children with autism in Palestine. The choice of the research methodology and methods relies on the research aims and the researcher understanding of research paradigms and philosophical assumptions. In this study, the paradigmatic position of the investigator influences the selection of the design, methods and procedures required to collect and analyze data (Creswell & Creswell, 2018).

The study planning and reporting were guided by a set of established reporting guidelines and checklists. These included the Mixed Methods Reporting in Rehabilitation Health Sciences Research (Aschbrenner et al., 2022; Tovin & Wormley, 2023), the CONSORT extension for randomized pilot and feasibility trial (Eldridge et al., 2016), the Template for Intervention Description and Replication (TIDieR) checklist (Hoffmann et al., 2014), and the Consolidated Criteria for Reporting Qualitative Studies (COREQ) (Tong et al., 2007).

This chapter moves from the rationale to the operational execution of the research. It first introduces the philosophical position underlying the study, followed by the design selection and justification. The setting and participants, recruitment procedures, sample size, randomization, allocation concealment, and blinding procedures are sufficiently described. A detailed description of the trial groups and the telecoaching intervention is then presented in accordance with the TIDieR framework, followed by outcome measures and sources of data. Next, procedures for quantitative data analysis, methods of qualitative inquiry, and procedures used to integrate the findings across the different strands are thoroughly reported. The chapter concludes with considerations of ethical aspects, and a short chapter summary.

3.2. Philosophical Assumption Underpinning the Research

Explanation of philosophical assumptions that underlie a study is fundamental in ensuring that research is coherent, credible and meaningful. A research paradigm influences the formulation of questions, the choice of methods, and the interpretation of the results. When these factors are well articulated, the quality and value of the research are enhanced (Creswell & Creswell, 2018)

A pragmatic philosophical stance is adopted to inform this study. Pragmatism has a major focus on real-world problems and the creation of knowledge that could guide practice and decision-making (Alele & Malau-Aduli, 2023). Pragmatism combines methodologies in addressing a research problem that is complex and cannot be comprehensively explained using a single design. In the current research, this enabled parent telecoaching intervention to be analyzed through both quantitative and qualitative designs. Indicators like feasibility, acceptability, and potential impact were measured using quantitative data and insights about the delivered intervention were obtained through qualitative data.

Using this philosophical stance, the research used a mixed methods pilot randomized controlled trial and post-intervention qualitative interviews to address the research problem. The trial element provided early estimates in the area of feasibility, acceptability and outcome change, and the interviews provided a more in-depth insight into the processes of implementation, perceived benefits as well as the factors that facilitated or inhibited parents participation. This methodology is in line with mixed-methods recommendations that emphasize the importance of qualitative results in the process of complementing quantitative results and in making decisions regarding refinement of the intervention before future scale-up. The pragmatic approach recognizes that certain elements of reality could be meaningfully measured using standard instruments, while other elements would be most appropriately perceived using the experience and perception of participants.

3.3. Study Design

The choice of the study design was informed by the philosophical stance of the current study, the study aim, and the analysis of both intervention processes and outcomes (Wasti et al., 2022). The main objectives were to evaluate the acceptability and feasibility of parent telecoaching intervention, as well as to test the potential effects of such intervention on children with ASD and their parents in the context of Palestine. To achieve these goals, it was necessary not only to measure the predetermined indicators but also to thoroughly investigate the experiences of parents and the situational context that affected the process of intervention delivery and participation (Creswell & Creswell, 2018).

A mixed-method design was therefore chosen as it would allow a more thorough and contextually specific examination of the intervention. A growing body of literature supports the use of mixed-methods in health and rehabilitation, particularly when addressing complex interventions that are influenced by social, cultural, and implementation-related aspects (Fetters & Molina-Azorin, 2020; Wasti et al., 2022). Quantitative methods are typically applied in early-stage of interventional studies to estimate feasibility parameters, analyze initial change patterns, whereas qualitative methods are used to understand how interventions can be implemented, why some results are achieved, and how the participants experience the intervention and the research process (Aschbrenner et al., 2022). This methodology is particularly applicable to pilot and feasibility trials, in which the focus is on establishing key indicators that are essential to inform the next phase of trial instead of creating definite evidence of efficacy (Eldridge et al., 2016).

The current research used an explanatory sequential mixed methods design (QUAN → qual), in which quantitative data collection and analysis were conducted first and informed the subsequent qualitative strand. In this notation, the uppercase QUAN indicates that the quantitative strand had priority, and the arrow indicates the sequence (Creswell & Creswell, 2018). The quantitative part was a pilot randomized waitlist-controlled trial in which two parallel groups were involved; the intervention group who participated in the telecoaching program, and the waitlist control group who accessed Sanad Al-Hayaa resources during the randomized period. The qualitative element was

implemented using semi-structured interviews (following the intervention) to explore the perception of parents regarding acceptability, feasibility, and perceived impact. The waitlist control design allowed between-group comparisons of the randomization phase and contributed to the fact that families assigned to the control group had access to the intervention after the randomization phase. This methodology is largely regarded as ethically fitting in the initial psychosocial intervention studies (Cunningham et al., 2013)

Integration of the quantitative and qualitative elements is considered a fundamental aspect of the study design. The five considerations of planning mixed-methods pilot and feasibility trials suggested by Aschbrenner et al. (2022) were used to facilitate systematic and purposeful integration results from both designs. This framework was chosen since it has been designed to be used in early-stage health research when decisions regarding the continuation of the trials are made based on knowledge from feasibility, acceptability, and implementation processes, rather than hypothesis testing. The operationalization of integration in terms of data collection, analysis, and interpretation is provided in details in the subsequent sections.

Taken together, the selected design and integration approach were intended to produce feasibility parameters and context-informed explanations that support progression decisions. While the methodological choices above align with the study aims, alternative approaches were considered and judged less suitable. A pilot randomized trial was selected rather than a definitive efficacy trial because the telecoaching approach and its digital infrastructure required local testing of recruitment pathways, delivery logistics, platform use, safety procedures, and fidelity processes in the West Bank prior to scale-up. A purely qualitative design was also insufficient on its own because it would not yield key numerical feasibility benchmarks, including recruitment, retention, intervention adherence, and assessment completion, nor would it support estimation of the direction and variability of change in child participation and parent outcomes. The mixed-methods pilot design was therefore selected to generate feasibility parameters and preliminary estimates needed to inform progression criteria and key assumptions for a future full-scale trial (Aschbrenner et al., 2022; Eldridge et al., 2016; Lancaster et al., 2004; Mellor et al., 2023).

Although the mixed-methods design permitted an in-depth exploration of the study objectives, it also posed practical obstacles in terms of complexity of the design, time-consumption, data synthesis, and interpretation (Tariq & Woodman, 2013). These challenges were mitigated by proper planning of study stages and integration processes. The adoption of the structured five-step planning framework for data collection and integration helped in avoiding unwarranted methodological complexity. Moreover, the use of digital technology for data collection, intervention delivery, and monitoring facilitated effective implementation and contributed to preserving the methodological rigor of the study.

3.4. Participants and Setting

This section describes the participant population and eligibility criteria, and outlines the study setting and telehealth delivery context in which the intervention was implemented. It explains how inclusion and exclusion criteria were defined to align with the study aims and ethical requirements, and how contextual realities in the West Bank shaped remote delivery procedures and documentation practices.

3.4.1. Participants and Eligibility

The target population of this study is Palestinian parents and their children with autism residing in the West Bank districts. The sample was chosen based on pre-identified eligibility criteria to ensure homogeneity and relevance to answering the study aims and questions. To be eligible to participate, parents of children with autism must be at least 18 years of age and able to provide informed consent, spend the majority of the intervention period with the child, and have access to internet-enabled devices (e.g., computers, phones, or tablets) with installed Zoom software and internet connection. Parents who did not meet these eligibility criteria were excluded at screening.

The primary caregiver requirement aligns with family-centered and parent-mediated models in which caregiver participation is the mechanism through which change is expected to occur in the child's daily routines (Dunst et al., 2007). The device and internet criterion was necessary because the intervention was delivered through videoconferencing with Platform support; at the same time, it raises an equity concern

that households without connectivity could be excluded. Digital health guidance recommends that trials document such constraints explicitly and plan mitigation in future work, for example by offering data stipends, offline-accessible materials, and loaner devices to reduce access barriers (World Health Organization [WHO], 2019)

Children's inclusion criteria require a confirmed diagnosis of ASD by a neurologist or a psychiatrist, and their ages between 3 and 7 years. Reasons that justify the selected age range include: first, early developmental years are crucial in supporting children's outcomes as the child's brain is developing and the neural plasticity is at its peak (Liu et al., 2025; Mukta & Akter, 2025). Second, it captures early-childhood period in which autism interventions emphasize participation in foundational routines and for which the strongest evidence base exists, including benefits of early, developmentally informed behavioral approaches and parent-mediated interventions (Mozolic-Staunton et al., 2020). Third, it avoids the adolescent period where needs often shift toward self-management, mental health, and peer participation that may require different modalities such as cognitive behavioral strategies or specialist services that lay beyond the scope of the present telecoaching intervention (Hyman et al., 2020).

Children with autism who receive other EI services remained eligible for participation, as it would be unethical to request parents to withdraw from ongoing services that may be beneficial for their children. In addition, the purpose of the current study is to evaluate the potential impact of telecoaching intervention and not to prove its efficacy, thus minimizing the need for setting strict restrictions on eligibility criteria (Eldridge et al., 2016).

Children are excluded if they have other comorbid conditions that require intensive medical or pharmacological management such as uncontrolled epilepsy or complex genetic syndromes that are beyond the scope of the current intervention. These criteria were applied using a structured Inclusion–Exclusion Checklist at screening, and completed forms were archived for audit, see appendix 1.

3.4.2. Setting

This study took place in Palestinian West Bank districts, a setting characterized by geographic fragmentation and recurrent movement restrictions that can disrupt access to health and social services. In early 2025, recent reports documented 849 movement obstacles across the West Bank that permanently or intermittently restrict Palestinian

movement, with additional obstacles installed between December 2024 and February 2025 (United Nations Office for the Coordination of Humanitarian Affairs, 2025). These conditions strengthen the rationale for remote, home-based approaches that reduce reliance on travel and in-person attendance. The local autism service ecology also supported a parent-mediated model. Research findings among Palestinian parents of children with autism in the West Bank reported a lack of screening and diagnostic pathways, insufficient psychoeducation, lack of access to specialized care, and high caregiver burden in the (Dababnah & Bulson, 2015; Dababnah & Parish, 2013) Within this context, telecoaching was positioned as a practical mechanism to build parents' capacity to support their child's daily participation at home and to reduce dependence on center-based services that may be distant, costly, or difficult to reach under unpredictable movement conditions.

Given these constraints, the intervention was designed for remote delivery. Parents were attending telecoaching sessions from their homes, using Internet-enabled devices to connect with intervention provider via Zoom. The caregivers were given the option to attend sessions without the presence of their child. This allowed capacity building, helped analyze family routines, and minimized the chance of capturing the child on the camera in the domestic setting. This goes in line with the Occupational Performance Coaching (OPC) and early-childhood telehealth literature (Graham et al., 2020)

The institutional environment consisted of a purposefully designed web Platform, called Sanad Al-Hayaa and a secure videoconferencing to deliver sessions. One on one sessions were conducted via Zoom with privacy settings such as a unique meeting identifier, password, and a waiting room. The logistics such as the acknowledgement of receipt of consent, neutral reminders and rescheduling were handled through one-to-one messages in the WhatsApp platform whereas clinical content and intervention specific materials were shared in Sanad Platform. The investigator offered the telecoaching sessions using an encrypted computer device with a wired broadband from a private office. The workspace had the same specifications for privacy and networks. Location was recorded for each telecoaching contact in accordance with professional telehealth practice and documentation standards for occupational therapy (World Federation of Occupational Therapists [WFOT], 2014).

3.5. Recruitment

Recruitment was performed with a transparent, time-bound plan following the reporting recommendations of pilot randomized trials. Participant accrual took place from 15th February to 14th April 2025 and was implemented using two complimentary recruitment strategies.

The first strategy was collaboration with a trusted third-party community organization, the Superhero Autism Foundation, which distributed study information packages to families who potentially met the eligibility criteria. This foundation was chosen because it has an extensive and up-to-date database of families of children diagnosed with autism spectrum disorder in the West Bank districts. Literature suggests that partnering with trusted community organizations and registry-type databases would enhance study credibility, and access to families that may be difficult to reach (Daniels et al., 2012; Warnell et al., 2015). The second strategy was to distribute recruitment advertisements via social media platforms and websites of autism-related organizations to a larger population, including families who are not involved in formal service networks. Together, these strategies sought to allow recruitment from cities, towns, villages, and refugee camps throughout the West Bank.

Caregivers who showed interest in participating were asked to return a signed reply slip by email or WhatsApp using the contact information provided in the participant information sheet. Upon receipt of the reply slip, the investigator made an initial telephone call with each caregiver to provide additional explanation of the study, answer questions, screen for eligibility, obtain verbal agreement to proceed, and inform families about the expected recruitment timeline. Caregivers were clearly informed that the recruitment process would take about one month to allow transparency and to manage expectations during the enrolment phase.

One-to-one WhatsApp communication was used solely for logistic purposes, such as receiving signed consent forms, recruitment updates, notification of group allocation, session reminders, and rescheduling. Use of WhatsApp was disclosed during consent, and parents could choose email instead. Messages were limited to administrative content only, and no clinical advice, intervention materials, or questionnaire responses were exchanged via WhatsApp. All intervention-related

communication and resource sharing were conducted through the secure Sanad Al-Hayaa messaging system, and WhatsApp was used only for brief coordination because it is widely used locally and easier for families to access. Group messaging was not used to minimize contamination between trial groups and protect privacy (Eysenbach et al., 2011)

Recruitment was completed with a final sample of 26 parents. Allocation to the telecoaching intervention group or waitlist control group was performed by covariate-adaptive randomization, with parents assigned to a group as soon as they were enrolled. This strategy ensured less participant burden caused by delayed allocation and helped in balancing groups. A full description of the randomization procedure is presented in Section 3.7.

Following enrolment, standardized onboarding information was provided to parents to ensure consistency of study preparation and processes. This included a clear explanation of the purpose of the study, the principles underlying the telecoaching intervention and the number and format of sessions. Parents were given instructions on how to register on the Sanad Al-Hayaa Platform, add their child's profile, navigate through the available resources, book telecoaching sessions and complete online self-administered questionnaires. To aid this process, four short instructional videos were sent to each parent demonstrating how to create an account, how to use the website, how to book a session, and how to complete the questionnaire. Parents who needed extra help were given one-on-one help to solve access or technical problems.

3.6. Sample Size

In clinical research, the proper determination of sample size is crucial to ensure that the goals of the research are being met in an efficient manner and that the data being collected are informative for further research (Mellor et al., 2023). Sample size considerations are closely related to study design and purpose. In definitive randomized controlled trials, sample size calculations are usually based on statistical power to demonstrate hypothesized treatment effectiveness. In contrast, pilot randomized trials are not designed to test efficacy, but rather to assess feasibility, refine procedures and

obtain preliminary estimates that will inform the design of a future full-scale trial (Eldridge et al., 2016).

Consistent with guidance on conducting pilot and feasibility studies, no formal power calculations were performed in the current study, instead, sample size justification was based on established recommendations for external pilot trials (Eldridge et al., 2016).

Several authors have proposed pragmatic guidance for pilot trial sample sizes. Julious (2005) suggested that approximately 12 participants per group are sufficient to estimate key feasibility parameters and variance estimates. Whitehead et al. (2016) further recommended that when a future definitive trial is planned with conventional design assumptions (for example, 90 percent power and a 5 percent significance level), a pilot trial sample size of approximately 15 participants per arm is appropriate to inform main trial planning. Similarly, Lancaster et al. (2004) proposed a rule of thumb of around 30 participants in total for pilot randomized controlled trials aimed at estimating recruitment, retention, outcome variability, and intervention delivery parameters.

In line with this guidance, recruitment for the present study was time-bound to the dissertation period between 15 February and 14 April 2025, during which 26 parents were enrolled and completed baseline procedures. Fourteen parents were allocated to the telecoaching intervention group and twelve to the waitlist control group. Recruitment was stopped at this stage because of the academic timetable constraints of completing the intervention and follow-up assessments within the study period. This final sample size is within the recommended ranges for external pilot trials and was appropriate to inform feasibility indicators and refine study procedures as well as provide preliminary estimates of outcome variability and direction of change to inform future trial.

Although the sample size is consistent with guidance from pilot trials, interpretation also depends on who was able to participate in this trial. The requirement for reliable internet access and participation in Zoom-based sessions may have excluded families with limited access to the internet, limited devices or with lower digital confidence. Survey findings from the local context indicate high levels of household internet access overall, but lower access in camp settings compared with urban and rural localities, and they also highlight device access and affordability as practical barriers for

some households (Palestinian Central Bureau of Statistics, 2020c, 2024). As a result, the sample may underrepresent families facing the greatest structural barriers to rehabilitation access. Feasibility estimates should thus be considered most relevant for families that were able to participate in videoconferencing under these conditions, and outcome changes patterns should be considered preliminary for this group rather than for all Palestinian families of children with autism.

3.7. Randomization, Concealment and Blinding

Randomization was performed using a covariate-adaptive minimization method based on the Pocock–Simon approach, with 1:1 allocation and a biased-coin random element (80/20) to retain allocation unpredictability while improving balance on key prognostic variables. The minimization factors were child sex and autism severity, operationalized using the Childhood Autism Rating Scale, Second Edition (CARS-2). This approach was selected because the study involved a small sample and rolling enrolment, conditions under which simple randomization can lead to chance imbalances and stratified block randomization becomes less practical when participants are accrued sequentially over time. Under these circumstances, minimization is commonly used to improve baseline balance while retaining a random component (Kang et al., 2008).

In the original study proposal, stratified block randomization was intended to be used to balance participants by sex of children and severity of autism. However, this approach was not considered practical during the implementation process since it requires prespecified block sizes and strata and is most effective when the entire sample is recruited or when enrolment takes place in well-defined blocks. In the present study, recruiting participants was done on a rolling basis due to the restricted time period and the difficulty encountered in estimating the final sample size. Rolling enrolment was not only a statistical or administrative option, but also a practical requirement. Families were often available at unpredictable times because of work pressures, caregiving obligations and movement related restrictions. This method facilitated stable recruitment, minimized time lags between consent and intervention commencement, and assisted in maintaining engagement within a time limited recruitment period. Thus, to overcome these limitations while ensuring balance on key covariates, the randomization

process was changed to covariate-adaptive minimization. This change is common and justifiable in pilot trial with sequential accrual. Importantly, the revised strategy maintained the original aim of matching groups in terms of child sex and severity of autism and it supported feasibility under the conditions of real-world recruitment (Kang et al., 2008)ent (Kang et al., 2008).

Randomization was centrally controlled by an independent coordinator who was not involved in the recruitment process, intervention delivery or outcome assessments. Child sex and CARS-2 severity were conveyed to the coordinator using participant codes only. The coordinator then entered these variables into a predetermined minimization algorithm which computed marginal imbalance across trial groups and generated the next allocation, with an 80% probability of assignment to the group that minimized imbalance and a 20% probability of assignment to the other group. This process ensured there was a random element and enhanced balance in group composition (Ferreira & Patino, 2016).

Centralized randomization was used as a means of allocation concealment. The investigator had no access to the allocation algorithm or any prior assignment or sequence of allocation. The independent coordinator generated the allocation and communicated the assigned group to the investigator. The investigator then informed caregivers of their assignment and arranged the next steps. This sequence maintained allocation concealment until baseline completion. This approach aimed to reduce chances of selection bias, and aligns with established standards regarding allocation concealment (Eldridge et al., 2016; Schulz & Grimes, 2002).

Blinding of caregivers and the primary investigator was not feasible due to the fact that telecoaching intervention entailed individualized sessions with parents. This is a common limitation in behavioral and educational interventions (Torgerson et al., 2017). In an attempt to minimize detection bias, clinical outcome assessments, the CARS-2 and the Canadian Occupational Performance Measure (COPM), were carried out by an occupational therapist who was blinded to group allocation and not involved in the delivery of intervention. Blinded outcome assessors are recommended in cases where participant and provider blinding is not feasible (Eldridge et al., 2016). The self-reported questionnaires were administered following standardized procedures and neutral instructions that value both negative and positive feedback. Parents were notified

that the answers they provide would not affect their access to services, or their relationship with the study team. In the qualitative phase, the interview questions were designed to elicit both positive and negative experiences, and parents were explicitly encouraged to describe challenges, concerns, or elements that were not applicable to their context.

3.8. Trial Groups and Intervention Description

This section presents the trial groups and the intervention each group received. The description of the intervention and control conditions is presented in accordance with the Template of Intervention description and Replication (TIDieR). It addresses the rationale and theoretical basis of the intervention, the materials and tools, procedures and delivery, the provider, the delivery mode, location, dose of the intervention, tailoring, modification and the process of fidelity monitoring. This framework is adopted to enhance transparency, enable critical appraisal, and reproducibility (Hoffmann et al., 2014).

3.8.1. Intervention Rationale and Theoretical Basis (TIDieR item 2: Why)

The intervention was designed to support and empower parents in addressing the difficulties they encounter when assisting their children during daily and family activities. It was guided by the OPC principles and family systems theory. Coaching strategies were selected to enable parents to build confidence through structured reflection, mastery experiences, and guided feedback. These mechanisms are consistent with the Social Cognitive Theory that emphasizes self-efficacy in behavior change, especially within a caregiving setting.

The intervention was also designed to build parents' sense of autonomy, competence, and relatedness, which is in line with the Self-Determination Theory. It sought to enhance intrinsic motivation and long-term engagement of parents through active involvement in the goal prioritization process, informed decision-making and review of progress. The desired change trajectory included increasing parental ability to analyze their child's daily activities, create clear and attainable action plans, and implement strategies across settings. It was assumed that these parental changes would

facilitate children's participation in their daily activities and positively influence the overall quality of life of participating families (Graham et al., 2020; Ryan & Deci, 2018).

3.8.2. Materials and Tools (TIDieR item 3: What materials)

The Sanad Al-Hayaa platform and Zoom videoconferencing were employed to deliver telecoaching sessions. The platform provided a collection of Arabic psychoeducation materials, along with a library tailored to the specific needs of each child. Embedded electronic forms were used to collect demographic data, and to administer outcome measures, including the COPM, the World Health Organization Quality of Life, Brief Version (WHOQOL-BREF), the Arabic-Quality of Life Autism (A-QoLA), the Parental Competence Scale for Autism Spectrum Disorder (PCS-ASD), the Autism Treatment Evaluation Checklist (ATEC), the CARS-2, and the Saudi Telehealth Acceptance Scale (STAS).

To accommodate communication and continuity across sessions, time-stamped appointment booking system and secure one-to-one messaging were also developed and integrated into the platform. All contents were created in Arabic, and optimized for mobile devices. These design features were intended to enhance accessibility and usability for families within the local context.

3.8.3. Procedures and Delivery (TIDieR item 4: What procedures)

Before starting the telecoaching intervention sessions, an occupational therapist who was independent of the research team and blind to group assignment administered the COPM with each parent from the intervention group. The assessor was a licensed occupational therapist with eight years of clinical experience in pediatric and family-centered practice and had prior experience administering the COPM in routine clinical settings. This method was employed to reduce bias and achieve consistency in outcome measurements. Parents identified and prioritized up to three goals addressing their child's needs. During the first telecoaching session, the telecoach and parent commenced addressing the highest-priority goal. This goal was refined as per the principles of OPC with clear definition of behavioral and contextual factors such as who, what, where and when the activity took place, how frequently, and the time frame in which the change is supposed to take place.

The delivery of the eight planned telecoaching sessions followed the three fundamental domains of the OPC (Connect, Structure, and Share), as outlined in the manual developed by Graham et al. (2020). These processes aimed to enhance parents' problem-solving skills and promote children's participation, see Figure 3.1, OPC domains. The OPC CaseNote Template was utilized to record the content and flow of each session to enhance standardization across families and sessions (see Appendix 2). The following sections provide a detailed explanation of how each of these domains were implemented.

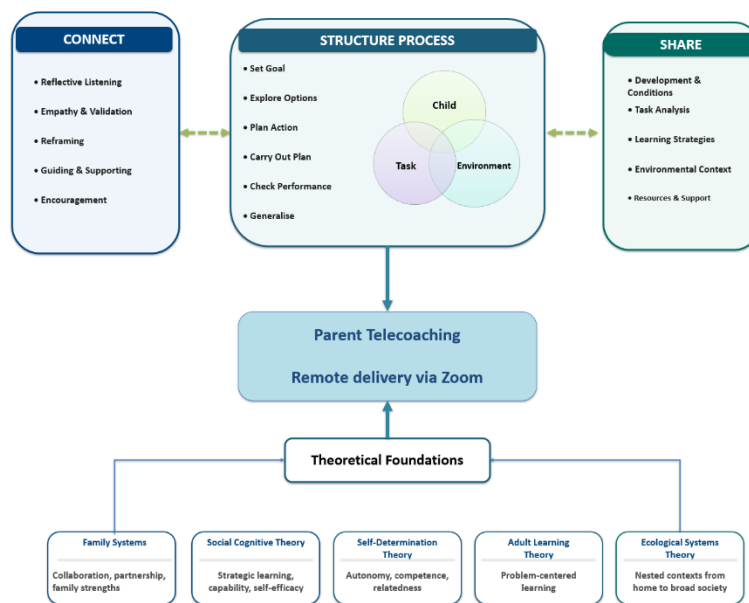


Figure 3.1.: Conceptual Framework of Parent Telecoaching Based on Occupational Performance Coaching

Note.

The figure illustrates the conceptual framework guiding the parent telecoaching intervention. The model integrates the core coaching processes of connection, structured collaborative performance analysis, and information exchange, delivered through remote telecoaching. The structured process is informed by an interaction between the child, task, and environment, while intervention delivery is grounded in multiple theoretical perspectives, including family systems theory, social cognitive theory, self-determination theory, adult learning theory, and ecological systems theory. Telecoaching was delivered remotely via videoconferencing.

3.8.3.1. Connect (Establishing a Collaborative Coaching Relationship).

Connect focused on building a working alliance and maintaining parent engagement in reflective problem solving. The telecoach used active listening,

validation, and explicit recognition of parents' expertise about their child and routines. In practice, this included clarifying what mattered most to the parent, acknowledging constraints (for example, fatigue, competing demands), and confirming the parent's preferred communication style and privacy needs. Connect processes were revisited whenever the parent reported stress, discouragement, or uncertainty that could affect follow-through (Graham et al., 2020).

3.8.3.2. Structure (Guided Performance Analysis and Action Planning).

Structure constituted the core of each telecoaching session and operationalized parent-led performance analysis and goal-directed action planning within everyday routines. It was implemented through a consistent sequence captured in the OPC CaseNote Template: goal clarification, current and preferred performance, analysis of bridges and barriers, parent-generated solutions, action planning, and structured review at the beginning of the next session (Graham et al., 2020).

- Illustrative Example from a Toileting Goal (Translated from the CaseNote Documentation).

Following the COPM prioritization by the external assessor, the first telecoaching cycle addressed a toileting participation goal. The telecoach first prompted the parent to define the goal in clear routine-based terms, for example, "My child will use the toilet for urination and bowel movements at home and in kindergarten, independently, by August 2025." The telecoach then elicited the current performance in step-by-step detail, using prompts such as, "Walk me through exactly what happens from the moment you decide it is time to use the toilet," and "Which steps does your child do independently, and which steps require your help?" This resulted in the parent outlining the routine sequence (entering the bathroom, clothing management, sitting, tolerating the toilet, cleaning, flushing and handwashing) and indicating where breakdowns occurred (for example, the need for help with wiping and not always washing hands). The telecoach then asked the parent to describe the preferred performance, using prompts such as, "If this was going well in two weeks, what would you see happening differently," and "Which parts would you most like your child to do with less help first?"

Next, the parent completed a structured bridges and barriers analysis across person, task, and environment. The telecoach used guided questions rather than prescribing solutions, for example:

- **Person factors:** “What helps your child cooperate with toileting,” “What signals show readiness,” “What makes it harder, pain, fear, avoidance, attention, or communication limits?”
- **Task factors:** “Which step is the hardest right now,” “Are the steps too many at once,” “Would a visual sequence help your child remember the order?”
- **Environmental factors:** “Where does toileting usually happen,” “What does the bathroom setup look like,” “Are there distractions or sensory triggers,” “Who is available to support, and at what times?”

Based on this analysis, the telecoach prompted the parent to generate solutions, using prompts such as, “What have you already tried that worked even a little,” “What is one small change you feel is realistic this week,” and “If you had to choose one step to improve first, which would have the biggest effect?” In the documented example, parent-generated solutions focused on routine timing and cues (for example, predictable toileting opportunities), simplifying steps, and using structured supports (for example, a simple visual sequence for bathroom steps). The role of the telecoach was to assist the parent in choosing the most feasible option and help to shape it into an action plan.

The parent and telecoach then co-developed a detailed action plan written in the template, with specific details of exactly who would do what, when, where, and how, and what "success" would look like during the week. The telecoach also prompted the parent to anticipate barriers and plan responses, for example, “If your child refuses at that time, what will you do next,” and “How will you keep the response consistent without escalating stress?” At the start of the following session, the telecoach led a structured review anchored in parent reflection: what was implemented, what worked, what did not work, and why. The plan was then refined, and where progress was observed, the parent was prompted to consider generalization to another setting or time of day.

3.8.3.3 Share (Responsive Information Exchange)

Share was used selectively and only in response to parent-identified needs that were directly relevant to the agreed action plan. The telecoach provided brief, practical information (for example, a simple toileting visual sequence or reinforcement idea) and uploaded materials to the child's private library on the Sanad platform. The intent was to support parent decision making while maintaining parent ownership of problem solving, consistent with OPC guidance (Graham et al., 2020).

3.8.4. Provider Expertise and Preparation (TIDieR item 5: Who provided)

All telecoaching sessions were delivered by the study's main investigator, an occupational therapist with approximately eighteen years of pediatric and EI experience.

3.8.5. Mode of Delivery (TIDieR item 6: How delivered)

Coaching was delivered one to one on Zoom with the option to use the camera. Privacy safeguards such as unique meeting identifiers and password protection, waiting room admission, and host-controlled entry were maintained. All clinical content and individualized materials were exchanged only in Sanad Platform instead of email or group messaging, in line with digital health privacy guidance (WHO, 2019).

Parents logged in using their assigned accounts on the Sanad Platform by using an embed booking system. Each booking created a session link that automatically opened the corresponding Zoom meeting without the need of copying and manually distributing links before each and every session. Automatic confirmations and 24-hour reminders were sent via the system. Make-up sessions were provided if there were urgent cancellations. Attendance was automatically recorded.

3.8.6. Delivery location (TIDieR item 7: Where)

Caregivers participated in sessions from home. The provider provided sessions from a private office set up to equivalent privacy/network specifications from an encrypted device. Reporting locations helps telehealth interventions to be reproducible and to manage risks (Hoffmann et al., 2014).

3.8.7. Dose and schedule (TIDieR item 8: When and how much)

The intervention included eight weekly sessions over an 8-week period of time which started in early April and ran to the early of June, 2025. Each session was 40 to 60 minutes. Session frequency and duration were based on previous telecoaching research with parents of children with autism (Jamali et al., 2022; Little et al., 2018, 2023).

3.8.8. Tailoring (TIDieR item 9: Tailoring)

Tailoring was achieved at the level of goal selection and resources provision. Parent-identified goals were prioritized with use of the COPM. When requested, tailored materials such as Arabic visual schedules, stepwise task analyses, reinforcement charts and home-based activities were uploaded on the private library of each child.

3.8.9. Modifications (TIDieR item 10: Modifications)

There were no significant changes to the protocol during the randomized phase. Parents reported occasional delays in website processing, which were addressed promptly once identified.

3.8.10. Planned Fidelity Procedures (TIDieR item 11: Fidelity planned)

Intervention fidelity is a cornerstone for achieving consistency in the delivery of telecoaching intervention. This trial adhered to the four components outlined by Dunn et al. (2018) to ensure intervention fidelity: intervention design, provider preparation and training, monitoring the delivery of the intervention, and monitoring the receipt of the intervention.

Design fidelity was based on a coherent theoretical and conceptual framework that was operationalized through the OPC, and all sessions were recorded using the standard CaseNote template.

Provider preparation and training included completion of the OPC Taster online course offered by the University of Otago, rehearsal sessions with two volunteer families, and structured review of case-note documentation (Graham et al., 2010). The OPC CaseNote Audit Tool (see Appendix 3) was used to ensure that the provider is competently completing the OPC CaseNote as recommended by the developer. A priori competency level of adherence of at least 80 percent of required components was

specified (Dunn et al., 2018; Graham et al., 2020). This was achieved by reviewing samples of the CaseNote documentations by the provider and an external occupational therapist and measure level of agreement.

Delivery fidelity in the trial was monitored using the Occupational Performance Coaching Fidelity Measure (OPC-FM) (see Appendix 4). A sample of the recorded telecoaching sessions were independently rated by the investigator and a second rater who was blinded to participant identity. Fidelity scores less than 80 percent elicited targeted feedback as well as documentation in the fidelity log (Dunn et al., 2018; Graham et al., 2020).

Receipt and adherence were measured using attendance records and records of action plan implementation and was defined as attendance at $\geq 80\%$ of sessions..

3.8.11. Fidelity Observed in the Trial (TIDieR item 12: Fidelity actual)

Observed fidelity scores, attendance data, and integrated qualitative explanations of engagement are reported in the Results chapter, together with a joint display linking quantitative fidelity indicators with participant accounts of collaborative goal setting, contextual planning, and reflective problem solving.

3.8.12. Control Condition (Waitlist Group)

During the randomized phase, the waitlist control group received access only to the general Sanad library. Participants in this group did not receive telecoaching sessions, private library uploads, or booking privileges until completion of post-intervention assessments, after which the full telecoaching program was offered. The platform includes a general library that provides evidence-based information and videos on autism and the management of specific needs, such as sensory issues, social interaction, and activities of daily living. All resources were provided in Arabic, and participants were followed up if they required support in accessing or using the materials.

3.9. Outcome Measures and Data Sources

This section specifies all outcomes and data sources used to address the primary aims of acceptability and feasibility and the secondary aim of estimating the potential impact of the telecoaching intervention on children with ASD and their parents.

Instruments were selected for conceptual fit with the theory of change, availability of Arabic versions or regional validation, clear scoring and interpretation, and feasibility for remote administration. Unless stated otherwise, questionnaires were completed in Arabic within the Sanad Al-Hayaa Platform at baseline (pre-randomization) and immediately post-intervention; assessor-rated tools were administered by an independent staff via Zoom with assessor blinding to allocation.

3.9.1. Demographic and Baseline Data

A study-specific Arabic demographic form captured caregiver characteristics (age, sex, education, employment, governorate, marital status, household composition), and child variables (age, sex, diagnosis source and date, co-occurring conditions, schooling) was developed. The form was completed within Sanad Platform during enrollment and exported to SPSS for descriptive analyses and to support covariate-adaptive randomization (i.e., child's sex). Items were written in plain Arabic and piloted for clarity with two parents before the trial; minor changes were required, (see appendix 5).

3.9.2. Acceptability Indicators

Acceptability was conceptualized as a multidimensional construct reflecting parents' perceptions of the appropriateness, usability, and perceived benefit of the telecoaching intervention, as well as their overall satisfaction and lived experience of participation. In line with guidance for pilot randomized trials and mixed-method research, acceptability was assessed using complementary quantitative and qualitative indicators to capture both the level of acceptance and the meaning underlying parents' responses. Accordingly, acceptability outcomes included a standardized telehealth

acceptance scale, satisfaction ratings derived from a client-centred outcome measure, and post-intervention qualitative interviews with parents.

3.9.2.1. Acceptability: Telecoaching Acceptance

The Saudi Telehealth Acceptance Scale (STAS), is a validated Arabic-language instrument designed to measure patient acceptance of telehealth services (see Appendix 6). The STAS is theoretically grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT) and assesses five core constructs: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), and Behavioral Intention (BI) (Almojaibel, 2024).

The patient version of the STAS consists of 24 items rated on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5), with higher scores indicating greater acceptance of telehealth. In the original validation study, the STAS demonstrated strong internal consistency, with a Cronbach's alpha of 0.91 for the total scale and subscale alpha values ranging from 0.78 to 0.89, indicating good to excellent reliability across domains. Construct validity was supported through confirmatory factor analysis demonstrating good model fit consistent with the five-factor UTAUT structure, as well as significant associations between STAS domains and intention to use telehealth service (Almojaibel, 2024).

In the current study, the STAS was self-administered electronically by parents in both the telecoaching intervention group and the waitlist control group at baseline (pre-intervention) and post-intervention. This design enabled examination of within-group changes in acceptability over time, as well as between-group differences in acceptability change.

To minimize response bias and to promote accurate understanding of the items in the questionnaire, parents were informed that they could ask for clarification if needed during completion. When support was requested, it was given by a trained occupational therapist who was not involved in intervention delivery, coaching or outcome analysis. Support was limited to explanation of item wording or response options without leading nor changing parents' answers.

Two items in the EE domain were slightly reworded to increase context relevance to the telecoaching intervention. In the original STAS, EE items refer to ease of using telehealth equipment and handling technical problems. In the current study, parents were not expected to install, configure, and troubleshoot devices or equipment, but rather to download, access, and use videoconferencing applications (i.e., Zoom) and to interact with a web-based booking system. Accordingly, adaptations were made as follows:

(1) "Learning to operate telehealth equipment will be easy for me" was adapted to reflect ease of learning to download and use remote communication applications such as Zoom; and

(2) "It will be easy for me to fix technical issues of telehealth" was modified to reflect ease of dealing with potential problems while using remote communication applications.

These adaptations preserved the conceptual definition of EE as perceived ease of use, while improving relevance to the study context. In the original development of the STAS, the wording of items was modified during validation to enhance the clarity and contextual applicability. Face validity of the adapted items was supported through the supervisory committee who approved minor wording changes to ensure conceptual equivalence with the original items. All other STAS items, response format, and scoring procedures were unchanged. Furthermore, the entire tool including the two adapted items were informally tested with two Palestinian parents of children with autism to ensure clarity, interpretability, and relevance, and no additional revision was needed.

3.9.2.2. Acceptability: Perceived Satisfaction

Satisfaction with the telecoaching intervention was measured with the COPM Satisfaction ratings scale. In the current study, parents rated their perceived satisfaction with changes in their child's performance on individually identified priority goals after the completion of the telecoaching program. The COPM is a standardized and client-centered outcome measure used widely in occupational therapy for the identification and assessment of changes in performance and satisfaction in self-selected goals including self-care, productivity, and leisure areas (Carswell et al., 2004). Satisfaction is reported on a 10-point numeric scale (of which higher scores indicate greater

satisfaction with performance). A change is generally considered a clinically significant when it is two or more points (McColl et al., 2023).

In this study, the COPM was only administered to parents in the telecoaching intervention group. The COPM was incorporated into the Sanad Al-Hayaa Platform under each child's individual profile and was completed remotely using Zoom before the first telecoaching session and after finishing the eight sessions. Performance and satisfaction scores were entered directly into the platform and automatically calculated, which reduced errors while scoring and ensured standardized data capture.

Administration followed the standardized five step reported in the COPM manual. First, parents identified everyday activities and tasks that their child had the most difficulties or participation challenges in. Second, parents rated the importance of each activity they identified on a 10-point scale where 1 represented "not important at all" and 10 represented "extremely important." Third, based on these ratings, parents chose and ranked the three most important participation problems that affected their child's everyday life. Fourth, parents rated their child's current level of performance for each prioritized activity on a 10-point scale in which 1 represented inability to perform the activity and 10 represented optimal performance. In the last step, parents rated their satisfaction with their child's performance for each prioritized activity on the same 10-point scale. Mean performance and satisfaction scores were calculated in line with standardized COPM scoring procedures (Carswell et al., 2004).

To reduce detection bias and intervention-related expectancy bias, the COPM was administered by an external occupational therapist who was not in contact with intervention delivery and was blinded to the group allocation. Administration followed standardized procedures, with the assessor guiding parents through goal clarification and scoring without influencing goal selection or satisfaction ratings.

Although the COPM has been translated into Arabic and is widely used internationally, to the best of the researcher's knowledge, no published studies have psychometrically validated the Arabic COPM specifically with parents of children with autism. However, emerging evidence supports the reliability of the Arabic version in pediatric disability contexts. In a reliability study involving children with physical disabilities, the Arabic COPM demonstrated good to excellent inter-rater reliability (ICC

= 0.84 for performance; ICC = 0.80 for satisfaction) and excellent test–retest reliability (ICC = 0.83 for performance; ICC = 0.91 for satisfaction) (Hadoush et al., 2024). Qualitative research further indicates that parents perceive the COPM as a meaningful and acceptable tool for capturing perceived change following intervention and supporting reflection on outcomes that matter to families (Verkerk et al., 2021). The COPM measure is provided in Appendix 7.

3.9.2.3. Acceptability: Qualitative Parent Interviews

Acceptability of the telecoaching intervention was also examined qualitatively by post-intervention semi-structured interviews with parents who participated in the telecoaching group. The interviews were aimed at obtaining parent perceptions of the relevance, appropriateness, perceived benefits, burden and general experience of the intervention. This provides contextual depth and explanatory understanding of the quantitative acceptability indicators. Full details of the qualitative interview design, data collection, analysis and reporting are presented in Section 3.14 (Qualitative Methods).

3.9.3. Feasibility Indicators

Feasibility of the telecoaching intervention was assessed following the recommendations for pilot and feasibility trials, including the CONSORT extension for pilot studies. Feasibility was captured using a combination of quantitative process indicators and qualitative information obtained from parent interviews and researcher process notes. The following feasibility domains were targeted: recruitment capability, enrolment and use of the Sanad Al-Hayaa platform, randomization procedures, participant retention, completion of online questionnaires, intervention fidelity and compliance, and safety monitoring.

3.9.3.1. Recruitment Capability

Recruitment capability was defined as the ability of the study to identify, screen and recruit eligible parent-child dyads in a specified recruitment window. A priori feasibility criteria were based on recommendations for pilot trials, and recruitment would be feasible if at least 80% of the target sample (30 parents -15 per group), could be recruited within the planned 4-week window (Aschbrenner et al., 2022).

Recruitment metrics were the number of parents screened, eligibility rates, consent rates, recruitment duration, and recruitment sources. These data were obtained

from screening logs and enrollment records. To complement measures of quantitative recruitment, qualitative data from post-intervention parent interviews and from study researcher field notes were explored in order to identify perceived facilitators and barriers to recruitment, including clarity of study information, trust in the research team, considerations related to timing and motivation to participate.

3.9.3.2. Enrolment and Use of Sanad Al-Hayaa Platform

Feasibility of using the digital platform was evaluated by examining the ability of parents to enroll, navigate, and interact with the Sanad Al-Hayaa platform. Indicators included successful account creation, child profile registration, booking of sessions, access to telecoaching sessions using embedded Zoom links and access to the online resource library.

Platform usage information was directly retrieved from the Sanad Al-Hayaa system, including the number of session booking, and the reported frequency of access to resources. These quantitative indicators were complemented by qualitative interview data about parents' experiences of usability, accessibility, scheduling flexibility and usefulness of the educational resources. This domain was considered feasible if all participants were able to create accounts, register their children, and use of the core platform functions with minimal technical support.

3.9.3.3. Randomization Procedure

The feasibility of the randomization procedure was evaluated by observing the operational implementation and parental understanding of group allocation. Quantitative indicators included a successful randomization of all eligible participants without protocol deviations or errors in the allocation process. In addition, the perceptions of randomization fairness and appropriateness regarding the applied procedure were explored qualitatively through post-intervention interviews.

3.9.3.4. Retention of Participants

Retention is defined as the number of parents who enrolled in the study and completed post-intervention assessments. Previous literature suggests that an 80% retention rate is important to proceed with a full-scale trial (Aschbrenner et al., 2022). Qualitative interview data were analyzed in an attempt to explore factors that support

continued participation, including perceived value, motivation, contextual fit and barriers relating to family or environmental circumstances.

3.9.3.5. Completion of Online Questionnaires

Feasibility of online data collection was determined by completion rates of all baseline and post-intervention questionnaires in both study groups. Completion time, need for support and difficulties experienced were also recorded.

Quantitative indicators were the percentage of participants who completed all the questionnaires at both time points. Qualitative perspectives regarding clarity, burden, and how accessible digital assessment were gathered, along with whether support mechanisms (e.g. therapist guidance, instructional materials) facilitated the completion of assessment. This domain was thought to be feasible when completion rates were at or above 80% and if reported barriers were minor and manageable.

3.9.3.6. Intervention Fidelity

Intervention fidelity was measured to determine if the telecoaching sessions were implemented according to the OPC model and study protocol. Fidelity indicators included fidelity to core components of OPC and completeness of documentation. Quantitative fidelity data were obtained using OPC Fidelity Measure and OPC Case Note Audit Tool. These tools were independently scored by 2 assessors on randomly selected sessions. Fidelity was also evaluated by attendance records of completed sessions. Predefined feasibility thresholds for fidelity and compliance were set at 80% across all fidelity measures. Qualitative data from parent interviews were used to discuss perceived collaboration, clarity of goals, strategies in context, and coaching relationship which offered insight into mechanisms that support fidelity and engagement.

3.9.3.7. Safety Monitoring

Safety was measured as observing adverse events resulting from the telecoaching intervention. Parents were informed about the importance of sharing any unintended adverse events during the course of the sessions. Safety monitoring logs and interview data were reviewed to determine if there were any physical, psychological, and technological risks associated with participation. The absence of any serious

adverse events was used as an indicator of feasibility and acceptability of remote delivery in this context. The Adverse Event Form utilized is included in Appendix 8.

3.9.4. Secondary Outcomes: Potential Impact

In addition to feasibility and acceptability, this pilot RCT examined secondary outcomes related to potential impact of the telecoaching intervention on children with ASD and their parents. Consistent with methodological guidance for pilot and feasibility studies, these outcomes were explored to identify signals of change, inform outcome selection, and support planning of a future definitive trial, rather than to establish intervention efficacy (Eldridge et al., 2016).

Potential impact on children was assessed using measures of participation-related performance, clinician-rated autism severity, and parent reported autism-related characteristics. Potential impact on parents was assessed using measures of parental competence and quality of life, including both generic and autism-specific instruments. All outcomes were administered at baseline and post-intervention unless otherwise specified, using standardized procedures and automated scoring through the Sanad Al-Hayaa platform.

3.9.4.1. Secondary Outcomes: Potential Impact on Children

Child-level potential impact was examined using three complementary outcome measures: the COPM- performance ratings, the CARS-2, and the ATEC. Together, these tools capture functional participation, autism severity, and autism-related characteristics across daily contexts.

3.9.4.1.1. Canadian Occupational Performance Measure (COPM; Child Goal Performance)

The COPM is an individualized, client-centred measure designed to identify participation problems in self-care, productivity, and leisure, followed by priority setting and numeric ratings of Performance and Satisfaction for each prioritized goal (Law et al., 2019). In this section, performance ratings were used as indicators of potential child-level impact.

Parents identified up to three priority goals for their child during a structured COPM interview conducted by an independent occupational therapist. For each goal, performance was rated on a 10-point scale (1 = unable to perform, 10 = performs extremely well). Mean performance scores were calculated across goals at each time point, and pre- to post-change was computed as the mean difference. Consistent with previous literature, a mean change of approximately two points was treated as a practically important improvement for pilot interpretation (McColl et al., 2023).

3.9.4.1.2. Autism Treatment Evaluation Checklist (ATEC)

Change in autism-related characteristics was assessed using the ATEC, a caregiver-completed outcome measure specifically designed to monitor intervention-related change over time rather than to establish a clinical diagnosis.

The ATEC consists of seventy-seven items distributed across four domains: Speech/Language/Communication, comprising fourteen items; Sociability, comprising twenty items; Sensory/Cognitive Awareness, comprising eighteen items; and Health/Physical/Behavior, comprising twenty-five items. Item responses reflect the severity and frequency of autism-related behaviors and are summed to generate domain-specific scores as well as a total score ranging from 0 to 179, with higher scores indicating greater symptom burden and functional impact.

In the current study, the ATEC (Arabic version) was completed by parents in both the telecoaching intervention group and the waitlist control group at baseline and post-intervention. The checklist was embedded in the platform Sanad Al-Hayaa in every child's individual profile. Parents completed the questionnaire electronically and the subscale and total scores were automatically calculated by the platform, providing standardization of the scoring procedures and reducing the likelihood of calculation error by manual calculation. Parents were told that they could ask for clarification of item wording during completion.

The ATEC has been modified and psychometrically validated for use in Arabic-speaking populations, including Saudi Arabia. In a large validation study of 363 children with autism spectrum disorder, the Saudi version of the ATEC showed good psychometric properties. Content validity was determined by expert review with at least

90 percent agreement of all items suggesting high relevance and clarity of item content. Internal consistency reliability was reported in the acceptable to excellent range with values of 0.72-0.97 on the four subscales with Cronbach's alpha values, thus supporting evidence of consistent measurement within each domain. Split-half reliability analyses were also consistent with score stability at item group levels. Construct and discriminative validity was shown using exploratory factor analysis and statistically meaningful associations between ATEC scores and relevant participant characteristics consistent with the theoretical structure and intended purpose of the instrument.

In this pilot trial, ATEC scores were used to investigate the direction and extent of change in autism-related characteristics in each group over time and to investigate between-group differences in change patterns. Consistent with goals of pilot feasibility, interpretation focused on observed trends and variability, and not a focus on formal hypothesis testing for treatment efficacy. The application of the ATEC in this context is consistent with its design as a sensitive outcome measure for monitoring change after intervention, and for its potential application for assessing potential impact in research on early phase telecoaching. The Arabic ATEC instrument is given in Appendix 9.

3.9.4.1.3. Childhood Autism Rating Scale–Second Edition (CARS-2)

Autism severity was measured by the CARS-2, a clinician-rated tool to measure the presence and severity of the core features of autism through structured caregiver interview (Vaughan, 2011). The CARS-2 comprises 15 items scored on a 4-point scale (1 = age-typical behavior; 4 = markedly atypical behavior) in 0.5-point increments, yielding a total score range of 15–60. Higher scores reflect greater autism severity, with interpretive bands commonly classifying scores as < 30 (minimal-to-no symptoms), 30–36.5 (mild-to-moderate symptoms), and ≥ 37 (severe symptoms).

Total scores for CARS-2 were derived from structured caregiver interview conducted via Zoom by an external occupational therapist who was trained in administration, was not involved in intervention delivery, and was blinded to group allocation, thus minimizing detection bias.

Psychometric evidence supports the use of the CARS-2 in Arabic-speaking contexts. Recent work evaluating the Arabic version of the CARS-2 in a sample of

Arabic-speaking children with ASD reported strong internal consistency (Cronbach's $\alpha = .88$) and a robust factor structure, with confirmatory factor analysis indicating good model fit indices and factorial validity (Ashour & Almohayya, 2025). Additional studies demonstrate that the Arabic CARS-2 yields acceptable internal consistency and inter-rater reliability, supporting its reliability and construct validity across cultural contexts (Alotaibi & Alotaibi, 2021).

Baseline CARS-2 scores were also used as a covariate in the covariate-adaptive minimization procedure during randomization to balance autism severity across allocation groups. The CARS-2 instrument is provided in Appendix 10.

3.9.4.2. Secondary Outcomes: Potential Impact on Parents

Potential impact on parents was assessed in two areas: (1) parent quality of life using one generic and one autism-specific measure, and (2) parental competence using an Arabic validated scale PCS-ASD. All parent-reported measures were completed electronically through the Sanad platform at baseline and post-intervention by parents in both study groups, with automated scoring to standardize calculation.

3.9.4.2.1. Generic Quality of Life: WHOQOL-BREF

Parent quality of life was assessed using the WHOQOL-BREF, a 26-item generic quality of life measure covering four domains (Physical Health, Psychological, Social Relationships, Environment), in addition to two global items. Items are rated on a 5-point response scale. Domain scores are computed according to WHO guidance and transformed to a 0–100 scale, where higher scores indicate better quality of life.

In the current study, the WHOQOL-BREF was self-administered electronically through the Sanad Al-Hayaa platform at baseline and post-intervention for parents in both trial groups. The platform automated scoring to reduce manual scoring errors and standardize data capture. Evidence supports acceptable psychometric performance of Arabic WHOQOL-BREF forms in Arabic-speaking samples, although psychometrics varies by setting and population (Dardas & Ahmad, 2014). The WHOQOL-BREF instrument is provided in Appendix 11.

3.9.4.2.2. Autism-Specific Quality of Life: Arabic Quality of Life in Autism (A-QoLA)

Autism-specific parental quality of life was assessed using the A-QoLA, which was selected to capture domains of caregiver well-being and autism-related impact that are not fully represented by generic quality-of-life instruments. The A-QoLA is structured in two parts and is scored and interpreted separately to avoid construct mixing: Part A assesses parents' overall quality of life (28 items), while Part B assesses the perceived impact of the child's autism-related characteristics on parent quality of life (20 items). Parents rate items using Likert-type response options as specified by the instrument, and scoring yields separate Part A and Part B totals, interpreted in the direction indicated by the scale developers (Alkhatib et al., 2024).

In the current trial, parents in both groups completed the A-QoLA electronically through the Sanad Al-Hayaa platform at baseline and post-intervention. The platform automatically calculated Part A and Part B scores to standardize scoring and minimize manual error.

Psychometric evidence of the A-QoLA is provided by its Arabic translation, cultural adaptati(Alkhatib et al., 2024). In this study, strong evidence of content validity, internal consistency, and stability was reported. Expert review supported content validity with very high item-level agreement (I-CVI = 0.952), supporting item relevance and clarity in an Arabic context. Internal consistency was high for both parts (Cronbach's alpha = 0.963 for Part A and 0.963 for Part B), indicating excellent reliability at the scale level. Test–retest reliability also supported score stability, with intraclass correlation coefficients reported as 0.786 for Part A and 0.963 for Part B. These psychometric findings support use of the A-QoLA as an autism-specific parent-reported quality-of-life measure in Arabic-speaking settings.

In this pilot trial, A-QoLA Part A and Part B totals were analyzed as continuous outcomes to examine the direction and magnitude of change within and between groups, in line with the study objective of detecting potential impact rather than establishing definitive efficacy. The A-QoLA questionnaire is provided in Appendix 12.

3.9.4.2.3. Parental Competence Scale for Parents of Children with ASD (PCS-ASD; Arabic)

Parental competence was assessed using the Arabic version of the PCS-ASD, a caregiver-reported instrument designed to measure parents perceived capability to support their child effectively across everyday caregiving and developmental contexts associated with ASD. The scale consists of 29 items, each rated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5), with higher total scores indicating greater perceived parental competence.

The Arabic PCS-ASD has been psychometrically evaluated in an Arabic-speaking context. Using a two-parameter logistic item response theory model, Alnasraween et al. examined the scale in a Jordanian sample of parents of children with ASD and reported strong item discrimination parameters and item difficulty estimates distributed across the competence continuum. Internal consistency for the total scale was high, with Cronbach's alpha exceeding 0.85, supporting good reliability and construct validity. Conceptual and empirical work has further promoted parental competence as a meaningful outcome in ASD research, with parental competence being associated with increases in parental adjustment and caregiving effectiveness.

In the present trial, the Arabic PCS-ASD was self-administered electronically using the Sanad Al-Hayaa platform by parents in both the telecoaching intervention and the waitlist control groups at baseline and post-intervention. The Arabic PCS-ASD instrument is in Appendix 13.

3.10. Quantitative Data Analysis

Quantitative analyses were performed in order to address the study objectives that relate to acceptability, feasibility and possible impact of the telecoaching intervention. In line with recommendations for external pilot and feasibility trials, an emphasis was placed on descriptive statistics, estimation of change, confidence intervals, and interpretation of effect sizes instead of tests of hypotheses to inform the

evaluation of efficacy (Lancaster et al., 2004; Eldridge et al., 2016). All analyses were done with IBM Statistics of the statistical software (version 26).

3.10.1. Analysis Set and Missing Data

All quantitative data were collected electronically through Sanad Al-Hayaa platform and exported directly into the statistical package (SPSS) for analysis. Standardized measures, like STAS, ATEC, PCS-ASD, WHOQOL-BREF, A-QoLA, and COPM ratings, were scored automatically on the platform to allow for scoring consistency and reduce error in data entry. Two participants allocated to the intervention group withdrew before receiving any telecoaching and did not complete post-intervention questionnaires. Therefore, analyses were conducted using complete-case data from participants who completed both pre- and post-intervention assessments (n = 24). Baseline equivalence was examined between groups, within-group pre to post changes were analyzed, and between-group differences in change scores were compared. No imputation was performed.

3.10.2. Descriptive statistics

Descriptive statistics were used to address study variables, including participant characteristics, feasibility and acceptability indicators, the child and parent outcome measures. Categorical variables were summarized as frequencies and percentage. Continuous variables were reported with means and standard deviations or medians. Baseline demographic and clinical characteristics were presented separately for the telecoaching intervention and waitlist control groups. For all outcome measures, descriptive statistics were provided at baseline and post-intervention and change scores were calculated.

3.10.3. Assessment of Distributional Assumptions

Given the small sample size and pilot nature of the trial, distributional assumptions for continuous outcome measures were evaluated. Normality was assessed by visual inspection of histograms and Q-Q plots, supported by the Shapiro-Wilk test. These assessments were used to determine the choice of parametric or non-parametric statistical procedures.

3.10.4. Inferential Procedures and Estimation of Effect Size

Inferential analyses were exploratory and used to explore patterns of change rather than to make definitive conclusions. Baseline equivalence between groups was tested with independent samples t tests of normally distributed variables and Mann-Whitney tests in cases of distribution deviations from normality (Lancaster et al., 2004)(Lancaster et al., 2004)Click or tap here to enter text..

Within-group pre- to post-intervention changes were analyzed using paired-samples t-tests when the assumptions of normality were observed and Wilcoxon signed-rank test when assumptions were violated. Between-Group comparisons of change scores were performed using independent samples t-tests or the nonparametric Mann-Whitney U tests, as appropriate.

Effect size of potential impact was measured using Cohen's d, a standardized measure of mean difference. It was computed for within-group and between-group change scores and interpreted using the recommended benchmarks of 0.20 (small), 0.50 (medium), and 0.80 (large) (Lakens, 2013). Ninety-five percent confidence intervals were presented alongside change scores and effect size estimates (Eldridge et al., 2016). All statistical tests were two-tailed, with an alpha level of 0.05 specified for transparency. Statistical significance was interpreted cautiously and considered alongside descriptive trends, effect sizes, and feasibility benchmarks.

3.11. Qualitative Methods and Reporting (COREQ-Guided)

This section outlines the qualitative component of the study, which was undertaken to complement and contextualize the quantitative findings in relation to acceptability, feasibility and potential impact of the telecoaching intervention. In accordance with the explanatory sequential mixed-methods design, qualitative inquiry followed the completion of quantitative data collection and analysis and was used to develop a better understanding of the experiences of parents, explain observed patterns in outcome measures, and explore contextual and process-related factors influencing

intervention delivery and engagement. The qualitative methods were designed, implemented and reported following the COREQ guidelines to achieve transparency, rigor and credibility throughout the qualitative process.

3.11.1. Design and Sampling

A qualitative descriptive design was used employing semi-structured one to one interview to explore parent's views regarding the acceptability, feasibility and perceived impact of the telecoaching intervention. This approach was chosen to enable rich and practice relevant descriptions of participants lived experiences.

Sampling was based on an explanatory sequential logic, in which the qualitative interviews were carried out after the collection and analysis of quantitative results. Purposeful sampling was applied to obtain maximum variation of important characteristics (for example, child age, parents' gender, socioeconomic background, geographic location, and patterns of intervention use). This was a useful strategy to support the identification of both common and divergent experiences. All parents who participated in the eight-session telecoaching intervention were invited to participate in post-intervention interviews. In addition, parents who signed up on the Sanad Al-Hayaa platform but did not complete baseline assessments were also asked to take part in order to explore barriers to enrollment and early engagement. (Creswell et al., 2016).

3.11.2. Reflexivity

Interviews were carried out by an independent occupational therapist with formal training in qualitative interviewing and previous clinical experience of working with parents of children with neurodevelopmental conditions. The interviewer was not involved in the recruitment of participants, delivery of interventions, or outcome assessment, and data analysis associated with the quantitative phase. Reflexivity was addressed by continual reflexive note taking by the interviewer and the principal investigator. These notes recorded assumptions and positions, and what may have influenced interpretation during the data collection and analysis process. The unfamiliarity of the interviewer to participants, and her neutral position in the study, facilitated open disclosure and frank discussion of both positive and challenging aspects of the intervention, consistent with COREQ recommendations (Tong et al., 2007).

3.11.3. Data Collection

Interviews were conducted in Arabic using Zoom videoconferencing and based on parent preference and logistical convenience which suits the remote nature of the intervention. Interviews lasted between 35 to 60 minutes. Informed consent was reaffirmed verbally at the beginning of each interview and participants approved permission to record interviews to ensure proper data collection.

A semi-structured interview guide was developed in Arabic and informed by the Theoretical Framework of Acceptability (TFA). The guide includes questions that cover constructs such as affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness and self-efficacy (Sekhon et al., 2017). Questions regarding perceived change of children and parents were included to explore mechanisms underlying quantitative results. The interview guide was piloted with one parent that was not included in the final qualitative sample and minor refinements were made to improve clarity, sequencing and conversational flow, see appendix 14.

3.11.4. Qualitative Data Analysis

All interviews were transcribed verbatim and verified against audio recordings for accuracy before analysis. Data analysis followed Braun and Clarke's six-phase reflexive thematic analysis approach (familiarization with data, generation of initial codes, development of candidate themes, review and refinement of themes, definition and naming of themes, and creation of an analytic narrative). This approach was chosen because it is flexible and amenable to applied health and mixed-methods research (Braun & Clarke, 2006).

Coding and data management were supported using Taguette, a secure, web-based, open-source qualitative analysis platform. Taguette allowed for systematic tagging, categorization, memo-writing and export of coded segments. In order to increase the credibility of the qualitative analysis, the principal investigator and an external occupational therapist who had experience in qualitative research and coaching-based interventions independently coded two interview transcripts. A comparison and discussion of coding decisions were then made with the intention to produce conceptual clarity and an understanding of coded data. This method is in line with reflexive

thematic analysis principles, which prioritize interpretation, reflexivity, and depth of analysis rather than inter-coder reliability metrics. The remaining interviews were coded by the principal investigator.

The TFA was used to guide the analysis. It offers a systematic approach for examining key constructs. At the same time, the analytic process remained flexible to accommodate themes that arose directly from the data. Peer debriefing was conducted with a senior qualitative researcher to further strengthen the quality of the analysis. This process supported critical reflection on emerging themes and evaluation of whether they were clearly defined, analytically distinct, and adequately supported by the data. All analytic decisions made during coding and theme development were recorded at each stage, and an audit trail was maintained to ensure transparency and traceability of interpretations.

3.11.5. Reporting

The Consolidated Criteria for Reporting Qualitative Research (COREQ) was followed as a guideline for qualitative reporting. The importance of giving enough contextual background, clarity of analytic choices, and a purposeful and systematic choice of participant quotes was emphasized. During the selection of quotes, emphasis was placed on ensuring that quotes reflected broader patterns, mechanisms of change, and variation among the experiences of the various participants.

Anonymity was ensured by participant identifiers while allowing patterns to be followed within individual accounts. A forward translation process was used to translate the selected quotations into English. The principal investigator did the first translations and a bilingual non-study researcher reviewed them to ensure linguistic accuracy and cultural equivalence. All analytic interpretations were based on the original Arabic transcripts.

3.12. Alignment of Mixed-Methods Integration (MMR-RHS)

In this section, the process of integrating quantitative and qualitative data to formulate clear and supported conclusions about the acceptability, feasibility, and the potential impact of the telecoaching intervention is outlined. As suggested by the principles of explanatory sequential mixed-methods and MMR-RHS guidelines, integration was considered during planning, data collection and analysis and interpretation.

3.12.1. Purpose and Rationale for Integration

Mixed-methods integration was used to develop an understanding of the telecoaching intervention that could be achieved using quantitative or qualitative data alone. Quantitative data provided estimates of predefined benchmarks and patterns of change across standardized outcome measures, while qualitative data captured parents' lived experiences, perceptions, and contextual explanations that could not be fully represented numerically. Integration was therefore necessary to help explain how and why observed quantitative patterns occurred and to support informed judgements regarding intervention refinement and progression to a future definitive trial.

3.12.2. Integration Procedures and Five Planning Considerations

Integration was informed by five planning considerations for mixed-methods pilot and feasibility trials, as suggested by Aschbrenner et al. (2022). These considerations structured the alignment between quantitative indicators, qualitative data sources, timing of data collection, and analytic strategies related to the domains of interest.

First, the key domains requiring integration were identified. The primary domains were acceptability and feasibility, given their conceptual complexity and central role in progression decisions. Feasibility domains included recruitment capability, enrolment and use of the Sanad Al-Hayaa platform, randomization procedures, retention, completion of online questionnaires, intervention fidelity and

adherence, and safety monitoring. Secondary domains included the potential impact of telecoaching on child and parent outcomes.

Second, quantitative indicators and qualitative data sources were matched to prespecified benchmarks and progression criteria. A priori indicators comprised recruitment and retention rates, questionnaire completion rates, fidelity scores, and estimates of change on standardized outcome measures. These indicators were integrated with qualitative data sources capable of explaining why benchmarks were met or not met, including parent interviews, researcher reflection notes, and feedback from an external fidelity auditor. Benchmarks were informed by prior pilot and feasibility research and recommendations from the OPC literature (Bearss et al., 2018; Dunn et al., 2018; Graham et al., 2024; Owen, 2020; Tkach et al., 2025).

Third, the sequence of quantitative and qualitative data collection was specified to clarify the order of events. Quantitative data were collected at baseline and post-intervention to estimate key parameters and patterns of outcome change. The qualitative interview took place after intervention completion or non-participation, so that parents could reflect on enrolment, participation, and perceived impact.

Fourth, explicit integration strategies were used in the analysis and interpretation phases. Joint displays were used as the main integration tool, which systematically connected quantitative indicators and qualitative themes in each domain. As an illustration, the retention rate (benchmark $\geq 80\%$) was analyzed alongside the parents' perceived competing demands and caregiving burden, whereas the telehealth acceptance scores were interpreted in relation to the qualitative accounts of usability, privacy, and perceived value. The narrative weaving describes quantitative results and illustrative qualitative quotes that illustrate the mechanisms behind the results and the contextual factors.

Fifth, meta-inferences were constructed across domains based on convergence, complementarity and divergence between quantitative and qualitative results. Convergence was noted when qualitative descriptions conformed to observed quantitative trends, and complementarity was observed when qualitative descriptions expanded on quantitative findings by describing mechanisms or contextual factors that

could not be identified using standard measures. Divergence prompted reflection on the measurement limitations or variability of the study context.

The mixed-methods research questions, quantitative indicators and benchmarks, qualitative data sources, data collection timing, and integration plans for each domain are presented in Table 3.1. Using this planned integration process, the study drew conclusions based on both empirical measurement and parents' experiences in determining the acceptability, feasibility, and potential impact of the telecoaching intervention. This methodology is consistent with best practices of mixed methods pilot and feasibility research in which evidence-based and transparent decisions are made to refine the intervention prior to scaling up to a definitive trial. Figure 3.2 illustrates the explanatory sequential mixed-methods integration of the pilot randomized controlled trial.

Table 3.1.: Mixed-Methods Integration Plan and Benchmarks Across Study Domains

Domain	Integrated mixed-methods question	Key quantitative indicators (benchmarks)	Qualitative data sources	Timing	Planned integration
Acceptability	To what extent is telecoaching acceptable, and how do usability and perceived value explain acceptance?	STAS total and domains (pre/post), $\geq 80\%$ score ≥ 4 at post. COPM satisfaction (INT only), $\geq 80\%$ achieve ≥ 2 -point improvement.	Interviews on usability, value, privacy, cultural fit, satisfaction, and intention to continue or recommend.	Baseline and post (QUAN); post interviews.	Joint display linking STAS and COPM patterns with acceptability themes (convergence, complementarity).
		Target N = 30 dyads (15 per arm); recruitment timeframe; eligibility and consent yield; reasons for exclusion or refusal. Benchmark: $\geq 80\%$ of target within 4 weeks.	Interviews on how parents heard about the study, decision drivers, trust, and recruitment barriers.	Recruitment period; post interviews.	Compare metrics with benchmark, then explain barriers and facilitators using themes and deviant cases.
Feasibility, recruitment	Is recruitment achievable within the planned 4-week window, and what explains performance?				

Domain	Integrated mixed-methods question	Key quantitative indicators (benchmarks)	Qualitative data sources	Timing	Planned integration
Feasibility, enrolment and platform use	Is enrolment and platform use feasible, and what explains engagement?	Account creation (targets $\geq 90\%$); platform activity and library use frequency; technical issues.	Interviews on onboarding, navigation, booking workflow, library usefulness, routine fit, device or internet barriers, support needs.	Baseline enrolment; intervention period; post interviews.	Align usage indicators with qualitative explanations to identify usability barriers and refinements.
Feasibility, randomization	Is randomization operationally feasible and acceptable, and what explains fairness perceptions?	Successful allocation for all eligible dyads (target 100%); baseline balance on minimization variables; procedural deviations (none expected).	Interviews on understanding, fairness, and views on need-based allocation.	Post-baseline; early or post interviews.	Integrate procedural integrity with parent perceptions to refine explanations in consent and study materials.
Feasibility, retention	What is the retention rate, and what explains continuation or dropout?	Retention $\geq 80\%$ at post; dropout timing and reasons; attendance patterns in INT.	Interviews on motivators, competing demands, burden, and contextual barriers (including dropouts when possible).	Ongoing; post interviews.	Link retention and attendance patterns with qualitative mechanisms, including deviant cases, to refine supports.
Feasibility, questionnaire completion	Is online questionnaire completion feasible and acceptable, and what explains burden or missingness?	Completion $\geq 80\%$ at each timepoint; missingness $\leq 10\%$ per measure; completion time and support requests (if tracked).	Interviews on clarity, burden, comfort with online forms, and support needs.	Baseline and post; post interviews.	Map completion and missingness patterns to burden and support themes to refine procedures and measures.

Domain	Integrated mixed-methods question	Key quantitative indicators (benchmarks)	Qualitative data sources	Timing	Planned integration
Feasibility, fidelity and compliance	Is telecoaching delivered as intended, and what supports fidelity and participation?	OPC Fidelity $\geq 80\%$; case note audit $\geq 80\%$; attendance $\geq 80\%$ (or prespecified).	Interviews on coaching process and engagement; coach reflections; external audit feedback (if collected).	Sampled sessions; post interviews.	Integrate fidelity metrics with qualitative mechanisms to identify training needs and adaptation targets.
Feasibility, safety	Is telecoaching delivered safely in home contexts, and how do families manage risk?	Adverse events (frequency, severity, relatedness); prespecified safety criterion (for example, no serious events); documentation completeness.	Interviews on safety awareness, supervision strategies, and any unreported incidents.	Continuous; post interviews.	Integrate event logs with parent accounts to interpret safety and refine safety guidance and reporting.
Potential impact, child outcomes	What is the potential impact on child performance and autism severity?	COPM performance (INT only; ≥ 2 -point improvement); ATEC and CARS-2 change scores (pre–post).	Interviews on functional participation change and examples of meaningful progress.	Baseline and post; post interviews.	Align quantitative trends with narratives to explain convergence or divergence and plausible mechanisms.
Potential impact, parent outcomes	What is the potential impact on parental QoL and parental competence?	WHOQOL-BREF, A-QoLA, PCS-ASD change estimates (pre/post).	Interviews on confidence, stress, coping, daily roles, and perceived competence.	Baseline and post; post interviews.	Explain outcome trends through lived experience themes, including contextual moderators and deviant cases.
Overall integration	What meta-inferences guide progression decisions and refinement priorities?	Summary of benchmarks met or not met across domains; precision of estimates; implementation signals.	Cross-domain themes, deviant cases, and refinement suggestions.	After QUAN and qual completion.	Synthesize across domains to justify progression and prioritize refinements for a definitive trial.

Note. This table summarizes the a priori integration plan for the explanatory sequential mixed-methods pilot randomized controlled trial (QUAN → qual). Key quantitative indicators include prespecified progression benchmarks for acceptability, feasibility, and potential impact, and qualitative sources specify the interview content used to explain quantitative patterns. N denotes the number of parent–child dyads (target and achieved, as relevant). For STAS domains, the “≥4” threshold indicates high acceptance at post-intervention. Planned integration specifies how quantitative signals will be linked with qualitative themes, including convergence, complementarity, and deviant cases, and summarized in joint displays.

Abbreviations. QUAN = quantitative; qual = qualitative; INT = intervention group; STAS = Saudi Telehealth Acceptance Scale; COPM = Canadian Occupational Performance Measure; OPC = Occupational Performance Coaching; ATEC = Autism Treatment Evaluation Checklist; CARS-2 = Childhood Autism Rating Scale, Second Edition; WHOQOL-BREF = World Health Organization Quality of Life, Brief Version; A-QoLA = Arabic-Quality of Life Autism; PCS-ASD = Parental Competence Scale for Autism Spectrum Disorder.

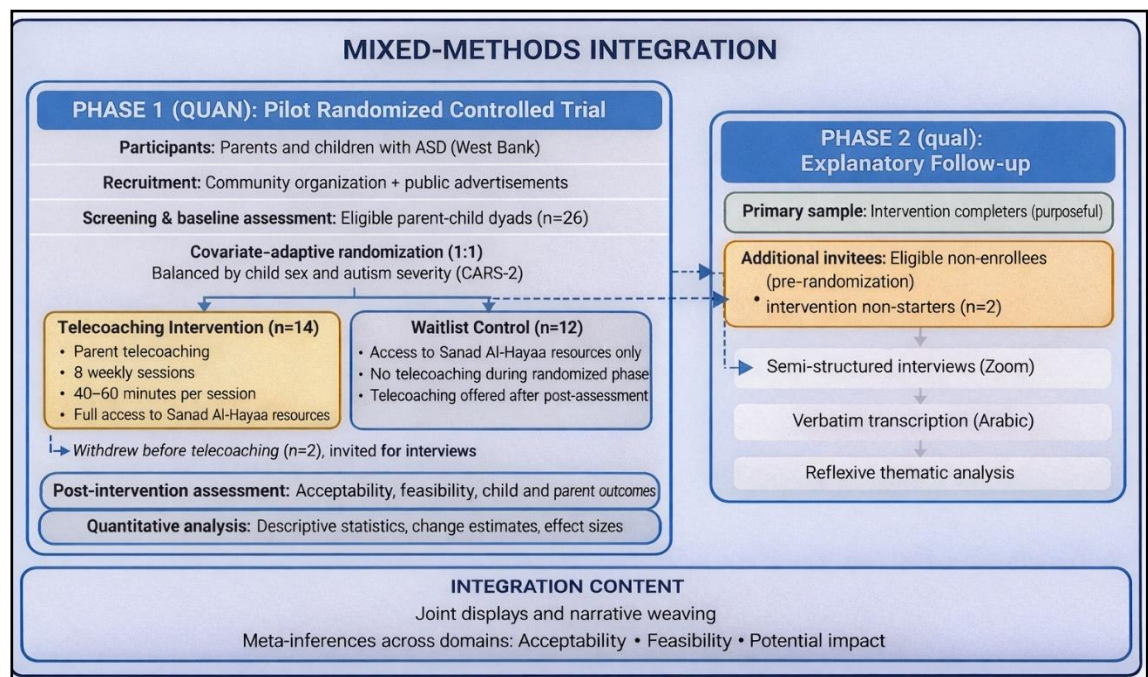


Figure 3.2: Explanatory sequential mixed-methods integration of the pilot randomized controlled trial.

Note. Phase 1 comprised a pilot randomized controlled trial assessing feasibility, acceptability, and potential impact of a parent telecoaching intervention. Phase 2 involved qualitative interviews conducted to explain and contextualize quantitative findings. Integration occurred through joint displays and narrative weaving, leading to meta-inferences across acceptability, feasibility, and potential impact domains.

3.13. Ethical Considerations

Ethical conduct was considered at all stages of this mixed-methods pilot randomized controlled trial, in line with international ethical standards for research involving human participants, professional guidelines for telehealth practice in occupational therapy and institutional regulatory requirements (WFOT 2021; WHO, 2019).

Ethical approval was obtained from the Arab American University Institutional Review Board (approval code: R-2024/A/164/N). Aside from obtaining ethical permission, issues such as informed consent, confidentiality of information, anonymity of participants and protecting participants from harm were all addressed in this study. Potential participants received the information sheet and consent form ahead of time to allow them time to reflect on their decision to participate. The information provided on the sheets was discussed with participants in the first telephone call and they were notified that they have the right to refuse participation whenever and for whatever reason they wished. Those who agreed to take part in the study were asked to complete a reply slip and a written consent before the commencement of the study. Copies of these materials are presented in Appendices 15-17.

During the process of delivering telecoaching, privacy and confidentiality was ensured. Since sessions were conducted in participants home, timing of the sessions, physical location and use of cameras were controlled by the parents, and the parents had an option not to discuss issues that they believed were personal. The sessions took place via Zoom with the standard security options, which include passwords, waiting room

access, and access control by the host. According to the telehealth principles, parents were not requested to activate their camera at any point of the session.

The exchange of clinical material and outcome evaluation took place only via the secure platform Sanad Al-Hayaa. WhatsApp was employed only to communicate logistically (reminder or rescheduling) and not to discuss and collect data related to the children and parents. This separation minimized the risk of privacy and was in line with the international recommendations on digital health data protection (World Health Organization, 2019). All electronic data were stored on password-controlled devices and only accessed by the research team. Analyses were performed with de-identified datasets, and the audio files of interviews were anonymized and stored safely.

Participants were assured that all information provided would be anonymous to the best of the researcher's ability. Interview transcripts were assigned codes which then were used when presenting transcript quotations in the report of findings. Special care was also taken to avoid including personal information about participants, or the use any quotations which may make them identifiable in any way.

Confidentiality issues were addressed and explained prior to the start of the interview. Participants were informed that appropriate measures will be taken to store research data in a secure manner (i.e. the computer on which data will be stored is password protected and paper records will be kept in a locked filing cabinet). Finally, although this research is presented as limited risks, potential participants were reminded that if they feel discomfort at any time during the interview, they need to bring this to the attention of the researcher and the interview will be suspended immediately and terminated at that point if this is what the participant wishes.

3.14 Summary

The chapter outlined the research design and methodology used to assess the acceptability, feasibility and potential impact of a parent telecoaching intervention among families of children with autism in the West Bank. The study followed a

pragmatic approach and adopted a mixed-methods design that included a pilot randomized, waitlist-controlled trial with two parallel groups, and semi-structured interviews.

Twenty-six parent-child dyads were purposively selected and randomly allocated to the intervention group or the waitlist control group. Parents in the intervention group received eight one-hour weekly telecoaching sessions via the Zoom platform, while parents in the waitlist control group had access to necessary evidence-based information on autism offered through the Sanad Al-Hayaa Platform. The acceptability, feasibility and potential impact of the delivered intervention were assessed by comparing the results obtained from pre- and post-tests and complemented by qualitative data obtained from interviews conducted with parents who completed the telecoaching intervention. Integration of quantitative and qualitative components was planned in advance and carried out through structured approaches, including joint displays and the development of meta-inferences. Ethical issues were addressed thoroughly, with attention given to informed consent, confidentiality, cultural sensitivity, and participant protection within telehealth delivery.

The study findings are reported in Chapter Four. Quantitative results from the pilot trial are presented first to address indicators of acceptability, feasibility, and potential impact. These are followed by qualitative findings that explain and add context to the quantitative results from parents' perspectives. Integration of both data types is then presented through joint displays and interpretive synthesis to support the development of meta-inferences across study domains.

Chapter 4: Results

4.1. Introduction

This chapter presents the results of the explanatory sequential mixed-methods pilot randomized controlled trial evaluating the acceptability, feasibility, and potential impact of a parent telecoaching intervention for families of children with autism spectrum disorder in Palestine. Results are reported in line with the study aims and questions. Acceptability and feasibility results are first described based on the predefined quantitative indicators, then qualitatively using themes drawn from parent interviews which explain the perceived benefits, barriers, and facilitators. Potential impact findings are then reported for child and parent outcomes coupled with parent's accounts of perceived changes in goal performance, competence of caregiving and quality of life. Integration among quantitative and qualitative methodologies is presented using joint displays and narrative synthesis. The chapter ends with a brief summary of the key findings of feasibility, acceptability and potential impact of the telecoaching intervention.

4.2. Participant Flow

As shown in Figure 4.1, during the recruitment period (15 February to 14 April 2025), 32 parents expressed interest and completed the screening form. Of these, 28 parents (87.5%) met the eligibility criteria. Reasons for ineligibility ($n = 4$) included a child above the age inclusion criterion ($n = 2$), lack of a confirmed ASD diagnosis ($n = 1$), and a diagnosis of Down syndrome ($n = 1$). Of the 28 eligible parents, 26 consented and were enrolled (92.9%). Two eligible parents later declined participation, one reported personal reasons and one reported insufficient time during Ramadan.

Baseline assessments were completed by all enrolled participants ($n = 26$). Participants were then randomized using a covariate-adaptive minimization procedure balancing gender of child and severity of autism. Fourteen parents were allocated to the

telecoaching intervention group and twelve assigned to the waitlist control group. In the intervention group, two parents discontinued before commencing telecoaching sessions, one due to caring for an ill family member and one due to increased household responsibilities following the spouse's return to work. The final analytic sample therefore comprised 24 parents who had complete baseline and post-intervention assessments with 12 in the intervention group and 12 in the waitlist control group.

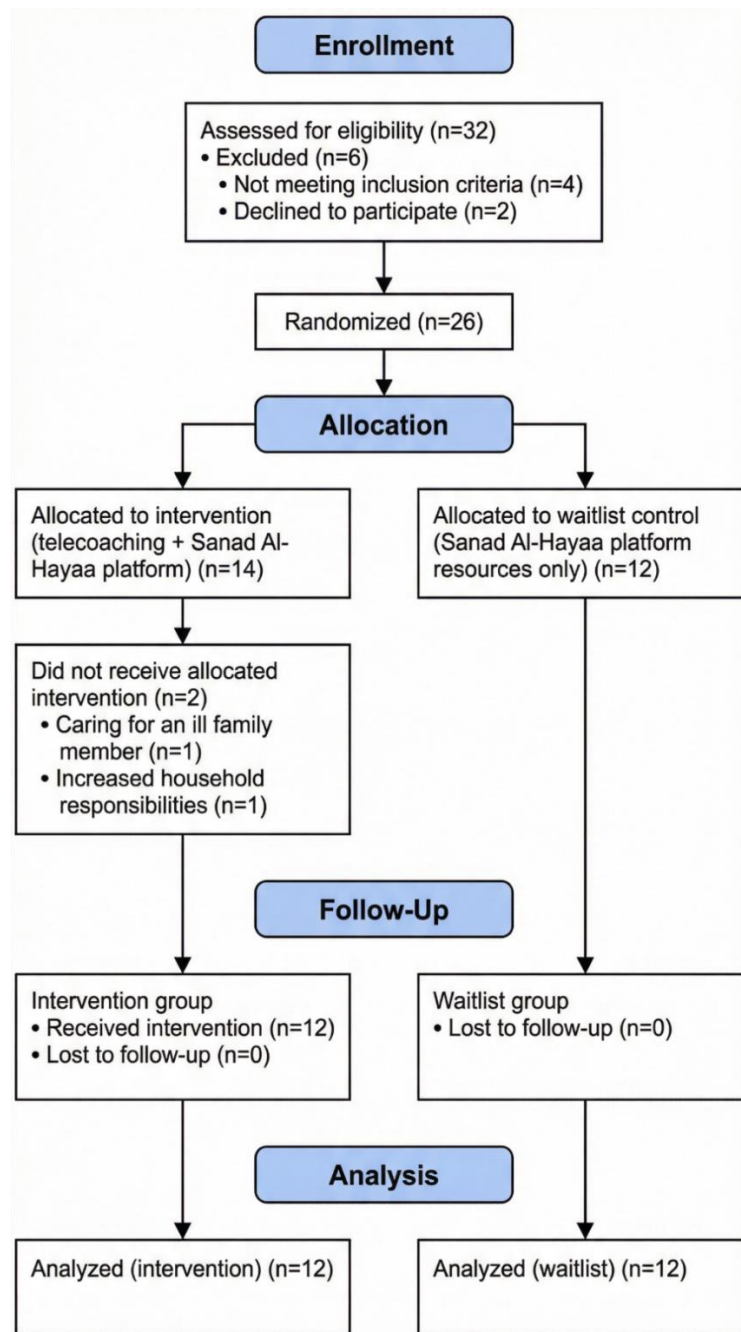


Figure 4.1: Participant Flow Through the Pilot Randomized Controlled Trial.

Note. Participant flow through enrolment, allocation, follow-up, and analysis for this randomized pilot trial.

4.3. Recruitment

Participant recruitment took place between 15 February 2025 and 14 April 2025 and was treated as a key feasibility domain. Families were approached using the two recruitment channels, a trusted community organization and open dissemination through social media and autism-related service networks. Interested parents underwent initial screening, eligibility was then confirmed and consent procedures completed prior to baseline assessment and randomization. Follow-up assessments were carried out shortly after the completion of the eight-week telecoaching intervention for the intervention group, and at a similar time interval for the waitlist control group. The recruitment feasibility indicators, such as the numbers screened, eligible, enrolled and retained, are reported in the following recruitment feasibility section.

4.4. Parents and Children Baseline Characteristics

As shown in Tables 4.1 and 4.2, the analyzed sample included 24 parent–child dyads recruited from districts across the West Bank, Palestine. Parents were evenly allocated between the intervention group ($n = 12$) and the waitlist control group ($n = 12$). Most respondents were mothers ($n = 23$, 95.8%). Parent age was $M = 33.80$ years ($SD = 4.56$). Most parents held a bachelor’s degree or higher ($n = 17$, 70.8%), and half of the sample reported a monthly household income of 2,000–5,000 NIS ($n = 12$, 50.0%). Most families lived in apartments ($n = 14$, 58.3%) and in urban areas ($n = 13$, 54.2%).

Child age was $M = 5.33$ years ($SD = 1.25$), and most children were boys ($n = 18$, 75.0%). Autism severity was distributed across mild-to-moderate ($n = 11$, 45.8%) and severe presentations ($n = 13$, 54.2%). For education and service context, most children were enrolled in nursery or school while also receiving therapy ($n = 10$, 41.7%) or

receiving therapy only ($n = 9$, 37.5%). Four children were not enrolled in education or therapy ($n = 4$, 16.7%), and one child was enrolled in nursery or school only ($n = 1$, 4.2%).

Baseline characteristics are presented descriptively. In small pilot trials, baseline significance testing is not required for interpreting feasibility parameters or preliminary outcome estimates.

Table 4.1.: Parent baseline characteristics by group

Variable	Intervention (n = 12)	Waitlist (n = 12)	Total (N = 24)
Parent age (years), M (SD)	33.9 (5.12)	33.7 (4.14)	33.8 (4.56)
Respondent parent, n (%)			
Mother	11 (91.7)	12 (100.0)	23 (95.8)
Father	1 (8.3)	0 (0.0)	1 (4.2)
Parent education, n (%)			
Diploma	4 (33.3)	3 (25.0)	7 (29.2)
Bachelor's degree or higher	8 (66.7)	9 (75.0)	17 (70.8)
Monthly income (NIS), n (%)			
< 2,000	3 (25.0)	3 (25.0)	6 (25.0)
2,000–5,000	5 (41.7)	7 (58.3)	12 (50.0)
5,000–8,000	4 (33.3)	2 (16.7)	6 (25.0)
Residence, n (%)			
City	7 (58.3)	6 (50.0)	13 (54.2)
Village	5 (41.7)	6 (50.0)	11 (45.8)
Housing type, n (%)			
Apartment	8 (66.7)	6 (50.0)	14 (58.3)
Independent house	4 (33.3)	6 (50.0)	10 (41.7)

Note. Values are presented as M (SD) for continuous variables and n (%) for categorical variables. Percentages may not total 100 due to rounding.

Table 4.2: Child baseline characteristics by group

Variable	Intervention (n = 12)	Waitlist (n = 12)	Total (N = 24)
Child age (years), M (SD)	5.58 (1.17)	5.08 (1.31)	5.33 (1.25)
Gender, n (%)			
Female	3 (25.0)	3 (25.0)	6 (25.0)
Male	9 (75.0)	9 (75.0)	18 (75.0)
Autism severity, n (%)			
Mild to moderate	6 (50.0)	5 (41.7)	11 (45.8)
Severe	6 (50.0)	7 (58.3)	13 (54.2)
Education and therapy setting, n (%)			
Not enrolled	0 (0.0)	4 (33.3)	4 (16.7)
Nursery/School & Therapy	7 (58.3)	3 (25.0)	10 (41.7)
Nursery/School Only	0 (0.0)	1 (8.3)	1 (4.2)
Therapy Only	5 (41.7)	4 (33.3)	9 (37.5)
Note. Values are presented as M (SD) for continuous variables and n (%) for categorical variables. Percentages may not total 100 due to rounding.			

4.5. Acceptability of Telecoaching Intervention

This section addresses the first aim of the study, to evaluate the acceptability of the telecoaching intervention for parents of children with ASD in Palestine. Quantitative results from the Saudi Telehealth Acceptance Scale (STAS) and the COPM satisfaction ratings are presented first followed by qualitative themes based on parent interviews.

Findings are then combined to help inform interpretation of parental attitudes and satisfaction, as well as the cultural and contextual fit of the intervention.

4.5.1. Quantitative Results: Parent Acceptance and Satisfaction

Quantitative evaluation of acceptability focused on two outcome indicators: (a) measurement of the STAS, which evaluated parental acceptance of telehealth based on five domains and a total score, and (b) the satisfaction ratings (COPM), which evaluates parents' satisfaction with their child's goal-related performance. Both the intervention and waitlist groups completed the STAS at baseline and post-intervention. COPM satisfaction ratings were collected for the intervention group only.

4.5.1.1. Telehealth Acceptance: Descriptive Statistics (STAS, COPM Satisfaction)

Post-intervention descriptives favored the intervention group across STAS domains and the total score (Table 4.3), with higher post-intervention means and a larger proportion of parents meeting the predefined threshold (score ≥ 4) compared with the waitlist group. The clearest separation was observed for facilitating conditions (FC). The intervention group increased to $M = 4.21$ ($SD = 0.53$) at post-intervention, with 75.0% scoring ≥ 4 , compared with $M = 3.33$ ($SD = 0.80$) and 25.0% scoring ≥ 4 in the waitlist group. Effort expectancy (EE) showed a similar pattern, with 91.7% of parents in the intervention group scoring ≥ 4 post-intervention compared with 41.7% in the waitlist group. Post-intervention values for performance expectancy (PE) and total STAS also favored the intervention group (Table 4.3).

COPM satisfaction (intervention group only) increased from $M = 2.40$ ($SD = 1.13$) at baseline to $M = 7.04$ ($SD = 1.53$) post-intervention. Most parents achieved a clinically meaningful improvement (91.7% with a ≥ 2 -point increase). Figures 4.2 and 4.3 summarize these patterns.

4.5.1.2. Telehealth Acceptance: Inferential Statistics (STAS, COPM Satisfaction)

Normality of change scores was supported by Shapiro–Wilk tests (all $p > .05$) and inspection of histograms and Q–Q plots, supporting parametric analyses. Given the pilot design, inferential findings are interpreted as exploratory estimates rather than definitive tests.

Within-group analyses (Table 4.4) estimates suggested improvements in the intervention group for Facilitating Conditions (FC), mean change = 0.54 (SD = 0.59), $t(11) = 3.17$, $p = .009$, and for total STAS, mean change = 0.22 (SD = 0.29), $t(11) = 3.10$, $p = .010$. COPM satisfaction increased substantially, mean change = 4.64 (SD = 2.00), $t(11) = 8.02$, $p < .001$, indicating a very large improvement. In the waitlist group, change scores were negative for several domains and the total score, but none reached statistical significance (Table 4.4).

Between-group comparisons of change scores (Table 4.5) indicated greater improvement in the intervention group than the waitlist group for facilitating conditions (FC), performance expectancy (PE), and total STAS, with statistically significant differences for FC ($p = .006$), PE ($p = .030$), and total STAS ($p = .002$). These findings are interpreted as preliminary signals of acceptability and perceived benefit to be confirmed in a fully powered trial.

Table 4.3: Descriptive Statistics for Telehealth Acceptance (STAS) and COPM Satisfaction by Group

Measure	Group	Pre, M (SD)	Post, M (SD)	Change (Post–Pre), M (SD)	95% CI for change	Post threshold met, %
STAS PE	INT	3.99 (0.43)	4.11 (0.47)	0.12 (0.36)	[–0.11, 0.35]	75.0
	WL	3.87 (0.66)	3.63 (0.79)	–0.24 (0.40)	[–0.49, 0.01]	25.0
STAS EE	INT	4.04 (0.51)	4.25 (0.34)	0.21 (0.44)	[–0.07, 0.49]	91.7
	WL	3.71 (0.67)	3.65 (0.83)	–0.06 (0.43)	[–0.33, 0.21]	41.7
STAS FC	INT	3.67 (0.77)	4.21 (0.53)	0.54 (0.59)	[0.17, 0.91]	75.0
	WL	3.42 (0.76)	3.33 (0.80)	–0.08 (0.39)	[–0.33, 0.17]	25.0
STAS BI	INT	4.10 (0.38)	4.17 (0.51)	0.06 (0.49)	[–0.25, 0.37]	66.7
	WL	4.02 (0.56)	3.65 (0.86)	–0.38 (0.75)	[–0.86, 0.10]	41.7
STAS SI	INT	3.48 (0.65)	3.55 (0.59)	0.07 (0.38)	[–0.16, 0.30]	58.3
	WL	3.44 (0.78)	3.39 (0.60)	–0.05 (0.33)	[–0.28, 0.18]	41.7
STAS Total	INT	3.86 (0.49)	4.08 (0.42)	0.22 (0.29)	[0.04, 0.40]	62.5
	WL	3.72 (0.58)	3.53 (0.64)	–0.19 (0.30)	[–0.38, 0.00]	29.2
COPM satisfaction	INT	2.40 (1.13)	7.04 (1.53)	4.64 (2.00)	[3.36, 5.91]	91.7

Note. Values are presented as *M* (SD). Change scores were computed as post-intervention minus baseline; positive Δ values indicate improvement. “Post threshold met (%)” indicates the proportion scoring ≥ 4 at post-intervention for each STAS domain and the STAS total score. COPM satisfaction was collected in the intervention group only; for COPM, “post threshold met (%)” indicates the proportion achieving a clinically meaningful improvement (≥ 2 -point increase). STAS = Saudi Telehealth Acceptance Scale; PE = Performance Expectancy; EE = Effort Expectancy; FC = Facilitating Conditions; BI = Behavioral Intention; SI = Social Influence; COPM = Canadian Occupational Performance Measure. INT = Intervention Group, WL = Waitlist Control Group. Values are based on complete pre–post pairs.

Table 4.4: Within-group changes in STAS subdomains, total score, and COPM satisfaction

Variable	Group	Mean change (Δ)	Test Statistic	p	Effect size
STAS PE	INT	0.12	$t(11) = 1.15$	.274	$d_z = 0.33$
	WL	–0.24	$t(11) = -2.07$	.062	$d_z = 0.60$
STAS EE	INT	0.21	$t(11) = 1.65$	.127	$d_z = 0.48$
	WL	–0.06	$t(11) = -0.51$	.623	$d_z = 0.15$
STAS FC	INT	0.54	$t(11) = 3.17$	.009	$d_z = 0.92$
	WL	–0.08	$t(11) = -0.74$	.474	$d_z = 0.21$

STAS BI	INT	0.06	$t(11) = 0.44$	.667	$d_z = 0.13$
	WL	-0.38	$t(11) = -1.73$	.111	$d_z = 0.50$
STAS SI	INT	0.07	$t(11) = 0.73$	.479	$d_z = 0.21$
	WL	-0.05	$t(11) = -0.56$	.587	$d_z = 0.16$
STAS Total	INT	0.22	$t(11) = 3.10$	.010	$d_z = 0.90$
	WL	-0.19	$t(11) = -2.02$	.065	$d_z = 0.58$
COPM Satisfaction	INT	4.64	$t(11) = 8.02$	< .001	$d_z = 2.32$

Note. Change scores (Δ) were computed as post-intervention minus baseline; positive Δ values indicate improvement. Within-group change was tested using paired-samples t tests. Effect sizes are reported as Cohen's d_z , defined as the mean change divided by the SD of the change scores (equivalently, $t/\sqrt{n}$), and presented as magnitudes. STAS = Saudi Telehealth Acceptance Scale; PE = Performance Expectancy; EE = Effort Expectancy; FC = Facilitating Conditions; BI = Behavioral Intention; SI = Social Influence; COPM = Canadian Occupational Performance Measure. INT = Intervention Group; WL = Waitlist Control Group. COPM satisfaction was collected in the intervention group only. All p values are two-tailed.

Table 4.5: Between-Group Comparisons of Change Scores for STAS Subdomains and Total Score

Variable	INT mean change (SD)	WL mean change (SD)	Mean difference (INT – WL) [95% CI]	Test Statistic	p	Effect size
STAS PE	0.12 (0.36)	-0.24 (0.40)	0.36 [0.04, 0.68]	$t(22) = 2.31$	.030	$d = 0.94$
STAS EE	0.21 (0.44)	-0.06 (0.43)	0.27 [-0.10, 0.64]	$t(22) = 1.53$	.140	$d = 0.62$
STAS FC	0.54 (0.59)	-0.08 (0.39)	0.63 [0.20, 1.05]	$t(22) = 3.06$	.006	$d = 1.24$
STAS BI	0.06 (0.49)	-0.38 (0.75)	0.44 [-0.10, 0.97]	$t(22) = 1.69$	.105	$d = 0.69$
STAS SI	0.07 (0.38)	-0.05 (0.33)	0.12 [-0.16, 0.39]	$t(22) = 0.86$	.398	$d = 0.34$
STAS Total	0.22 (0.29)	-0.19 (0.30)	0.41 [0.16, 0.63]	$t(22) = 3.43$	.002	$d = 1.39$

Note. Change scores were computed as post-intervention minus baseline; positive Δ values indicate improvement. Mean differences are intervention minus waitlist. Between-group comparisons were tested using independent-samples t tests. Effect sizes are reported as Cohen's d , calculated using the pooled SD of the change scores. INT = intervention; WL = waitlist. STAS = Saudi Telehealth Acceptance Scale; PE = Performance Expectancy; EE = Effort Expectancy; FC = Facilitating Conditions; BI = Behavioral Intention; SI = Social Influence. All p values are two-tailed.

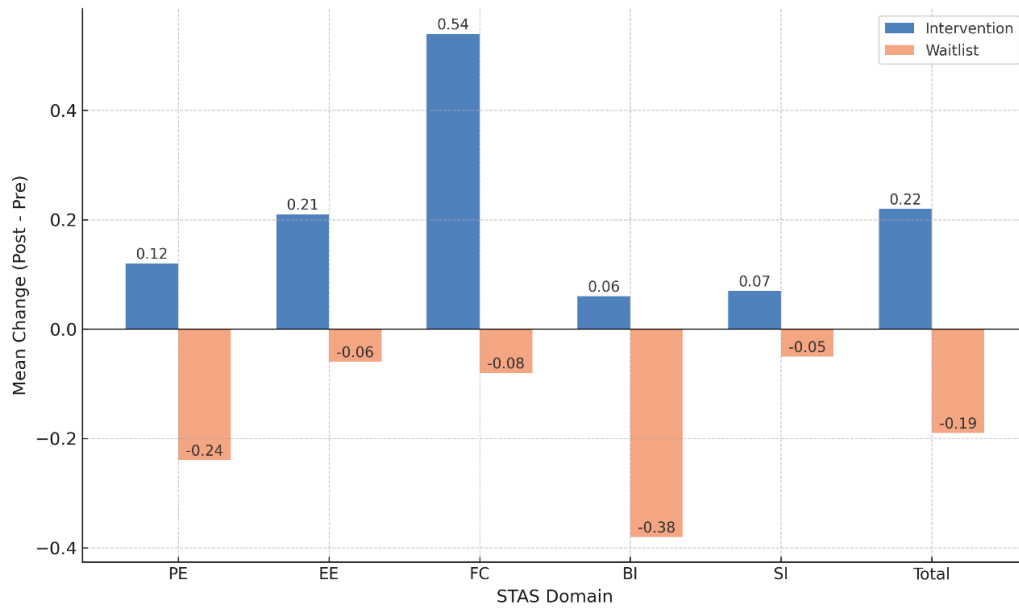


Figure4.2: Mean Change in STAS Scores by Domain and Group

Note. Bars represent the mean change scores (post–pre) for each domain of the Saudi Telehealth Acceptance Scale (STAS) across the intervention and waitlist control groups. Positive values indicate improvement, while negative values reflect decline. PE = Performance Expectancy; EE = Effort Expectancy; FC = Facilitating Conditions; BI = Behavioral Intention; SI = Social Influence. Error bars indicate ± 1 SD.

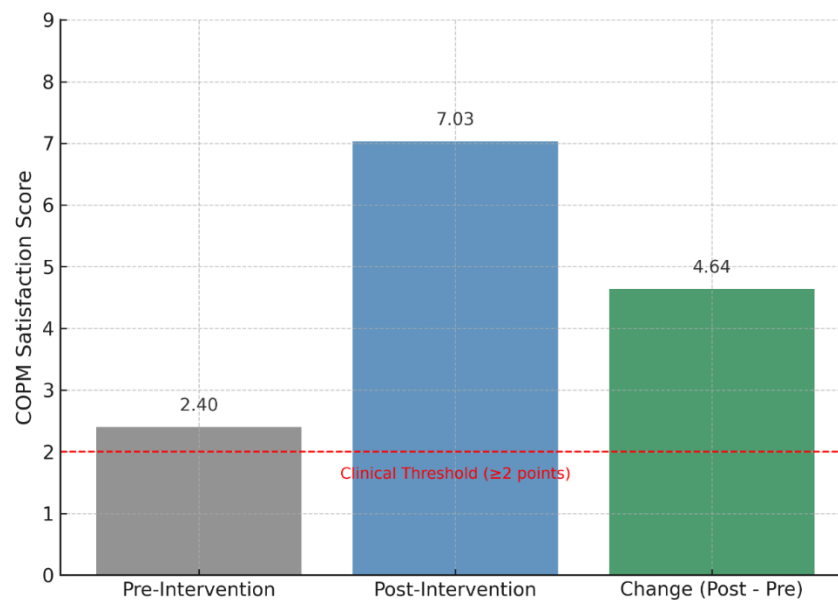


Figure 4.3: Parental Satisfaction with Child's Performance Before and After Telecoaching Intervention

Note. Satisfaction was measured using the Canadian Occupational Performance Measure (COPM). Bars represent mean satisfaction scores at pre-intervention, post-intervention, and the

mean change from pre to post. Error bars indicate ± 1 standard deviation. A clinically meaningful improvement (≥ 2 points) was observed in 91.7% of participants.

4.5.2. Acceptability: Qualitative Results

Qualitative interviews were conducted to capture parents' experiences of participating in the telecoaching program and to explain quantitative acceptability patterns. Thematic analysis generated one overarching theme and six related subthemes describing how parents appraised telecoaching in terms of perceived benefit, fit with family values and routines, and willingness to continue or recommend the intervention.

Overarching theme: A culturally attuned and parent-empowering model of care.

Subtheme 1: Perceived benefits and satisfaction with telecoaching

Parents found telecoaching as helpful and supportive and associated satisfaction with practical improvements in daily life, perceived child progress, and a supportive therapeutic relationship. Positive evaluations were expressed throughout interviews and were often accompanied by a desire to continue beyond the scheduled sessions.

"Honestly, I found it to be a great experience. I benefited from it as a mother." (P6)

"The idea of the program is very nice and parents need such things, especially when they first find out about their child's condition." (P4)

Subtheme 2: A change in roles towards parent-led participation

Parents contrasted telecoaching with services that focus primarily on the child, and they described a clearer parent role in identifying goals, applying strategies, and tracking progress. This shift was often expressed as greater involvement and ownership of change.

"At the moment I feel that centers that just work with the child, without involving parents, aren't very useful. Sometimes I just take him so I feel like I've done my duty. I think the centers should work with the parents too." (P11)

"I used to just follow, but now the effort is more on me." (P1)

"When I took him to a center . . . they gave sessions and told me to do certain things . . . but here I started thinking about what I can do." (P4)

- Subtheme 3: A culturally and contextually compatible model of care

- **Parents perceived the telecoaching model as highly compatible with their cultural values, family structures, and the challenging realities of their local context. The intervention's home-based nature was a critical feature, affording a level of privacy and discretion that is highly valued in Palestinian culture and reducing the stigma sometimes associated with accessing disability services.**
- *"At first it was a bit uncomfortable, but after a few sessions, I got used to it and it became normal. I think telecoaching respected my privacy and my family's culture. I didn't feel anything bad." (P11)*
- **The model was also seen as respectful of family hierarchies and gender roles. While mothers were the primary participants (95.8%), the home-based format facilitated the indirect involvement and support of spouses and other family members, which was crucial for acceptance.**
- **One parent noted, "At first, my husband was accepting and patient about everything, and for my family too, there was no problem" (P6).**
- **This integration within the family unit, rather than isolating the mother, was a key element of its cultural fit. The intervention empowered mothers, who often bear the primary responsibility for childcare, with one stating,**
- **"There is more responsibility on me as a mother, but it's also empowering" (P8), framing the increased role not as a burden but as a source of strength.**

Furthermore, parents emphasized that telecoaching addressed significant contextual and resource constraints. The model evaded the financial and logistical burdens of transportation and session fees, a major barrier for many families. As one parent explained, "If I wanted to take my child to a doctor or a center for these things, it would definitely cost me. I would have to pay for sessions and transportation. Telecoaching definitely saved me these expenses" (P9). Another parent reported, "The program is excellent and very suitable for families in the current conditions in the West Bank. It is suitable financially ... It saves time and effort for parents" (P9). This adaptation to local resource limitations significantly enhanced the intervention's acceptability and perceived value.

- Subtheme 4: Practicality, flexibility and reduced access barriers
- **Parents emphasized that telecoaching helped to overcome common barriers to rehabilitation access, such as transport costs, time demands, and the unpredictability of daily conditions. Telecoaching was described as easier to integrate into household responsibilities and safer during times of instability.**
- **“For me, as a mother, I actually prefer remote services because you feel like you have more options. It’s easier and more comfortable. You can take the session from home, your child is with you, and it fits your life better.” (P7)**
- **A critical aspect of this flexibility was the ability to continue the intervention amidst significant safety and security constraints in the local environment. Parents reported that political instability and community safety concerns often restricted their ability to travel to in-person appointments. Telecoaching was perceived as a safer, more reliable alternative. One parent vividly described this reality:**
- **“My husband called and told me not to go out because there was an army at the building. Situations like this happen a lot. When I can’t make it to the center, I feel relieved there’s another way I can make it up to my daughter through telecoaching” (P11).**
- **These finding highlights that in contexts of instability, the home-based nature of telecoaching is not merely a convenience but a crucial facilitator of consistent access to care.**
- Subtheme 5: Integrating therapy into home routines and narrowing perspective gaps

Parents described telecoaching as useful because strategies could be practiced in the real home context where difficulties occur. They reported that working within daily routines made recommendations feel more realistic and easier to apply. Several parents also noted that telecoaching helped the therapist understand challenges that may not appear in a center setting.

“It shed light on simple things ... giving instructions. I can give instructions even while I’m in the kitchen. Sometimes there are simple things that just don’t come to mind for a mother.” (P7)

“A lot of times, the child is acting differently at the center than at home. Telecoaching brings the perspective of the therapist closer to the real problems we face at home. (P10)

Subtheme 6: Advocacy and desire for expansion

Many parents indicated that they would recommend telecoaching to other families, and some expressed interest in continuing services beyond the study period. This theme reflected perceived value and a preference for wider access, including among working parents and families who face barriers to attending services in person.

“I wish I could share this program with all the groups I’m in ... I want everyone to benefit the way I did.” (P12)

“If I know someone, of course I would recommend this program. I want more sessions. I even told the doctor I would pay if needed because there’s a lot I still want to develop with her.” (P6)

4.5.3. Mixed-Methods Integration: Joint Display of Telecoaching Acceptability Findings

To enhance integration between the quantitative and qualitative strands, a joint display (see table 4.6) was created to align the main quantitative acceptability indicators with qualitative themes explaining ways in which parents interpreted telecoaching in everyday life. Quantitatively, the intervention group had higher post-intervention STAS scores and significantly greater improvements than the waitlist group for facilitating conditions, performance expectancy, and total STAS, as well as a large pre-post increase in COPM satisfaction. Qualitatively, acceptability was attributed to perceived benefits, increased parent role clarity, cultural privacy fit, reduced access barriers and practicality of incorporating strategies in daily routines. Together, integrated findings support acceptability as a combination of measurable telehealth acceptance and perceived fit with caregiving routines and contextual constraints in the West Bank.

Table 4.6: Integrated quantitative and qualitative findings for acceptability of telecoaching

Construct/outcome	Key quantitative signal (intervention group, within-group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta-inference
Perceived usefulness (STAS PE)	INT $\Delta = +0.12$; $p = .274$; $d_z = 0.33$.	Subthemes 1, 4, 5: perceived usefulness, reduced burden, routine relevance. “Honestly, I found it to be a great experience. I benefited from it as a mother.” (P6)	Convergence	A small positive PE change aligned with parents describing telecoaching as useful and relevant, even when statistical evidence was not strong in this pilot sample.
Ease and effort (STAS EE)	INT $\Delta = +0.21$; $p = .127$; $d_z = 0.48$.	Subthemes 3, 4: increased comfort over time and manageable delivery. “At first it was a bit uncomfortable, but after a few sessions, I got used to it and it became normal.” (P11)	Convergence	EE improved with a small-to-moderate effect size, consistent with accounts that the process became easier with familiarity.

Construct/outcome	Key quantitative signal (intervention group, within-group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta-inference
Practical supports and access (STAS FC)	INT $\Delta = +0.54$; $p = .009$; $d_z = 0.92$.	Subtheme 4: reduced access barriers and workable delivery. “Telecoaching definitely saved me these expenses.” (P9)	Convergence	A statistically significant, large FC improvement converged with accounts emphasizing cost and access barriers, suggesting enabling conditions were a key driver of acceptability.
Family and cultural fit (STAS SI)	INT $\Delta = +0.07$; $p = .479$; $d_z = 0.21$.	Subtheme 3: privacy and cultural comfort. “I think telecoaching respected my privacy and my family's culture. I didn't feel anything bad.” (P11)	Complementarity	SI change was small, while interviews highlighted privacy and household comfort as central, which may not be fully captured by SI items.
Intention to continue/recommend (STAS BI)	INT $\Delta = +0.06$; $p = .667$; $d_z = 0.13$.	Subthemes 2, 6: recommendation and desire for continuation. “If I know someone, of course I would recommend this program. I want more sessions.” (P6)	Divergence (explained)	Strong endorsement in interviews contrasted with minimal BI change, likely reflecting high baseline BI and limited room for measurable improvement in a short pilot.

Construct/outcome	Key quantitative signal (intervention group, within-group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta-inference
Overall telehealth acceptance (STAS total)	INT $\Delta = +0.22$; $p = .010$; $d_z = 0.90$.	Subthemes 1, 3, 4, 5, 6: value, privacy fit, practicality, routine relevance, advocacy. “The program is excellent and very suitable for families in the current conditions in the West Bank.” (P9)	Convergence	A statistically significant, large total STAS improvement aligned with consistent qualitative endorsement, supporting overall acceptability.
Satisfaction with goal progress (COPM satisfaction)	INT $\Delta = +4.64$; $p < .001$; $d_z = 2.32$.	Subthemes 1, 2, 5, 6: meaningful progress, parent ownership, routine-based practice, desire to continue. “I used to just follow, but now the effort is more on me.” (P1)	Strong convergence	Very large gains in satisfaction matched accounts of meaningful progress and increased parent ownership.

Note. Qualitative data were obtained from intervention-group parents only. Quantitative signals prioritize within-intervention-group pretest–posttest change (INT Δ) with corresponding two-tailed p values and Cohen’s d_z . Δ values represent posttest minus pretest; positive Δ values indicate improvement unless stated otherwise. Cohen’s d_z is defined as the mean change divided by the SD of the change scores (equivalently, $t/\sqrt{n}$) and is presented as a magnitude. Integration type indicates convergence, complementarity, or divergence between quantitative and qualitative strands. INT = intervention. STAS = Saudi Telehealth Acceptance Scale; PE = Performance Expectancy; EE = Effort Expectancy; FC = Facilitating Conditions; BI = Behavioral Intention; SI = Social Influence. COPM = Canadian Occupational Performance Measure.

4.6. Feasibility of Telecoaching Intervention

Feasibility was assessed across seven prespecified domains: recruitment capability, enrolment and use of the Sanad Al-Hayat platform, randomization procedure, retention, completion of online questionnaires, intervention fidelity, and safety. Quantitative indicators were compared with predefined feasibility benchmarks, and qualitative interviews were used to describe parents' experiences in context, including supports, barriers, and deviant cases.

4.6.1. Recruitment Capability

Recruitment feasibility was evaluated by describing recruitment performance against the a priori target and examining parent accounts of facilitators and barriers.

4.6.1.1. Recruitment (Quantitative Results)

The a priori recruitment target was 30 parents within a four-week enrolment period. A total of 26 parents were enrolled (87% of the target). Recruitment extended to approximately eight weeks (February to early April), indicating that the benchmark was partially met. Recruitment pathways included social media dissemination and referrals through professionals and service networks. Recruitment overlapped with Ramadan, and program initiation was scheduled after the holiday period.

4.6.1.2. Recruitment (Qualitative Result)

Thematic analysis produced one theme and four subthemes.

Overarching theme: Recruitment engagement shaped by trusted outreach and competing responsibilities.

Subtheme 1: Trusted gateways supported reach and credibility

Parents described sources of learning about the study ranging from existing parent networks to trusted sources such as organizations and clinicians. These routes of referral seemed to enhance perceived credibility and minimize uncertainty regarding participation.

"I heard about it [telecoaching] through a Messenger group for mothers." (P8)

"The Superhero Autism Foundation sent us the program and explained it to us."
(P6)

"I take my child to an occupational therapist; she told me about the program." (P1)

Subtheme 2: Clear and supportive communication helped in making decisions

Parents characterized recruitment and consent processes as easy, when study goals and procedures were explained clearly. Short videos were described as helpful as they made expectations concrete and reduced confusion in enrolment.

"Everything was easy and straightforward ... the doctor called and sent videos of the program and its goals." (P11)

"The videos were easy to understand, they helped me think through what we were going to do." (P10)

Subtheme 3: Child benefits and parent learning shaped enrolment motivation.

Parents placed enrolment in the context of a practical decision related to improved child functioning and acquisition of usable strategies. Several described interest in approaches that might be applied at the home, as opposed to relying Solely on center-based.

"The motivation was to benefit from the program for my son... and for myself as a mother, to learn how to deal with him." (P10)

"I wanted solutions I can apply at home, not only in centers." (P2)

Subtheme 4: Competing responsibilities constrained enrolment among eligible non-enrollees

When eligible parents who did not enroll were contacted, reasons focused on time pressure and competing commitments. These messages suggested that non-participation reflected limited capacity rather than rejection of the program itself.

"I thought the program was short, I apologize as I have many responsibilities related to my child school." (Non-enrollee1)

"I would love to participate but I am currently fully committed to establishing my new chanting group." (Non-enrollee 2)

4.6.2. Enrolment and Use of Sanad Al-Hayat Platform

Platform engagement was assessed because participation depended on parents' ability to register, access resources, and use the booking function. Quantitative indicators were used to describe completion of core platform steps among participants who remained active in study procedures. Qualitative interviews were used to describe usability, perceived value, and access barriers.

4.6.2.1 Enrolment and Platform Use (Quantitative Results)

All parents who completed post-assessments ($n = 24$) created accounts, registered their child, and accessed at least some platform content (24/24, 100%). Among intervention completers ($n = 12$), all parents used the booking system to schedule the planned eight telecoaching sessions (12/12, 100%). Parents reported variable use of the resource library. In interviews, most intervention completers described accessing the library at least weekly (10/12, 83.3%). Figure 4.4 summarizes the platform content categories most used, as identified by parents during interviews.

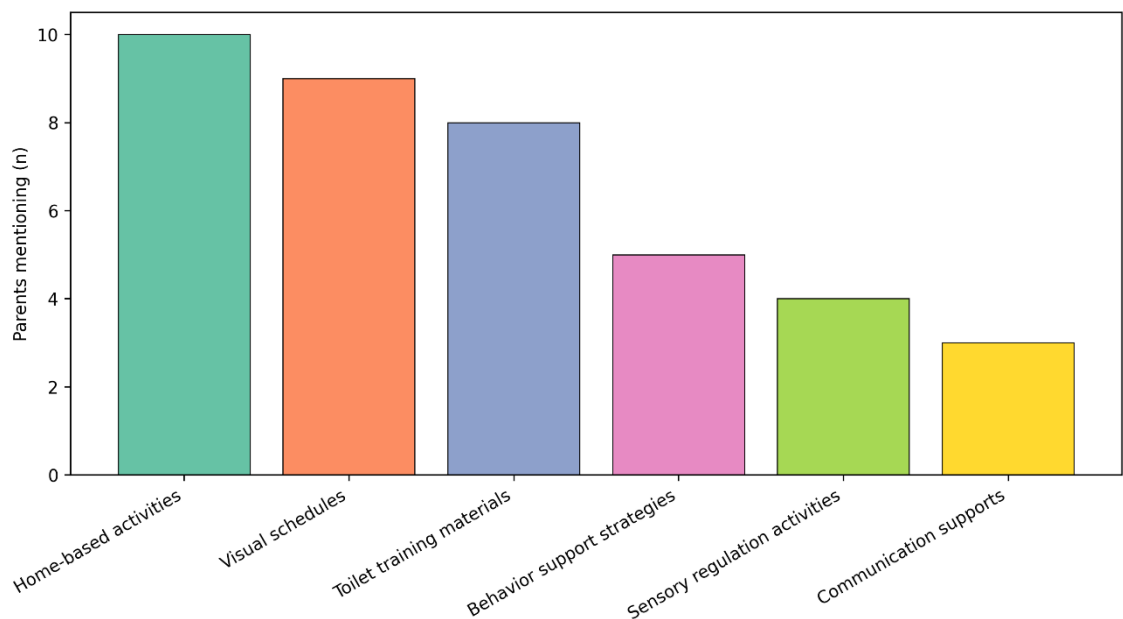


Figure 4.4: Most used therapeutic content on the Sanad Al-Hayaa platform, as identified by parents

Note. Categories reflect parent-reported use of platform resources during interviews. Bar heights represent the number of interviewed parents who mentioned using each category.

4.6.2.2. Enrolment and Platform Use (Qualitative Results)

Thematic analysis generated one overarching theme supported by four subthemes.

Overarching theme: Platform-enabled flexibility with occasional technical friction.

Subtheme 1: Onboarding was manageable once steps were clear

Parents described account creation and child registration as simple when the steps were understood. Guidance materials, particularly short instructional videos, helped parents move from initial uncertainty to independent use.

"The platform is simple and easy to use." The videos helped me create account and register my son." (P2)

"At first I asked then it was clear and I could do it alone." (P9)

Subtheme 2: Booking and Zoom supported flexible participation, with occasional internet connection interruptions.

Parents found the booking system practical because it enabled scheduling around home routines. Zoom was described as acceptable after initial use though connection interruptions were reported occasionally.

"Booking appointments was very comfortable, it's flexible and gives you choices." (P6)

"Booking helped because I could fit it round the child and the house." (P7)

"At the beginning I was not used to Zoom but then it was normal." (P3)

"Sometimes the internet would cut, but we carried on." (P11)

Subtheme 3: Library engagement varied from frequent practical use to little or no use

Parents varied in the extent to which they used the library. Some said that they used it as a useful reference for visual supports and activities at home, while others reported little use (time, preference or access limitations). Some parents suggested some improvements, especially adding more videos.

The library was excellent... it offered me activities and clear pictures on how to implement them.” (P10)

“We used the visual reinforcers... and we also made visual schedules.” (P12)

“I tried more than once to access the library... I could not get into the videos. My internet connection did not allow it.” (P8)

“More videos are needed... Videos are better.” (P7)

Subtheme 4: Access friction was mainly device- and connectivity-related, and was described as intermittent

A minority described technical friction, especially when using mobile phones or when internet quality was weak. These issues included loading screens, difficulty opening videos, and occasional submission failures, and were described as manageable.

"Sometimes, I get a white screen, I have to use a laptop, reload the site or leave and sign in again." (P12)

“When I clicked save and send, it wouldn't submit. I had to log out and log in again." (P1)

Most used therapeutic content on the Sanad Al-Hayaa platform, as identified by parents

4.6.3. Randomization Procedure

Randomization feasibility was assessed by examining whether allocation was implemented as planned without errors or protocol deviations, and by documenting parents’ understanding of and perceived fairness of the randomization process.

4.6.3.1. Randomization Procedure (Quantitative Results)

All twenty-six eligible parents were successfully randomized with no protocol deviations or errors in allocation.

4.6.3.2. Randomization Procedure (Qualitative Result)

Thematic analysis produced one overarching theme supported by two subthemes. Among interviewed intervention parents (n = 12), the majority of them

described randomization as fair (8/12, 66.7%). A minority said it was unfair (2/12 (16.7%)), or expressed mixed opinions (2/12 (16.7%)), usually reflecting acceptance of the use of randomization as an unbiased approach, but also questioning whether allocation should take into account child or family need.

Overarching theme: Understanding of allocation and fairness judgments shaped randomization perceptions

Subtheme 1: Understanding and recall of the allocation process varied across parents

Parents differed in how clearly they recalled the randomization process. Some described the two-group structure and understood that group assignment was determined by a computerized method. Others reported limited recall or uncertainty about how allocation occurred.

“Yes, there were two groups, and he explained to me that assignment was random through the website using the computer.” (P10)

“Honestly, I forgot this story.” (P3)

Subtheme 2: Procedural fairness was accepted, but need-based fairness was questioned

Most parents described randomization as fair because it reduces favoritism and personal selection. At the same time, a minority questioned fairness when children with greater need might not receive immediate intervention, or expressed discomfort with the idea that a computer determines allocation.

“I believe it’s a good method for academic studies, with no bias. Random samples are not biased.” (P10)

“Somewhat fair, but some children who needed it may have missed out.” (P8)

“Definitely not fair, based on what does the computer choose?” (P1)

4.6.4. Retention

Retention was evaluated quantitatively against the predefined benchmark and explored qualitatively to describe reasons for continued participation and the context of rare withdrawal.

4.6.4.1. Retention (Quantitative Results)

Of the 26 parents enrolled across both study groups, 24 completed post-intervention assessments (24/26, 92.3%), yielding an attrition rate of 7.7% (2/26). This exceeded the predefined feasibility criterion of 80% retention. Both discontinuations occurred in the intervention group after baseline assessments and before the first telecoaching session. Reported reasons reflected changes in family responsibilities, including increased caregiving for an ill family member (n = 1) and increased household responsibilities following a spouse's return to work (n = 1).

4.6.4.2. Retention (Qualitative Results)

Thematic analysis generated one overarching theme supported by four subthemes.

Overarching theme: Retention driven by observed gains and structured accountability amid daily demands.

Subtheme 1: Seeing progress supported continued participation

Parents commonly associated continuation with observing progress on their child or feeling that the goals were making meaningful change.

"The progress I saw with my son from the goals kept me going, otherwise I would have quit." (P7)

Subtheme 2: Weekly follow-up and accountability helped maintain engagement

Several parents described the structure of the weekly meetings as helpful for follow-through. It created a sense of responsibility to apply strategies and report on progress, even when routines were busy.

"One of the things that helped us keep going was the fact that there was a weekly meeting." (P6)

"The fact that I had to present results weekly... motivated me to work with my son... and to push myself to work with him more." (P1)

Subtheme 3: Planning and prioritization made follow-through more manageable

Parents described that breaking goals into steps and prioritizing what to focus on helped them continue rather than feeling overwhelmed.

“What helped me keep going was that when I started with the doctor, we set a plan and goals. At first I wanted my child to do everything at once, but he broke it down, helping me prioritize.” (P12)

Subtheme 4: Dissatisfaction with center-based therapy increased the perceived value of continuing

Some parents contrasted telecoaching with center-based services and described limited benefit when parent input was not integrated into planning.

“Progress at the centers is very, very slow compared to what parents do at home... sometimes, even after months, I don’t notice much improvement.” (P11)

“My motivation was that I went to the center more than once and kept telling them, ‘At home it’s different.’ Either they didn’t believe us or they just gave some comments. This experience was much better because it felt like it entered our home... we suggest what suits us based on our environment... the plan was more realistic and more suitable.” (P1).

4.6.5. Completion of Online Questionnaires

Completion rates at baseline and post-intervention were examined quantitatively, and qualitative interviews were used to describe what supported completion and what created burden or access friction.

4.6.5.1. Completion of Online Questionnaires (Quantitative Results)

All enrolled parents completed baseline online questionnaires (26/26, 100%). At post-intervention, 24 parents completed the online questionnaires (24/26, 92.3%). This exceeded the predefined feasibility criterion of 80%. Parents reported a mean total completion time of approximately 60 minutes for all questionnaires at each time point.

4.6.5.2. Completion of Online Questionnaires (Qualitative Results)

Thematic analysis generated one overarching theme supported by three subthemes.

Overarching theme: Manageable digital assessments with time burden and sporadic barriers.

Subtheme 1: Onboarding guidance reduced initial uncertainty

Some parents described initial uncertainty when first accessing the platform, but guidance materials helped them understand how to complete the questionnaires and proceed independently.

“Yes, when I first opened the site, I didn’t know how, but when you sent me the videos... it became easy. The videos were helpful.” (P5)

Subtheme 2: Overall questionnaire clarity with time burden and occasional item-level uncertainty

Parents commonly described the questionnaires as understandable while also reporting that they were lengthy and required time to complete.

“They were good, comprehensive about the mother and child’s lifestyle and the surrounding environment, but honestly very long.” (P5)

A minority described that some items were not fully clear when completed alone, and that brief explanation supported confident responding.

“Alone, I might struggle, but when you explain what the question is asking, it becomes much easier.” (P7)

Subtheme 3: Sporadic technical friction during completion

Some parents described intermittent access or submission problems, particularly early on, that required logging out, reloading, or receiving assistance.

“For the pre-program questionnaires, I needed help... a white screen would appear. For the post-program questionnaires, the issue was fixed, and I completed them alone, easily.” (P2)

4.6.6. Intervention Fidelity

Fidelity was assessed to confirm that telecoaching sessions were delivered and documented as intended. Fidelity was evaluated quantitatively using independent ratings of session delivery and documentation quality, and qualitatively through parent accounts of how coaching was implemented and followed up between sessions.

4.6.6.1. Intervention Fidelity (Quantitative Results)

Fidelity was evaluated using two indicators: the Occupational Performance Coaching (OPC) Fidelity Measure to assess session delivery and the OPC Case Note

Audit Tool to assess documentation quality. Two expert assessors independently rated three randomly selected sessions. OPC Fidelity ratings ranged from 88.9% to 100% for both assessors, exceeding the predefined benchmark of 80%. Case note audit ratings also exceeded the benchmark, ranging from 84.6% to 92.3% for Assessor 1 and from 85.0% to 92.3% for Assessor 2. Compliance, indexed by parent attendance, was complete among intervention completers (12/12, 100%).

4.6.6.2. Intervention Fidelity (Qualitative Results)

Thematic analysis generated one overarching theme supported by five subthemes.

Overarching theme: Structured collaboration amid daily demands.

Subtheme 1: Encouragement and guidance supported engagement

Parents described the coach's manner as supportive and motivating, which helped them stay engaged and continue implementing strategies at home.

"I waited for every session eagerly; the coach motivated and encouraged us." (P6)
"Each session was psychologically relaxing and satisfying." (P7)

Subtheme 2: Shared goal setting was organized into manageable steps

Parents described setting goals through discussion and prioritization and working through a structured plan step by step.

"As I mentioned, I arranged my goals... Before... I used to think I wanted her to achieve everything at once. But after working with the doctor, I understood there are plans, and we need to take things step by step." (P12)

"It was excellent; every week we analyzed what happened or what goal to set... whether the environment was suitable... his strengths and weaknesses for each goal." (P1)

Subtheme 3: Context-fit planning aligned goals with home routines

Parents emphasized that plans felt realistic because they were linked to their home environment and routines.

"No, we suggest to him what works for us, according to our environment." (P1)
"In centers, support was for Ghaith, not for me as a mother... Here, the focus was on me, which is better because I'm the one working with him daily." (P2)

Subtheme 4: Between-session action was reinforced through accountability and partnership

Parents described actively practicing strategies at home between sessions and returning to the next meeting with updates on what was attempted and what changed. The weekly structure created a sense of accountability that encouraged follow-through, even when routines were busy. Parents also described feeling like active partners in the process, which supported commitment to applying plans in daily activities rather than treating sessions as isolated consultations.

“The fact that I had to present results weekly... motivated me to work with my son... and to push myself to work with him more.” (P1)

“I felt like an active partner in the meetings; we set goals and plans together.” (P2)

Subtheme 5: Consistency was sometimes limited by time demands and family circumstances

Parents described circumstances that reduced how consistently they could apply planned activities, including busy routines and limited time or energy.

“I wasn’t consistent 100% because of these barriers, kindergarten and therapy sessions took up most of the day.” (P12)

“Plans were realistic but require time and energy. I was able to implement simple tasks.” (P3)

4.6.7. Adverse Events

Adverse event monitoring was included to document unintended harms during participation. Adverse events were tracked using a dedicated form throughout the intervention period, and parents were also asked during post-intervention interviews about any incidents that were not reported formally.

4.6.7.1. Adverse Events (Quantitative Results)

One adverse event was reported during the study period. The event was classified as moderate and possibly related to intervention activities during outdoor practice. No medical action was required and the incident resolved immediately. No other adverse events were documented.

4.6.7.2. Adverse Events (Qualitative Results)

Thematic analysis generated one overarching theme supported by two subthemes.

Overarching theme: Safety maintained through cautious planning amid community constraints.

Subtheme 1: Safety was maintained through cautious goal and setting selection

Most parents described that no harmful or dangerous incidents occurred and linked this to cautious selection of safe environments and activities.

“No, nothing dangerous happened; we were cautious.” (P1)

“No unexpected or safety problems.” (P6)

“No, never faced any situations where my child was at risk.” (P10)

Subtheme 2: Isolated safety concerns were manageable but sometimes constrained practice

A minority described minor incidents or safety concerns while practicing certain goals. These situations were managed by stopping, adapting the activity, or changing the plan, and parents reported no lasting harm.

“She sometimes would run into the street; it was frightening but she was safe.” (P12)

“Security concerns prevented practicing street crossing.” (P10)

Table 4.7: Feasibility outcomes against prespecified benchmarks

Feasibility domain	Prespecified benchmark	Observed outcome	Benchmark met
Recruitment capability	Recruit 30 parents within 4 weeks.	26 parents enrolled (87% of target); recruitment period extended to ~8 weeks.	Partially
Enrolment and platform use (Sanad Al-Hayat)	Platform procedures feasible if core steps are completed by most participants ($\geq 80\%$) and	All parents completing post-assessments created accounts and registered their child (24/24, 100%). Among intervention completers, 10/12	Yes

Feasibility domain	Prespecified benchmark	Observed outcome	Benchmark met
	barriers are minor/manageable.	(83.3%) reported using the library at least weekly; all intervention completers booked sessions through the platform (12/12, 100%).	
Randomization procedure	Allocation implemented as planned without errors or deviations.	All eligible participants randomized successfully (26/26, 100%) with no allocation errors or protocol deviations.	Yes
Retention	Retention $\geq 80\%$ at post-intervention.	Post-intervention assessments completed by 24/26 (92.3%); attrition 2/26 (7.7%), both from intervention group prior to session 1.	Yes
Completion of online questionnaires	Completion $\geq 80\%$ at baseline and post-intervention; barriers minor/manageable.	Baseline completion 26/26 (100%); post-intervention completion 24/26 (92.3%).	Yes
Intervention fidelity and compliance	Fidelity $\geq 80\%$ on OPC Fidelity Measure and case note audit; compliance adequate.	OPC Fidelity ratings for three audited sessions ranged from 88.9% to 100% for both assessors. Case note audit ratings ranged from 84.6% to 92.3% (Assessor 1) and 85.0% to 92.3% (Assessor 2). Attendance among intervention completers was 12/12 (100%).	Yes
Safety (adverse events)	No serious adverse events attributable to study participation.	One moderate adverse event was reported and resolved immediately without medical action; no other events documented.	Yes
Note. Benchmarks were defined a priori in the methodology chapter. “Observed outcome” reports descriptive feasibility indicators. Platform-use indicators are reported for participants completing post-assessments and, where relevant, for intervention completers. OPC = Occupational Performance Coaching.			

4.6.8. Mixed-Methods Integration: Joint Display of Telecoaching Feasibility Findings

Table 4.8 integrates quantitative feasibility indicators with qualitative interview findings to explain how feasibility benchmarks were achieved and where practical constraints emerged. Quantitative results summarize performance across the prespecified feasibility domains, including recruitment, platform enrolment and use, randomization, retention, assessment completion, fidelity, and safety, and indicate whether each domain met the predefined criteria. Qualitative data are then used to interpret these indicators by describing the supports and barriers parents experienced during participation, including deviant or limiting cases. A joint display is presented to align the main quantitative signals with the corresponding qualitative themes, clarifying points of convergence and complementarity, and generating integrated meta-inferences to inform refinement and scalability of procedures for a future full trial.

Table 4.8: Mixed-methods joint display integrating feasibility indicators and parent experiences

Feasibility domain	Quantitative signal	Qualitative signal (linked themes/subthemes)	Integration type	Integrated meta-inference
Recruitment capability	26 enrolled (87% of target); recruitment extended to ~8 weeks.	Subthemes: trusted gateways, clear communication, motivation for child benefit; non-enrollees cited competing responsibilities.	Complementarity	Recruitment was achievable but time-limited capacity constrained enrolment for some eligible parents, suggesting longer recruitment windows may be needed.
Enrolment and platform use	Onboarding completed by post-assessment completers (24/24, 100%). Library use weekly reported by 10/12 intervention completers (83.3%).	Subthemes: onboarding manageable with guidance; booking and Zoom flexible; varied library engagement; intermittent device/connectivity friction.	Convergence	High completion of onboarding and frequent library use aligned with parents describing the platform as usable, with manageable technical friction for a minority.

Feasibility domain	Quantitative signal	Qualitative signal (linked themes/subthemes)	Integration type	Integrated meta-inference
Randomization procedure	Randomization completed without errors (26/26, 100%).	Subthemes: varied recall; most accepted procedural fairness, minority questioned need-based fairness.	Complementarity	Operational randomization was feasible, while some parents expressed a preference for need-based allocation, indicating a need for clearer explanation and expectation management.
Retention	Retention 24/26 (92.3%); two withdrawals prior to session 1.	Subthemes: progress, weekly accountability, planning, and dissatisfaction with center-based care supported continuation; competing demands affected consistency.	Convergence	High retention aligned with parents describing perceived value and structured follow-up, with rare withdrawal attributed to changing family responsibilities.
Completion of online	Baseline completion 26/26 (100%); post completion 24/26 (92.3%).	Subthemes: questionnaires clear but long; clarification supported completion; minor technical issues for a minority.	Convergence	High completion aligned with reports that questionnaires were manageable, though time burden was the most common concern.
Intervention fidelity and compliance	Fidelity $\geq 80\%$ across audited sessions; attendance 12/12 (100%) among completers.	Subthemes: structured, collaborative coaching; shared goal setting; active between-session work; time demands sometimes reduced consistency.	Convergence	High fidelity and attendance aligned with parents describing structured coaching and follow-through, with variability reflecting constraints on intensity rather than disengagement.
Safety	One moderate event; no serious events documented.	Subthemes: most reported no incidents; isolated manageable incidents prompted adjustment.	Convergence	Safety monitoring indicated low risk, and parent accounts supported that risks were generally anticipated and managed through cautious goal selection and adaptation.

Feasibility domain	Quantitative signal	Qualitative signal (linked themes/subthemes)	Integration type	Integrated meta-inference
<i>Note.</i> Qualitative data were obtained primarily from intervention parents, with additional brief information from eligible non-enrollees. Quantitative signals summarize feasibility indicators used to assess progress against prespecified benchmarks. Integration types reflect convergence when strands aligned, complementarity when interviews added explanatory context, and divergence when strands conflicted.				

4.7. Potential Impact of Telecoaching Intervention on Children and Parents

Potential impact findings are presented using quantitative results (descriptive statistics, normality assessment, inferential tests, and figures), followed by qualitative thematic findings. Mixed-methods joint displays are then used to integrate both strands and support interpretation in context.

4.7.1. Potential Impact on Children

Child outcomes were examined using COPM performance ratings (intervention group only) and standardized measures collected in both groups (ATEC and CARS-2). Quantitative results are reported using descriptive statistics, Shapiro-Wilk normality tests of change scores, within-group pre to post tests, and between-group comparisons of change scores. Qualitative themes are used to contextualize observed patterns by describing parent-perceived changes in daily routines and factors linked to improvement.

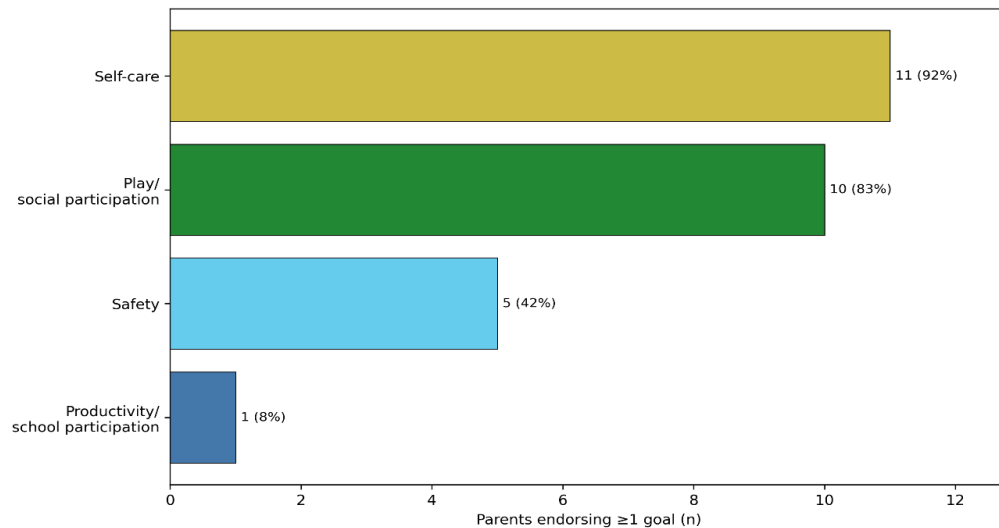


Figure 4.5: Occupational Domains of COPM Goals Identified by Parents in the Intervention Group

Note. The figure summarizes the distribution of goals identified by parents using the COPM at baseline. Domains are categorized as self-care, productivity or school participation, play or social participation, and safety.

4.7.1.1. Potential Impact on Children, Quantitative Results

Table 4.9 presents pre and post means, standard deviations, and 95% confidence intervals for ATEC domains and total scores, CARS-2 total scores (both groups), and COPM performance (intervention group only). In the intervention group, ATEC total scores decreased from $M = 83.58$ ($SD = 21.65$) at baseline to $M = 77.17$ ($SD = 17.59$) at post assessment (mean change = -6.42). Reductions were also observed in Communication, Sociability, and Sensory/Cognitive domains, whereas the Health/Behavior domain showed a small increase. CARS-2 total scores in the intervention group decreased from $M = 37.88$ ($SD = 6.95$) to $M = 35.42$ ($SD = 8.25$; mean change = -2.46). The largest mean change was observed for COPM performance in the intervention group, increasing from $M = 2.69$ ($SD = 1.34$) to $M = 6.59$ ($SD = 1.03$; mean change = 3.89). Eleven of 12 parents (91.7%) reported a clinically meaningful improvement in COPM performance (at least a 2-point increase). In the waitlist group, mean scores were generally stable, with small changes across outcomes. These patterns are visually summarized in Figures 4.6 to 4.8.

Table 4.9: Descriptive Statistics for ATEC Domains, ATEC Total, CARS-2, and COPM Performance by Group and Time Point

Measure	Group	Pre M (SD)	Post M (SD)	Mean change (SD)	95% CI for change
ATEC COM	INT	18.17 (5.64)	16.08 (6.57)	-2.09 (3.42)	[-4.26, 0.08]
	WL	19.92 (5.88)	19.83 (5.97)	-0.09 (1.64)	[-1.13, 0.95]
ATEC SOC	INT	16.75 (6.18)	14.33 (5.94)	-2.42 (4.34)	[-5.18, 0.34]
	WL	19.00 (8.91)	18.42 (7.20)	-0.58 (3.41)	[-2.74, 1.58]
ATEC SEN	INT	22.08 (6.54)	19.58 (6.36)	-2.50 (3.21)	[-4.54, -0.46]
	WL	19.50 (6.95)	19.83 (8.04)	0.33 (4.23)	[-2.36, 3.02]
ATEC HB	INT	26.58 (10.07)	27.17 (9.25)	0.58 (6.65)	[-3.64, 4.81]
	WL	32.67 (15.97)	28.92 (13.41)	-3.75 (8.25)	[-8.99, 1.49]
ATEC Total	INT	83.58 (21.65)	77.17 (17.59)	-6.41 (12.69)	[-14.47, 1.65]
	WL	91.08 (30.54)	87.00 (26.77)	-4.08 (12.18)	[-11.82, 3.66]
CARS-2 Total	INT	37.88 (6.95)	35.42 (8.25)	-2.46 (3.96)	[-4.97, 0.06]
	WL	39.88 (8.70)	39.79 (11.48)	-0.08 (4.79)	[-3.13, 2.96]
COPM Performance	IN	2.69 (1.34)	6.59 (1.03)	3.89 (1.68)	[2.83, 4.96]

Note. Values are presented as M (SD) with 95% confidence intervals for Δ shown in brackets. Change scores were computed as posttest minus pretest. For ATEC and CARS-2, lower scores indicate improvement; therefore, negative change scores values indicate improvement. For COPM performance, higher scores indicate improvement; therefore, positive change scores values indicate improvement. COPM performance was collected in the intervention group only. Clinically meaningful improvement for COPM performance was defined as an increase of ≥ 2 points. ATEC = Autism Treatment Evaluation Checklist; COM = Communication; SOC = Sociability; SEN = Sensory/Cognitive; HB = Health/Behavior; CARS-2 = Childhood Autism Rating Scale, Second Edition; COPM = Canadian Occupational Performance Measure; INT = Intervention Group; WL = Waitlist Group. Values are based on complete pre–post pairs.

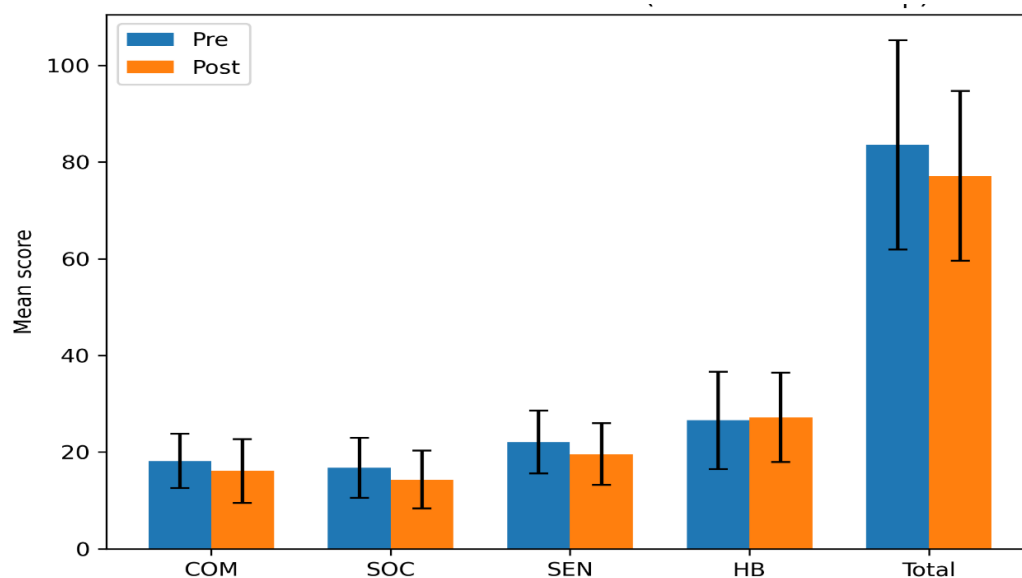


Figure 4.6: ATEC Domain and Total Scores for the Intervention Group at Pretest and Posttest

Note. Bars show mean ATEC scores; error bars represent ± 1 SD. Pre = baseline; Post = post-intervention. Lower scores indicate fewer autism-related difficulties. ATEC = Autism Treatment Evaluation Checklist; COM = Communication; SOC = Sociability; SEN = Sensory/Cognitive; HB = Health/Behavior.

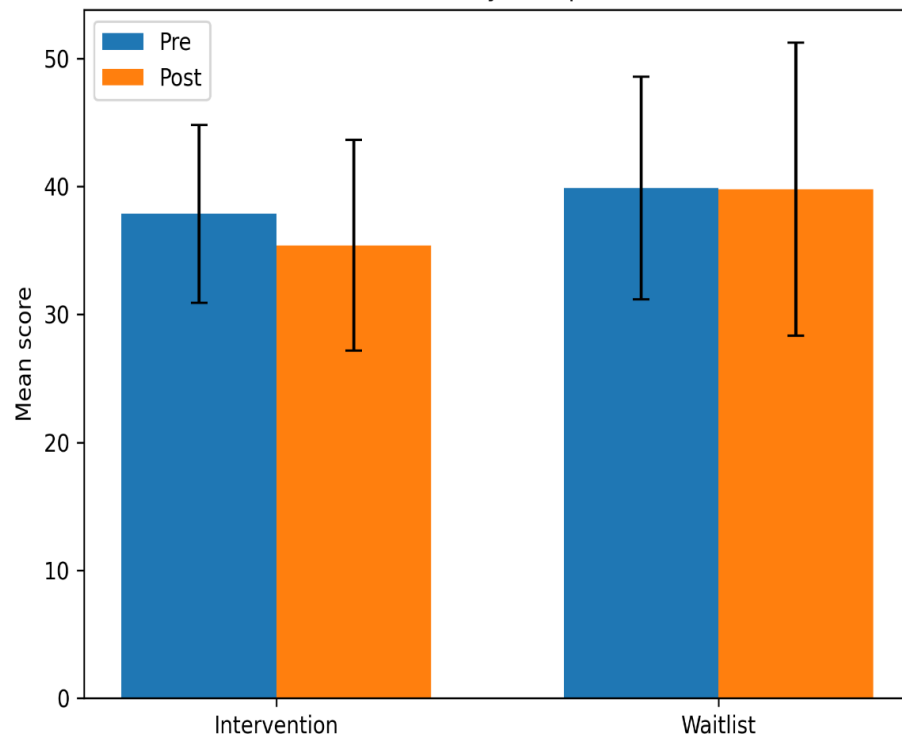


Figure 4.7: CARS-2 Total Scores by Group at Pretest and Posttest

Note. Bars show mean CARS-2 total scores; error bars represent ± 1 SD. Pre = baseline; Post = post-intervention. Lower scores indicate lower autism severity. CARS-2 = Childhood Autism Rating Scale, Second Edition.

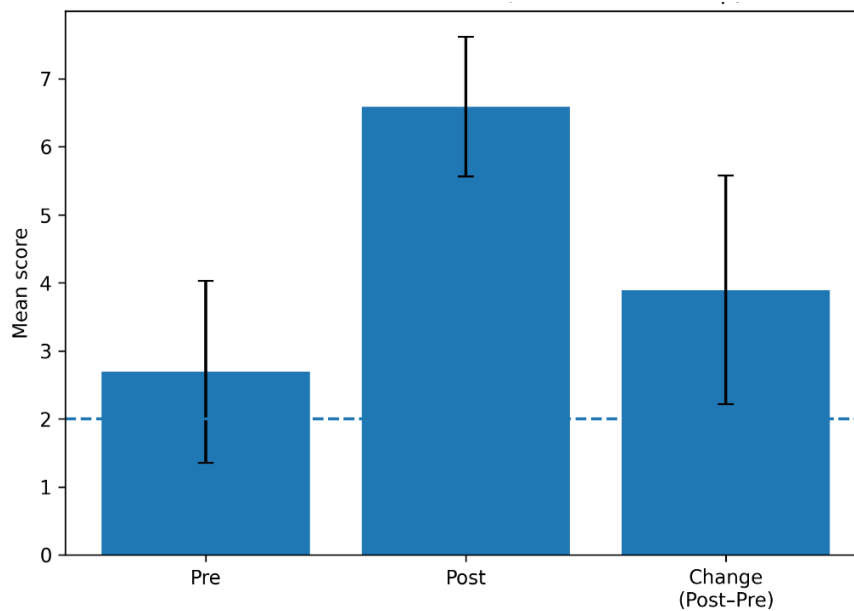


Figure 4.8: COPM Performance Scores at Pre and Post and Mean Change, Intervention Group

Note. Bars show mean COPM performance scores at baseline, post-intervention, and mean change (post minus pre); error bars represent ± 1 SD. The dashed line indicates the threshold for clinically meaningful improvement (increase of 2 points or more). COPM = Canadian Occupational Performance Measure.

Normality of pre to post change scores was assessed using the Shapiro–Wilk test for each outcome. All change scores met the normality assumption ($p \geq .05$) except the ATEC Health/Behavior change score in the waitlist group ($W = 0.79$, $p = .008$). Accordingly, parametric tests were used for all outcomes except ATEC Health/Behavior in the waitlist group, which was examined using a Wilcoxon signed-rank test. Given the pilot design, inferential findings should be interpreted as exploratory estimates rather than definitive tests of efficacy.

Within the intervention group ($n = 12$), COPM performance increased from $M = 2.69$ ($SD = 1.34$) to $M = 6.59$ ($SD = 1.03$). This change was statistically significant and clinically meaningful, $t(11) = 8.03$, $p < .001$, $d_z = 2.32$, with a mean increase of 3.89 points (95% CI [2.83, 4.96]). ATEC Sensory/Cognitive scores decreased from baseline ($M = 22.08$, $SD = 6.54$) to post assessment ($M = 19.58$, $SD = 6.36$), $t(11) = -2.70$, $p = .021$, $d_z = 0.78$, indicating reduced sensory and cognitive difficulties (mean change = -2.50 , 95% CI [-4.54 , -0.46]).

Other outcomes in the intervention group improved in the expected direction (lower symptom scores) but did not reach statistical significance (Table 4.10). In the waitlist group ($n = 12$), pre to post scores remained stable across outcomes, with no statistically significant changes. For ATEC Health/Behavior in the waitlist group, a Wilcoxon signed-rank test also indicated no significant change (Table 4.10).

Between-group comparisons did not reach statistical significance (all $p > .05$), although ATEC Communication and ATEC Sensory/Cognitive showed trend-level differences favoring the intervention. For ATEC Health/Behavior, a Mann-Whitney U test found no evidence of a between-group difference in change scores. These findings are interpreted as preliminary estimates of change and variability to inform future trials (see Table 4.11).

Table 4.10. : Pre to Post Changes in ATEC Domains, CARS-2 Total, and COPM Performance Within Each Group

Variable	Group	Mean change	Test Statistic	p	Effect size
ATEC COM	INT	-2.08	$t(11) = -2.12$	.057	$d_z = 0.61$
	WL	-0.08	$t(11) = -0.19$	.851	$d_z = 0.06$
ATEC SOC	INT	-2.42	$t(11) = -1.93$	.080	$d_z = 0.56$
	WL	-0.58	$t(11) = -0.59$	.567	$d_z = 0.17$
ATEC SEN	INT	-2.50	$t(11) = -2.70$	.021	$d_z = 0.78$
	WL	0.33	$t(11) = 0.27$	.790	$d_z = 0.08$
ATEC HB	INT	0.58	$t(11) = 0.30$	.767	$d_z = 0.09$
	WL	-3.75	$Z = -0.86$	.389	$r = 0.25$
ATEC Total	INT	-6.42	$t(11) = -1.75$	.107	$d_z = 0.51$
	WL	-4.08	$t(11) = -1.16$	.270	$d_z = 0.34$
CARS-2 Total	INT	-2.46	$t(11) = -2.15$	.055	$d_z = 0.62$
	WL	-0.08	$t(11) = -0.06$	.956	$d_z = 0.02$
COPM Performance	IN	3.89	$t(11) = 8.03$	< .001	$d_z = 2.32$

Note. Change scores (Δ) were computed as posttest minus pretest. For ATEC and CARS-2, negative Δ values indicate improvement; for COPM performance, positive Δ values indicate improvement. Within-group change was tested using paired-samples t tests for normally distributed change scores and the Wilcoxon signed-rank test when normality was not met. Effect sizes for paired-samples t tests are reported as Cohen's d_z , defined as the mean change divided by the SD of the change scores (equivalently, $t/\sqrt{n}$), and presented as magnitudes. Wilcoxon effect size is reported as r and computed as $|Z|/\sqrt{N}$, where N is the number of paired observations. ATEC = Autism Treatment Evaluation Checklist; COM = Communication; SOC = Sociability; SEN = Sensory/Cognitive; HB = Health/Behavior; CARS-2 = Childhood Autism Rating Scale, Second Edition; COPM = Canadian Occupational Performance Measure; INT = Intervention Group; WL = Waitlist Group. All p values are two-tailed.

Table 4.11: Between-Group Comparisons of Change Scores on ATEC Domains, ATEC Total, and CARS-2 Total

Outcome	INT mean change, (SD)	WL mean change, (SD)	Mean diff (INT – WL) [95% CI]	Test Statistic	p	Effect size
ATEC COM	–2.08 (3.40)	–0.08 (1.51)	–2.00 [–4.22, 0.22]	t(22) = –1.86	.076	d = 0.76
ATEC SOC	–2.42 (4.34)	–0.58 (3.42)	–1.83 [–5.14, 1.47]	t(22) = –1.15	.263	d = 0.47
ATEC SEN	–2.50 (3.21)	0.33 (4.23)	–2.83 [–6.01, 0.34]	t(22) = –1.85	.078	d = 0.76
ATEC HB	0.58 (6.65)	–3.75 (8.25)	4.33 [NA]	U = 56.00, Z = –0.93	.354	r = 0.19
ATEC Total	–6.42 (12.67)	–4.08 (12.17)	–2.33 [–12.85, 8.19]	t(22) = –0.46	.650	d = 0.19
CARS-2 Total	–2.46 (3.96)	–0.08 (5.09)	–2.38 [–6.24, 1.49]	t(22) = –1.27	.216	d = 0.52

Note. Change scores (Δ) were computed as posttest minus pretest. For ATEC and CARS-2, negative Δ values indicate improvement; for COPM performance, positive Δ values indicate improvement. Mean differences are intervention minus waitlist. Between-group comparisons were tested using independent-samples t tests for normally distributed change scores and the Mann–Whitney U test when normality was not met. Effect sizes for t tests are reported as Cohen’s d, calculated using the pooled SD of the change scores. Mann–Whitney effect size is reported as r and computed as $|Z|/\sqrt{N}$, where N is the total sample size across groups. ATEC = Autism Treatment Evaluation Checklist; COM = Communication; SOC = Sociability; SEN = Sensory/Cognitive; HB = Health/Behavior; CARS-2 = Childhood Autism Rating Scale, Second Edition; INT = intervention; WL = waitlist. All p values are two-tailed.

4.7.1.2. Potential Impact on Children (Qualitative Results)

Interviews with intervention-group parents were conducted after intervention completion provided detailed accounts of perceived change in children’s occupational performance goals and autism-related symptoms. The qualitative findings largely converged with the quantitative patterns reported above, particularly for functional gains in daily routines and communication, while also highlighting variability in the pace and

extent of change across children. One overarching theme and six subthemes were identified.

Overarching Theme: Functional gains in daily participation within a constrained context.

Subtheme 1: Progress in daily living skills (toileting, dressing, eating)

Parents frequently linked goal-focused home routines and structured practice to gains in self-care and independence. Several accounts emphasized toileting progress, improved cooperation with dressing routines, and increased willingness to try foods.

“The program helped me with bathroom training. We had almost lost hope. Thank God, she has improved a lot. We made a lot of progress with bathroom training. She is about 70% there now, which is a big achievement.” (P12)

“Thanks to this program, my daughter is out of diapers, eats alone, and is more independent. Other programs didn’t help as much.” (P6)

“We started with a goal for him to take off his clothes by himself. Before, he only moved his hand or foot. Now he can almost take them off on his own, and I only need simple help.” (P11)

Subtheme 2: Improved communication and responsiveness

Communication gains were described as a central area of impact. Parents noticed progress in verbal requesting, answering simple questions, and responding to everyday prompts. These improvements were often attributed to regular practice and using everyday routines to prompt communication.

“We set a goal for him to say his name. Before the program he did not answer. After the program he answered with his name in more than 70% of attempts.” (P10)

“My child has become different. Now she can speak in simple sentences and pronounce many words.” (P6)

“When I started pushing him to speak, he began to talk and request more. We started with two words, then three words.” (P3)

Subtheme 3: Behavioral regulation supporting participation

Several parents described reductions in challenging behaviors and improved regulation, which facilitated participation in home routines. These changes were often associated with the modification of the home environment, adjustments in demands and practicing calming strategies and tolerance.

“He became calmer after we modified the home environment.” (P5)

“Stress and tension at home decreased as behaviors improved.” (P4)

“The program helped him a lot with loud noises. He became less afraid, and this improved his daily participation.” (P7)

Subtheme 4: Greater engagement in routines and play

Beyond isolated skill gains, parents described broader improvements in children’s engagement in everyday activities, including play and shared routines. Several accounts emphasized that practicing goals within daily contexts supported skill generalization and reduced conflict during routine participation.

“When he played with younger children, he used to hit them. Now he plays better, and if he gets upset, he calms down faster.” (P1)

“Everything we worked on came from his daily life and our routines. It was not like a center where the child only sits and plays with blocks.” (P11)

“I also took ideas from the play activities, and I applied them at home.” (P2)

Subtheme 5: Safety routines improved, but community risks constrained practice

Some parents described improvements in safety-related routines and supervision strategies, yet safety remained a concern, particularly in community mobility contexts. Parents described persistent limitations in children’s danger awareness, and some indicated that practice opportunities were constrained by the physical and social environment.

“He still doesn’t understand dangers.” (P7)

“I couldn’t always take him outside to practice because our street is busy and the neighborhood is crowded.” (P7)

“I wanted to practice with him outside, but it was not always possible because of safety and traffic.” (P9)

Subtheme 6: Progress was variable and time-dependent

Although most parents described meaningful change, several emphasized that progress was uneven and required time, repetition, and sustained effort. Parents described differences between goals that improved quickly and goals that required longer practice, suggesting that some families might benefit from extended dosage or follow-up.

“It is nice to see progress. It is slow, but you live the moment and feel you achieved something.” (P11)

“Some goals need more time, maybe two or three months, depending on the child.” (P1)

“Not all goals were fully achieved, but we moved forward step by step.” (P1)

4.7.1.3. Mixed-Methods Integration: Joint Display

A joint display (see Table 4.12) was used to integrate quantitative change estimates (ATEC domains and total scores, CARS-2, and COPM performance for the intervention group) with the qualitative themes reported above. This integration supported meta-inferences about where findings converged, where qualitative accounts explained mechanisms behind observed change, and where contextual constraints or variability helped interpret non-significant between-group effects in this pilot sample.

Table 4.12: Integrated Quantitative and Qualitative Findings for Potential Impact on Children

Outcome/con struct	Key quantitative signal (within intervention group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta- inference
Child goal attainment (COPM Performance, intervention only)	INT $\Delta = +3.89$, 95% CI [2.83, 4.96]; $p <$.001; $d_z = 2.32$; 91.7% (11/12) achieved a ≥ 2 -point gain.	Subthemes 1, 2, and 4: routine-based progress in parent-prioritized goals and daily performance. “She is about 70% there now, which is a big achievement.” (P12)	Convergence	Large improvements in parent-identified priorities matched parents’ reports of meaningful, observable gains within daily routines.

Outcome/con- struct	Key quantitative signal (within intervention group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta- inference
Communication (ATEC Communication)	INT $\Delta = -2.08$; $p = .057$; $d_z = 0.61$.	Subtheme 2: increased requesting and more consistent responsiveness in everyday interactions. “He answered with his name in more than 70% of attempts.” (P10)	Complementarity	Parents described clear functional communication gains that aligned with the improvement trend and moderate within-group effect, despite borderline significance in a pilot sample.
Social participation (ATEC Sociability)	INT $\Delta = -2.42$; $p = .080$; $d_z = 0.56$.	Subthemes 2 and 4: improved play engagement and reduced conflict during shared activities. “Now he plays better.” (P1)	Complementarity	Parents described better participation in everyday interactions, while standardized sociability change showed a modest trend, suggesting longer follow-up may better capture participation change.
Sensory and regulation (ATEC Sensory/Cognitive)	INT $\Delta = -2.50$; $p = .021$; $d_z = 0.78$.	Subtheme 3: calmer behavior and improved tolerance during routine demands. “He became less afraid, and this improved his daily participation.” (P7)	Convergence	Quantitative reductions in sensory/cognitive difficulties converged with parent reports of improved regulation and tolerance in daily life.
Health/behavior symptoms (ATEC Health/Behavior)	INT $\Delta = +0.58$; $p = .767$; $d_z = 0.09$.	Subtheme 3: fewer challenging behaviors and lower family tension. “Stress and tension at home decreased.” (P7)	Divergence (explained)	Parents reported behavioral improvements that were not reflected in ATEC HB change, suggesting heterogeneity in behavior targets, short observation window, and limited sensitivity of the subscale to family-selected priorities.

Outcome/con- struct	Key quantitative signal (within intervention group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta- inference
Overall autism severity (CARS-2 Total)	INT $\Delta = -2.46$; $p = .055$; $d_z = 0.62$.	Subthemes 1–4: broad participation gains and more workable daily plans. “He entered our home, the plan was more realistic.” (P1)	Complementarity	Parents emphasized functional change and improved daily fit, while severity showed a favorable trend with wide uncertainty expected in a pilot sample.
Heterogeneity of response and time needed	INT effects varied across outcomes (d_z range = 0.09 to 0.78 across ATEC domains; COPM $d_z = 2.32$).	Subtheme 6: uneven pace of progress and need for longer dose or follow-up. “Some goals need more time.” (P1)	Convergence	Both strands indicated change with variability across children and goals, supporting progression to a larger trial and consideration of longer follow-up for outcomes that evolve slowly.
Safety and community participation constraints	Safety and community participation targets were captured primarily through COPM goals rather than standardized symptom measures.	Subtheme 5: limited practice opportunities and persistent danger-awareness difficulties due to context and supervision demands. “He still doesn’t understand dangers.” (P7)	Complementarity	Qualitative findings clarified why safety-related progress may remain constrained despite gains in home routines, indicating a need for safety-specific indicators and structured opportunity tracking in future trials.

Note. Quantitative signals summarize within-intervention-group pretest to posttest change (Δ). Negative values indicate improvement for ATEC and CARS-2; positive values indicate improvement for COPM performance. p values and Cohen’s d_z are from within-group tests in the intervention group. Waitlist findings are reported elsewhere (between-group table) and are not repeated here to keep the joint display focused on within-group change and its qualitative explanation. INT = intervention group. CI = confidence interval. COPM = Canadian Occupational Performance Measure. ATEC = Autism Treatment Evaluation Checklist. CARS-2 = Childhood Autism Rating Scale, Second Edition. Participant quotes are labeled using study codes (P#). Qualitative findings were derived from interviews with intervention-group parents.

4.7.2. Potential Impact on Parents

The potential impact of the telecoaching intervention on parents was evaluated using generic and autism-specific quantitative measures, alongside post-intervention qualitative interviews with parents in the intervention group. Quantitative outcomes included the WHOQOL-BREF (generic quality of life), the A-QoLA (Arabic-Quality of Life Autism), and the PCS-ASD (parental competence in caring for a child with autism spectrum disorder). All measures were administered at baseline and post-intervention in both the intervention and waitlist control groups. Given the pilot design and sample size, inferential analyses were treated as exploratory.

4.7.2.1. Potential Impact on Parents (Quantitative Results)

Descriptive statistics indicated small, generally favorable trends in the intervention group across multiple parent outcomes, while the waitlist group showed little change or small declines. Table 4.13 summarizes pre-intervention and post-intervention scores and mean change estimates. The largest within-group improvement in the intervention group was observed in A-QoLA Part B, which reflects autism-related parenting impact and distress.

Table 4.13: Descriptive Statistics for Parental Outcomes by Group

Measure	Group	Pre-Mean (SD)	Post Mean (SD)	Mean Change	Change 95% CI
WHOQOL-PHY	INT	13.00 (3.19)	13.19 (3.12)	0.19	[-1.14, 1.53]
	WL	12.00 (3.39)	11.24 (2.39)	-0.76	[-2.51, 0.99]
WHOQOL-PSY	INT	12.06 (2.42)	12.44 (3.28)	0.39	[-1.17, 1.95]
	WL	11.44 (3.39)	10.94 (3.07)	-0.50	[-1.39, 0.39]
WHOQOL-SOC	INT	13.33 (2.73)	13.22 (2.92)	-0.11	[-1.22, 1.00]
	WL	11.67 (4.41)	11.67 (4.03)	-0.00	[-1.88, 1.88]
WHOQOL-ENV	INT	11.00 (2.98)	11.83 (2.51)	0.83	[-0.22, 1.89]
	WL	11.17 (3.52)	10.83 (2.39)	-0.33	[-1.63, 0.96]
A-QoLA Part A	INT	83.08 (13.65)	85.50 (15.78)	2.42	[-5.25, 10.09]
	WL	77.33 (20.09)	73.75 (19.37)	-3.58	[-12.76, 5.59]
A-QoLA Part B	INT	56.58 (15.02)	63.42 (12.15)	6.83	[0.86, 12.81]
	WL	60.42 (13.47)	60.67 (16.53)	0.25	[-5.86, 6.36]
PCS-ASD Total	INT	118.75 (10.45)	120.08 (7.53)	1.33	[-2.94, 5.60]
	WL	118.25 (13.74)	116.67 (19.18)	-1.58	[-8.41, 5.25]

Note. Values are presented as M (SD). Change scores (Δ) were computed as post minus pre; positive Δ values indicate improvement. WHOQOL-BREF = World Health Organization Quality of Life, Brief Version; WHOQOL-PHY = WHOQOL-BREF Physical; WHOQOL-PSY = WHOQOL-BREF Psychological; WHOQOL-SOC = WHOQOL-BREF Social Relationships; WHOQOL-ENV = WHOQOL-BREF Environment. A-QoLA = Arabic-Quality of Life Autism (Parts A and B). PCS-ASD = Parental Competence Scale for Autism Spectrum Disorder. INT = Intervention Group; WL = Waitlist Control Group. Values are based on complete pre–post pairs.

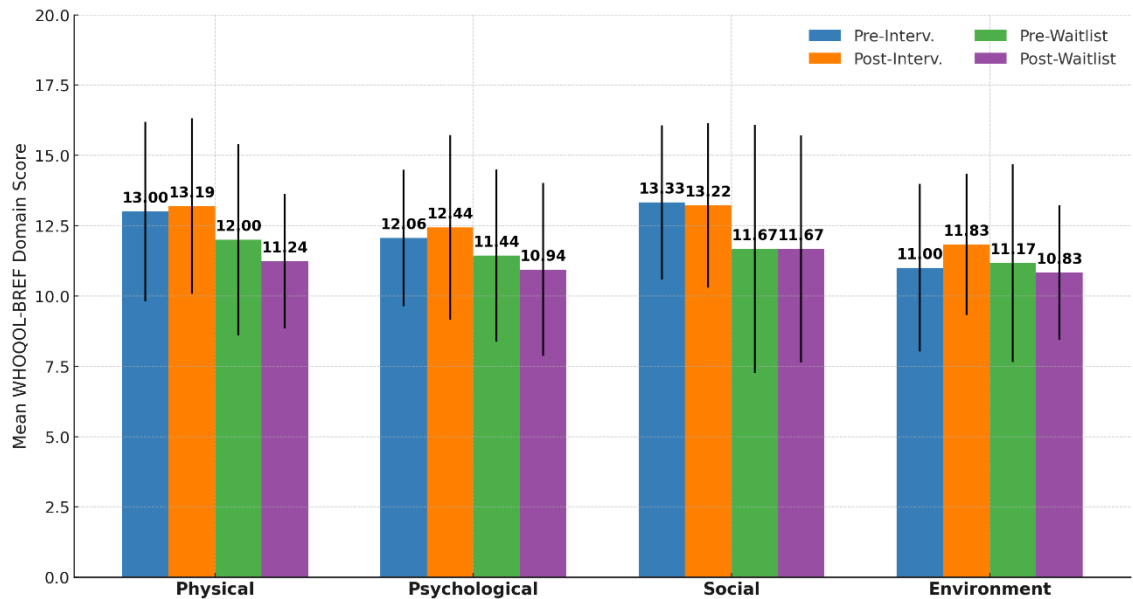


Figure 4.9: Mean WHOQOL-BREF Domain Scores for Intervention and Waitlist Groups at Pre- and Post-Intervention

Note. Bars represent mean domain scores (with standard deviation error bars) for each WHOQOL-BREF domain (Physical, Psychological, Social, Environment) at pre- and post-intervention, separately for the intervention and waitlist groups. Value labels indicate group means for each time point. Higher scores reflect better quality of life in the respective domain. WHOQOL-BREF = World Health Organization Quality of Life—BREF.

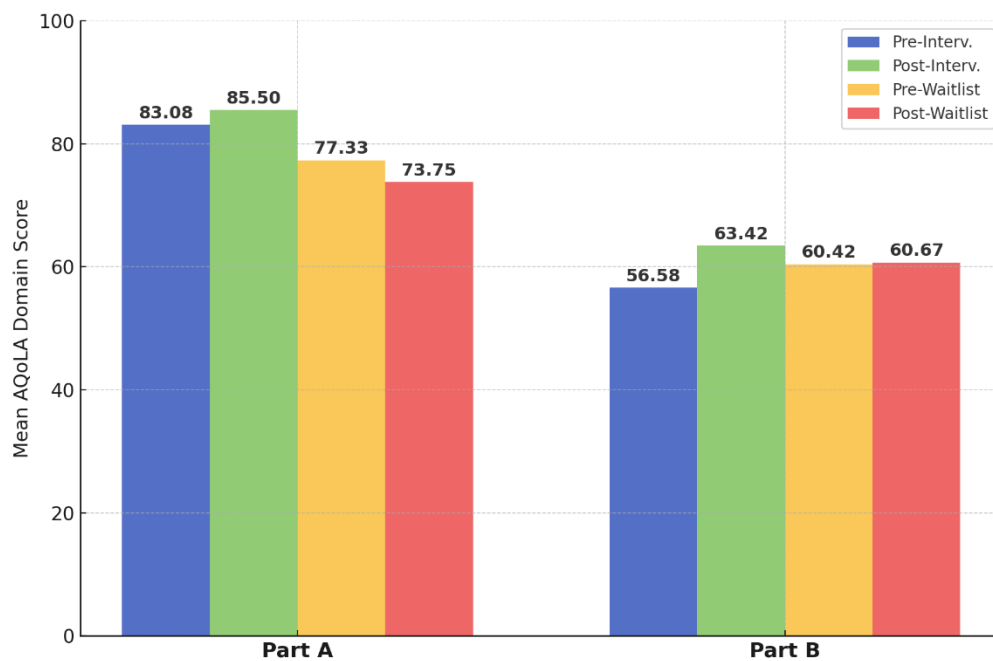


Figure 4.10: Mean A-QoLA Part A and Part B Scores at Pre- and Post-Intervention for Intervention and Waitlist Groups

Note. Bars represent group mean scores on A-QoLA Part A (core quality of life items) and Part B (parental concerns related to autism) for both intervention and waitlist groups at pre- and post-intervention. Higher scores indicate better parental quality of life or fewer autism-related concerns. Value labels indicate group means for each domain at each time point. A-QoLA = Arabic- Quality of Life Autism.

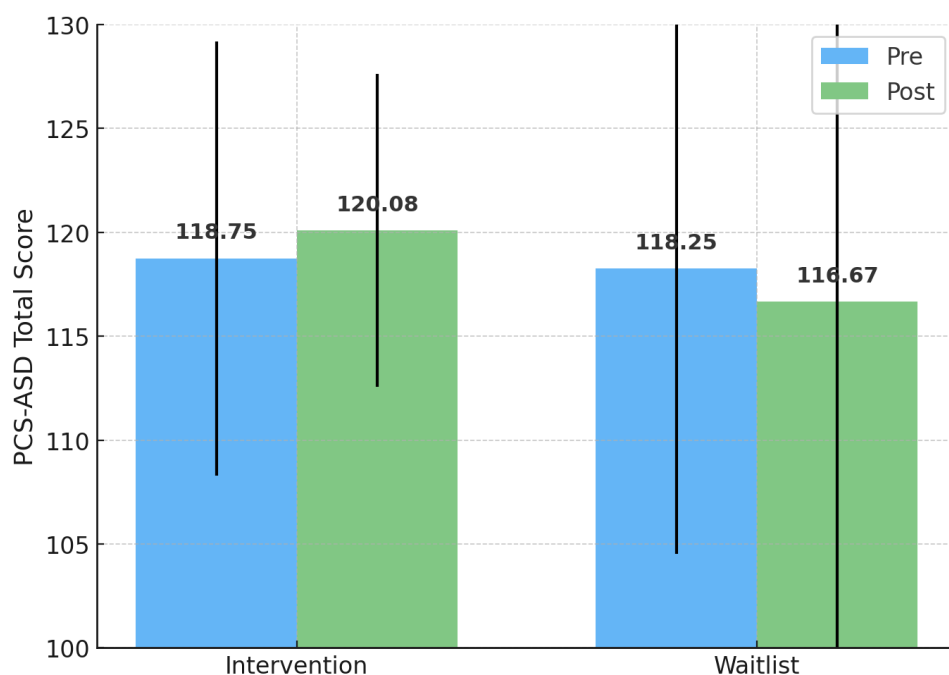


Figure 4.11: Parental Competence (PCS-ASD Total) Pre- and Post-Intervention by Group

Note. Bars represent mean Parental Competence Scale for Autism Spectrum Disorder (PCS-ASD) total scores for the intervention and waitlist groups at pre- and post-intervention. Error bars indicate ± 1 standard deviation. Value labels reflect group means for each time point.

Normality of change scores was assessed using Shapiro-Wilk tests. Change scores for all outcomes met normality assumptions ($p > .05$) except the WHOQOL-BREF Environment domain, which showed non-normal change distributions in both groups ($p < .05$). Accordingly, paired t-tests and independent t-tests were used for normally distributed outcomes, while Wilcoxon signed-rank and Mann-Whitney U tests were used for the WHOQOL-BREF Environment domain.

Within-group analyses examined pre-post change in each group. As shown in Table 4.14, the intervention group demonstrated a statistically significant improvement in A-QoLA Part B, $t(11) = 2.52$, $p = .029$, with a moderate effect size ($d_z = 0.73$). Other outcomes showed small, non-significant changes in both groups.

Between-group analyses compared change scores between the intervention and waitlist groups (Table 4.15). No between-group differences reached statistical significance. For A-QoLA Part B, the mean improvement was larger in the intervention

group than the waitlist group, with a moderate effect size, but the difference did not reach statistical significance in this pilot sample.

Table 4.14: Within-Group Pre Post Change in Parental Outcomes

Variable	Group	Mean change	Test Statistic	p	Effect size
WHOQOL-PHY	INT	0.19	$t(11) = 0.31$	.759	$d_z = 0.09$
	WL	-0.76	$t(11) = -0.96$	.358	$d_z = 0.28$
WHOQOL-PSY	INT	0.39	$t(11) = 0.55$	.594	$d_z = 0.16$
	WL	-0.50	$t(11) = -1.24$	.241	$d_z = 0.36$
WHOQOL-SOC	INT	-0.11	$t(11) = -0.22$	.830	$d_z = 0.06$
	WL	0.00	$t(11) = 0.00$	1.000	$d_z = 0.00$
WHOQOL-ENV	INT	0.83	$Z = -1.53$	.127	$r = 0.44$
	WL	-0.33	$Z = -0.66$	.512	$r = 0.19$
A-QoLA Part A	INT	2.42	$t(11) = 0.69$	.502	$d_z = 0.20$
	WL	-3.58	$t(11) = -0.86$	.408	$d_z = 0.25$
A-QoLA Part B	INT	6.83	$t(11) = 2.52$	.029	$d_z = 0.73$
	WL	0.25	$t(11) = 0.09$	.930	$d_z = 0.03$
PCS-ASD Total	INT	1.33	$t(11) = 0.69$	.506	$d_z = 0.20$
	WL	-1.58	$t(11) = -0.51$	.620	$d_z = 0.15$

Note. Change scores (Δ) were computed as posttest minus pretest; positive Δ values indicate improvement. Within-group change was tested using paired-samples t tests for normally distributed change scores and the Wilcoxon signed-rank test when normality was not met. Effect sizes for paired-samples t tests are reported as Cohen's d_z , defined as the mean change divided by the SD of the change scores (equivalently, $t/\sqrt{n}$), and presented as magnitudes. Wilcoxon effect size is reported as r and computed as $|Z|/\sqrt{N}$, where N is the number of paired observations. All p values are two-tailed. WHOQOL-BREF = World Health Organization Quality of Life, Brief Version; WHOQOL-PHY = WHOQOL-BREF Physical; WHOQOL-PSY = WHOQOL-BREF Psychological; WHOQOL-SOC = WHOQOL-BREF Social Relationships; WHOQOL-ENV = WHOQOL-BREF Environment. A-QoLA = Arabic-Quality of Life Autism. PCS-ASD = Parental Competence Scale for Autism Spectrum Disorder. INT = Intervention Group; WL = Waitlist Control Group.

Table 4.15: Between-Group Comparisons of Change Scores for Parental Outcomes

Outcome	INT mean change (SD)	WL mean change (SD)	Mean difference (INT – WL) [95% CI]	Test statistic	p	Effect size
WHOQOL- PHY	0.19 (2.10)	-0.76 (2.75)	0.95 [-1.12, 3.02]	t(22) = 0.95	.351	d = 0.39
WHOQOL- PSY	0.39 (2.45)	-0.50 (1.40)	0.89 [-0.80, 2.58]	t(22) = 1.09	.287	d = 0.45
WHOQOL- SOC	-0.11 (1.75)	0.00 (2.95)	-0.11 [-2.17, 1.94]	t(22) = -0.11	.912	d = 0.05
WHOQOL- ENV	0.83 (1.66)	-0.33 (2.04)	1.17 [—]	U = 47.00, Z = -1.48	.139	r = 0.30
A-QoLA Part A	2.42 (12.07)	-3.58 (14.44)	6.00 [-5.27, 17.27]	t(22) = 1.10	.281	d = 0.45
A-QoLA Part B	6.83 (9.41)	0.25 (9.61)	6.58 [-1.47, 14.64]	t(22) = 1.70	.104	d = 0.69
PCS-ASD Total	1.33 (6.72)	-1.58 (10.75)	2.92 [-4.67, 10.51]	t(22) = 0.80	.434	d = 0.33

Note. Change scores (Δ) were computed as post minus pre; positive Δ values indicate improvement. Mean differences are intervention minus waitlist control. Between-group comparisons were tested using independent-samples t tests for normally distributed change scores and the Mann–Whitney U test when normality was not met. Cohen’s d was calculated using the pooled SD of the change scores. Mann–Whitney effect size is reported as $r = |Z|/\sqrt{N}$, where N is the total sample size across groups. All p values are two-tailed. WHOQOL-BREF = World Health Organization Quality of Life, Brief Version; WHOQOL-PHY/PSY/SOC/ENV = WHOQOL-BREF domain scores; A-QoLA = Arabic-Quality of Life Autism; PCS-ASD = Parental Competence Scale for Autism Spectrum Disorder; WL = waitlist control group.

4.7.2.2. Potential Impact on Parents (Qualitative Results)

Post-intervention interviews across the full sample (P1–P12) indicated that telecoaching influenced parents’ daily functioning through linked changes in knowledge, confidence, coping, and family routines. Parents described the impact as practical and observable, often framed as feeling more capable of understanding their child’s needs, setting realistic goals, and sustaining strategies within everyday life. Parents also noted that change required sustained effort and time, and that progress was uneven across weeks and routines.

Overarching Theme: Parent empowerment and coping through reflective home-based action.

Across interviews, parents described taking a more active and informed role in planning and implementing strategies at home. This shift was linked to clearer problem-solving, stronger confidence in the caregiver role, and improved coping in daily routines.

Subtheme 1: Increased knowledge, insight, and reflective problem-solving

Parents commonly described learning to observe their child more carefully, identify barriers and facilitators, and respond to situations using structured reflection. Coaching discussions were described as helping translate broad concerns into specific, workable steps.

“This method was nice, I liked how it lets you think about barriers and facilitators, and find solutions, not just superficially teaching, but analyzing things deeply. When you analyze, the learning process becomes clearer.” (P4)

“My confidence and analytical skills improved. I started seeing details I wasn’t aware of before, definitely benefited.” (P2)

“Honestly, I started to think of solutions from a different perspective for various problems or behaviors.” (P5)

“Analyzing goals helped me as a mother to think more and be creative.” (P8)

Subtheme 2: Stronger confidence and ownership of the caregiver role in daily routines

Many parents described increased confidence and a clearer sense of responsibility for applying strategies between sessions. Parents often framed this as becoming a more active partner in goal-setting, decision-making, and follow-through rather than relying only on center-based sessions.

“I felt like an active partner in the meetings; we set goals and plans together.” (P2)

“I was an active partner and the coach’s support made all the difference.” (P6)

“Even when my child went to a center, I never relied only on what the therapist did; I always worked with him myself. I’m used to being his therapist at home, children always need ongoing support throughout the day.” (P10)

“With the remote coaching, I became more focused. I was more structured. The remote coaching benefited me more.” (P12)

Subtheme 3: Reduced stress and increased hope linked to perceived control and child progress

Parents frequently linked improved wellbeing to feeling more able to manage daily challenges and to seeing progress in their child. Several described emotional relief, greater calmness, and renewed hope during the intervention period.

“Each session was psychologically relaxing and satisfying; I learned more about my child and myself, parents gain new insight from these discussions.” (P7)

“It gave me motivation, made me feel hopeful.” (P5)

“Stress and tension at home decreased, we used to be tense and upset, but now things have improved.” (P7)

Subtheme 4: Shifts in routines and family climate, with variability across households

Some parents described more organized routines and improved family interactions when strategies were implemented consistently. Others described minimal routine change during the short trial period, or described improvements that were limited to specific contexts.

“Compared to center sessions, I felt the remote coaching focused more on our daily routine and realistic needs, and helped us connect goals to the child’s daily life and even improved social relationships within the family.” (P4)

“Yes, my husband says [my child] is calmer, and organizing the house brought psychological comfort.” (P5)

“No major impact on family routine, unless child has disruptive behaviors (not present here).” (P3)

“There’s still some stress in the family... I still worry when we go out, even if things at home are calmer.” (P9)

Subtheme 5: Parents recognized effort demands and the need for time to consolidate change

Parents emphasized that telecoaching required active involvement and consistent practice. Several described that some changes needed more time and commitment to stabilize, and some described fluctuations across weeks due to daily responsibilities.

“There is more responsibility on me as a mother, but it’s also empowering.” (P8)

“The plans just need more time and commitment for success.” (P4)

“The fact that I had to present results weekly... motivated me to work with my son... and to push myself to work with him more.” (P1)

“I wasn’t consistent 100% because of these barriers; kindergarten and therapy sessions took up most of the day.” (P12)

4.7.3. Mixed-Methods Integration: Joint Display (Potential Impact on Parents)

To integrate quantitative and qualitative findings on parental outcomes, a joint display was constructed to align changes in standardized measures (WHOQOL-BREF, A-QoLA, PCS-ASD) with parents’ post-intervention accounts. Integration was examined for convergence (agreement between strands), complementarity (qualitative explanations or added nuance when quantitative change was small), and divergence (apparent mismatch, interpreted in relation to measurement sensitivity, baseline endorsement, and the short intervention dose in a pilot trial). Because qualitative interviews were conducted with intervention-group parents only, quantitative signals are prioritized as within-group change in the intervention group, with waitlist trends noted for context.

Table 4.16: Integrated Quantitative and Qualitative Findings for Potential Impact on Parents (Within Intervention Group)

Construct/outcome	Key quantitative signal (within intervention group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta-inference
Autism-related parenting impact and distress (A-QoLA Part B)	INT $\Delta = +6.83$; $t(11) = 2.52$; $p = .029$; $d_z = 0.73$.	Subthemes 1–3: reflective problem-solving, stronger ownership, and reduced stress linked to feeling more able to manage daily challenges. “Each session was psychologically relaxing and satisfying.” (P7)	Convergence	The statistically significant improvement in A-QoLA Part B aligned with parents’ accounts of reduced autism-related distress and improved coping, suggesting this autism-specific domain may be more responsive over a short pilot period than broader QoL domains.
Generic quality of life, physical (WHOQOL-BREF Physical)	INT $\Delta = +0.19$; $t(11) = 0.31$; $p = .759$; $d_z = 0.09$.	Subthemes 3–5: emotional relief and coping gains were described more than physical change. “It gave me motivation, made me feel hopeful.” (P5)	Divergence (explained)	Parents described meaningful coping and emotional benefits, but physical QoL showed negligible short-term change, consistent with the expectation that physical QoL requires longer time or larger contextual shifts to change.
Generic quality of life, psychological (WHOQOL-BREF Psychological)	INT $\Delta = +0.39$; $t(11) = 0.55$; $p = .594$; $d_z = 0.16$.	Subthemes 1–3: improved insight, confidence, and emotional relief. “My confidence and analytical skills improved.” (P2)	Complementarity	Psychological QoL showed only a small quantitative change, while interviews described clearer psychological gains (confidence, relief, hope), suggesting the qualitative data captured targeted wellbeing shifts not fully reflected by the generic domain score in a brief follow-up.

Construct/outcome	Key quantitative signal (within intervention group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta-inference
Generic quality of life, social (WHOQOL-BREF Social)	INT $\Delta = -0.11$; $t(11) = -0.22$; $p = .830$; $d_z = 0.06$.	Subtheme 4: family climate improvements for some, limited social change for others. “It even improved social relationships within the family.” (P4)	Divergence (explained)	Parents reported improved family interactions and home climate, yet social QoL did not improve quantitatively, which may reflect limited change in broader social participation outside the home during the short trial period.
Generic quality of life, environment (WHOQOL-BREF Environment)	INT $\Delta = +0.83$; $Z = -1.53$; $p = .127$; $r = 0.44$.	Subthemes 4–5: some households described better organization, but structural constraints remained. “Organizing the house brought psychological comfort.” (P5)	Complementarity	The environment domain showed a favorable descriptive shift with a moderate r , while interviews clarified that improvements were often home-organization or routine related, and that wider environmental constraints were not easily altered in a short pilot period.
Autism-specific quality of life (A-QoLA Part A)	INT $\Delta = +2.42$; $t(11) = 0.69$; $p = .502$; $d_z = 0.20$.	Subthemes 1–4: practical gains in managing daily challenges and setting workable goals. “Analyzing goals helped me as a mother to think more and be creative.” (P8)	Complementarity	Parents described functional improvements and better management of daily demands, while A-QoLA Part A showed only a small quantitative shift, suggesting broader autism-specific QoL may need longer exposure to translate into measurable change.

Construct/outcome	Key quantitative signal (within intervention group)	Qualitative signal (linked subthemes, example quote)	Integration type	Integrated meta-inference
Parental competence (PCS-ASD Total)	INT Δ = +1.33; $t(11) = 0.69$; $p = .506$; $d_z = 0.20$.	Subthemes 1–2 and 5: stronger reflective problem-solving and ownership, but effort demands were emphasized. “There is more responsibility on me as a mother, but it’s also empowering.” (P8)	Divergence (explained)	Parents reported meaningful competence gains in reflective thinking and follow-through, yet PCS-ASD change was modest. This pattern may reflect limited time for consolidation, scale sensitivity, and the fact that competence improvements were described in applied skills rather than global self-ratings.

Note. Qualitative data were obtained from intervention-group parents only. Quantitative signals prioritize within-intervention-group pretest–posttest change (INT Δ) with corresponding two-tailed p values and Cohen’s d_z . Δ values represent posttest minus pretest; positive Δ values indicate improvement unless stated otherwise. Cohen’s d_z is defined as the mean change divided by the SD of the change scores (equivalently, $t/\sqrt{n}$) and is presented as a magnitude. Integration type indicates convergence, complementarity, or divergence between quantitative and qualitative strands. INT = intervention. WHOQOL-BREF = World Health Organization Quality of Life, Brief Version. A-QoLA = Arabic-Quality of Life Autism. PCS-ASD = Parental Competence Scale for Autism Spectrum Disorder. Participant quotes are labeled using study codes (P#). Qualitative findings were derived from interviews with intervention-group parents.

4.8. Summary

Across this chapter, the feasibility indicators show that the pilot trial procedures were deliverable in this setting. Recruitment and enrolment progressed through trusted referral pathways and clear study information, while time demands and competing responsibilities constrained some eligible families. Retention and assessment completion met the prespecified benchmarks, with interruptions mainly linked to routine variability and intermittent connectivity. Fidelity findings indicate that sessions were

delivered as structured, collaborative coaching, although between-session application was sometimes disrupted by caregiving load.

Acceptability findings indicate high perceived value and fit of the telecoaching model. Parents described the intervention as respectful, practical, and aligned with family priorities. Adaptation to the Palestinian context was reflected in flexible scheduling around work and caregiving, sensitivity to privacy and gender norms during home-based sessions, and emphasis on low-cost strategies that could be implemented in crowded households and with limited resources. Parents also described how involving mothers and, when feasible, other family members supported uptake within common family structures.

Potential impact findings showed modest quantitative improvements across several child and parent outcomes, with limited between-group statistical significance in this pilot sample. The pilot was likely underpowered to detect effects, so inferential findings were treated as exploratory. In contrast, qualitative accounts provided consistent signals of meaningful change, particularly in parental problem solving, confidence, and coping, and in children's participation within daily routines. Parents also described how safety and community constraints limited outdoor practice in some areas, which shifted goal practice toward indoor or backyard routines. This pattern suggests that proximal outcomes, such as parental competence and distress (including A-QoLA Part B), may shift earlier than broader quality of life domains, which may require longer exposure and wider contextual change. The next chapter interprets these patterns and considers implications for a future full-scale trial.

Chapter 5: Discussion

5.1. Overview and Interpretive Approach

This chapter discusses the findings of a mixed-methods pilot randomised controlled trial evaluating a parent telecoaching intervention for families of children with autism in Palestine. The study aimed to examine the acceptability and feasibility of telecoaching among parents of children with autism in the West Bank, as well as to explore its potential impact on parents' competence and quality of life (QoL) and on children's performance in parent-identified goals and autism-related characteristics. The intervention was grounded in Occupational Performance Coaching (OPC) and delivered through Zoom videoconferencing. An Arabic digital platform, Sanad AlHayaa, was developed to support participation by enabling registration, session scheduling, access to asynchronous resources, and secure communication between parents and the coach.

For the purposes of interpreting the findings, the conceptual distinction between telecoaching and telehealth is important. Telehealth is often used as an umbrella term for remote clinical encounters (Pacione, 2022). Telecoaching refers more specifically to a relational, process-oriented intervention in which the practitioner supports parents to analyse everyday occupational challenges, generate solutions that fit their family routines, and build capacity to enact change (Resua et al., 2020). In OPC, coaching is not a set of prescribed techniques. It is an enabling approach that relies on collaborative goal setting, reflective occupational performance analysis, and iterative action planning (Graham et al., 2020). This means that outcome patterns should be expected to align most strongly with participation and caregiver capacity rather than global indices of autism symptom severity and QoL.

The Saudi Telehealth Acceptance Scale (STAS) was originally developed within the broader telehealth adoption literature. In the present study, however, minor adaptations were made to ensure that the scale reflected parents' experiences of telecoaching, rather than general telehealth services. As a result, findings derived from the STAS are interpreted specifically in relation to parent telecoaching. Another key interpretive boundary that needs to be acknowledged at the outset is the use of the

Canadian Occupational Performance Measure (COPM). The COPM was collected for the intervention group only, and therefore COPM findings are discussed as within-group change signals rather than between-group intervention effects. This limitation affects how strength of evidence can be claimed and informs recommendations for measurement in a future definitive trial.

The Palestinian context is central to interpretation because it shapes both the implementation and outcome pathways. Palestinian families raising children with autism report limited availability of autism-specific services, geographic and financial barriers, and dissatisfaction with screening and psychoeducation (Dababnah & Bulson, 2015). Previous studies that focused on this population of parents have also reported high caregiver burden, social stigma, and emotional strain of negotiating services in the West Bank parents (Dababnah & Parish, 2013; Wahdan et al., 2023). These facts present solid support of telecoaching that seeks to reduce the weight of caregiving burden and enhance parental capacity at home.

The discussion is presented in the same format as in the Results chapter, proceeding in order through acceptability to feasibility and then potential impact. The quantitative indicators within each domain are interpreted together with the qualitative themes and integration is employed to elucidate mechanisms as well as explain convergence, complementarity or divergence patterns across the two methodologies. This aligns with the rationale of mixed-methods pilot trials, in which the main objective is to find out whether the intervention and trial procedures are feasible and acceptable in practice, and obtain early indicators of outcome change that may be used to inform future scale-up and trial refinement (Aschbrenner et al., 2022; Eldridge et al., 2016).

5.2. Acceptability of Telecoaching Intervention

Pilot and feasibility research relies heavily on acceptability. In this study, acceptability was examined using the STAS domains and the COPM satisfaction ratings, alongside qualitative interviews with parents participated in the telecoaching intervention.

5.2.1. Quantitative Acceptability: Interpretation of STAS Findings

In this study, STAS was used to assess parents' views on telecoaching, including perceived usefulness, ease of use, and the facilitating conditions that supported or hindered participation. Overall, STAS findings suggest that parents perceived telecoaching as an acceptable mode of service delivery with the most consistent signals found in domains related to practical support and enabling conditions. Facilitating Conditions (FC) emerged as particularly prominent. Although this pilot study was not designed to detect definite effects, parents in the intervention group showed stronger post-intervention endorsement than those in the waitlist condition, and a higher proportion met the predefined threshold of four. These patterns suggest that parents experienced telecoaching as a workable and supportive form of engagement, particularly when compared with usual care options.

What appears to be particularly important in this context is how FC are experienced by families in Palestine. Within the STAS, FC refers to perceptions of having the necessary resources, knowledge, system compatibility, and technical support to use telehealth effectively. In the present study, the large within-group effect size observed for FC ($d^2 = 0.92$) suggests a meaningful shift in parents' perceptions over time, although this finding cannot be generalised to all families of children with autism in Palestine.

Several contextual factors may help explain this pattern. Following the COVID-19 pandemic, many Palestinian families were required to engage with digital platforms for remote education and service access, which may have increased familiarity with online tools despite ongoing political instability and service disruption (Shraim & Crompton, 2020). Broader regional and international telehealth literature similarly shows that access to internet connectivity, basic digital resources, and ongoing technical or professional support are central to positive perceptions of telehealth feasibility and acceptance (Kruse et al., 2017; Pickard et al., 2016; Wallisch et al., 2019).

In this study, parents became more comfortable using digital platforms over time. Videoconferencing was simple to manage, and parents had access to consistent technical and professional support. Together, these factors appear to have contributed to more positive perceptions of facilitating conditions. At the same time, not all families had the resources needed to participate easily. Some lacked reliable internet access or

suitable devices. These constraints highlight the importance of addressing equity directly in future trials, particularly through support for digital access.

Perceived benefits (PE) did not change substantially from pre- to post-intervention. Parents in the intervention group reported high PE scores at baseline, and the mean change over time was small (0.12). Given these starting values, limited measurable change is not surprising. Similar patterns have been reported in other telehealth studies, where parents express positive views about telehealth before direct use (Cheung et al., 2022; Fairweather et al., 2022). A different pattern was observed in the waitlist group. Parents reported lower PE scores at post-assessment. This shift appears more closely related to delayed access to coaching and the absence of face-to-face support during the waiting period than to negative views of telecoaching itself. In a future full-scale trial, shortening the waiting period and clarifying expectations at enrolment may help prevent declines in perceived benefit that arise from procedural frustration rather than from the intervention.

Findings from the Effort Expectancy domain provide additional insight into perceived burden. Parents already rated the telecoaching as easy to use at baseline (mean = 4), so there was limited scope for change. Even so, this finding is informative. Despite their active participation in sessions and between-session work, parents did not feel that telecoaching was too demanding. Previous research indicates that parent-mediated interventions can be a burden, especially for families with high caregiving demands load (Jurek et al., 2023; Yang et al., 2021). Qualitative telecoaching studies, on the other hand, suggest that concerns about effort often decrease once expectations are clear and early progress is visible (Wallisch et al., 2019). In this study, perceived burden seemed to be manageable and did not outweigh perceived benefit. This pattern is consistent with the logic of acceptability as outlined in the Theoretical Framework of Acceptability (TFA).

Minimal change was also observed in the Behavioral Intention and Social Influence domains. Most participating parents reported strong intention to use telecoaching at baseline. Social endorsement was also rated highly from the outset. These ceiling effects likely limited sensitivity to change over time. Cultural context may further explain these patterns. In Palestinian society, decisions about disability-related services are often made privately. Stigma and concerns about visibility shape how

families seek support (Dababnah, 2018; Ghanim et al., 2024). Telecoaching may therefore be valued because it allows discreet engagement at home, rather than because it is publicly endorsed or socially promoted.

A further explanation is that both domains may have been affected by ceiling effects. Participation in the study was voluntary, and in a setting where autism specific services are limited, parents who respond to recruitment announcements may represent families who are already actively seeking support. High baseline levels of intention and perceived social influence reduce sensitivity to change over time. Previous studies have reported similar patterns, with parents who already hold positive attitudes toward telehealth and who receive adequate social support demonstrating strong initial engagement with remote service delivery (Choi et al., 2023; Salman et al., 2022). For future full-scale trials, recruiting through multiple channels, including service providers and community organisations, may help reduce self-selection effects and allow acceptance to be examined among families who may be less ready or less familiar with telehealth-based support.

When considered collectively, the STAS findings suggest that telecoaching was accepted primarily because it enabled access, reduced opportunity costs, and was perceived as useful and manageable. Domains related to social endorsement and future intention were less informative in this pilot, not because acceptance was low, but because cultural dynamics and sample characteristics limited their explanatory value.

5.2.2. Quantitative Acceptability: Interpretation of COPM Satisfaction Ratings

The COPM satisfaction ratings offered a distinct and complementary quantitative indicator of acceptability in this study, capturing parents' appraisal of the relevance and value of intervention outcomes rather than perceptions of the delivery modality itself. As noted earlier, the COPM was administered to parents in the intervention group only and is therefore interpreted as a within-group signal of perceived change. Within the TFA, perceived effectiveness is a central construct, making COPM satisfaction a particularly relevant indicator of how parents evaluated the intervention.

Parents reported substantial increases in satisfaction with their child's performance in goals they identified as important. The within-group effect size for

COPM satisfaction was very large ($d = 2.32$) from pre intervention to post intervention. Given the pilot nature of the trial and the subjective nature of the COPM scoring, this magnitude should be interpreted cautiously. Rather than reflecting concrete evidence of objective functional improvement, the observed change is better understood as reflecting perceived benefit by parents, increased confidence and greater correspondence between intervention goals and family priorities. This pattern is consistent with the available occupational performance coaching and tele-OPC literature in which satisfaction with goal performance is often high when goals have been collaboratively defined and incorporated into daily routines (Chilman et al., 2024; Jamali et al., 2022; Little et al., 2023; Wallisch et al., 2019). Unlike standardised symptom measures, COPM satisfaction reflects parents judgements about whether an intervention responds to issues that are meaningful in their situations. From an OPC perspective, this makes satisfaction a key indicator of coherence in intervention and perceived effectiveness.

Interpretation of COPM satisfaction must also take into account the coaching process itself. OPC explicitly supports reflection, clarification of priorities and iteration of adjustments of strategies. As a result, the increases in satisfaction may reflect in part, response shift processes whereby parents may recalibrate their expectations and are more sensitive to incremental changes in participation. This process is consistent with Adult Learning Theory (ALT), which places emphasis on experiential learning and reflection as mechanisms of behavior change. Qualitative OPC studies from different cultural contexts have also found that there is greater satisfaction accompanied by improved self-learning and problem-solving ability, even when observable changes are small (Angelin et al., 2021).

Contextual factors further shape interpretation. In this study, parents described ongoing dissatisfaction with autism services in Palestine, particularly fragmented provision and limited guidance that reflected family priorities. Similar concerns have been reported in earlier work (Dababnah & Bulson, 2015). Within this service landscape, gains in satisfaction may also reflect relief associated with receiving structured, respectful support that recognises parents' expertise and constraints. Literature from low- and middle-income settings suggests that perceived relevance and responsiveness may be more relevant drivers of satisfaction than symptom change alone when services are scarce (Katakis et al., 2025; Lee & Meadan, 2020). In this study,

COPM satisfaction therefore functions as an acceptability indicator of relevance and perceived benefit, rather than as a proxy for clinical effectiveness. In future large-scale trials, the use of the COPM alongside qualitative data and complementary outcome measures would strengthen inferences about the impact of the telecoaching intervention.

5.2.3. Qualitative Acceptability: Interpretation of Thematic Findings

Several mechanisms underlying acceptability were evident in the qualitative data. Parents frequently described the intervention as convenient and flexible, grounding these perceptions in concrete examples from their everyday routines. The value was not abstract convenience. It was the ability to attend without arranging transport, without risking late arrival, and without losing hours from an already demanding caregiving day.

Privacy and comfort were also evident in parents' accounts. Receiving support at home reduced exposure to public scrutiny and reduced emotional costs of accessing services. Prior West Bank research reported stigma and social isolation among parents raising children with autism (Dababnah & Parish, 2013). Telecoaching may reduce isolation by enabling engagement without requiring public disclosure.

Parents also described the importance of relational trust and psychological safety. Coaching conversations appeared to create a space in which parents could discuss challenges without fear of judgement. This is not incidental. Within OPC, the coach's stance is collaborative and strengths-based, which can reduce defensiveness and support honest reflection (Graham et al., 2020). In contexts where parents have experienced minimization of concerns by service providers, relational trust can be central to acceptability. Dababnah and Bulson (2015) reported that Palestinian parents frequently described ineffective communication and minimization of concerns during service encounters. Telecoaching delivered with a collaborative stance may therefore address not only access gaps but also relational gaps in service delivery.

Comparisons with existing telecoaching evidence support the credibility of these mechanisms. In occupation-based coaching delivered via telehealth for families of young children with autism, parents reported high satisfaction and meaningful improvement in targeted routines (Little, Pope, Wallisch, & Dunn, 2018). In a telerehabilitation randomised trial of OPC for families of children with autism, coaching was feasible and associated with improvements in occupational performance (Jamali et al., 2022). Across telehealth parent-mediated interventions, engagement has been shown

to depend on perceived relevance, time burden, and parent readiness (Ingersoll & Berger, 2015). The present study aligns with these patterns while demonstrating that, in Palestine, acceptability is tightly connected to structural realities of service scarcity and mobility constraints.

Acceptability must also be interpreted in relation to who participated. The sample included parents with relatively high educational attainment and families from cities and villages, but not refugee camps. Digital access and digital literacy vary by locality. According to the 2019 Household Survey on Information and Communications Technology, home internet access was reported at 80% overall, with lower access in refugee camps (75%) compared with urban (80%) and rural (81%) areas (Palestinian Central Bureau of Statistics, 2020c). These differences suggest that the intervention may be experienced differently by families with lower connectivity, fewer devices, or lower digital literacy. Acceptability is therefore high among families who were able to enrol and engage under study conditions, while acceptability among families in camps and other low-resource settings remains an empirical question.

Another issue that needs to be considered is the dual role of the researcher who also served as the coach in the current study. Working with a single coach supported consistency and strong relationships with parents. This likely contributed to high satisfaction. At the same time, it limits conclusions about whether acceptability would remain similar with multiple providers. A future trial should test delivery across several coaches.

Collectively, parents in this study described telecoaching as useful and acceptable within their daily lives. They pointed to less travel, greater privacy, and supportive coaching conversations. These features appeared to make engagement easier and helped parents feel more confident in managing routines at home.

5.2.4. Acceptability overall interpretation

Acceptability in the current study emerged through the way several factors worked together across the quantitative and qualitative data. The STAS findings indicate that parents generally experienced telecoaching as workable under constrained conditions. COPM satisfaction ratings point in the same direction, suggesting that parents valued the focus on goals they had identified themselves. Interviews added

further context. Parents emphasised fit with daily life, protection of privacy, and feeling supported rather than judged, all of which shaped how acceptable the intervention felt.

This pattern aligns with telecoaching and OPC literature, while also reflecting the specific social and structural conditions of the Palestinian context. Issues of privacy, dignity, and access carried particular weight in a setting marked by service scarcity. Parents appeared to judge telecoaching as acceptable when it reduced burden and supported goals that mattered in their own routines.

Viewed through the TFA, these findings suggest that acceptability functioned as a context-sensitive appraisal rather than a single attitude. It was shaped by feasibility, perceived relevance, and respect for family circumstances, rather than by simple approval or endorsement.

5.3. Feasibility of the Telecoaching Intervention

Feasibility was assessed against a number of predefined areas and is interpreted here as an evaluation of whether the intervention and trial procedures can be carried out as intended under practical constraints and what changes would be necessary before advancing to a definitive trial. Two complementary theoretical lenses guided the interpretation. The first is the mixed-methods feasibility logic used in this study, which treats feasibility parameters as incomplete without qualitative explanation and then uses integrated meta-inferences to specify refinements before progression. The second is an implementation-oriented reading of acceptability and uptake, drawing on the TFA and technology acceptance concepts. In this regard, feasibility success depends on whether the intervention is coherent to parents, whether burden and opportunity costs are manageable, and whether the environment provides adequate facilitating conditions for participation.

5.3.1. Recruitment Capability

Recruitment capability was partially achieved. The study approached the target sample, and the yield among eligible families was high, yet recruitment took longer than the prespecified timeline. A superficial interpretation would treat this as a logistical

shortfall. A more defensible interpretation is that two recruitment processes occurred simultaneously. First, the intervention generated strong interest among eligible families once the offer was understood and trusted. Second, the pace of enrolment was constrained by time-limited capacity at household level, a constraint that is structurally amplified in Palestine.

This pattern aligns closely with uptake evidence from community offers of parent-mediated programs, where a substantial proportion of eligible families do not enroll even when interventions are perceived as valuable. Ingersoll and colleagues reported that roughly one quarter of eligible families enrolled in a community offer of a self-directed parent-mediated program at diagnostic feedback, and uptake was higher when families received therapist contact and a clear schedule (Ingersoll et al., 2016).

Enrolment in the current study increased once families understood what telecoaching involved and what participation would require. Parents were generally willing to take part, but many were unable to enrol immediately. This delay did not reflect lack of parents' interest. Rather, it reflected practical constraints that differed from those typically reported in higher-resource settings, where families may be able to commit more quickly.

These constraints were closely tied to the context in which the current research took place. Palestinian parents referred to fragmented services, heavy caregiving demands, and restrictions on movement and work. Together, these pressures limited the time families could realistically allocate, even when motivation to participate was high. From an ecological systems perspective, recruitment pace is shaped by factors operating beyond the individual level, including mesosystem and macrosystem conditions. In practical terms, the feasibility signal is not that recruitment is inherently difficult, but that recruitment requires pacing aligned with local rhythms, such as religious periods and school obligations, and relies on trusted entry points to reduce uncertainty and cognitive load.

This interpretation also sharpens what a definitive trial should change. Recruitment yield can be preserved while improving pace by extending recruitment windows and building early human contact into recruitment workflows, as suggested by the uptake literature (Ingersoll et al., 2017; Pickard et al., 2016). The present study already contains the mechanisms that uptake research identifies as facilitators,

particularly clarity, scheduling structure, and trusted pathways. The next trial must treat those as essential recruitment infrastructure rather than incidental supports.

5.3.2. Enrolment and Platform Use

Enrolment and platform use feasibility were supported by full completion of onboarding tasks among participants who completed post-assessments, as well as consistent session booking via the platform. Use of platform resources was generally acceptable among intervention completers, although some technical friction and variability in library use were noted. These indicators matter because telecoaching feasibility in practice depends on whether parents can reliably complete a chain of procedural actions without repeated professional intervention. In a full-scale trial, weak links in that chain typically become points of attrition or unequal participation.

The observed feasibility profile aligns with prior telecoaching research showing that when platforms are kept simple and supported by brief orientation or onboarding, parents adapt quickly even when initial digital confidence is limited (Bernie et al., 2023; Gately et al., 2023). Wallisch and colleagues describe similar normalisation processes in telehealth participation, whereby early uncertainty decreases once parents understand the format and can integrate sessions (Wallisch et al., 2019).

The present findings extend that evidence into a Palestinian context where variability in connectivity and device access is more likely to be a persistent implementation constraint. That is why the qualitative signal of “occasional technical friction” is not a minor note. It is an early indicator of which families might be at risk of exclusion when the sample broadens.

Variable engagement with asynchronous materials aligns with prior telecoaching evidence indicating that families tend to prioritise synchronous coaching interactions, which offer immediate tailoring and relational accountability, while optional library-style resources are accessed more selectively (Wallisch et al., 2019; Little et al., 2018, 2023; Gately et al., 2023; Ingersoll & Berger, 2015). An adult learning interpretation strengthens this point. Adults preferentially engage with learning that is immediately relevant, problem-centered, and socially supported. When families are under time pressure, they tend to allocate effort to the component with the highest perceived payoff. That makes selective library engagement an expected pattern rather than an adherence failure.

The feasibility implication is therefore not to increase compliance with the library. It is to decide what role asynchronous resources should play in a definitive trial. One option is to retain the library as an optional scaffold and treat usage as a moderator, rather than as a required dose component. Another is to integrate library content directly into live sessions to increase coherence and reduce decision burden. Either approach would be theory-consistent and supported by telecoaching implementation patterns, but the choice should be made intentionally rather than left emergent.

5.3.3. Randomization procedure

Randomization was implemented without errors or deviations, indicating procedural feasibility. In telecoaching trials, randomization feasibility is often threatened less by technical allocation errors than by dissatisfaction with allocation outcomes, particularly when families view services as scarce or urgently needed. The present qualitative findings indicate that most parents accepted procedural fairness, while a minority preferred need-based allocation.

This pattern aligns with what is observed in other pilot telecoaching trials that have used waitlist designs. For example, tele-OPC work in Iran used a waitlist comparator and was able to recruit and retain families, suggesting that randomization can remain feasible in contexts where services are constrained, provided expectations are managed and perceived benefit is credible (Jamali et al., 2022)e (Jamali et al., 2022). Bernie and colleagues also implemented both videoconference and face-to-face OPC arms in a waitlist-related context and maintained retention across formats, indicating that families can tolerate allocation when the intervention is perceived as worthwhile and when access is not permanently denied (Bernie et al., 2023).

The ethical dimension of randomization is further shaped by the Palestinian context. Randomization may be interpreted through a scarcity lens when families face limited access to autism services. This response extends beyond dissatisfaction as conceptualised within the TFA. Rather, it reflects opportunity cost assessments and ethical concerns, because the perceived cost of delayed access can be high when families are uncertain whether effective support will become available.

In a definitive trial, the feasibility of randomization would be strengthened by making the uncertainty around relative benefits transparent and by ensuring credible, time bound access to the intervention for the waitlist group. This is not a methodological

compromise. It is a requirement for implementation in a context where families judge research participation in relation to real service scarcity.

5.3.4. Retention

Retention met the prespecified benchmark, with attrition limited and occurring prior to the first session for the two families who withdrew. This detail is important because it suggests that once the intervention began, the program was sufficiently workable and valued to sustain participation. Retention is therefore interpretable as an indicator of feasibility of delivery, not only feasibility of recruitment.

This retention profile compares favorably with telecoaching feasibility studies in the field (Allen et al., 2021; Bernie et al., 2023; Little et al., 2018, 2023). For example, Bernie et al reported retention of about three quarters of families across both videoconferencing and face-to-face OPC formats, suggesting no retention disadvantage for remote delivery. Similarly, Little et al. maintained 25 of 34 families over a 10- to 12-week period of telehealth coaching, which supports the viability of retaining families over an intervention period comparable to the present study. Retention in the present trial, although interpreted cautiously, aligns with these benchmarks and can be considered a positive feasibility indicator given the broader contextual constraints faced by Palestinian families.

In this study, the Palestinian parents' qualitative accounts add necessary distinction here. Parents described weekly accountability, structured follow-up, planning, and dissatisfaction with centre-based care as reasons for continuing. They remained engaged when coaching felt collaborative and reliable. They particularly valued setting goals together, working through problems, and having consistent support. These features appeared to help parents continue using strategies at home, especially in a context where local services were inconsistent and structured guidance was limited..

At the same time, parents mentioned competing demands that made it harder to carry out plans between sessions. Although most families attended sessions consistently, the amount of practice at home varied. This distinction matters for feasibility. Attendance alone does not capture how much families are able to enact strategies in daily life. A future trial should therefore track enactment more directly, for example by noting time pressures, household stress, or interruptions related to technology. Doing so

would avoid assuming that all families receive the same dose of intervention when their circumstances differ.

5.3.5. Completion of Online Questionnaires

Completion of online questionnaires was high at both time points. All enrolled parents completed baseline questionnaires (26/26), and most completed post-intervention questionnaires (24/26, 92.3%), exceeding the prespecified feasibility criterion. These results indicate that remote data collection was workable for families who remained engaged in the trial, even though the assessment battery required a substantial time commitment of approximately 60 minutes at each time point.

Parents' accounts help clarify how this feasibility was experienced. Questionnaires were generally described as clear, but time burden was a common concern. Several parents noted that completing the measures required sustained attention alongside caregiving responsibilities. This pattern aligns with findings from other caregiver-mediated intervention trials, where high completion rates coexist with reports of fatigue and reduced data quality when assessment batteries are lengthy, particularly among parents managing high caregiving load (Bernie et al., 2023). In the present study, parents' accounts suggest a similar dynamic, in which willingness to complete measures did not eliminate the practical strain associated with time and competing responsibilities.

These findings do not suggest that remote measurement is infeasible. Rather, they point to the need for greater selectivity in a future trial. Streamlining the number and timing of measures would help balance data needs with parents' available time. Prioritizing outcomes most closely linked to the intervention's theory of change, and scheduling assessments around caregiving demands, may improve both feasibility and data quality.

5.3.6. Intervention Fidelity and Adherence

In this study, the coach delivered sessions with high adherence to OPC processes, and most families attended sessions consistently once the intervention began. In healthcare intervention research like coaching, fidelity is not an optional methodological extra. It is a feasibility criterion because coaching outcomes depend on maintaining core processes such as collaborative goal setting, reflective analysis, and

guided problem solving. Telecoaching introduces additional potential threats to fidelity, including technological disruptions, divided attention in home settings, and reduced nonverbal cues. High fidelity in this pilot therefore supports the feasibility of delivering OPC with integrity through telecoaching under Palestinian home conditions.

This finding aligns closely with OPC fidelity pilot studies which commonly adopting benchmarks of approximately 80% adherence to indicate acceptable delivery consistency prior to progression to larger trials (Bernie et al., 2023; Dunn et al., 2018; Jamali et al., 2022). For instance, the earlier work of Dunn and colleagues demonstrated feasibility of monitoring around 40% of sessions in OPC research, establishing that fidelity assessment can be conducted without undermining delivery and that it provides actionable insight into both delivery and receipt. The present trial's fidelity procedures are consistent with that approach and provide early evidence that similar monitoring can be sustained in a Palestinian pilot.

Tele-OPC trials also support the interpretation that fidelity and engagement are maintainable in remote formats. Bernie et al (2023) reported comparable feasibility across videoconference and in-person OPC arms, which indirectly suggests that the core coaching process can be preserved across modalities when structure and training are in place. The present findings converge with that evidence, while adding a context-specific mechanism: parents' desire for structured follow-up and their dissatisfaction with variable center-based care may have strengthened engagement with coaching tasks, thereby supporting fidelity of receipt.

The main feasibility boundary remains scalability. High fidelity in a single-coach pilot is encouraging, yet it does not guarantee fidelity at scale when multiple coaches deliver the intervention. A definitive trial will require standardized training, calibration, and ongoing fidelity checks, which are feasible in low resource settings. The feasibility contribution of this pilot is that it provides empirical justification for maintaining fidelity monitoring as an integral component of the trial, rather than reducing it in the name of practicality.

5.3.7. Safety

Safety benchmarks were achieved without any adverse events attributed to participation, although one moderate event resulted, which resolved without medical action. Safety feasibility in telecoaching has two dimensions. One is intervention related

risk during home based activities. The other is contextual safety and continuity, especially in an environment that is associated with travel and routine disruption.

Parents' accounts show that risks were usually anticipated and dealt with by cautious choice of goals and adaptation. This is consistent with an approach to OPC in which goals are negotiated, contextually adapted and changed when conditions change (Bernie et al., 2023; Jamali et al., 2022; Gately et al., 2023). From an ecological perspective, safety planning in Palestine also needs to take into account environmental instability. Telecoaching has the advantage of continuity as it minimizes the need for travel and enables services to continue in times of restricted movement. In more stable environments, the use of telecoaching is often justified on the basis of convenience. In Palestine, the feasibility value proposition is larger. It incorporates continuity and risk reduction associated with constraints in mobility imposed by political instability.

5.3.8. Integrated Feasibility Interpretation

Across the domains, the feasibility profile both converges with existing telecoaching evidence and displays context-specific differences that are theoretically consistent. Recruitment pace was slower than the pre-specified benchmark, although enrolment yield among eligible families and post-enrolment retention were strong. This pattern is consistent with community uptake research showing that capacity, rather than perceived value, often constrains initial uptake, and it compares favourably with retention profiles reported in telecoaching studies such as those by Little et al. (2018) and Bernie et al. (2023).

Platform procedures, booking, and videoconferencing were workable and aligned with telecoaching feasibility evidence, while variable use of asynchronous resources reflected predictable adult learning and time-allocation dynamics rather than implementation failure. Fidelity monitoring was feasible and demonstrated high adherence, aligning with OPC fidelity research and strengthening confidence that coaching integrity can be preserved under remote delivery.

The integrated meta inference is therefore not simply that the intervention was feasible. A stronger conclusion is that feasibility is attainable in Palestine under conditions that protect coherence, reduce burden and opportunity costs, and ensure facilitating conditions. At the same time, recruitment and assessment burden are likely to be key pressure points during scale up. The feasibility findings here point to specific

areas that would need adjustment before a definitive trial. These include allowing more time for recruitment, explaining randomization more clearly to families, reducing assessment burden, and ensuring that fidelity monitoring can be maintained as the study scales.

5.4. Potential Impact of the Telecoaching Intervention

Potential impact in the current study is discussed as preliminary signals of change rather than evidence of efficacy. These signals are used to inform outcome selection, to understand variability, and to guide planning for a future definitive trial. The discussion first considers child outcomes and then parent outcomes, drawing on both quantitative patterns and qualitative accounts to interpret convergence and divergence in relation to the study's theoretical framework and the Palestinian context.

5.4.1. Potential Impact on Children

5.4.1.1. Interpretation of Proximal Participation Outcomes (COPM)

Interpreting child outcomes in this study requires clarity about what the telecoaching intervention was intended to influence, and what change was unlikely to occur over a short period. The intervention followed the OPC process, in which parents worked with the coach to identify goals that mattered to them, examine barriers within daily routines, try out strategies at home, and adjust plans over time. Under this logic, the most proximal child-level impact should appear first in participation-based indicators linked to parent-selected goals, while broader measures of autism characteristics and clinician-rated severity are expected to move more slowly, show mixed patterns, or remain stable over short periods.

This hierarchy of expected change is not an attempt to shield the intervention from evaluation. Rather, it reflects a principled interpretation based on the theory of action. Coaching does not directly target autism symptoms as isolated goals. Instead, it changes how parents structure tasks and environments and how they support engagement and regulation in everyday occupations. This is why COPM performance

was included as a proximal outcome and why a 2-point change was treated as a practically meaningful indicator in pilot work .

The Palestinian context strengthens the credibility of this hierarchy. In settings where school supports and access to specialised services may be inconsistent or difficult to obtain, parent led routine adaptation becomes a key pathway for change in child participation. Under such conditions, it is coherent to observe marked gains in participation at home, alongside more modest change in broader measures of severity, because the home is where parents have the greatest scope for direct influence.

The clearest quantitative signal of proximal child participation change was observed in COPM performance. The intervention group showed a large mean increase of 3.89 points. Nearly all parents participated in the intervention group reported at least a two-point improvement which indicates a clinically meaningful change.

This pattern aligns closely with the expected proximal outcome of the OPC model. The COPM is designed to detect change in performance of prioritized occupations that matter to families. When coaching is delivered with integrity and parents enact strategies in routines, COPM performance tends to be highly responsive, including in telecoaching formats. This responsiveness has been documented in previous tele-OPC work with families of autistic children and in broader online OPC feasibility evidence, where COPM change is often interpreted as the clearest early indicator that coaching has translated into functional routine change rather than knowledge alone (Chilman et al., 2024; Jamali et al., 2022; Little et al., 2023).

However, the magnitude of COPM change in this pilot should be interpreted cautiously, even though it is compelling. In a small pilot, large standardized effects can occur when baseline scores are low and when measurement is closely aligned with intervention targets. The baseline COPM mean in this study was low, leaving substantial room for improvement and increasing sensitivity to change.

This is not a flaw. It indicates that parents selected goals where difficulty was real and participation restrictions were significant. It also means that improvement represents meaningful functional movement for families. However, low baselines can also inflate the apparent size of improvement, and goal-based measures are susceptible to expectancy effects if assessment procedures are not carefully managed. In this study, the COPM interview was administered by an independent occupational therapist who

was blind to allocation, which strengthens credibility and reduces the risk that coaching enthusiasm directly shaped performance ratings.

This design feature matters because online OPC feasibility research has explicitly noted the risk of bias when the same therapist delivers the intervention and administers the COPM, and has recommended assessor separation where possible (Frater et al., 2025). The current design aligns with that recommendation and therefore strengthens the interpretation that COPM gains reflect honest change in parent-perceived child performance in daily routines.

The Palestinian context offers a further explanatory lens for why COPM gains may have been strong. Parents in this setting often manage service gaps and must rely on home routines as the primary context for intervention. When coaching provides structured performance analysis and feasible strategy planning, parents can implement changes immediately without waiting for service appointments or traveling long distances. The result is that functional participation improvements become realistic and observable within weeks. This aligns with the ecological premise that change is most likely in the microsystem contexts parents can control.

Theoretical frameworks clarify the mechanism behind this pattern. ALT predicts that parents will learn best through problem-centered, immediately relevant tasks. COPM goals are by definition meaningful, urgent, and embedded in daily routines, which makes them ideal targets for adult learning through coaching. Social Cognitive Theory predicts (SCT) that repeated cycles of trying strategies, observing child responses, and revising plans with feedback create mastery experiences that increase parents' self-efficacy. Greater self-efficacy increases persistence and quality of enactment, which in turn improves child participation in targeted routines.

In the subsequent section, the qualitative child-impact themes specify what these improvements looked like in daily life and to identify constraints that limited generalization across routines. That interpretive step will ensure the discussion does not treat COPM change as a simple numeric gain, but as evidence of practical participation change that is uneven across contexts and sensitive to household constraints.

5.4.1.2. Interpretation of Distal Outcomes (ATEC and CARS-2)

The ATEC results provide a more complex impact profile, consistent with expectations for a short pilot coaching intervention. The intervention group showed decreases in ATEC total score and in Communication, Sociability, and Sensory/Cognitive domains, while the Health/Behavior domain increased slightly. Within-group analysis indicated a statistically significant improvement in Sensory/Cognitive (mean change -2.50), with other domains showing trend-level changes and wide confidence intervals, and between-group comparisons not reaching statistical significance.

These patterns can be interpreted as preliminary and reasonable, rather than as contradictory. The ATEC was designed to monitor change over time and is caregiver-reported, which makes it sensitive to changes parents notice in daily behavior and engagement, as well as to shifts in parental awareness and interpretation (Abaoud et al., 2020; Backer et al., 2016).

The Sensory/Cognitive improvement is coherent with coaching content that helps parents interpret sensory triggers, adjust environmental demands, and use predictable routines to support engagement. Those changes may be experienced by parents as meaningful shifts in awareness, responsiveness, and regulation, particularly in home settings.

The Health/Behavior domain increase should be interpreted with caution and with attention to reasonable explanations that do not assume deterioration. First, caregiver report can shift as parents become more aware of patterns, more attentive to triggers, and more precise in distinguishing behaviors that were previously interpreted as general difficulty. Coaching may therefore produce reporting recalibration, where parents notice and report behaviors more accurately even as routines improve. Second, health and behavior are highly context-sensitive, and in Palestine, daily disruptions, stressors, and inconsistent sleep routines can affect regulation despite improvements in strategy use. In a pilot, it is not possible to determine which explanation dominates. The appropriate inference is that the domain is unstable, sensitive to context, and warrants closer monitoring in a larger trial.

The broader literature supports this cautious domain-specific interpretation. Parent-mediated interventions often show stronger and more consistent change in

proximal functional outcomes and caregiver competence than in broad symptom indices, especially over short durations (Althoff et al., 2019; Bin Zuair et al., 2025; Conrad et al., 2021). In telecoaching and hybrid telehealth interventions, functional skill targets and routine-based behavior change are typically more responsive than global autism severity markers. The hybrid telehealth toileting study, for example, reported functional gains even though engagement with asynchronous materials was low, illustrating that coaching-supported enactment can drive meaningful routine change without uniform shifts in broader characteristics (Little et al., 2023).

Theoretical frameworks support the interpretation that ATEC improvements may be uneven. Ecological Systems Theory predicts that child behavior and regulation remain influenced by contextual constraints and stressors that coaching does not remove. ALT predicts that parents implement strategies selectively in the routines that matter most and where implementation is feasible. This selective enactment can produce improvements in some behavior domains while leaving other domains unchanged or inconsistently affected.

In this trial, the CARS-2 functioned as a distal indicator. The intervention group showed a decrease in CARS-2 total scores (mean change -2.46), while the waitlist remained essentially stable. The within-group change approached statistical significance in the intervention group, but between-group comparison did not reach significance, consistent with the pilot nature of the trial.

CARS-2 is a clinician-rated measure of autism severity, and severity indicators are generally more stable over short timeframes than goal-based participation measures. It is therefore important not to overinterpret modest changes. In a pilot, this pattern is best treated as a preliminary estimate of variability and as a suggestion that observable behavior and engagement may shift in ways captured by clinician ratings, possibly through improved regulation and participation opportunities in daily routines.

Qualitative findings below interpret what may underlie this signal, such as reduced escalation during transitions, increased engagement in structured routines, or improved functional communication opportunities. These mechanisms are coherent with coaching that changes parent behavior and environmental supports, rather than suggesting that core autism features were treated away.

5.4.1.3. Interpretation of Qualitative Findings: Potential Impact on Children

The qualitative findings related to potential impact on children provide a detailed and contextually grounded account of how change was experienced, where it was most evident, and where it was constrained.

Across interviews, parents consistently described progress in daily living skills that were the focus of coaching goals, including toileting, dressing, eating, and participation in structured activities within the home. These changes were described in practical terms, such as reduced resistance, smoother transitions, and increased cooperation, rather than as developmental milestones. This framing aligns closely with the strongest quantitative signal observed in COPM performance and clarifies its meaning. The COPM gains reflected improvements in children's participation in parent-prioritized routines, not broad developmental change. This pattern is consistent with occupational performance coaching theory, which predicts that goal-level participation outcomes will be the most proximal and sensitive indicators of impact, particularly in short interventions (Graham et al., 2009; Chilman et al., 2024).

Parents' accounts also indicate that these participation gains were mediated through changes in parent behaviour. Many parents described becoming more deliberate in how they structured tasks, prepared the environment, and responded to early signs of difficulty. Improvements were often attributed to clearer expectations, greater consistency, and proactive adjustment of sensory and contextual demands. In this sense, child change was inseparable from parent change. This mechanism-oriented interpretation aligns with SCT, which emphasises mastery experiences and guided feedback as drivers of behaviour change, and with ALT, which predicts that learning embedded in real problems and immediate contexts is more likely to be enacted and sustained. Similar parent-mediated mechanisms have been reported in tele-OPC studies and in hybrid telehealth interventions targeting functional routines, where synchronous coaching supported parents to enact strategies that produced observable child participation gains even when other intervention components were used minimally (Little et al., 2018; Jamali et al., 2022).

At the same time, the parents were clear about the boundaries of change. Improvements were often limited to routines that were specifically targeted and did not

necessarily automatically generalize to unfamiliar settings and new contexts. Several parents reported that advances seen at home were not always implemented in the community or at times of increased stress. This lack of generalization is not to be taken as intervention failure. Rather, it seems to indicate the context-bound nature of parent-mediated enactment and to reflect the constraints that are imposed by wider environmental conditions. From an ecological systems perspective, coaching mainly helped to support change at the level of the microsystem, where parents were able to modify tasks, expectations, and interactions. Mesosystem and macrosystem factors, including crowding, safety and lack of access to resources in the community, continued to influence children's behaviour and opportunity. In the Palestinian context, these constraints are especially pronounced and can help explain the relatively strong gains in participation within the home.

Qualitative findings also provide insight into the communication and responsiveness changes. Parents described increased engagement, better turn taking, and more consistent responses when coached routines were being used. Several parents attributed these gains to repeated practices in the context of daily life, for example, encouraging communication at meals, or play. These observations are useful to understand the trend level reductions from the ATEC Communication domain. Rather than global change in language development, such changes point to the creation of functional communication in the context of everyday life. This pattern is consistent with parent-mediated intervention literature indicating that the early communication gains are often context-specific before broader generalization occurs (Jamali et al., 2022; Tsami et al., 2023). From SCT perspective, these shifts are consistent with parents expressing greater confidence in structuring opportunities for interactions as well as contingent responding to their child's cues.

Parents further mentioned enhancements in regulation that were conducive to participating. Many detailed strategies of modifying sensory demands, increasing the predictability and modifying the environment to reduce the overload. These qualitative accounts are consistent with the statistically significant reduction that we found in the ATEC Sensory/Cognitive domain. Coaching supported parents to recognise triggers and make adaptations to routines in ways that minimised sensory overload and supported engagement. Similar findings have been reported in tele-OPC and broader parent-

mediated literature, in which sensory-related behaviours are often quite amenable to environmental modification despite the lack of stability in broader behavioural domains.

By contrast, parents reported ongoing challenges with health, behaviour and safety (especially outside of the home). These accounts give critical context to the lack of improvement in the ATEC Health/Behavior domain and the small extent of the clinician-rated severity change. Several parents described how over time they became more aware about behavioural triggers and safety concerns, in some cases making difficulties seem more prominent, rather than less.

The Palestinian context further constrains interpretation of behaviour and safety outcomes. Parents described limited opportunities to practise skills in community settings due to safety concerns, mobility restrictions, and environmental unpredictability. These macrosystem constraints reduced opportunities for generalization and help explain why clinician-rated severity measures such as the CARS-2 showed only modest change over the intervention period. Clinician-rated severity is typically stable over short intervals and reflects behaviour across multiple contexts. It is therefore expected that a short-duration parent coaching intervention focused on home routines would produce stronger signals in participation-based measures than in global severity indices.

5.4.1.4. Integrated Interpretation of Child Outcomes

Integrating the quantitative and qualitative findings through the joint display logic yields a coherent pattern of convergence, complementarity, and explained divergence. Convergence is strongest for participation-focused outcomes, where COPM performance gains align with parents' detailed accounts of improved routine engagement and reduced conflict. Complementarity is evident for broader caregiver reported characteristics, where qualitative data explain why some ATEC domains improved while others did not. Divergence is most apparent for clinician rated severity and health related behaviours, where qualitative accounts and ecological constraints provide a clear rationale for limited change within the pilot timeframe.

5.4.2. Potential Impact on Parents

Potential impact on parents is interpreted here as preliminary evidence that telecoaching may shift proximal caregiver capacities and experiences that enable

sustained child participation change. Parent outcomes are treated as legitimate targets rather than secondary correlates. This stance is consistent with family centered intervention principles, where caregiver competence, coping, and wellbeing are part of the intended benefit profile of coaching-based approaches.

As a pilot randomized controlled trial, the study was not designed to detect statistically robust parent outcome changes across multiple domains. The correct analytic task is therefore to examine the pattern of direction and magnitude across measures, consider coherence with the qualitative accounts, and evaluate whether the observed signals align with the intervention's theory of action and the constraints of the Palestinian setting.

5.4.2.1. Quantitative Indicators in Parent Outcomes (PCS-ASD, WHOQOL-BREF, A-QoLA)

The Parental Competence Scale findings showed a pattern favoring the intervention group, with small-to-moderate effect size signals but wide confidence intervals. In a pilot, this pattern is meaningful when interpreted as a proximal outcome that is expected to respond earlier than distal indicators such as global QoL.

This direction aligns with telecoaching evidence indicating that coached formats tend to strengthen parents' perceived capability to use strategies and manage routines. In telehealth parent mediated programs, parent outcomes are often strongest when parents receive interactive coaching, feedback, and opportunities to practice within their own contexts, rather than relying only on self-directed materials (Gentile et al., 2022; Sundarajan & Franco, 2024). It is also consistent with telecoaching work using video feedback and guided reflection, where increases in parents' confidence and strategic thinking are common proximal outcomes even when broader well-being shifts lag behind (Ousley et al., 2023).

Two design related considerations shape interpretation. First, competence measures are sensitive to parents' learning and internalization of strategy use, which the intervention explicitly targeted through structured reflection and action planning. Second, competence change is moderated by parents' readiness, literacy, and time capacity, which is particularly relevant given the sample's characteristics and the digital access requirements of videoconferencing. These factors do not undermine competence

signals; rather they indicate where heterogeneity should be examined and where a definitive trial would benefit from collecting moderators and stratifying analyses.

The QoL results generated from the generic (WHOQOL-BREF) and Autism-specific QoL (A-QoLA) questionnaires need particular attention. The WHOQOL-BREF results suggested modest favorable patterns in some domains, while other domains were largely stable. This mixed pattern is coherent rather than disappointing, given that generic QoL instruments capture broad aspects of functioning that are influenced by structural conditions beyond the reach of an eight-session coaching intervention.

In Palestine, parents of children with autism often experience chronic stressors linked to fragmented services, financial pressure, stigma, and mobility related barriers. Such macrosystem constraints can depress QoL and limit the degree to which improvements in household routine management translate into immediate global QoL shifts. This ecological constraint provides a rational explanation for why competence may improve while environmental and social QoL domains move more slowly.

This pattern is not unique to Palestine. Telecoaching and telehealth parent training studies frequently report that parent satisfaction and competence improve more reliably than broad well-being indicators, especially over short timeframes. The rapid review on telemedicine coaching in parent mediated developmental interventions highlights that outcome evidence is mixed and that broader outcomes often require sustained implementation and stable contextual supports (Alatar et al., 2025). These broader patterns support treating the WHOQOL findings as preliminary and as indicators of which domains may be most sensitive in a longer trial.

The A-QoLA outcomes showed a more differentiated signal for the intervention group, including a statistically significant within-group improvement in the Part B score with a moderate effect size, while other QoL indicators were smaller and non-significant.

This pattern is theoretically meaningful. Autism-specific QoL tools are designed to capture concerns and burdens that generic instruments often dilute, including perceived ability to cope with day-to-day strain shaped by caregiving demands. When coaching helps parents develop workable strategies and reduce uncertainty, these concerns may reduce before broader QoL constructs.

The signal in Part B is therefore consistent with an intervention mechanism focused on actionable competence and coping rather than on changing external conditions. It also aligns with Arab-region caregiver literature indicating that autism-related burden and stress are closely tied to perceived ability to manage challenging behavior and to access (Dardas & Ahmad, 2014; Mohammadi et al., 2019). In contexts where service systems are inconsistent, reducing uncertainty and increasing perceived control can be a meaningful outcome for caregivers of children with autism.

5.4.2.2. Qualitative Findings on Potential Impact on Parents

The results of the qualitative interviews offer an explanation of the observed quantitative signals. Change expressed by parents was not the acquisition of abstract knowledge. Instead, they went on to describe themselves as increasingly able to interpret their child's behaviors, plan responses, adapt routines and deal with day to day demands with less confusion and with more confidence. One qualitative pattern was the shift from reactive coping toward deliberate problem solving. Parents reported learning how to handle difficult situations and consider what could be changed to facilitate child's participation in daily routine. This process was repeatedly associated with being more in control of life's daily challenges. This pattern reflects that parents developed a transferable problem-solving skill rather than memorizing strategies. Such accounts reflect telehealth coaching evidence in EI, whereby coaching enables partnership with parents, enhances their agency, and facilitates learning through practice in the home environment rather than a clinic room (Chilman et al., 2024; Pickard et al., 2016; Wallisch et al., 2019).

Parents' accounts also focused on the worth of the relationship and the collaborative format. Being heard, respected and guided seemed to be as important as the actual content. Several parents described the sense of partnership that emerged through coaching. Other parents described the sessions as emotionally supportive. This relational dimension has implications for understanding why parental competence and autism-specific concern changed despite relatively stable levels in terms of generic QoL. Consistent with qualitative telecoaching literature, the alliance and collaborative coaching seemed to be at the heart of parents' perceptions of benefit, underpinning confidence and persistence in using strategies between the sessions (Frater et al., 2025; Graham et al., 2024).

Qualitative findings also revealed variability in parent impact. Parents were varied in how easy it was to practice strategies in between sessions. This variability was mainly attributed to competing demands and household conditions, and the unpredictability of daily life. These accounts align with more general telehealth evidence indicating that the capacity of families and conditions in the home influence enactment intensity and maintenance (Franz et al., 2022; Gately et al., 2023).

5.5. Mixed-Methods Integration of Quantitative and Qualitative Findings

Mixed methods integration strengthens interpretation by combining numerical patterns with contextual explanations. The explanatory sequential design allowed qualitative findings to explain and elaborate quantitative outcomes. Integration across acceptability, feasibility, and potential impact yields several meta-inferences that are more informative than either strand alone.

The first meta-inference is that acceptability is best understood as service fit within a constrained system. Quantitative gains in telehealth acceptance, particularly facilitating conditions, converged with qualitative accounts of reduced travel burden, privacy, and continuity. This convergence supports the interpretation that telecoaching is valued because it addresses structural access barriers that are prominent in the West Bank. This aligns with evidence that Palestinian parents face geographic and financial barriers and limited availability of autism-specific interventions (Dababnah & Bulson, 2015).

The second meta-inference is that feasibility is high among families with adequate digital access and readiness, yet reach is likely to be socially patterned. Retention and completion were strong, and parents described the platform as workable. At the same time, qualitative accounts of internet disruption and variable engagement with resources suggest that feasibility will differ in settings with lower connectivity. PCBS data showing lower internet access in camps and differential ICT access by household characteristics reinforce that equity strategies are needed (Palestinian Central Bureau of Statistics, 2020c).

The third meta-inference concerns outcome specificity. Participation outcomes aligned with coaching mechanisms showed the strongest signal of change and were supported by qualitative descriptions of routine improvements and parent strategy use. Broader symptom related outcomes were smaller and were explained by qualitative accounts of gradual change and contextual constraints on practice. This integrated pattern supports the claim that the intervention operates primarily through proximal parent mediated mechanisms that translate into participation change, with distal outcomes requiring longer time frames.

The fourth meta-inference concerns provider effects. Fidelity evidence indicated that OPC processes were delivered with integrity, and qualitative accounts suggested strong engagement and trust. Together these findings support the interpretation that a coherent coaching process was delivered and valued. However, because the coach was also the researcher, integrated interpretation must acknowledge that relational alliance may have contributed to perceived benefits. This is a realistic feature of early-stage development but must be tested in a multi-coach model.

Overall, integration yields a coherent interpretation: OPC-based telecoaching was acceptable and feasible in this Palestinian sample and produced a strong preliminary signal of improved participation in meaningful daily occupations. Integration also clarifies the constraints on generalisation and the design enhancements required for a definitive trial.

5.6. Conceptual model of change

An integrated conceptual model is proposed to represent how OPC-based parent telecoaching may lead to outcomes in the West Bank (see Figure 5.1). The model is grounded in the study findings and in OPC theory and is intended to guide future implementation and evaluation.

At the foundation of the model are contextual determinants. Families in the West Bank often face limited availability of autism-specific services, geographic and financial barriers to care, and experiences of stigma and social isolation (Dababnah & Bulson, 2015; Dababnah & Parish, 2013). These determinants increase the perceived usefulness

of remote services. Digital infrastructure is relatively widespread but uneven. PCBS data indicate that internet access at home is lower in camps than in urban and rural localities, and ICT access differs by household characteristics. These determinants shape both uptake and intensity of engagement.

The intervention infrastructure are developed based on these contextual conditions. The programme comprises synchronous videoconference coaching sessions and an Arabic platform that supports scheduling and asynchronous resources. The coaching sessions implement core OPC processes: collaborative goal identification, occupational performance analysis within everyday routines, reflective questioning, and action planning with iterative.

Within this structure, coaching activates a set of proximal mechanisms. Through coaching, parents develop increased clarity about goals, increased confidence in analysing routine challenges, improved self-efficacy in implementing strategies, and increased capacity to adapt plans when barriers occur. These proximal changes increase the quality and frequency of opportunities for the child to participate in targeted routines.

These mechanisms are expected to translate into proximal participation outcomes. Improved parent capacity leads to improved child participation in parent-prioritized occupations and increased parent satisfaction with performance. These outcomes are proximal child-related impacts and are expected to be sensitive to change over short time frames.

Over time, and with sustained enactment, more distal outcomes may emerge, including broader changes in child behaviour, social engagement, and family QoL. Distal outcomes are expected to emerge more slowly because they depend on sustained practice and because structural stressors and contextual constraints remain stable over short periods.

Moderators operate across the model. Parent literacy and digital confidence influence engagement with reflective processes and asynchronous resources. Locality type influences connectivity and opportunities. Provider skill influences alliance and fidelity. In the present study, the single-coach model likely strengthened consistency. In a scaled model, training, supervision, and fidelity monitoring will be required to preserve mechanisms. The model therefore positions OPC telecoaching as a context-

responsive pathway to participation change with strong potential in Palestine, while highlighting that equitable reach and sustained impact depend on addressing digital and contextual barriers.

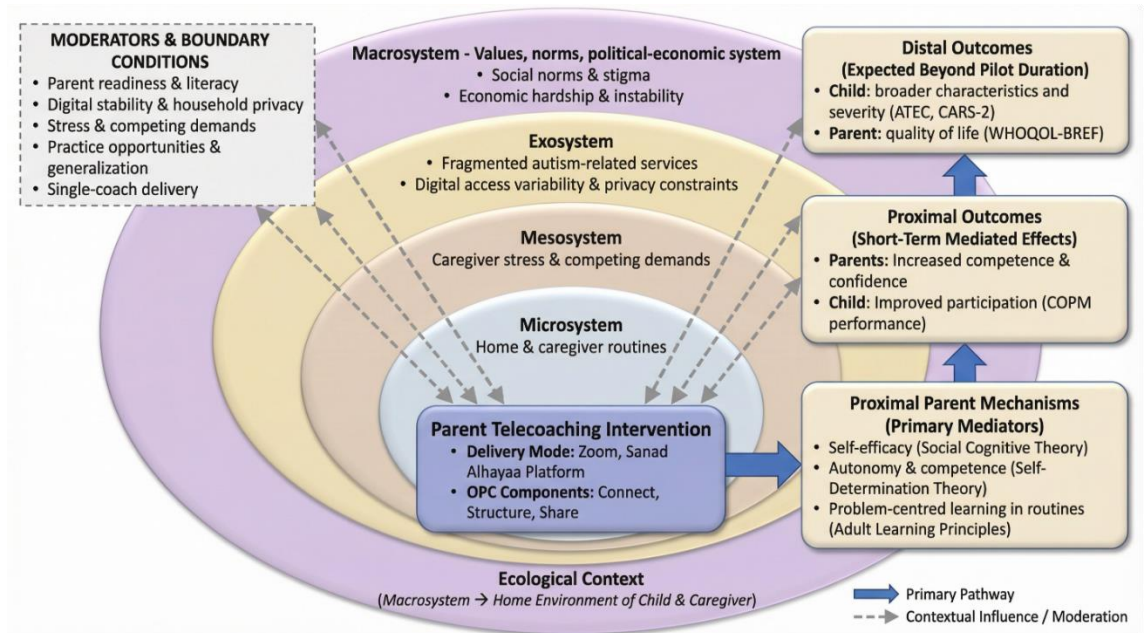


Figure 5.1: Conceptual model of OPC-based parent telecoaching outcomes in the Palestinian context

Note. Conceptual model showing how OPC-based parent telecoaching operates through proximal parent mechanisms to support child and parent outcomes, while being shaped by ecological context and moderating conditions in the Palestinian setting.

5.7. Implications and Recommendations

This pilot study has implications for occupational therapy practice, service development, and future research in Palestine and similar contexts. Among participating families, high acceptability and feasibility indicate that telecoaching can function as a meaningful complement to existing services rather than as a temporary substitute. These implications are interpreted cautiously and remain proportionate to the pilot nature of the study. Feasibility findings also highlight the importance of structured onboarding, predictable session routines, and fidelity monitoring in supporting engagement and consistency over time.

5.7.1. Implications for clinical practice

The findings suggest that OPC-based telecoaching can support family-centred practice by embedding intervention into everyday routines and positioning parents as active agents in the change process. Clinicians working in similar contexts may draw on this approach to prioritize collaborative goal selection and reflective occupational performance analysis to ensure that strategies align with family routines, priorities and cultural expectations.

Relational safety became a key characteristic of engagement. Parents' involvement was influenced by privacy, trust, and sensitivity to stigma, especially in home-based sessions. These findings suggest that effective telecoaching practice goes beyond technical delivery to encompass alliance-building, flexibility, and relational skill including sensitivity to preferences regarding use of the camera and disclosure.

5.7.2. Implications for developing services

At the service level, the study shows that an integrated Arabic-language platform can be used to support the delivery of telecoaching. At the same time, equity considerations were prominent. Access to reliable internet connection and appropriate devices differed between households, with lower access reported in refugee camps relative to urban and rural areas. These findings suggest that services that offer telecoaching will need to plan for low bandwidth delivery options, alternative modes when video is not feasible, and resources that are not heavily dependent on literacy. Partnerships with community organizations may be important in extending access for families with limited connectivity.

The results also help to make the boundaries of telecoaching clear. In this study, telecoaching supported family capacity but did not replace diagnostic assessment or specialist intervention when these were required. Instead, it worked alongside existing pathways and helped to ensure continuity of support when access to in-person services was disrupted.

For local therapy centres, the findings indicate that telecoaching could be incorporated as a complement to face-to-face services, especially for families who face barriers related to travel, cost or scheduling. The study also emphasizes the importance of deliberate workforce development. Coaching competencies, such as reflective

questioning, working collaboratively on goals, and fidelity-informed practice, need training and supervision and cannot be expected to transfer automatically from traditional intervention models.

5.7.3. Implications for health system planning

At a broader system level, the findings support recognition of telecoaching as a legitimate mode of rehabilitation service delivery. For stakeholders such as the Ministry of Health, the results suggest the importance of enabling conditions rather than immediate scale-up. These include digital infrastructure to support the low bandwidth use, clear governance for telehealth delivery and consideration of parent-mediated telecoaching in broader rehabilitation and autism planning frameworks.

5.7.4. Implications for research

This pilot study provides a foundation for a future definitive trial. The findings suggest that such a trial should be powered to detect between-group effects on a limited set of primary outcomes aligned with the intervention mechanism, such as participation in targeted routines and parent self-efficacy, while retaining symptom indices as secondary outcomes.

Comparison with usual-care occupational therapy or standard service pathways may help clarify added value in access, efficiency, and mechanism rather than focusing on superiority. Recruitment windows are likely to need extension and alignment with local calendars, including Ramadan and school terms, with explicit strategies to include families from refugee camps and remote localities.

The findings also indicate the value of administering goal-based participation measures in both study arms, alongside an additional routine participation measure to reduce reliance on subjective appraisal alone. Delivery by multiple trained coaches, supported by structured supervision and periodic fidelity calibration, would allow assessment of scalability beyond a single provider. Longer follow-up periods, including assessments at three and six months, would help examine maintenance and generalization, particularly for distal outcomes such as quality of life.

Finally, future research should consider capturing digital access, connectivity, and time burden as moderators to support equity-focused refinement. Once mechanisms

are established with parents, later-stage research may explore adaptation of coaching approaches for other service users, such as school teachers.

5.8. Strengths and Limitations

This study has several strengths. It addressed a pressing service gap by adapting a well-described occupational therapy coaching approach to a Palestinian context and delivering it through a culturally and linguistically appropriate platform. It used a randomised design with pre-specified feasibility benchmarks, combined quantitative and qualitative methods, and included fidelity monitoring to ensure that coaching processes were delivered as intended. Mixed methods integration strengthened explanatory power by linking numerical outcomes to lived experience.

Several limitations require careful interpretation. The most important limitation is the pilot sample size. The study was not powered to detect between-group effects reliably. Consequently, non-significant findings cannot be interpreted as evidence of no effect, and statistically significant findings must be treated as preliminary signals that may be unstable. The recruitment period was also constrained by dissertation timelines, which limited sample expansion.

Representativeness is another limitation. Participants were recruited from cities and villages, and no families from refugee camps were included. Given that internet access is lower in camps and that socioeconomic constraints may be higher, this limits generalisability and raises equity questions (Palestinian Central Bureau of Statistics & Ministry of Telecom and Information Technology, 2020). The parent sample also had high educational attainment. Parents with higher literacy and digital confidence may be more able to engage with reflective questioning and written resources, and they may be more motivated to sustain participation. These factors can inflate acceptability and feasibility estimates and may amplify outcome signals.

Measurement characteristics also shape interpretation. Goal-based measures such as the COPM are sensitive and aligned with coaching targets, yet they can capture response shift as well as performance change. The use of COPM in the intervention group only limits comparative inference. Broader symptom-related measures may be

less sensitive to short-duration participation-focused interventions. In addition, ceiling effects in some acceptability domains and floor effects in some outcome subscales may constrain detectable change.

The single coach model is both a strength and a limitation. It supported high fidelity, consistency, and contextual responsiveness, but it also raises questions about scalability and whether relational alliance and expectancy influenced perceived benefit. A definitive trial should therefore involve multiple coaches and assess whether outcomes are consistent across providers.

Despite these limitations, the study provides strong evidence of acceptability and feasibility for participating families in the West Bank, alongside credible preliminary signals of change in participation that warrant further evaluation.

5.9. Conclusion

This chapter discussed the results of a pilot randomized controlled trial of an OPC-based telecoaching intervention targeting parents of children with autism in West Bank. The discussion centered around acceptability, feasibility, and the potential impact and brought together the quantitative and qualitative findings and interpreted them in relation to the intervention's theory of action and the Palestinian context.

Across the study, parents found telecoaching an acceptable approach. This acceptability was not due to novelty or interest in technology itself. Instead, it was a measure of the extent to which telecoaching could be integrated into the daily life. Parents valued less travel time, privacy and a continuity of support. They also emphasised the importance of collaborative coaching conversations that respected family priorities. Quantitative acceptability indicators were consistent with these accounts and showed that telecoaching is manageable, relevant and compatible with family routines under constrained circumstances. Feasibility findings show that telecoaching can be delivered with fidelity in this context.

Potential impact was interpreted cautiously, consistent with the pilot nature of the trial. The clearest signals of change were observed in proximal participation

outcomes linked to parent-selected goals. These quantitative patterns were supported by parents' accounts of improved engagement in daily routines and more effective use of strategies at home. Broader child characteristics and clinician-rated severity showed smaller or mixed changes. This was expected given the short intervention period and the influence of contextual constraints. Parent outcomes showed early signs of increased competence and reduced autism-specific concern, while global quality of life remained largely stable.

Integration of quantitative and qualitative findings strengthened interpretation. Qualitative data helped explain how change occurred, where it was constrained, and for whom the intervention was most feasible. Taken together, the findings suggest that telecoaching operates mainly through proximal, parent-mediated mechanisms that support participation in routines parents can influence. The findings also highlight boundary conditions related to equity, scalability, and generalisation.

Overall, this chapter shows that parent telecoaching was acceptable and feasible for the families who participated in this study and produced credible preliminary signals of benefit at the level of participation and caregiver capacity. The findings do not demonstrate efficacy. They do, however, support progression to a definitive trial with extended recruitment, multi-coach delivery, streamlined measurement, and longer follow-up. In a setting where access to autism-specific services is fragmented and constrained, telecoaching offers a viable way to strengthen family capacity at home, provided that equity and implementation challenges are addressed directly.

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Appendices

Appendix 1: Eligibility Criteria Inclusion-Exclusion Checklist

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Answer each of the criteria by checking the box marked Yes or No. A subject is eligible if they meet all of the inclusion criteria and do not meet any of the exclusion criteria. Add supporting documentation, as relevant, to this form.

VISIT TYPE	☒ Screening ☐ Baseline	DATE	15/2/2025 @ 2.08 PM
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Participant must answer YES to all inclusion criteria to be included in study:

#	INCLUSION CRITERIA	SOURCE / COMMENTS	MEETS CRITERIA Yes / No		INITIALS & DATE of Verifying Staff
1	Are you the parent of a child with autism?		☐ Yes	☐ No	
2	Are you 18 years and above?		☐ Yes	☐ No	
3	Do you spend most of your time with your child?		☐ Yes	☐ No	
4	Do you have access to a computer with a stable internet connection and an installed Zoom app?		☐ Yes	☐ No	
5	Is the age of your child between 3 – 7 years?		☐ Yes	☐ No	
6	Does your child have a confirmed autism diagnosis from a psychiatrist or neurologist?		☐ Yes	☐ No	
7			☐ Yes	☐ No	
8			☐ Yes	☐ No	

Participant must answer NO to all exclusion criteria to be included in the study:

#	EXCLUSION CRITERIA	SOURCE / COMMENTS	MEETS CRITERIA Yes / No		INITIALS & DATE of Verifying Staff
1	Does your child have other comorbidities (e.g., seizure, blindness) that require special care and treatment?		☐ Yes	☐ No	
2			☐ Yes	☐ No	
3			☐ Yes	☐ No	
4			☐ Yes	☐ No	
5			☐ Yes	☐ No	
6			☐ Yes	☐ No	
7			☐ Yes	☐ No	
8			☐ Yes	☐ No	

Did the participant meet the eligibility requirements for this study? ☐ Yes ☐ No

<i>Print Name and Title of Verifying Research Staff Member</i>	<i>Signature of Verifying Research Staff Member</i>	<i>Date</i>

Appendix 2: Occupational Performance Coaching (OPC) Casenote Template

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الجامعة العربية الأمريكية

DATE : 27/1/2025
GOAL (<i>who, what activity, where, how much, by when</i>)
CURRENT PERFORMANCE
PREFERRED PERFORMANCE
BRIDGES AND BARRIERS (<i>Person: Motivation, Knowledge, Task: Ability, Steps, Sequence, Standard; Environment: Social, Physical</i>)
ACTION PLAN (<i>who, do what?</i>)
NEXT MEETING

Appendix 3:OPC Case Note Audit Tool

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الجامعة العربية الأمريكية

Audit Date _____ Therapist ID _____ Client ID _____ Session # _____

Quality Rating			Item Descriptor
NR	Un-clear	Clear	Scoring Notes:
0	1	2	(0) if item is not reported; (1) if item is reported but meaning is unclear; (2) if item is clearly reported.
			1. The person who will engage in the goal activity is clearly stated. (e.g., client, child, dependent). 2. Activity (task or routine) at the focus of the goal is stated. 3. Context of the goal is stated e.g., home, school, work, specific community location. 4. Indication of the importance/ value of the goal to the client. Revisited each session. 5. A specific score or descriptor related to client-valued gain in activity performance (e.g., quality/level of involvement, engagement, satisfaction). May be measured as frequency, duration, percent, or descriptively. 6. Specific date for anticipated goal achievement. 7. Brief description of current situation in relation to goal. 8. Additional descriptors beyond goal statement of client vision. Highly valued and motivating aspects highlighted. 9. Evidence of Collaborative Performance Analysis: client-led observations, reflections, analysis related to achieving goal. 10. In client words, statement of planned action in subsequent sessions.
			TOTAL SCORE if first session (Items 1-9): ____ / 20; = ____ %
			11. Evidence that goal progress discussed. Specific reporting in relation to goal 'extent' documented at first session needed. 12. Planned action specifically recorded. Success of strategies and /or rejection of earlier plans is noted. 13. Evidence that opportunities to generalise successful plans noted.
			TOTAL SCORE if subsequent session (Items 1-13): ____ / 26; = ____ %

Appendix 4: OPC Fidelity Measure

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الجامعة العربية الأمريكية

	Quality Rating					Items
	0	1	2	3	NA	
Critical Components						Summary self-reflection or feedback:
						1. Therapist expresses empathy through comment & gesture, comprising non-judgmental responsiveness to the client's emotional experience.
						2. Therapist prompts client-led goal setting around a situation that is clearly highly meaningful to client.
						3. Therapist prompts occupation/participation focused (activity + context) expression of the goal.
						4. The therapist prompts the client to envision the preferred, future goal situation. In subsequent sessions, the therapist refers to or prompts further clarification of the previously discussed vision.
						5. Performance analysis is oriented mostly to the preferred (goal) situation and solutions leading to it. (i.e., performance analysis is not oriented to the problem or current situation).
						6. Therapist prompts client-led performance analysis of the goal situation. Therapist prompts relate to client's perceptions and understanding of goal situations rather than therapist understanding or perceptions.
						7. Therapist prompts client decision-making/choices about identifying and selecting solutions/strategies leading to goal achievement.
						8. Therapist prompts client to specify details of their action plan (i.e., when, where, how, with whom).
						Subsequent sessions only. Mark NA if first session.
					9. Therapist prompts client evaluation of planned strategies and outcomes after they are attempted.	
					Subsequent sessions only. Mark NA if first session.	
					10. Therapist prompts client generalising successful strategies to other valued activities, contexts & roles.	
Client Response						11. Client seems to trust the therapist.
						12. Client articulates specific reflection and analysis of goal-related situations.
						13. Client articulates specific planned actions within goal-related activities outside of direct contact with therapist.
						Subsequent sessions only. Mark NA if first session.
					14. Client reports enacting actions intended to influence goal progress (including planned actions and innovations) in subsequent sessions.	
Distinguishing						15. Therapist provides advice without implicit or stated permission.
						16. Therapist attempts to persuade client to agree with therapist's interpretation or ideas.
						17. Therapist summarises or paraphrases the client's words in their own words, rather than using client's words.
						18. Therapist uses hands on techniques (e.g., hand over hand) on the goal subject for the purposes of directly improving performance (excluding teaching or demonstrating a strategy to the client).
					COLUMN TOTALS	
First Session (items 1-8; 11-13; 15-18) Total score <u>45</u> / 45 %						Subsequent Session (all items) Total score <u>54</u> / 54 %

Rater ID _____ Therapist _____ Date Scored _____ Code _____
 Session# _____
 Goal: Who _____ Activity _____ Context _____

Appendix 5: Demographic Questionnaire

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الجامعة العربية الأمريكية

Instructions

Dear Parents, please read each question carefully and answer all items. All information will be used for research purposes only and treated confidentially. All questions are mandatory.

Parent Information:

1. Age: 20–29 / 30–39 / 40–49 / 50–59 / 60+
2. Gender: Male / Female
3. Marital status: Married / Single / Divorced / Widowed
4. Educational level: Preparatory / Secondary / Diploma / Bachelor or higher
5. Father's occupation: Employed / Self-employed / Unemployed / Retired
6. Mother's occupation: Employed / Homemaker / Retired
7. Monthly household income (NIS): <2000 / 2000–5000 / 5000–8000 / >8000
8. Number of household members: 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10+
9. Place of residence: City / Camp / Village
10. Father's health status: Good / Has health problems
11. Mother's health status: Good / Has health problems
12. Responding caregiver: Father / Mother

Child Information:

1. Child gender: Male / Female
2. Child age: 3 / 4 / 5 / 6 / 7
3. Birth order: First / Second / Third / Fourth / Fifth
4. Age at ASD diagnosis: 1–1.5 / 2–2.5 / 3–3.5 / 4–4.5 / 5+ years
5. Co-existing conditions (select all): None / ADHD / Sensory issues / Sleep problems / Epilepsy / Anxiety or depression / Challenging behaviors
6. ASD severity: Mild / Moderate / Severe
7. Current interventions (select all): None / OT / Speech therapy / PT / Behavioral therapy / Special education
8. Educational placement: Not enrolled / Kindergarten / Mainstream school / Special school / Rehabilitation center
9. Additional school support: Not applicable / None / Shadow teacher / Resource room sessions

Home Environment:

1. Housing type: Apartment / House
2. Child has own room: Yes / No
3. Outdoor play area: Yes / No
4. Noise level: Low / Moderate / High
5. Educational toys available: Many / Few / None

Technology and Communication:

1. Child owns electronic device: Yes / No
2. Daily screen time: <1h / 1–3h / 3–5h / >5h
3. Primary communication methods: Gestures / Words / Electronic devices
/ Communication board

مقياس قبول الرعاية الصحية عن بعد

تعليمات للمشاركين

،حضرة أولياء الأمور المحترمين

يهدف هذا الاستبيان إلى قياس تصورات أولياء الأمور حول قبول استخدام خدمات الرعاية الصحية عن بعد، بما يشمل الفوائد المتوقعة، والصعوبات المحتملة، والتأثير الاجتماعي، وعوامل المساندة، والنية السلوكية لاستخدام هذه الخدمات. ستستخدم جميع

مقياس قبول الرعاية الصحية عن بعد

تعليمات للمشاركين

،حضرة أولياء الأمور المحترمين

يهدف هذا الاستبيان إلى قياس تصورات أولياء الأمور حول قبول استخدام خدمات الرعاية الصحية عن بعد، بما يشمل الفوائد المعلومات المقدمة لأغراض البحث العلمي فقط، مع ضمان السرية التامة للبيانات. يرجى الانتباه: يجب الإجابة عن جميع الأسئلة حتى يتمكن المشاركون من إرسال الاستبيان. شكراً لتعاونكم.

مقياس الاستجابة: موافق بشدة | موافق | محايد | غير موافق | غير موافق بشدة

أولاً: الفوائد المتوقعة من استخدام الرعاية الصحية عن بعد

1. الرعاية الصحية عن بعد سوف توفر وقتي
2. الرعاية الصحية عن بعد سوف تمكن المريض من الحصول على الخدمات الصحية بشكل أسهل .
3. الرعاية الصحية عن بعد سوف تزيد من جودة الخدمات الصحية .
4. الرعاية الصحية عن بعد سوف تقلل التكلفة المالية للخدمات الصحية .
5. الرعاية الصحية عن بعد سوف تساعدني في مراقبة الوضع الصحي للمريض عن بعد.
6. الرعاية الصحية عن بعد ستكون مفيدة لمنظومة الخدمات الصحية .
7. الرعاية الصحية عن بعد سوف توفر وقت الانتقال إلى المركز الصحي أو المستشفى .
8. الرعاية الصحية عن بعد سوف تمكنني من الحصول على خدمات صحية أكثر مقارنة بالطريقة التقليدية .
9. الرعاية الصحية عن بعد سوف تحسن العلاقة بيني وبين مقدم الرعاية الصحية .

ثانياً: الصعوبات المتوقعة عند استخدام الرعاية الصحية عن بعد

1. سيكون من السهل علي استخدام الرعاية الصحية عن بعد .
2. سيكون من السهل علي أن أصبح ماهراً في استخدام الرعاية الصحية عن بعد .
3. سيكون من السهل علي تعلم تحميل واستخدام تطبيقات التواصل عن بعد مثل تطبيق زوم .
4. سيكون من السهل علي التعامل مع المشكلات المحتملة أثناء استخدام تطبيقات التواصل عن بعد .

ثالثاً: التأثير الاجتماعي في استخدام الرعاية الصحية عن بعد

1. أغلب الأشخاص المهمين بالنسبة لي مثل العائلة أو الأصدقاء يعتقدون أنه يجب علي استخدام الرعاية الصحية عن بعد
2. الأشخاص الذين أقدر آراءهم يفضلون أن أستخدم الرعاية الصحية عن بعد .
3. الجهات الصحية المسؤولة تحفزني علي استخدام الرعاية الصحية عن بعد .

رابعاً:العوامل المساعدة على استخدام الرعاية الصحية عن بعد

1. أمتلك الأدوات اللازمة لاستخدام الرعاية الصحية عن بعد مثل جهاز كمبيوتر مزود بكاميرا، أو هاتف ذكي، وخدمة إنترنت
- 2.أمتلك المعرفة الكافية لاستخدام الرعاية الصحية عن بعد .
- 3.الرعاية الصحية عن بعد متوافقة مع أنظمة التشغيل التي أستخدمها مثل ويندوز، ماك، أندرويد، وغيرها .
- 4.الدعم الفني متوفر للمساعدة عند مواجهة أي صعوبات أثناء استخدام الرعاية الصحية عن بعد .

خامساً:نية استخدام الرعاية الصحية عن بعد

1. لدي شعور إيجابي نحو استخدام الرعاية الصحية عن بعد
2. سأستخدم الرعاية الصحية عن بعد إذا أصبحت متاحة
3. سأستخدم الرعاية الصحية عن بعد بدلاً من زيارة المركز الصحي أو المستشفى
4. سأستخدم الرعاية الصحية عن بعد كلما دعت الحاجة إلى ذلك



المقياس الكندي للأداء الوظيفي

النسخة الثانية

المؤلفون:

ماري لو، شو بابتيستي، آن كارزول،
ماري آن ماكول، هيلين بولاتيكيو، نانسي بولوك

المقياس الكندي للأداء الوظيفي مقياس فردي صمم ليستعمله المعالج الوظيفي
في تحديد التغير المدرك ذاتياً في مشكلات الأداء الوظيفي
خلال فترات زمنية متتالية.

اسم المراجع:		
العمر:	الجنس:	رقم الهوية الشخصية:
المرافق (إن لم يكن المراجع):		
تاريخ التقييم:	التاريخ المقرر لإعادة التقييم:	تاريخ إعادة التقييم:

المعالج:
المؤسسة:
البرنامج:

الخطوة الأولى: التعرف على قضايا الأداء الوظيفي من أجل التعرف على المشكلات والقضايا المتعلقة بالأداء الوظيفي، قابل المراجع واسأله عن أنشطته اليومية في مجال العناية بالذات، والانتاجية وأوقات الفراغ. اطلب من المراجعين أن يحددوا الأنشطة اليومية التي يرغبون في أدائها، أو يحتاجون إليها أو يتوقع منهم أن يؤديوها، وذلك بتشجيعهم على التفكير في يوم عادي، ثم اطلب من المراجع أن يحدد أيًا من هذه الأنشطة يصعب عليه أدائها الآن بشكل مرضٍ له. ثم دوّن هذه المشكلات المتعلقة بالأنشطة في الخطوة ١ (أ)، ١ (ب) و ١ (ج).	الخطوة الثانية: تقدير أهمية الأنشطة أطلب من المراجع تقدير أهمية كل نشاط وفق مقياس (١-١٠) وذلك باستعمال بطاقة الدرجات المرفقة، ثم ضع تقدير لدرجات في المربعات المطبقة في الخطوات ١ (أ) (ب) و (ج)
الأهمية	الخطوة ١ (أ): العناية بالذات العناية الشخصية: (مثل اللباس، والاستحمام وتناول الطعام والنظافة) التنقل الهاتف: (مثل: التنقل الداخلي والخارجي) التعامل مع مرافق الوسيط الاجتماعي: (مثل: التعامل مع المواصلات، التسوق، المرافق المالية)
	١ (ب): الانتاجية عمل مدفوع الأجر/ غير مدفوع الأجر: (مثل: إيجاد وظيفة والاحتفاظ بها، العمل التطوعي) المشاركة في الأعمال البيتية: (مثل: التنظيف والغسيل والطبخ) اللعب / المدرسة: (مثل مهارات اللعب، الوظائف البيتية)

الأهمية	١ (ج): أوقات الفراغ الترفيه الهادىء: (مثل: الهوايات والحرف والقراءة)
	الترفيه النشط: (مثل: الألعاب الرياضية والنزهات والسفر)
	الأنشطة الاجتماعية: (مثل: الزيارات والاتصالات الهاتفية والمراسلات)

الخطوات ٣ و ٤: رصد الدرجات - التقييم الأولي وإعادة التقييم

أَكَّدْ مع المراجع أهم خمس مشكلات وسجلها أثناءه. وباستعمال "بطاقات الدرجات"، اطلب من المراجع تقدير كل مشكلة بالنسبة للأداء ودرجة الرضى، ثم اجمع الدرجات الكلية. تحسب الدرجات الكلية بجمع درجات الأداء أو الرضى المتعلقة بالمشكلات كافة وقسمة الناتج على عدد المشكلات. وعند إعادة التقييم يضع المراجع مرة ثانية درجة لكل مشكلة بالنسبة للأداء والرضى. احسب الدرجات الجديدة ودرجة التغير.

إعادة التقييم:				التقييم الأولي:
الأداء (٢)	درجة الرضى (٢)	الأداء (١)	درجة الرضى (١)	مشكلات الأداء الوظيفي:
				١.
				٢.
				٣.
				٤.
				٥.

الأداء (٢)	درجة الرضى (٢)	الأداء (١)	درجة الرضى (١)	حساب الدرجات:
				الدرجة الكلية = $\frac{\text{الدرجة الكلية للأداء}}{\text{عدد المشكلات}}$

التغير في الأداء = درجة الأداء (٢) - درجة الأداء (١)	التغير في الرضى = درجة الرضى (٢) - درجة الرضى (١)

البطاقات

الأهمية									
١	٢	٣	٤	٥	٦	٧	٨	٩	١٠
غير مهم مطلقاً									مهم جداً - لا يمكن العيش بدون

الأداء									
١	٢	٣	٤	٥	٦	٧	٨	٩	١٠
غير قادر على القيام به									شأنه على القيام به بكفاءة عالية

الرضى									
١	٢	٣	٤	٥	٦	٧	٨	٩	١٠
غير راض على الإطلاق									راض على الحد

Appendix 8: Adverse Event Form.

Arab American University



الجامعة العربية الأمريكية

Adverse Event Form

STUDY NAME	
Site Name: _____ Pt. ID: _____	This form is cumulative and captures adverse events of a single participant throughout the study.

Severity	Study Intervention Relationship	Action Taken Regarding Study Intervention	Outcome of AE	Expected	Serious Adverse Event (SAE)
1 = Mild 2 = Moderate 3 = Severe 4 = Life-Threatening	0 = Not related 1 = Unlikely related 2 = Possibly related 3 = Probably related 4 = Definitely related	0 = None 1 = Dose modification 2 = Medical intervention 3 = Hospitalization 4 = Intervention discontinued 5 = Other	1 = Resolved 2 = Recovered with minor sequelae 3 = Recovered with major sequelae 4 = Ongoing/Continuing treatment 5 = Condition worsening 6 = Death 7 = Unknown	1 = Yes 2 = No	1 = Yes 2 = No (if yes, complete SAE form)

At end of study only: Check this box if participant had no adverse events ☐ None

Adverse Event	Start Date	Stop Date	Severity	Relationship	Action Taken	Outcome of AE	Expected?	SAE?

قائمة تقييم معالجة التوحد ATEC

الاهل الكرام، يرجى قراءة التعليمات التالية قبل البدء بتعبئة اقسام القائمة.
اقسام القائمة: تقسم القائمة الى أربعة اقسام:

القسم الاول (الكلام/ اللغة/ التواصل – 14 فقرة) تتكون الإجابة من ثلاثة خيارات، عبارات ايجابية /
(تنطبق تماماً - تنطبق إلى حد ما - لا تنطبق إطلاقاً) تحصل على الدرجات (صفر - 1 - 2) على التوالي
إجمالي الدرجات الفرعية بين صفر - 28 درجة

القسم الثاني (التفاعل الاجتماعي – 20 فقرة) تتكون أيضاً الإجابة من ثلاثة خيارات، عبارات سلبية /
(تنطبق تماماً - تنطبق إلى حد ما - لا تنطبق إطلاقاً) تحصل على الدرجات (2 - 1 - صفر) على التوالي إجمالي الدرجات الفرعية بين
صفر - 40 درجة

القسم الثالث (الوعي الحسي/ الإدراكي – 18 فقرة) تتكون الإجابة من ثلاثة خيارات عبارات ايجابية /
(تنطبق تماماً - تنطبق إلى حد ما - لا تنطبق إطلاقاً)
نحصل على الدرجات (صفر - 1 - 2) على التوالي
إجمالي الدرجات الفرعية بين صفر - 36 درجة

القسم الرابع (الصحة البدنية/ السلوك – 25 فقرة) تتكون الإجابة من أربعة خيارات عبارات سلبية /
(تنطبق تماماً - تنطبق في الغالب - تنطبق إلى حد ما - لا تنطبق إطلاقاً) نحصل على الدرجات (3 - 2 - 1 - صفر)
إجمالي الدرجات الفرعية بين صفر - 75 درجة

لا تنطبق إطلاقاً = لا يحدث (الطفل لا يأتي بالسلوك)
تنطبق إلى حد ما = أحياناً (الطفل يأتي بالسلوك من 1 - 2 مرات كل 6 ساعات)
تنطبق في الغالب - كثيراً (الطفل يأتي بالسلوك من 3 - 4 مرات كل 6 ساعات)
تنطبق تماماً = دائماً (الطفل يأتي بالسلوك من 5 - 6 مرات كل 6 ساعات)

القسم 1 (اللغة والاتصال)

الفقرة	تنطبق تماماً	تنطبق إلى حد ما	لا تنطبق إطلاقاً
يعرف اسمه			
يستجيب لـ "لا" أو "قف"			
يمكنه أن يتبع بعض الأوامر			
يمكنه أن يستخدم كلمة واحدة في المرة (لا، كل، ماء، إلخ..)			
يمكنه أن يستخدم كلمتان في المرة (لا أريد، اذهب للمنزل)			
يمكنه أن يستخدم 3 كلمات في المرة (أريد لبن أكثر)			
يعرف 10 كلمات أو أكثر			
يستطيع استخدام عبارات من 4 كلمات أو أكثر			
يفرح ما يريده/ تريده			
يسأل أسئلة ذات معنى			
كلامه عادة له معنى / متصل بالمعنى			
كثيراً ما يستخدم جمل متلاحقة			
يستطيع أن يدير حوار بطريقة معقولة أو جيدة			
لديه قدرة طبيعية على الإتصال مناسبة لسنه/سنها			

القسم 2 (التفاعل الاجتماعي)

الفقرة	تنطبق تماماً	تنطبق إلى حد ما	لا تنطبق إطلاقاً
يبدو كأنه في قوقعة لا تستطيع أن تتواصل معه/معه			
يتجاهل الناس الآخرون			
لا ينتبه أو ينتبه قليلاً جداً عند مخاطبته			
غير متعاون و مقاوم			
لا يوجد اتصال بصري			
يفضل أن يترك وحيداً			
لا يظهر عاطفة			
يفشل في تحية والديه			
يتجنب الإتصال بالآخرين			
لا يقلد			
لا يحب أن يحتضن			
لا يشارك أو يعرض ما فعله			
لا يشير "باي"			
غير متوافق / غير ممثل			
نوبات غضب			
ليس لديه أصدقاء أو رفاق			
نادراً ما يتسم			
غير حساس لمشاعر الآخرين			
لا يهتم بأن يحبه الآخرون			
لا يهتم أن غادر والده/ والداه			

القسم 3 (الوعي الحسي/ المعرفي)

الفقرة	تطبيق تماماً	تطبيق إلى حد ما	لا تطبيق إطلاقاً
يستجيب لاسمه			
يستجيب للثناء			
ينظر للناس والحيوانات			
ينظر للصور والتلفزيون			
يقوم بالرسم، التلوين والأعمال الفنية			
يلعب باللعب بالطريقة الصحيحة			
تعبيرات وجهه ملائمة			
يفهم القصص على التلفزيون			
يفهم الشرح			
واعي للبيئة			
واعي للخطر			
يظهر خيال			
يبدأ الأنشطة			
يرتدى ثيابه بلون مساعدة			
فضولي ومهتم			
مغامر - مستكشف			
متواصل على نفس الموجة - ليس بعيداً			
ينظر إلى حيث ينظر الآخرون			

القسم 4 (الصحة/الجسد/السلوك)

الفقرة	تطبيق تماماً	تطبيق في الغالب	تطبيق إلى حد ما	لا تطبيق إطلاقاً
بلل الفراش				
بلل الثياب أو الحفاضات				
يتبرز في الثياب أو الحفاضات				
إسهال				
إمساك				
مشاكل في النوم				
يأكل كثيراً/ قليلاً				
يأكل أنواع قليلة جداً من الطعام				
كثير الحركة				
بطيء الحركة				
يضرب أو يؤذي نفسه				
يضرب أو يؤذي الآخرين				
مدمر				
حساس للأصوات				
قلق - يخاف كثيراً				
غير سعيد/ يبكي				
تشنجات				
كلام متكرر عن نفس الموضوع				

				روتين وأنظمة ثابتة وجامدة
				يصرخ
				يطلب نفس الأشياء باستمرار
				كثيراً ما يتهيج
				غير حساس للألم
				متعلق بشدة ببعض الأشياء أو المواضيع
				حركات تكرارية (هز, لف, إلخ ..)

Appendix 10: Childhood Arabic Rating Scale- Edition 2

Arab American University



الجامعة العربية الأمريكية

مستشفى الملك عبد الله بن عبد العزيز الجامعي
King Abdullah bin Abdulaziz University Hospital
Princess Nourah Bin Abdulaziz University



مقياس تقييم التوحد للطفولة (كارز-2-ST)

النسخة العربية 2 المنقحة

The Childhood Autism Rating Scale (CARS-2-ST)

The Childhood Autism Rating Scale (CARS) is designed as a clinical rating scale for the trained clinician to rate items indicative of Autism Spectrum Disorder (ASD) after direct observation of the child. The CARS 2 is preferred over the older, original CARS. The form is used with individuals of all ages and in both clinical and research settings.

مقياس تقييم التوحد للطفولة (كارز) ليكون أداة لتقييم السمات التوحدية للعيادي المتخصص ومن خلال الملاحظة الإكلينيكية.

الإسم العلمي ومرجعيته	مقياس تقييم التوحد للطفولة (كارز-2-ST)
الفئة العمرية Age Range	مقياس (كارز-2-ST): يستخدم المقياس للأطفال من سن 2-6 سنوات ممن "أقل من 10" (IQ) أو أقل أو من لديهم عجز في التواصل بشكل واضح. من يتوقع مستوى الذكاء الـ IQ أعلى من 80 فيوصى باستخدام الصورة الثانية من المقياس (كارز-2-HF).
نموذج القياس Format	مقياس (كارز-2-ST): يتم جمع المعلومات بشكل أساسي من الملاحظة المباشرة ثم من الوالدين. وهذه الأداة مصممة للممارس النفسي المتخصص. وليست مقياس يتم به الآباء أطفالهم.
تحذير الاستخدام Cautions	مقياس (كارز-2-ST): فقط الممارسين المتدربين على الفئة التوحدية يمكنهم تنفيذ التقييم. لم يصمم هذا المقياس ليكون أداة تقييم لعينات من الجمهور. كما أن تكيف المقياس في الصورة الحالية لم يكن تحت مظلة الممارسة البينومنترية من المتخصصين فقط في: Child Development Center, King Abdullah Bin Abdulaziz University Hospital Princess Nourah Bin Abdulaziz University.

Childhood Autism Rating Scale-2-ST

مقياس (كارز-2-ST): مركز النمو والطفولة، مستشفى الملك عبد الله الجامعي، جامعة الأميرة نورة.
Child Development Center, King Abdullah Bin Abdulaziz University Hospital Princess Nourah Bin Abdulaziz University

تعليمات: مباشرة وبعد إتمام تقييم الحالة وفق قائمة مقياس (كارز-2-ST) ثلاثية، يتم تحويل النتائج إلى نموذج التصحيح في الأسفل.

DIRECTIONS: After rating the 15 items, transfer the ratings from the inside pages to the corresponding spaces below. Sum the ratings to obtain the Total raw score, and indicate the corresponding Severity Group. Circle the Total raw score value in the table in the column labeled All ages and in the column that corresponds to the age of the person who has been rated. The number oriented to the left of each value you have circled is the T-score.

تصنيف الفئة والشدة SEVERITY GROUP	
لا يوجد أعراض توحدية أو محدودة جداً Minimal-to-No Symptoms of Autism Spectrum Disorder (15-25.5; 15-27.5 for ages 13+)	☐
أعراض بسيطة إلى متوسطة للتوحد Mild-to-Moderate Symptoms of Autism Spectrum Disorder (30-38.5; 28-34.5 for ages 13+)	☐
أعراض شديدة للتوحد Severe Symptoms of Autism Spectrum Disorder (43 and higher; 35 and higher for ages 13+)	☐

المجموع الكلي Total Raw Score

1. العلاقات مع الناس Relating to People	
1	لا يوجد دليل على وجود صعوبات أو سلوكيات غير اعتيادية في العلاقات مع الآخرين. No evidence of difficulty or abnormality in relating to people. لا يوجد دليل على صعوبة أو خلل في العلاقات الشخصية. ملاحظة: سلوك الطفل مناسب لم رد. قد يظهر بعض الحجل أو العصبية أو الانزعاج عندما يخبر بما يجب فعله، ولكن ليس بشكل تعطي.
1.5	
2	يوجد شكل بسيط من السلوكيات الغير اعتيادية في العلاقات مع الآخرين. Mildly abnormal relationships علاقات غير طبيعية بشكل بسيط. ملاحظة: الطفل يجذب النظر إلى الشخص البالغ في العين. أو رد فعل مفرط في حال فرض التفاعل. أو يحول بشكل مفرط. أو يجذب الكبار. أو لا يسحب للكبار كما هو متوقع. أو ملصق بالوالدين أكثر قليلاً من أقرانه.
2.5	
3	يوجد شكل متوسط من السلوكيات الغير اعتيادية في العلاقات مع الآخرين. Moderately abnormal relationships علاقات غير طبيعية بدرجة متوسطة. ملاحظة: في بعض الأحيان يظهر الطفل عدم ميالة (كأنه يتجاهل الشخص البالغ). في أوقات أخرى. تمت المحاولات المتكررة والفشل في إثارة اهتمام الطفل. الوصال الذي قدمه الطفل بعد حين الحد الأدنى للتفاعل المطلوب.
3.5	
4	يوجد شكل شديد الشذوذ من السلوكيات الغير اعتيادية في العلاقات مع الآخرين. Severely abnormal relationships علاقات غير طبيعية بدرجة شديدة. ملاحظة: الطفل غير مهتم أو غير مدرك دائماً لما يفعله الشخص البالغ. لا يكاد يسحب للواصل مع الكبار المحاولات المتكررة لجذب الانتباه ليس لها أي تأثير.
ملاحظة إكلينيكية	

2. التقليد Imitation	
1	لديه القدرة المناسبة على التقليد Appropriate Imitation: التقليد بشكل كامل. ملاحظة: يمكن للطفل أن يقلد الأصوات والكلمات والحركات المناسبة لمس تواتر وقدراته.
1.5	
2	لدى الطفل شكل بسيط من القصور في التقليد Mildly abnormal imitation تقليد غير طبيعي. الملاحظة: لا يحسن خطه. ملاحظة: لا تقليد غير طبيعي إلى حد ما في معظم الوقت. يقلد الطفل سلوكيات من خطة مثل الضيق أو الأصوات. يقلد أحياناً بعد المحفز أو يتأخر في تقليد الموقف.
2.5	

3	لدى الطفل قصور متوسط في التقليد Moderately abnormal imitation تقليد غير طبيعي بشكل متوسط، مثلاً: يقلد الطفل جزء فقط من الوقت ويخطأ كثيراً في الممارسة أو مساعدة الكبار؛ غالباً لا يقوم بالتقليد إلا بعد فترة من الوقت (سلوك متأخر).
3.5	
4	لدى الطفل قصور شديد في التقليد Severely abnormal emotional response تقليد غير طبيعي بدرجة شديدة، مثلاً: نادراً ما يقلد الطفل، أو لا يقلد الأصوات أو الكلمات أو الحركات حتى مع الحفز والمساعدة.
ملاحظة إكلينيكية	

3. الإستجابة العاطفية Emotional Response	
1	لدى الطفل استجابة عاطفية مناسبة متوافقة مع العمر والموقف Age-appropriate and situation-appropriate emotional response إبراز حاجة عاطفية مناسبة للموقف والعمر، مثلاً: يظهر الطفل نوعاً ودرجة مناسبة من الانسحاب العاطفي، كما يظهر تعالي الوجه الملائمة للموقف والسلوك.
1.5	
2	لدى الطفل شكل بسيط من القصور في الاستجابات العاطفية Mildly abnormal emotional response إبراز حاجة عاطفية غير طبيعية بدرجة بسيطة، مثلاً: يظهر الطفل أحياناً درجة أو نوعاً غير مناسب من الانسحاب العاطفي، في بعض الأحيان لا ترتبط ردود أفعال بالوقت.
2.5	
3	لدى الطفل مستوى متوسط من القصور في الاستجابات العاطفية Moderately abnormal emotional response إبراز حاجة عاطفية غير طبيعية بدرجة متوسط، مثلاً: يظهر الطفل علامات واضحة على انسحاب عاطفي غير كافية إلى النوع أو الدرجة). يمكن أن تكون ردود الفعل مبهمة أو مفرطة وغير مرتبطة بالموقف؛ يمكن أن تتركب تعالي وجه أو ضحك أو صرخة جامدة الملامح حتى في حال عدم وجود أشياء أو أحداث تثير المشاعر.
3.5	
4	لدى الطفل قصور شديد في الاستجابات العاطفية Severely abnormal emotional response إبراز حاجة عاطفية شديدة القصور، مثلاً: ردود الفعل نادراً ما تكون مناسبة للموقف. بمجرد أن يصل الطفل إلى مزاج معين، يكون من الصعب للغاية تغييره من ناحية أخرى. قد يظهر الطفل مشاعر مبهمة رغم عدم تهيئته.
ملاحظة إكلينيكية	

4. الاستجابة الجسدية Body Use	
1	لديه استجابة جسدية ملائمة لعمره Age-appropriate body use استخدام الجسم متناسب للعمر. ملاحظة: يحرك الطفل بسهولة في الحركة والتألق كطفل عادي في نفس العمر
1.5	
2	لدى الطفل قصور بسيط في الاستجابة الجسدية Mildly abnormal body use استخدام الجسم غير طبيعي بدرجة بسيطة. ملاحظة: قد توجد بعض الخصائص الحركية التي مشتقة (كحركات حقا). أو الحركات التكرارية، أو التألق الحركي الضعيف، أو الوجود التآثر لحركات غريبة.
2.5	
3	لدى الطفل قصور متوسط في الاستجابة الجسدية Moderately abnormal body use استخدام الجسم غير طبيعي بشكل متوسط. ملاحظة: قد تشمل السلوكيات الغريبة حركات الصاع الغريبة، وضربات الجسم واليد الحركية الغريبة، ضغط الجسم أو فرضه أو الإمالة، أو التدقيق، أو يزعج الجسم أو يمشي على أصابع القدم.
3.5	
4	لدى الطفل قصور شديد في الاستجابات الجسدية Severely abnormal body use استخدام الجسم غير طبيعي بشدة. ملاحظة: الحركات الشديدة أو المتكررة من النوع المذكور أعلاه، علامات على استخدام الجسم غير طبيعي أو غير طبيعي. قد تنقر هذه السلوكيات على الرغم من محاولات تثبيط الطفل عن القيام بذلك حتى حين إشراك الطفل في أنشطة أخرى.
ملاحظة إكلينيكية	

5. (استخدام الأشياء) الاستخدام الوظيفي التكيفي Object Use	
1	لدى الطفل الاستجابة المناسبة في الاهتمام والاستخدام للألعاب والأشياء المختلفة. Appropriate interest in, or use of, toys and other objects الاستخدام السليم والاهتمام بالألعاب والأشياء الأخرى. ملاحظة: يظهر الطفل اهتماما طبيعيا باللعب والأشياء الأخرى المناسبة لمسن توى ممرته ويسخدمها بشكل صحيح.
1.5	
2	لدى الطفل قصور بسيط في الاهتمام والاستخدام للألعاب والأشياء المختلفة. Mildly inappropriate interest in, or use of, toys and other objects الاستخدام والاهتمام بالألعاب والأشياء متناسبة بدرجة بسيطة. ملاحظة: قد يظهر الطفل اهتمام غيبي في لعبة أو يلعب معها بطريقة غير لائقة بسنة، وبطريقة متولوية شاذة (مثال: تحريك أو مص اللعبة).
2.5	

3	لدى الطفل قصور متوسط في الاهتمام والاستخدام للألعاب والأشياء المختلفة. Moderately inappropriate interest in, or use of, toys and other objects الاستخدام غير المناسب بشكل معتدل والاهتمام في الألعاب وغيرها من الأشياء . مثلا : قد يظهر الطفل القليل من الاهتمام في الألعاب أو الأشياء الأخرى . أو قد يتم باس تحديدا بطيئة غريزة . أو التركيز على جزء ضئيل من اللعبة . أو يقن بالضوء الذي ينعكس منها . أو تحريك جزء منها مرارا وتكرارا أو لعبها بشكل حصري
3.5	
4	لدى الطفل قصور شديد في الاهتمام والاستخدام للألعاب والأشياء المختلفة. Severely inappropriate interest in, or use of, toys and other objects الاستخدام والاهتمام غير ملائم بمقدار اللعب والأشياء الأخرى . مثلا : قد يخطر الطفل في نفس السلوكيات المذكورة أعلاه . ولكن بت وافر وشدة أكبر . من الصعب صرف انتباه الطفل عن هذه النقطة في المناسبات .
ملاحظة إكلينيكية	
6. القابلية للتأقلم مع التغيير Adaptation to Change	
1	لديه قابلية ملائمة للتكيف مع التغيير ملائمة لعمره Age-appropriate adaptation to change يسر تحديات تكيفية ملائمة للعمر . مثلا : الطفل قادر على قبول هذه التغيرات دون ضائقة مفرطة . حتى وإن أدرك التغييرات من حوله وعلق على التغير في الروتين .
1.5	
2	لدى الطفل قصور بسيط في التكيف مع التغيير Mildly abnormal adaptation to change يسر تحديات تكيفية غير ملائمة للعمر . قليلا . مثل : عندما يحاول شخص بالغ تبني المهام أو ال نشاط . ف إن الطفل يس تمر في نفس النشاط أو يس تمر في اس استخدام نفس المواد
2.5	
3	لدى الطفل قصور متوسط في التكيف مع التغيير Moderately abnormal adaptation to change يسر تحديات تكيفية غير ملائمة للعمر بدرجة متوسطة . مثل : لا : يقاوم الطفل نشاط التغييرات في الروتين . ويجولم واصلة نشاطه القديم ويصعب صرفه . قد يصبح غير سعيد وغاضب عند تبني روتين ثابت
3.5	
4	لدى الطفل قصور شديد في التكيف مع التغيير Severely abnormal adaptation to change يسر تحديات تكيفية غير ملائمة للعمر بدرجة متوسطة . مثل : لا : الطفل يظهر ردود فعل شديدة على التغييرات . اذا فرض تبني ما . قد يظهر غضب شديد . أو يرتفع الحصول على مساعدة للمهنة .
ملاحظة إكلينيكية	

7. الاستجابة البصرية Visual Response	
1	لدى الطفل استجابة بصرية متوافقة مع عمره Age-appropriate visual response السلوك البصري للطفل طبيعي ومناسب لعمره، مثلاً: لا: الاتس تجابة البصرية تنس بخدم بالنوازي مع الخواس اأخرى وبشكل طبيعي لاس تكشاف اأش يام الجديدة
1.5	
2	لدى الطفل قصور بسيط في الاستجابات البصرية Mildly abnormal visual response إس تجابة بصرية غير طبيعية إلى حد ما، مثلاً: يجذب الطفل إلى ال تنكي للنظر في اأش يام أحياناً، قد يظهر الطفل اهتماماً أكثر بالنظر إلى المرايا أو النوار من النظر إلى ما بقده أقرانه له، وقد يجذب أحياناً في الفضاء، أو قد يجذب النظر إلى عيون الآخرين.
2.5	
3	لدى الطفل قصور متوسط في الاستجابات البصرية Moderately abnormal visual response إس تجابات بصرية غير ملائمة للمر بدرجة متوسط قد، مثلاً: يوح ب كذا تنكي الطفل بالنظر إلى ما يقوم به، التحقق التصائي، أو تجذب النظر إلى عيون الآخرين، أو النظر إلى اأش يام من زاوية غير عادية، أو وضع اأش يام قريباً من العين.
3.5	
4	لدى الطفل قصور شديد في الاستجابات البصرية Severely abnormal visual response إس تجابات بصرية غير ملائمة للمر بدرجة شديدة قد، مثلاً: يجذب الطفل باس تقرار النظر إلى المخاص أو إلى أش يام معينة ويمكنه اظهار أشكال مطرفة من المخاص البصرية اأخرى الموضحة أعلاه.
ملاحظة إكلينيكية	

8. الاستجابات السمعية Listening Response	
1	لدى الطفل استجابة سمعية متوافقة مع عمره Age-appropriate listening response. الاس تجابات السمعية المناسبة للسن، مثلاً: سلوك الطفل السمعي طبيعي ومناسب للعمر، يس بخدم السمع مع الخواس اأخرى بشكل مناسب للمر
1.5	
2	لدى الطفل قصور بسيط في الاستجابات السمعية Mildly abnormal listening response إس تجابات سمعية غير ملائمة للمر بدرجة بسيطة قد، مثلاً: قد يكون هناك عدم اس تجابة أو اس تجابة مبالغ فيها بعض الشيء لبعض اأصوات. قد تتأخر الاس تجابات الصوتية وقد يلزم تكرار اأصوات لجذب انتباه الطفل. قد يتحدث الطفل بسبب اأصوات الخارجية.
2.5	
3	لدى الطفل قصور متوسط في الاستجابات السمعية Moderately abnormal listening response. إس تجابات سمعية غير ملائمة للمر بدرجة متوسط قد، مثلاً: تباين في اس تجابات الطفل على اأصوات. غالباً ما يجهل الصوت في المرات القليلة الأولى. قد يظهر خوفاً من الأصوات أو يخطئ أذنيه عندما يسمع بعض اأصوات اليومية.
3.5	

4	لدى الطفل قصور شديد في الاستجابات السمعية Severely abnormal listening response إس: تجليات سمعية غير ملائمة للمرض بدرجة شديدة، مثلاً: يبالغ الطفل في رد الفعل ضد و / أو تجاهل الأصوات بدرجة كبيرة للغاية، ينحس النظر عن نوع الصوت.
ملاحظة إكلينيكية	

. استجابات الشم، اللمس، والتذوق 9. Taste, Smell, and Touch Response and Use	
1	استخدام واستجابة طبيعية أحاسيس: التذوق، الشم واللمس. Normal use of, and response to, taste, smell, and touch إس: تجليات البوق والرائحة واللمس مناسبة للمرض، مثلاً: يحس تكشف الطفل أنش يام جديدة بطريقة تتناسب مع عمره، وحواس وشعور ملائمة لعمره. إس: تخدام ملائم لحواس المذاق أو الرائحة. عند إس تجابة الطفل للألام اليومية الإس بطة ف أنه يحبر عنها بشكل طبيعي من الشعور بعدم الارتياح، لكنه لا يبالغ في رد فعله
1.5	
2	قصور بسيط في استخدام و/أو استجابة أحاسيس: التذوق، الشم واللمس. Mildly abnormal use of, and response to, taste, smell, and touch إس: تجليات البوق والشم واللمس غير ملائمة للمرض بدرجة بسيطة، مثلاً: قد يس قمر الطفل في وضع أنش يام في الفم؛ شم أو يحنوق أنش يام غير الصالحة ل تكل. تجاهل أو رد فعل مبالغ نحو ذاك المس توى من اللم، والتي يحبر عنه الطفل المادي بعدم الراحة فقط.
2.5	
3	قصور متوسط في استخدام و/أو استجابة أحاسيس: التذوق، الشم واللمس. Moderately abnormal use of, and response to, taste, smell, and touch. إس: تجليات البوق والشم واللمس غير ملائمة للمرض بدرجة متوسط، مثلاً: يتم الطفل بشكل متوسط وغير ملائم باللمس أو الشم أو تنوق أنش يام أو الشخص. إس: تجابة الطفل الحس بة هنا أكثر من المعتاد أو قليلاً جداً
3.5	
4	قصور شديد في استخدام و/أو استجابة أحاسيس: التذوق، الشم واللمس. Severely abnormal use of, and response to, taste, smell, and touch إس: تجليات البوق والشم واللمس غير ملائمة للمرض بدرجة شديدة، مثلاً: يتم الطفل بالرائحة والعذوق واللمس كاس تجابة حس بة فقط أكثر من كونها إس: تجابة لسلوك إس: تكهاي. قد تجاهل الطفل اللم تماماً أو يتفاعل بشدة مع الارتياح الخفيف.
ملاحظة إكلينيكية	

10. المخاوف والعصبية Fear or Nervousness	
1	مستوى طبيعي من المخاوف أو العصبية Normal fear or nervousness ليس تجاوب المخاوف والعصبية مناسبة للسن، ملاحظة: سلوك الطفل مناسب لكل من الوضع والممر
1.5	
2	مستوى بسيط من أعراض المخاوف والعصبية. Mildly abnormal fear or nervousness ليس تجاوب المخاوف والعصبية غير ملائمة للممر قليلاً، ملاحظة: يظهر الطفل أحياناً خوفاً بسيطاً، أو قليلاً من التعلق أو العصبية عند مقارنته برؤود فعل الطفل العادي في نفس العمر وفي وضع مماثل.
2.5	
3	مستوى متوسط من أعراض المخاوف والعصبية. Moderately abnormal fear or nervousness ليس تجاوب المخاوف والعصبية غير ملائمة للممر بدرجة متوسطة، ملاحظة: يظهر الطفل خوفاً أكثر أو أقل كثيراً مما هو معتاد بالنسبة للطفل الصغير أو الأكبر سناً في وضع مماثل.
3.5	
4	مستوى شديد من أعراض المخاوف والعصبية. Severely abnormal fear or nervousness ليس تجاوب المخاوف والعصبية غير ملائمة للممر بدرجة شديدة، ملاحظة: تسبب المخاوف التي مبررة رغم مرور الطفل بمرحلة سلوكية مماثلة ومكررة مع نفس الحدث أو الشيء في العار. من الصعب للغاية تهدئة الطفل في تلك المواقف. من ناحية أخرى، قد يفشل الطفل في إظهار السلوك التجني المناسب في مواجهة المخاطر التي يجنبها في المادة لطفل الخوف في نفس العمر.
ملاحظة إكلينيكية	

11. التواصل اللفظي Verbal Communication	
1	مستوى طبيعي للتواصل اللفظي، بما يتناسب العمر والموقف. Normal verbal communication, age and situation appropriate التواصل اللفظي ضمن النطاق الطبيعي، ملاحظة: تواصل الطفل اللفظي مناسب لكل من الوضع والممر
1.5	
2	مستوى بسيط من قصور التواصل اللفظي Mildly abnormal verbal communication التواصل اللفظي غير ملائم للممر بدرجة بسيطة، ملاحظة: ظهرت آخر من بطء وعام. معظم الكلام الطفل يفهم وله له معنى. ومع ذلك، قد تحدث بعض الصوتيات المتكررة (مكرار كالمصدى الصوتي) أو عكس الضمائر. بعض الكلمات الغريبة أو المصطلحات أو الهجاء المأداة صوتياً قد تظهر من حين إلى آخر.
2.5	
3	مستوى متوسط من قصور التواصل اللفظي Moderately abnormal verbal communication التواصل اللفظي غير ملائم للممر بدرجة متوسطة، ملاحظة: قد يكون الكلام غائباً، وفي حال وجوده، يمكن أن يكون التواصل اللفظي عبارة عن مزيج من بعض الكلام ذو المعنى وبعض الكلمات الغريبة، مثل الكلمات الضحكي أو الاصطلاحات المأداة وتكرار الصوتيات وعكس الضمائر. يمكن لجزء من الكلام ذو المعنى أن يشمل القرط في الكلام عن موضوع معين والاسئلة المفترضة عن شيء محدد.
3.5	

4	مستوى شديد من قصور التواصل اللفظي Severely abnormal verbal communication <u>التواصل اللفظي غير ملائم للمرحلة العمرية، مثل: لا يتم استخدام الكلام الهادف، قد يلفظ الطفل من كلمات صاخبة، صيحات وصرخات طفولية أو كصوات الحيوانات أو أصوات غريبة وضوضاء، اللفظ يعقد من الكلام والمجارات المسقاة والتمية المشابهة للكلام.</u>
ملاحظة إكلينيكية	

12. التواصل غير اللفظي Nonverbal Communication	
1	مستوى طبيعي للتواصل اللفظي، بما يتناسب العمر والموقف Normal use of nonverbal communication, age and situation appropriate <u>التواصل غير اللفظي المناسب للمرحلة العمرية، مثل: تواصل الطفل في اللفظ متناسب لكل من الوضع والموقف.</u>
1.5	
2	مستوى بسيط من قصور التواصل غير اللفظي Mildly abnormal nonverbal communication <u>التواصل اللفظي غير ملائم للمرحلة العمرية، مثل: لا يمكن للطفل فقط أن يثني بإصبعه بشكل عامض أو يمد يده لتحقيق ما يريد بنموض، في نفس المواقف التي يسطيع فيها الطفل من نفس العمر أن يثني بإصبعه أو يثني يده بشكل أكثر تحديدا إلى ما يريد.</u>
2.5	
3	مستوى متوسط من قصور التواصل غير اللفظي Moderately abnormal nonverbal communication <u>التواصل اللفظي غير ملائم للمرحلة العمرية، مثل: عادة ما يكون الطفل غير قادر على المعنى عن احتياجاته أو رغباته بطريقة غير لفظية، ولا يسطيع فهم التواصل غير اللفظي للآخرين.</u>
3.5	
4	مستوى شديد من قصور التواصل غير اللفظي Severely abnormal nonverbal communication <u>التواصل اللفظي غير ملائم للمرحلة العمرية، مثل: يصدر الطفل فقط إيماءات غريبة أو لففات شاذة دون أي معنى واضح، ولا يفهم المعاني المرتبطة بالإيماءات أو تعابير الوجه للآخرين.</u>
ملاحظة إكلينيكية	

13. مستوى النشاط Activity Level	
1	مستوى طبيعي للنشاط الحركي، بما يتناسب العمر والظروف. Normal activity level for age and circumstances يسير توى النشاط ضمن النال الطبيعي، قد يظل: مس توى النشاط ضمن النال الطبيعية بالنسبة للمر والظروف: النفل ليس أكثر ولا أقل نشاطا مقارنة بالفل المادين في نفس المر والظروف البيئية .
1.5	
2	مستوى بسيط من قصور النشاط Mildly abnormal activity level يسير توى النشاط غير طبيعي، إلى حد ما، مث لا: يكن أن يكون النفل اما حركيا قليلا أو "كسولا" قليلا بالصقة المضطربة، في بعض الأحيان تظهر حركات بطيئة. يؤثر مس توى نشاط النفل قليلا في أدائه وانداجيه .
2.5	
3	مستوى متوسط من قصور النشاط Moderately abnormal activity level يسير توى النشاط غير طبيعي، بدرجة متوسط، قد يظل: يكن أن يكون النفل نطقا جدا وضربا أحواله. قد يكون إبه طاقة غير محدودة أو قد لا يهدأ طاقته بسهولة للنوم ليلا. من ناحية أخرى، يكن للفل أن يكون خائلا تماما ويحتاج إلى حافز كي للمحرك.
3.5	
4	مستوى شديد من قصور النشاط Severely abnormal activity level يسير توى النشاط غير طبيعي، بدرجة شديدة، يظل: يظهر النفل أقصى درجات النشاط أو عدم النشاط (الغول)، وقد يحول من طرف إلى آخر.
ملاحظة إكلينيكية	

14. مستوى وثبات الاستجابات الذهنية Level and Consistency of Intellectual Response	
1	مستوى طبيعي للذكاء ومتسق بشكل معقول عبر المجالات المختلفة Intelligence is normal and reasonably consistent across various areas. يسير توى الاستجابة الفكرية والذكاء طبيعي، ومتسق بشكل معقول في عدة مجالات، مث لا: النفل ذكي مثل الفل المادين من نفس المر، وليس إبه القدرة الفكرية الخاصة والميزة أو مشأل في عادة
1.5	
2	مستوى بسيط من قصور الوظائف الفكرية Mildly abnormal intellectual functioning إإام الفكرية قاصير أو غير متسق إلى حد ما، مث لا: النفل ليس ذكي مثل الفل المادين من نفس المر: المهارات منتظمة إلى حد ما في جميع المجالات.
2.5	
3	مستوى متوسط من قصور الوظائف الفكرية Moderately abnormal intellectual functioning إإام الفكرية قاصير أو غير متسق بدرجة متوسط، مث لا: بشكل عام، النفل ليس ذكي مثل الفل المادي في نفس المر، لكن النفل قد يعمل بالقرب من المعدل الطبيعي في مجال فكري أو أكثر
3.5	

مستوى شديد من قصور الوظائف الفكرية Severely abnormal intellectual functioning إيذاء الفكري قاصر أو غير متسق بدرجة شديدة. ملاحظة: على الرغم من أن الطفل ليس ذكياً في عموم اليماد الفكرية مثل الطفل العادي في نفس العمر. لا أنه يمكنه أن يعمل بشكل أفضل من الطفل العادي في نفس العمر في منطقة واحدة أو أكثر	4
ملاحظة إكلينيكية	

15. الانطباع العام General Impressions	
لا يوجد توحد No autism spectrum disorder لا يوجد اضطراب طيف التوحد، ملاحظة: الطفل ليس لديه أي من الأمراض المسببة لاضطراب التوحد.	1
	1.5
مستوى بسيط من أعراض التوحد Mild autism spectrum disorder وجدت مستويات خفيفة من أعراض طيف التوحد: يظهر الطفل شكل من بط ومحدود من السمات التوحدية أو درجة خفيفة فقط من سمات التوحد.	2
	2.5
مستوى متوسط من أعراض التوحد Moderate autism spectrum disorder وجدت مستويات متوسطة من أعراض طيف التوحد: يظهر الطفل عدد متوسط من الأمراض التوحدية أو درجة متوسطة من الأعراض التوحدية	3
	3.5
مستوى شديد من أعراض التوحد Severe autism spectrum disorder وجدت مستويات شديدة من أعراض طيف التوحد: يظهر الطفل شكل جاد من الأمراض التوحدية أو العديد منها أو درجة شديدة من أعراض التوحد	4
ملاحظة إكلينيكية	

وصف مجالات السلوك التوحدي وفق الدرجة الكلية ومقارنته من تم تشخيصهم بالتوحد	
الدرجة الكلية لـ ST-2	
الدرجة القصوى من أعراض التوحد	
درجة مرتفعة جداً من أعراض التوحد	
درجة مرتفعة من أعراض التوحد	
درجة متوسطة من أعراض التوحد	≥71
	60-70
	55-59
	45-54
	44-40
	39-25
درجة منخفضة من أعراض التوحد	
درجة منخفضة جداً من أعراض التوحد	
الدرجة في الحد الأدنى من أعراض التوحد	≤24

مجموع النقاط الخام مقرونة بالعمر والتصنيف التشخيصي			
التشخيص	الصياغة التشخيصية للسلوك	العمر 13 سنة فأكثر Ages 13+	العمر أقل من 13 سنة Ages ≤ 12:11
لا توحد No Autism	Minimal-to-No Symptoms of Autism Spectrum Disorder	15-27.5	15-29.5
طيف توحد Autism Spectrum Disorder	Mild-to-Moderate Symptoms of Autism Spectrum Disorder	28-34.5	30-36.5
طيف توحد Autism Spectrum Disorder	Severe Symptoms of Autism Spectrum Disorder	35-60	37-60

Appendix 11: World Health Organization Quality of Life, Brief Version (WHOQOL-BREF)

Arab American University



الجامعة العربية الأمريكية

استبيان مختصر لجودة الحياة النوعية. النسخة العربية

تعليمات: حضرة أولياء الأمور المحترمين، يهدف هذا الاستبيان إلى تقييم جودة حياة الأهالي ورفاههم العام قبل وبعد تدخل. يرجى تعبئة هذا الاستبيان لمساعدتنا في فهم تجربتك بشكل أفضل. سيتم استخدام المعلومات التي تقدمها لأغراض البحث فقط. شكرًا لتعاونك.

الأسئلة التالية تستفسر عن مدى تعرضك لأشياء معينة خلال الأسبوعين الماضيين					
	لا يوجد	قليل	درجة متوسطة	كثير جدا	درجة بالغة
3 (F1.4)	1	2	3	4	5
إلى أي حد تشعر بأن الألم الجسدي يمنعك من القيام بالأعمال التي تريدها؟					
4 (F11.3)	1	2	3	4	5
إلى أي مدى أنت بحاجة للعلاج الطبي لتتمكن من القيام بأعمالك اليومية؟					
5 (F4.1)	1	2	3	4	5
إلى أي مدى تستمتع بالحياة؟					
6 (F24.2)	1	2	3	4	5
إلى أي مدى تشعر بأن حياتك ذات معنى؟					
7 (F5.3)	1	2	3	4	5
إلى أي مدى أنت قادر على التركيز؟					
8 (F16.1)	1	2	3	4	5
إلى أي مدى تشعر بالأمان في حياتك اليومية؟					
9 (F22.1)	1	2	3	4	5
إلى أي حد تعتبر أن البيئة المحيطة بك صحية؟					
الأسئلة التالية تستفسر عن مدى قدرتك على إتمام أمور معينة خلال الأسبوعين الماضيين					
	لا يوجد	قليل	درجة متوسطة	كثير جدا	درجة بالغة
10 (F2.1)	1	2	3	4	5
هل لديك طاقة كافية لمزاولة الحياة اليومية؟					
11 (F7.1)	1	2	3	4	5
هل أنت قادر على قبول مظهرك الخارجي؟					
12 (F18.1)	1	2	3	4	5
هل لديك من المال ما يكفي لتلبية احتياجاتك؟					
13 (F20.1)	1	2	3	4	5
ما مدى توفر المعلومات التي تحتاجها في حياتك اليومية؟					
14 (F21.1)	1	2	3	4	5
إلى أي مدى لديك الفرصة لممارسة الأنشطة الترفيهية؟					
	سيئة للغاية	سيئة	لا بأس	جيدة	جيدة جدا

5	4	3	2	1	إلى أي مدى أنت قادر على التنقل بسهولة؟	(F9.1)15

يرجى قراءة كل سؤال وتقييم ما تشعر به ووضع دائرة حول الرقم الذي يعطي أفضل إجابة بالنسبة لك

		سيئة للغاية	سيئة	لا بأس	جيدة	جيدة جدا
(G1)1	كيف تقيم نوعية حياتك	1	2	3	4	5
		غير راض على الاطلاق	غير راض	لا راض ولا غير راض	راض	راض تماما
(G4)2	ما مدى رضاك عن صحتك	1	2	3	4	5

الأسئلة التالية تطلب منك أن تعبر عن مدى رضاك نحو جوانب مختلفة من حياتك خلال الأسبوعين الماضيين

		غير راض على الاطلاق	غير راض	لا راض ولا غير راض	راض	راض تماما
(F3.3)16	كم أنت راض عن نومك؟	1	2	3	4	5
(F10.3)17	إلى أي مدى أنت راض عن قدرتك على القيام بنشاطاتك اليومية؟	1	2	3	4	5
(F12.4)18	كم أنت راض عن قدرتك على العمل؟	1	2	3	4	5
(F6.3)19	كم أنت راض عن نفسك؟	1	2	3	4	5
(F13.3)20	كم أنت راض عن علاقتك الشخصية؟	1	2	3	4	5
(F15.3)21	كم أنت راض عن حياتك الجنسية؟	1	2	3	4	5
(F14.4)22	كم أنت راض عن الدعم أو المساعدة من الأصدقاء؟	1	2	3	4	5
(F17.3)23	كم أنت راض عن الأوضاع في مكان سكنتك؟	1	2	3	4	5
(F19.3)24	كم أنت راض عن الخدمات الصحية المتوفرة لك؟	1	2	3	4	5
(F23.3)25	كم أنت راض عن وسائل المواصلات التي تستخدمها؟	1	2	3	4	5

الأسئلة التالية تشير إلى كم من المرات شعرت أو تعرضت فيها لأشياء معينة خلال الأسبوعين الماضيين

		أبدا	نادرا	غاليا	غاليا جدا	دائما
(F8.1)26	كم من المرات كانت لديك مشاعر سلبية مثل	1	2	3	4	5
هل قام أحدهم بمساعدتك لتعبئة هذه الاستمارة؟ (رجاء قم بوضع دائرة: نعم أو لا)						
			نعم	لا		

شكرا لك

Appendix 12: Arabic Quality of Life in Autism (A-QoLA)

Arab American University



الجامعة العربية الأمريكية

استبيان جودة الحياة لأولياء أمور الأطفال ذوي التوحد

تعليمات: حضرة أولياء الأمور المحترمين، يهدف هذا الاستبيان إلى تحديد مدى جودة الحياة لدى أشر الأطفال ذوي اضطراب طيف التوحد. الرجاء منكم الإجابة عن جميع الأسئلة المرفقة في هذا الاستبيان بدقة، لما لهذا من أثر إيجابي في تطوير البحث العلمي البناء وخدمة إبنائكم. سيتم استخدام المعلومات التي تقدمها لأغراض البحث فقط. شكرًا لتعاونك! عند الإجابة على الأسئلة التالية، يرجى وضع إشارة صح (✓) بجانب الجواب التي:

أولاً: حدد مستوى رضاك عما تشير اليه الفقرات التالية على مدى الأسابيع الأربعة الماضية .
يرجى تحديد الدرجة التي تعكس بشكل أفضل ما كنت تشعر به على مدى الأسابيع الأربعة الماضية*

الفقرة	لا ينطبق	لا إطلاقاً	بشكل قليل	بشكل متوسط	بشكل كبير نوعاً ما	بشكل كبير جداً
أنا راض عن حياتي						
أشعر بالتوتر						
أشعر بالسعادة والرضا						
أشعر بالاكئاب أو القلق						
أشعر بالرضا عن نفسي كشخص						
أنا راض عن علاقتي مع المقربين						
العديد من الأشخاص متاحين لي عند الحاجة لهم						
أنا راض عن حياتي الاجتماعية.						
أنا راض عن حياتي العائلية.						
أنا راض عن وضعي المالي.						
أنا راض عن المكان الذي أعيش فيه.						
لدي ما يكفي من المال لتلبية احتياجاتي.						
أنا راض عن إنجازاتي.						
أنا راض عن صحتي العامة.						
لدي أسلوب حياة صحي.						
أنا راض عن أنشطتي الترفيهية.						

						المشاكل الصحية تمنعني من القيام بأشياء أريدها.
						أشعر بالسيطرة على حياتي.
						يمكنني وضع أهداف في حياتي وأقوم بتحقيقها.
						يمكنني وضع خطة عمل وأقوم بمتابعتها.
						أأخذ قراراتي الخاصة.
						أشعر بالذنب.
						أنا جزء من مجتمع محلي.
						أستطيع الحصول على الدعم الذي أحتاجه من المجتمع المحلي.
						أستطيع الوصول إلى المكان الذي أحتاج الوصول إليه.
						أشعر بالأمان في حياتي اليومية.
						أشعر بالاحترام في حياتي اليومية.
						أنا راض عن توفر الخدمات الصحية.

يتعلق هذا الجزء بالأطفال ذوي اضطراب طيف التوحد

يمكن أن يواجه الأطفال من ذوي التوحد مجموعة من الصعوبات من خلال التجارب التي يمرون بها. نود هنا معرفة المشكلات التي كانت أكثر تأثيراً عليك في الأسابيع الأربعة الماضية. على سبيل المثال ، بالنسبة لأي بند من التالية؛ إذا قمت بتحديد الوضع على أنه يشكل "مشكلة بسيطة لي"، هذا يعني أن: "الصعوبة التي يعانيها طفلي فيما يتعلق بهذا البند كانت مشكلة طفيفة بالنسبة لي - كولي أمر - في الأسابيع الأربعة الماضية."

يمكن أن يعاني الأطفال من ذوي التوحد من صعوبات تتمثل بالآتي : يرجى وضع إشارة صح (✓) بجانب العبارة التي تعكس بشكل أفضل حالة طفلك*

(0) لا ينطبق

(1) ليست مشكلة كبيرة

(2) مشكلة بسيطة

(3) مشكلة متوسطة

(4) مشكلة كبيرة نوعاً ما

(5) مشكلة كبيرة جداً

مشكلة كبيرة جداً	مشكلة كبيرة نوعاً ما	مشكلة متوسطة	مشكلة بسيطة	ليست مشكلة كبيرة	لا ينطبق	
						التواصل الاجتماعي مع الناس

						تكوين الصداقات
						فهم مشاعر الآخرين
						إجراء المحادثات
						التعبير عن الاحتياجات
						يأخذ المعنى الحرفي لما يسمعه
						التلفظ بأشياء محرجة اجتماعياً
						التمسك بروتين معين.
						الاهتمام المفرط بموضوع معين
						الشعور بالقلق في مواقف معينة أو أثناء التغيير.
						الحساسية إتجاه بعض المشاعر
						فهم قواعد التفاعل الاجتماعي
						التحكم باستجاباته العاطفية
						الحاجة إلى القيام بالأشياء بطريقة معينة
						السلوكيات المدمرة بما في ذلك الغضب والعدوان
						إظهار ردود أفعال عاطفية غير ملائمة.
						القيام بحركات جسدية أو سلوكيات متكررة غير عادية
						الانخراط بسلوكيات متهورة وغير لبقة.
						القيام بالمهام الحياة اليومية باستقلالية
						الاستجابة في حالة التقرب الاجتماعي له
						التواصل الاجتماعي مع الناس
						تكوين الصداقات

بشكل عام: على المقياس من 1 إلى 10، حيث 1 تمثل (غير راضي على الإطلاق)، و 10 (راضي للغاية)؛ كيف تقيم جودة حياتك؟*

غير راضي على الإطلاق 1 2 3 4 5 6 7 8 9 10 راضي للغاية

هل هناك أي أشياء أخرى تعتقد أن لها تأثير مهم على جودة حياتك؟ الرجاء ذكرها بالتفصيل:

Appendix 13: Parental Competence Scale for Parents of Children with ASD (PCS-ASD)

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الجامعة العربية الأمريكية

مقياس الكفاءة الوالدية للأبناء المصابين باضطراب طيف التوحد

تعليمات: حضرة أولياء الأمور المحترمين، يهدف هذا الاستبيان إلى قياس الكفاءة الوالدية للأبناء المصابين باضطراب طيف التوحد. الرجاء منكم الإجابة عن جميع الأسئلة المرفقة في هذا الاستبيان بدقة، لما لهذا من أثر إيجابي في تطوير البحث العلمي البناء وخدمة أبنائكم. سيتم استخدام المعلومات التي تقدمها لأغراض البحث فقط. شكرًا لتعاونك!

الفقرة	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
تقبلت وضع ابني المصاب باضطراب طيف التوحد					
أنا صبور في التعامل مع ابني.					
أنا صبور على كلمات وسلوكيات ابني.					
أستطيع التغلب على مشاعري السلبية.					
أخجل من مرض ابني.					
أشعر بالراحة لأن شريكي وأقاربي يتفهمون ظروفه.					
راحة البال بالتوكل على الله والصلاة					
الرجاء إلى مراكز التوحد لتقديم رعاية أفضل لابني.					
معتقداتي تحفزني على مواصلة التعلم والحداثة بابني.					
أحاول الحصول على معلومات حول ابني وتعليمه من أشخاص وموارد مختلفة.					
أنا راضى عن نفسي لاستمرارى في تعليم ورعاية ابني.					
أعتقد أنني ناجح في دوري كأم / أب.					
كشريك، أؤدي واجباتي بشكل جيد.					
أنظر إلى رجائي واهتماماتي.					
لقد تمكنت من تحسين علاقة ابني مع أفراد الأسرة الآخرين.					
يساعدني أفراد عائلتي في رعاية ابني وتعليمه.					
حب ابني يزيد من حافزي لمواصلة تعليمه.					
أعطي ابني شفاء ابني					
عندما يتعلم ابني شيئاً ما، أصبح أكثر حرصاً على تعليمه.					
أستطيع الاعتناء ابني جيداً وخلق السلوك الصحيح فيه.					
أعتقد أنه يمكنني تحسين مستقبل ابني.					
تحت أي ظرف من الظروف، أشعر بالمسؤولية عن متابعة تعليم ابني.					
من أجل تعليم ابني أوفر له كل الظروف المناسبة					
أعامل ابني بجدية عند التدريب لخلق السلوك الصحيح لدى ابني					
أرافق ابني معظم الأوقات حينما يخرج من المنزل					
أسعى لمشاركة ابني في المناسبات الاجتماعية					
لا أخجل من وضع ابني					
أساعد ابني للتغلب على مشكلاته المدرسية					
أدعم ابني في قراراته					



دليل المقابلة مع الأهالي:

مقدمة:

شكراً لموافقتك على التحدث معي اليوم. تهدف هذه المقابلة إلى فهم تجربتك في برنامج التوجيه عن بُعد (Telecoaching) المقدم لأهالي الأطفال المصابين بالتوحد من قبل الأستاذ محمد صلاحات. نود أن نتعرف على ما نجح، وما كانت تحدياته، وكيف يمكن تحسينه. ستبقى إجاباتك سرية، وستستخدم لتحسين الخدمات المقدمة للأسر الأخرى. ستستغرق هذه المقابلة ما بين 30 إلى 45 دقيقة.

القسم الأول: الجوانب المتعلقة بالجدوى والإجراءات

حاجب أسمع منك عن تجربتك ببرنامج التوجيه عن بعد بشكل عام

1. الأهلية والانضمام:

- كيف سمعت لأول مرة عن برنامج التوجيه عن بُعد؟
- ما الذي ساعدك في اتخاذ قرار المشاركة؟
- ما هي التحديات أو الصعوبات التي واجهتها خلال عملية التسجيل والموافقة؟

2. التوزيع العشوائي والمشاركة:

- ما هي معرفتك عن هذه العملية، وهل تعتقد أنها عادلة؟

3. الاستمرارية والالتزام:

- ما الذي ساعدك على الاستمرار في البرنامج حتى النهاية؟
- ما هي التحديات التي صعبت عليك حضور الجلسات أو تنفيذ المهام بين الجلسات؟

4. الإجابة على التقييمات :

- كيف كانت تجربتك في تعبئة الاستبيانات والتقييمات عبر الإنترنت؟ من حيث سهولة الفهم، الوقت المستغرق، وجود معالج للمساعدة في عملية تعبئة الاستبيانات؟
- كيف شعرت بطريقة تحديد الأهداف من خلال أداة COPM وكيف ساعدتك على التفكير في أولوياتك لطفلك؟

القسم الثاني: الجوانب المتعلقة باستخدام الموقع

1. الوصول إلى الموقع واستخدامه:

- كيف كانت تجربتك في الدخول إلى موقع "سند الحياة"؟ كيف كانت عملية إنشاء حساب وتسجيل طفلك في البرنامج؟ امثلة: هل احتجت إلى مساعدة في ذلك؟ هل وجود الفيديوها سهل عليك الامر؟

2. حجز الجلسات:

- كيف كانت تجربتك في حجز الجلسات باستخدام النظام الإلكتروني؟ هل كان ذلك سهلاً أم معقداً ولماذا؟

3. استخدام "زووم":

- ما مدى ارتياحك لاستخدام تطبيق "زووم" خلال الجلسات؟
- ما هي المشاكل التي واجهتها (تقنية أو في الاتصال بالإنترنت)؟

4. استخدام المكتبة والمواد التعليمية:

- أخبرني عن استخدامك للمواد التعليمية أو مكتبة الفيديو المتاحة؟
- ما هي أكثر المواد افادة؟

5. اقتراحات لتحسين التكنولوجيا:

- ما الذي يمكن تحسينه في استخدام الموقع أو الأدوات الرقمية؟

القسم الثالث: مدى التزام البرنامج وقبوله

1. تنفيذ الجلسات:

- في كل جلسة، كنّتي تقومين مع الاستاذ محمد بتحليل الهدف بناءً على أداء طفلك الحالي والمأمول والمعوقات. كيف وجدت هذه الطريقة؟
- بعد تحليل الهدف، كنّتي تقومين بوضع خطة عمل لتطبيقها بين الجلسات. ما رأيك في واقعية هذه الخطط؟ وهل كان باستطاعتك تنفيذها؟ ما العوامل التي ساعدت أو حدت من قدرتك على تطبيقها؟
- خلال الجلسات كيف تصفي دور الاستاذ محمد في عملية تحليل الهدف؟
- كيف تصف دورك خلال الجلسات؟

2. السلامة والصعوبات:

- ما هي المشاكل أو المواقف الغير متوقعة التي حدثت خلال تطبيق البرنامج؟

3. القبول العام:

- كيف تصفين تجربتك العامة مع البرنامج؟
- ما أكثر ما استفدت منه؟
- ما الأمور التي ترغبين في تغييرها أو تحسينها؟

القسم الرابع: الأثر المتصور للبرنامج

1. مشاركة الطفل:

- ما هي التغييرات التي لاحظتها في قدرة طفلك على أداء الأنشطة اليومية بعد البرنامج؟ هل يمكنك مشاركة مثال عن تغيير كان مهماً بالنسبة لك؟

2. ثقتك بنفسك وجودة الحياة:

- كيف أثر تدخل التوجيه عن بعد على ثقتك في قدرتك على دعم طفلك بعد المشاركة في الجلسات؟
- ما هي التغييرات التي لاحظتها في نمط حياتكم، أو في مستويات التوتر، أو في جودة حياة الأسرة عموماً؟

القسم الخامس: تفاصيل البرنامج وتجربة التفاعل مع المحتوى

1. المدة وعدد الجلسات:

- البرنامج تضمن 8 جلسات، كل منها حوالي 40 دقيقة. ما رأيك في عدد الجلسات وطول كل جلسة؟
- هل كان وقت الجلسة مناسباً لك؟ هل كنت تفضلين جلسات أقصر، أطول، أو أكثر؟

القسم السادس: مقارنة مع الخدمات التقليدية

1. مقارنة بجلسات المركز:

- إذا سبق وتلقيت خدمات وجهاً لوجه في مركز، كيف تقارنين هذه التجربة بجلسات الإرشاد عن بُعد؟
- ما الفروقات من حيث دعمك كأم؟

2. ملاءمة البرنامج لحياتكم اليومية:

- هل شعرت أن الإرشاد عن بُعد ركّز على روتينكم اليومي واحتياجاتكم الواقعية؟
- كيف تقارنين ذلك بجلسات المركز من حيث ربط الأهداف بحياة الطفل اليومية؟

3. الملائمة الثقافية الخصوصية :

- كيف تصفين جلسات التوجيه عن بُعد من حيث مناسبتها وثقافتك وقيم وخصوصية عائلتك؟
- كيف شعرت حيال التواصل مع المعالج عن بُعد من المنزل بدلاً من الحضور إلى المركز؟
- هل كانت هناك مواقف شعرت فيها بعدم الارتياح؟

4. مقترحات لتعزيز القبول الثقافي:

- ما الذي يمكن تحسينه لجعل هذا النوع من البرامج أكثر قبولاً في مجتمعك؟

القسم السابع: الجوانب العملية واللوجستية

1. الوقت والمرونة:

- كيف ساعدك التوجيه عن بُعد من حيث الوقت؟

2. التكاليف:

- من حيث المصاريف مثل المواصلات أو الحاجة لمربية أطفال أو التغيب عن العمل؟

3. التحديات الصحية والسياسية:

- من حيث تجاوز صعوبات مثل الإغلاقات أو الأوضاع السياسية أو الصحية؟

4. الجهد والضغط:

- كيف تقارنين الجهد المطلوب للمشاركة في البرنامج مقارنة بالخدمات المقدمة في المركز؟

الأسئلة الختامية:

- هل تنصحين بهذا البرنامج لأهالي آخرين؟ وما النصيحة التي تودين تقديمها لأم جديدة تنضم إلى البرنامج؟
- شكراً جزيلاً لوقتكم وصراحتكم. مداخلتكم مهمة جداً وسنساهم في تحسين الخدمات المقدمة لأمس أخرى في المستقبل.



AAUP-IRB-R Code No.: R-2024/A/164/N

AAUP-IRB-R Date: 21/11/2024.

نموذج معلومات المشاركين

عنوان الدراسة: التعلل، إمكانية التطبيق، والتأثير المحتمل لتدخل التوجيه عن بُعد على الأطفال المصابين بالتوحد وأولياء أمورهم في فلسطين:
تجربة تجريبية عشوائية مضبوطة.

يسرنا دعوتك للمشاركة في دراسة بحثية. قبل أن نقرر ما إذا كنت ستشارك أم لا، عليك أن تفهم سبب إجراء البحث وماذا يمكن أن يتضمن. خذ وقتاً كافياً لقراءة المعلومات التالية بعناية، يمكنك التحدث مع الآخرين حول هذه الدراسة إذا أردت .
يمكنك سؤالنا عما إذا كان هناك شيء غير واضح أو في حال كنت ترغب بالمزيد من المعلومات.

1. ما الهدف من هذه الدراسة؟

تهدف هذه الدراسة إلى تقييم التعلل، إمكانية التطبيق، والتأثير المحتمل لتدخل التوجيه عن بُعد للآباء الذين لديهم أطفال مصابين باضطراب طيف التوحد (ASD) في فلسطين. تشمل الأهداف تحسين مشاركة الأطفال في الأنشطة اليومية وزيادة كفاءة الآباء في رعاية أطفالهم وجودة حياتهم .

2. لم تعتبر هذه الدراسة مهمة ؟

الأطفال المصابون باضطراب طيف التوحد في فلسطين يواجهون تحديات كبيرة في الحصول على خدمات التدخل المبكر بسبب العوائق السياسية والمالية والجغرافية. تهدف هذه الدراسة إلى تقديم حل عملي وملئم عبر التوجيه عن بُعد، والذي يمكن أن يحسن من تطور الأطفال ويعزز قدرات الآباء على رعايتهم.

3. ما هو الإجراء الذي يتم اختياره ؟ (ان كان ينطبق)

يتم اختيار تدخل التوجيه عن بُعد الذي يستمر لمدة ثمانية أسابيع، حيث يتم عقد جلسات إرشاد عبر منصة زووم للآباء لمساعدتهم في تحسين أداء أطفالهم في الأنشطة اليومية.

4. لم تمت دعوتي للمشاركة في هذه الدراسة؟

تمت دعوتك للمشاركة لأنك الوالد أو الوالدة لطفل مصاب باضطراب طيف التوحد، ويتوافق طفلك مع معايير القبول المحددة للدراسة.

5. من لا تنطبق عليه المشاركة في الدراسة ؟
الآباء الذين لديهم أطفال يعانون من حالات مرضية مصاحبة للتوحد أو الذين تتراوح أعمار أطفالهم خارج الفئة العمرية من 3 إلى 7 سنوات، لن يكونوا مؤهلين للمشاركة في الدراسة.
6. هل يمكنني رفض المشاركة في الدراسة؟
نعم، المشاركة اختيارية تماماً، ويمكنك رفض المشاركة أو الانسحاب في أي وقت دون أي تبعات.
7. ماذا سيحدث لي إذا شاركت؟
إذا شاركت، ستتلقى جلسات توجيه عن بُعد أسبوعية لمدة ثمانية أسابيع غير زووم. ستطلب منك أيضاً تعبئة استبيانات والمشاركة في مقابلات قبل وبعد التدخل.
8. كم المدة التي سأكون فيها مشاركاً في هذه الدراسة ؟
ستكون مشاركاً في الدراسة لمدة ثمانية أسابيع في كل أسبوع سيكون هناك جلسة واحدة لمدة 40 دقيقة، وتشمل هذه المدة التقييمات قبل وبعد التدخل وجلسات التوجيه.
9. ما هي الاضرار والمخاطر المحتملة ؟
تعتبر هذه الدراسة منخفضة المخاطر. قد تواجه بعض الشعور بعدم الراحة عند مناقشة التحديات الشخصية، لكن سيتم توفير الدعم اللازم لتخفيف هذا الشعور.
10. ما هي الفوائد المحتملة لي؟
المشاركة في هذه الدراسة قد تؤدي إلى تحسين أداء طفلك في الأنشطة اليومية، وزيادة ثقته وكفاءته في دعم احتياجات طفلك.
11. من سيكون لديه صلاحية الوصول لسجلاتي الطبية وبيانات البحث؟
سيكون لدى فريق البحث فقط صلاحية الوصول إلى بياناتك، وسيتم الاحتفاظ بها بسرية تامة وتخزينها بشكل آمن.
12. هل سيتم الحفاظ على سرية بياناتي؟
نعم، سيتم الحفاظ على سرية بياناتك بشكل كامل وفقاً للأنظمة المتعلقة بحماية البيانات. ستستخدم منصة زووم الآمنة لإجراء جلسات التوجيه، والتي تتوافق مع المعايير الدولية لحماية الخصوصية.
13. ماذا سيحدث لأي عينات أقوم بتقديمها؟ (إذا كن يطبق)
لا ينطبق، حيث لا تتطلب هذه الدراسة جمع أي عينات مادية.
14. ماذا سيحدث لنتائج الدراسة البحثية ؟
سيتم نشر نتائج الدراسة ومشاركتها مع المجتمع الأكاديمي والطبي. لن يتم مشاركة أي معلومات تحدد هويتك الشخصية في هذه المنشورات.
15. هل سأحصل على مكافئة مقابل المشاركة في هذه الدراسة؟

لن يتم تقديم مكافأة مالية مقابل المشاركة، ولكن قد تستفيد من الاستراتيجيات الإرشادية التي ستساعدك في دعم طفلك المصاب بالتوحد.

16. بمن يجب أن أتصل إذا كانت لدي أسئلة إضافية أو حدثت مشاكل أثناء الدراسة؟ تفاصيل الاتصال للباحث :
يمكنك التواصل مع الباحث الرئيسي المعالج محمد صلاحات عبر البريد الإلكتروني mohammad.salahat@aaup.edu أو جوال 0592345678

17. بمن يجب أن أتصل إذا لم أكن راضي عن كيفية إجراء الدراسة ؟
مجلس أخلاقيات البحث العلمي-رام الله الجامعة العربية الأمريكية

Arab American University



الجامعة العربية الأمريكية

نموذج الموافقة الخطية

AAUP-IRB-R Code No.: R-2024/A/164/N

AAUP-IRB-R Date: 21/11/2024.

أنا (اسم المشارك / اختياري) أوافق بموجبه على المشاركة في البحث المحددة أدناه:

التقبل، إمكانية التطبيق، والتأثير المحتمل لتدخل التوجيه عن بُعد على الأطفال المصابين بالتوحد وأولياء أمورهم في فلسطين: تجربة تجريبية عشوائية مضبوطة.

لتحقيق درجة: الدكتوراة في برنامج: علوم التأهيل في الجامعة العربية الأمريكية.

تم شرح وتفسير طبيعة الدراسة وهدفها عن طريق الباحث: الأستاذ محمد صلاحات
لقد تم إخباري عن طبيعة البحث من حيث المنهجية والآثار المترتبة (حسب ورقة معلومات المشارك).
بعد معرفة وفهم جميع المزايا والعيوب المحتملة لهذا البحث، أوافق طواعية بمحض إرادتي على المشاركة في البحث المحدد أعلاه.
أفهم أنه يمكنني الانسحاب من هذا البحث في أي وقت دون إبداء أي سبب على الإطلاق.

التاريخ: إمضاء المشارك:

رقم الهاتف/ الجوال:

في حضور:-

اسم:

التسمية / اللقب:

إمضاء:

(شاهد على توقيع المشارك)

أؤكد أنني أوضحت للمشارك طبيعة وهدف البحث المذكور أعلاه.

تاريخ: إمضاء:

(الباحث)

Appendix 17: AAUP- IRP Approval

Arab American University



الجامعة العربية الأمريكية

الموافقة الاخلاقية

Arab American University

Institutional Review Board - Ramallah



الجامعة العربية الأمريكية

مجلس أخلاقيات البحث العلمي - رام الله

IRB Approval Letter

Study Title: "The Potential Efficacy, Feasibility and Acceptability of Parents Telecoaching Intervention on Children with Autism and their Parents in Palestine: A Mixed-Method Pilot Randomized Controlled Trial".

Submitted by: Mohammad Hasan Saleh Salahat

Date received: 20th November 2024

Date reviewed: 21st November 2024

Date approved: 21st November 2024

Your Study titled "The Potential Efficacy, Feasibility and Acceptability of Parents Telecoaching Intervention on Children with Autism and their Parents in Palestine: A Mixed-Method Pilot Randomized Controlled Trial" with the code number "R-2024/A/164/N" was reviewed by the Arab American University Institutional Review Board - Ramallah and it was approved on the 21st of November 2024.

Sajed Ghawadra, PhD
IRB-R Chairman
Arab American University of Palestine

Sajed



General Conditions:

1. Valid for 6 months from the date of approval.
2. It is important to inform the IRB-R with any modification of the approved study protocol.
3. The Board appreciates a copy of the research when accomplished.

رام الله - فلسطين

Tel: 02-294-1999

E-Mail: IRB-R@aaup.edu

Website: www.aaup.edu

القبول والجدوى والتأثير المحتمل لتدخل التوجيه عن بُعد لأولياء أمور الأطفال ذوي

اضطراب طيف التوحد في فلسطين: تجربة عشوائية محكمة تجريبية بمنهجية

الطرق المختلطة.

محمد حسان صالح صلاحات

أسماء لجنة الإشراف:

د. حسن سرسك

د. محمد نزال

د. حكمت حدوش

الملخص باللغة العربية

خلفية: تواجه أسر الأطفال المصابين باضطراب طيف التوحد في فلسطين تحديات كبيرة

في الوصول إلى خدمات التدخل المبكر المتخصصة بسبب العوائق الجغرافية والسياسية

والاقتصادية. تؤثر هذه التحديات سلباً على جودة الحياة والشعور بالكفاءة لدى الآباء. تقدم

التدخلات التي يقودها الآباء عبر خدمات الصحة عن بعد، وتحديداً التوجيه عن بعد، نهجاً واعداً

يركز على الأسرة لسد هذه الفجوة في الخدمات من خلال تمكين الآباء من دعم تطور أطفالهم

في بيئاتهم الطبيعية.

الأهداف: هدفت هذه الدراسة إلى تقييم مدى قبول وجدوى وتأثير تدخل قائم على التوجيه عن بعد يعتمد على نموذج توجيه الأداء الوظيفي لآباء الأطفال الفلسطينيين المصابين باضطراب طيف التوحد، وبحث في آثار التدخل على مجموعة من نتائج الوالدين والطفل.

المنهجية: تم استخدام تصميم منهجي مختلط توضيحي متسلسل، تضمن تجربة عشوائية محكمة تجريبية مع مجموعة ضابطة على قائمة الانتظار (ن=24) ومقابلات نوعية بعد التدخل تكون التدخل من ثمانية أسابيع من جلسات التوجيه الفردية عن بعد. تم تقييم النتائج باستخدام مجموعة من المقاييس: مقياس قبول خدمات الصحة عن بعد السعودي ، ومقياس الأداء المهني الكندي، ومقياس كفاءة الوالدين لاضطراب طيف التوحد ، ومقياس جودة الحياة لمنظمة الصحة العالمية، ومقياس جودة الحياة في التوحد (النسخة العربية) للوالدين، وقائمة تقييم علاج التوحد ومقياس تصنيف التوحد الطفولي-الإصدار الثاني للأطفال. وتم جمع البيانات النوعية من خلال مقابلات شبه منظمة.

النتائج: أظهر تدخل التوجيه عن بعد قبولاً وجدوى عاليين. وكشفت النتائج الكمية عن تحسينات ذات دلالة إحصائية لمجموعة التدخل في قبول خدمات الصحة عن بعد وكفاءة الوالدين لوحظت زيادة كبيرة وذات مغزى سريري في رضا الوالدين عن أداء أطفالهم في الأهداف الفردية . وفي حين لم تظهر فروق ذات دلالة إحصائية بين المجموعتين في جودة حياة الوالدين أو . خصائص التوحد لدى الأطفال في هذه الدراسة التجريبية، أيدت البيانات النوعية بقوة التأثير الإيجابي للتدخل، حيث وصفه الآباء بأنه نموذج رعاية ممكن وملائم ثقافياً.

الخلاصة: يعد التوجيه الوالدي عن بعد، القائم على مبادئ توجيه الأداء المهني، تدخلاً

مقبولاً ومجدياً وفعالاً محتملاً لأسر الأطفال المصابين باضطراب طيف التوحد في السياق

الفلسطيني. من خلال توفير دعم متاح وفردى، يمكن لهذا النموذج أن يعزز الكفاءة والرضا لدى الوالدين. تدعم النتائج دمج التوجيه عن بعد في خدمات التدخل المبكر في فلسطين والبيئات الأخرى ذات الموارد المحدودة، مع توصيات لإجراء تجربة واسعة النطاق لتأكيد فعاليته على نطاق أوسع من النتائج.

الكلمات المفتاحية: اضطراب طيف التوحد، التوجيه عن بُعد، الأداء الوظيفي، الجدوى،

الأساليب المختلطة