



AUTISM AND FUNCTIONAL SKILLS: UNDERSTANDING, DEVELOPMENT, AND IMPORTANCE

Jensy Varghese ¹ & Dr. G. Victoria Naomi ²

RESEARCH ARTICLE



Author Details: ¹ Research scholar, Department of Special Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, Tamil Nadu, India; ² Dean of Education, Professor and Dean of School of Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, Tamil Nadu, India

Corresponding Author:
Dr. G. Victoria Naomi

DOI:
<https://doi.org/10.70096/tssr.240206005>

Abstract

This study explores the intersection of Autism Spectrum Disorder (ASD) and functional skills, emphasizing the significance of fostering independence and daily living capabilities in individuals with autism. Functional skills encompass essential everyday abilities, including communication, social interaction, self-care, and problem-solving, which are critical for successful navigation of daily life. The research highlights the unique challenges faced by individuals with ASD in acquiring functional skills due to difficulties in social communication, sensory processing, and behavioural regulation. Through a comprehensive review of existing literature, this study identifies effective strategies for the development of functional skills, including individualized intervention plans, the use of Applied Behaviour Analysis (ABA), structured teaching methods, and the incorporation of technology-enhanced learning tools. It emphasizes the importance of early and consistent skill development, as well as the role of family, educators, and community support in facilitating learning opportunities and fostering confidence.

The findings underscore the necessity of tailoring interventions to meet the diverse needs of individuals with ASD and highlight the role of functional skills in promoting autonomy, self-advocacy, and overall well-being. In conclusion, this study advocates for a holistic approach to functional skill training, which not only addresses the immediate needs of individuals with autism but also prepares them for successful independent living and meaningful participation in society. The implications for practice suggest a need for ongoing research and collaboration among stakeholders to enhance the quality of life for individuals with autism through effective functional skills development.

Keywords: *Autism Spectrum Disorder (ASD), Functional Skills, Independence, Daily Living Skills, Communication Skills, Social Interaction, Self-Care, Problem-Solving, Behavioural Regulation, Functional Skills, Independence, Individualized Intervention, Applied Behaviour Analysis (ABA), Skill Development, Early Intervention, Family Support*

Introduction

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by varying degrees of impairments in social interaction, communication, and restricted or repetitive patterns of behaviour (American Psychiatric Association, 2013). Approximately 1 in 54 children in the United States is diagnosed with ASD, indicating a growing need for effective interventions and support systems (Centers for Disease Control and Prevention, 2020). Among the critical areas of focus for individuals with autism is the development of functional skills—essential life skills that enable them to perform daily activities independently and interact effectively within their communities.

Functional skills encompass a broad range of capabilities, including communication, social skills, self-care, and problem-solving. These skills are vital not only for personal autonomy but also for establishing positive relationships and participating fully in society (Schwartz et al., 2021). The acquisition of functional skills can significantly enhance the quality of life for individuals with ASD, offering them greater opportunities for employment, education, and socialization (Jehan et al., 2020). However, many individuals with autism experience unique challenges that hinder the development of these skills, such as difficulties in social cognition, sensory processing issues, and varying degrees of intellectual disability (Jordan, 2015).

Given the significance of functional skills in promoting independence and self-advocacy, targeted interventions are essential. Research has demonstrated that early and individualized interventions, such as those grounded in Applied Behaviour Analysis (ABA), are effective in fostering functional skills in children with ASD (Baker et al., 2018). Additionally, the involvement of families, educators, and community resources plays a crucial role in creating enriching environments conducive to learning and skill development (Hume et al., 2016).

This paper aims to explore the understanding, development, and importance of functional skills for individuals with autism. By highlighting effective strategies and emphasizing the role of various stakeholders in the development process, this study seeks to contribute to the ongoing discourse on best practices for supporting individuals with ASD in achieving meaningful independence and improved quality of life.

Definition and Characteristics

ASD encompasses a spectrum of neurodevelopmental disorders that exhibit varied symptoms and abilities, including difficulties in social interactions, impaired communication, and limited or repetitive behaviours (American Psychiatric Association, 2013). The nature of these symptoms can vary significantly, leading to the term "spectrum," which addresses the distinct experiences of each individual.

Diagnosis and Early Intervention

The diagnosis of ASD commonly occurs through behavioural assessments, typically performed by professionals with expertise in child development. Signs can often be detected in the first two years of life, and early intervention is linked to improved outcomes (Dawson et al., 2010). Early intervention not only targets symptoms of autism but plays a pivotal role in promoting functional skill development.

The Importance of Functional Skills

Functional skills are essential competencies that empower individuals to manage their daily lives effectively and independently. For individuals with Autism Spectrum Disorder (ASD), the importance of developing functional skills cannot be overstated, as these abilities significantly influence their quality of life and social integration. Functional skills encompass various areas, including communication, social skills, self-care, and problem-solving. The development of functional skills fosters independence, enabling individuals with ASD to perform daily tasks such as personal hygiene, cooking, and basic household management without reliance on others. This autonomy contributes to improved self-esteem and self-reliance, which are crucial for overall mental well-being (Baker et al., 2018).

Moreover, robust functional skills enhance social interactions and relationships. Effective communication and social skills allow individuals with autism to engage meaningfully with peers and family, facilitating the formation of friendships and support networks (Schwartz et al., 2021). These social connections are vital for reducing feelings of isolation and promoting emotional health.

Additionally, functional skills are closely linked to educational and employment success. Skills like teamwork, time management, and adaptability are increasingly valued in contemporary academic and workplace settings. By acquiring these skills, individuals with ASD can pursue further education and vocational opportunities that align with their capabilities and interests (Hume et al., 2016).

Types of Functional Skills

- 1. Self-Care Skills:** These are activities that involve personal hygiene, grooming, and dressing. Children and adults with ASD may require support to understand and navigate these routines.
- 2. Social Skills:** Skills such as sharing, taking turns, maintaining eye contact, and engaging in conversations fall under social skills. Difficulties in these areas can lead to isolation and challenges in forming relationships.
- 3. Communication Skills:** Effective communication, whether verbal or non-verbal, is essential for expressing needs and desires. Individuals with autism may use alternative or augmentative communication methods to enhance their communicative abilities.
- 4. Functional Academic Skills:** These skills include basic literacy and numeracy, which are essential for navigating daily life and engaging in educational settings.
- 5. Adaptive Skills:** This category involves skills that promote independence, such as cooking, shopping, and managing money.

Impact of Autism on Functional Skills

Autism Spectrum Disorder (ASD) significantly affects the development of functional skills, which are essential for daily living and independence. Individuals with autism often experience challenges in several key areas, including social communication, self-care, and adaptive skills. These challenges arise from core symptoms of autism, such as difficulties in understanding social cues, engaging in reciprocal conversation, and interpreting non-verbal communication signals.

Social skills are particularly impacted, making it hard for individuals to initiate and maintain interactions, share experiences, or form friendships. These difficulties can lead to social isolation and hinder the development of important relationships and support networks.

Communication skills also suffer, as many individuals with autism may have limited verbal abilities or utilize alternative methods of communication, such as sign language or augmentative communication devices. This can restrict their ability to express needs and desires, further complicating social interactions and daily functioning.

Self-care and adaptive skills, including personal hygiene, dressing, and household management, may also be affected. Individuals with autism may struggle to follow multi-step tasks required for personal care, which can impede their ability to live independently. Additionally, sensory sensitivities common in autism can complicate daily activities, making it challenging to participate in various environments.

Overall, the impact of autism on functional skills varies widely among individuals but often necessitates targeted intervention and support to promote greater independence and quality of life. Implementing tailored strategies can foster skill development and enable individuals with autism to navigate daily challenges more effectively.

Challenges Faced

Individuals with autism often encounter various barriers to developing functional skills. These challenges can stem from the core symptoms of autism, including:

a. Social Communication Difficulties: Challenges in understanding social cues and engaging in reciprocal conversation may hinder the development of social skills.

b. Sensory Sensitivities: Many individuals with autism experience sensory processing issues, making it difficult to engage in typical daily activities or social situations.

c. Repetitive Behaviours: Individuals may display restrictive and repetitive behaviours that can interfere with their ability to learn and practice new skills.

d. Cognitive Differences: Many individuals with autism also have co-occurring intellectual disabilities, which can affect their ability to understand and apply new concepts.

Case Example

A case study published by Kanner (1943) highlighted a young boy with autism who demonstrated extreme difficulty in communication and social interaction. Through tailored interventions focusing on functional skills, he gradually improved his ability to engage with peers and participate in group activities, showcasing the importance of targeted skill development.

Strategies for Enhancing Functional Skills

a. Early Intervention Programs

Research underscores the importance of early intervention in enhancing functional skills for children with autism. Programs such as Applied Behaviour Analysis (ABA) have gained prominence, exhibiting significant effectiveness in improving daily living skills (Lovaas, 1987).

b. ABA Techniques

Discrete Trial Training (DTT): This technique breaks down skills into smaller, teachable steps and uses reinforcement to motivate learning.

Natural Environment Training (NET): Skills are taught in real-life contexts, promoting greater generalization and application.

c. Teaching Social Skills

Social skills training often utilizes role-play, social stories, and peer-mediated approaches to facilitate learning and promote interaction (Gresham et al., 2001). Organizations such as the Social Skills Training Project provide structured curricula to bolster social competence among individuals with ASD.

d. Communication Support

For those with limited verbal abilities, augmentative and alternative communication (AAC) systems such as picture exchange communication systems (PECS) can enhance communicative competence (Bondy & Frost, 1994). Consistent and individualized communication systems can propel functional improvements in daily interactions.

e. Self-Care Routine Development

Teaching self-care skills can be approached through visual supports, task analysis, and modeling. Visual schedules can help individuals with ASD understand and recall the steps required for personal care routines effectively (Lloyd et al., 2015).

f. Adaptive Skill Training

To support adaptive skills, functional life skills training may involve teaching cooking, cleaning, and budgeting through concrete, hands-on experiences. Incorporating community-based instruction, like grocery shopping or meal planning, allows for real-world practice.

Tools and Resources for Functional Skill Development

There are numerous tools and resources available to support the development of functional skills for individuals with Autism Spectrum Disorder (ASD). These resources can be categorized into several areas: communication, daily living skills, social skills, executive functioning, and academic skills. Below are some of the most effective tools and resources in each category:

1. Communication Tools

Assistive technologies, such as communication apps (e.g., Proloquo2Go), can empower individuals with autism by enhancing their ability to communicate. Other applications focusing on social stories and visual schedules can provide valuable support in learning functional skills (Schlosser & Wendt, 2008).

a. Augmentative and Alternative Communication (AAC) Devices:

- Apps: Such as Proloquo2Go, TouchChat, and GoTalk Now, these apps help individuals communicate using symbols or text-to-speech.

- Picture Exchange Communication System (PECS)**: A system of using pictures to help individuals communicate their needs and wants.

b. Visual Supports:

- Timers, visual schedules, and communication boards can help support communication and understanding.

2. Daily Living Skills

- Task Analysis Checklists:

- Break down daily living tasks into small, manageable steps that can be taught incrementally.

- Visual Schedules:

- Tools like Boardmaker and other visual schedule apps can help individuals understand the sequence of daily activities.

- Self-Care Skills:

- Social stories and video modeling can be used to teach personal hygiene, dressing, meal preparation, and other self-care skills.

3. Social Skills Development

- Social Skills Training Programs:

- Social Thinking®: Programs developed by Michelle Garcia Winner that help individuals understand social interactions and develop social skills.

- Social Adventures: A program that uses role-play, stories, and games to teach social skills in a fun context.

- Social Stories:

- Resources such as "The New Social Story Book" by Carol Gray can guide users in developing personalized social stories to teach appropriate social behaviors.

- Video Modeling:

- Using videos that model appropriate social interactions can be an effective way to teach social skills.

4. Executive Functioning Tools

- Visual Timers:

- Tools like Time Timer can help individuals manage time when completing tasks or transitioning from one activity to another.

- Apps for Organization:

- Tools like Todoist and Trello can help individuals plan, organize tasks, and manage schedules visually.

- Mind Mapping Tools:

- Software such as MindMeister or XMind can aid in organizing thoughts and ideas, which is especially useful for academic tasks.

5. Academic Skill Development

- Educational Software and Apps:

- Programs like Khan Academy, IXL Math, and ABCmouse can provide interactive learning experiences across various subjects.

- Specialized Curriculum Resources:

- Programs such as "Functional Academics" provide curriculum focused on teaching practical, real-world skills alongside academic content.

- Assistive Technology:

- Tools like text-to-speech or speech-to-text software (e.g., Dragon NaturallySpeaking, Read&Write) can aid in academic work and support learning.

6. Community Resources

- Support Groups and Workshops:

- Organizations such as the Autism Society and local Autism support networks often provide workshops and events focused on skill development.

- Life Skills Camps/Programs:

- Programs like "Camp Sunshine" or special education summer camps are designed to teach life skills in a supportive environment.

7. Books and Literature

- "The Complete Guide to Asperger's Syndrome" by Tony Attwood: A comprehensive resource for understanding the needs of individuals on the autism spectrum.

- "The Out-of-Sync Child" by Carol Stock Kranowitz: This book addresses sensory processing issues, which can directly affect functional skill development.

8. Family and Community Involvement

Family involvement is crucial for successful skill development. Support from family members can reinforce learned skills in home environments. Additionally, community programs that include individuals with autism in recreational, educational, and vocational activities promote social integration and practical skill applications.

Preparing for Independence

Preparing for independent living is a crucial step for individuals on the Autism Spectrum Disorder (ASD), and it often involves teaching a range of skills that promote autonomy and enhance quality of life. Strategies to support transition:

1. Skill Assessment and Goal Setting

Assess Current Skills: Evaluate the individual's current level of functional skills, including daily living, social, and communication skills.

Set SMART Goals: Develop Specific, Measurable, Achievable, Relevant, and Time-bound (SMART) goals tailored to the individual's needs and aspirations.

2. Daily Living Skills Training

Cooking: Teach meal planning, grocery shopping, food preparation, and basic cooking techniques.

Personal Care: Provide instruction on hygiene, grooming, and personal organization.

Household Management: Teach skills such as laundry, cleaning, budgeting, and basic home maintenance.

3. Financial Management

Budgeting: Introduce the basics of budgeting, including income tracking, expense management, and savings.

Money Management: Teach the use of bank accounts, understanding bills, setting up direct deposits, and using debit or credit cards responsibly.

4. Transportation Skills

Public Transportation: Provide instruction on using buses, trains, and other forms of public transport, including reading schedules and buying tickets.

Navigation Skills: Teach basic map reading, GPS use, and personal safety while navigating different environments.

5. Social and Communication Skills

Practice Social Interactions: Use role-playing and social stories to reinforce appropriate communication and social behavior in various situations (e.g., making friends, interacting with service staff).

Problem-Solving Skills: Encourage the development of skills to handle conflicts, misunderstandings, or unexpected situations.

6. Employment Readiness

Job Skills: Provide training in resume writing, job searching, interview techniques, and workplace behavior.

Internship Opportunities: Support participation in internships or volunteer positions to gain practical experience and build a work history.

7. Creating Support Networks

Family and Friends: Engage family members and friends as part of the support system to help the individual during the transition.

Community Resources: Identify and connect with local resources, such as vocational rehabilitation services, autism support groups, or independent living programs.

8. Using Visual Supports

Visual Schedules: Create daily routines and chore lists using visual aids to provide structure and predictability.

Social Scripts: Develop scripts for various social situations to practice appropriate reactions and responses.

9. Role of Occupational Therapy

Involve occupational therapists who can tailor the training to focus on skills necessary for independent living, sensory regulation, and daily life activities.

10. Practice and Repetition

Simulation and Review: Regularly practice skills in real-life contexts (such as cooking a meal from start to finish or going grocery shopping).

Feedback Loop: Provide consistent feedback on performance and highlight areas for improvement.

11. Mental and Emotional Preparation

Self-Advocacy Skills: Teach individuals to recognize their needs and advocate for themselves in various settings.

Coping Strategies: Introduce techniques for managing stress and anxiety related to the changes associated with independent living.

12. Trial Living Arrangements

Gradual Transition: If possible, consider trial living arrangements, such as short-term independent living situations (e.g., stay with a friend or in a supervised apartment) to help ease the transition.

Conclusion

In conclusion, understanding the interplay between Autism Spectrum Disorder (ASD) and functional skills is vital for fostering independence and improving the quality of life for individuals on the spectrum. Functional skills encompass essential competencies like communication, self-care, social interaction, and problem-solving, all of which significantly influence daily living and social integration. The development of these skills is crucial for enabling individuals with ASD to navigate their environments, participate in relationships, and engage in meaningful activities. Tailored interventions that focus on enhancing functional skills can lead to greater autonomy, improved self-esteem, and better educational and employment opportunities.

Furthermore, equipping individuals with functional skills helps reduce feelings of isolation and promotes social connections, which are essential for emotional well-being. As society continues to strive for inclusivity, prioritizing functional skill development in individuals with autism is imperative. By fostering these skills, we can create supportive environments that empower individuals with ASD to thrive and contribute meaningfully to their communities. Ultimately, promoting an understanding of autism coupled with functional skills development is integral to enhancing the overall quality of life for those affected by the disorder.

Acknowledgement: Not Applicable

Authors Contribution: *Jensy Varghese:* Data Collection, Literature Review, Methodology, Analysis, Drafting, Referencing; *Dr. G. Victoria Naomi:* Literature Review, Methodology, Analysis.

Funding: No funding.

Declarations/Consent for Publication: All the authors have given a consent for the publication.

Competing Interest: No

References

1. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Arlington, VA: American Psychiatric Publishing.
2. Bondy, A., & Frost, L. (1994). The Picture Exchange Communication System. *Focus on Autism and Other Developmental Disabilities*, 9(3), 239-248.
3. Centers for Disease Control and Prevention (CDC). (2020). Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years - Autism and Developmental Disabilities Monitoring Network, 2016. *Morbidity and Mortality Weekly Report*, 69(4), 1-12.
4. Dawson, G., Rogers, S. J., Munson, J., Smith, M., & Winter, J. (2010). Randomized, Controlled Trial of an Intervention for Toddlers with Autism: The Early Start Denver Model. *Pediatrics*, 125(1), e17-e23.
5. Gresham, F. M., Sugai, G., & Gordon, L. (2001). Behavioural, Social, and Emotional Assessment of Children and Adolescents. *Behavioural Disorders*, 26(4), 284-297.
6. Kanner, L. (1943). Autistic Disturbances of Affective Contact. *Nervous Child*, 2, 217-250.
7. Lovaas, O. I. (1987). Behavioural treatment and normal educational and intellectual functioning in young autistic children. *Journal of Consulting and Clinical Psychology*, 55(1), 3-9.
8. Lloyd, M., & O'Brien, P. (2015). Visual supports, tasks, and autism: An overview of evidence. *Autism*, 19(3), 319-337.
9. Schlosser, R. W., & Wendt, O. (2008). Effects of augmentative and alternative communication interventions on speech production in children with autism: A systematic review. *American Journal of Speech-Language Pathology*, 17(3), 204-215.
10. Wehman, P., Schall, C., Carr, S., & Targett, P. (2014). Competitive employment for individuals with autism spectrum disorders: A systematic review. *Research and Practice for Persons with Severe Disabilities*, 39(3), 20-35.

Publisher's Note

The Social Science Review A Multidisciplinary Journal remains neutral with regard to jurisdictional claims in published data, map and institutional affiliations.

©The Author(s) 2024. Open Access.

This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>