



The Importance of Applied Behavior Analysis (ABA) Therapy in Nurturing Children with Autism Spectrum Disorder (ASD) According to *Maqāṣid al-Sharī'ah*

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Abstract

This study evaluates applied behavior analysis (ABA) therapy for individuals with autism spectrum disorder (ASD) from the perspective of *maqāṣid al-sharī'ah*, addressing the lack of research in this area. The research questions focus on how ABA therapy aligns with the principles of *maqāṣid al-sharī'ah* in ASD treatment. This qualitative study collected data from journal articles, reference books, and authoritative internet sources, which were thematically analyzed using an inductive approach. The findings indicate that ABA therapy plays a crucial role in helping individuals with ASD achieve the objectives of *maqāṣid al-sharī'ah*, including the preservation of religion, life, intellect, lineage/dignity, and property. ABA therapy was found to be effective in enhancing the ability of individuals with ASD to understand and practice religious teachings, reducing harmful behaviors, obtaining proper nutrition, improving cognitive function and mental health, addressing problematic sexual behaviors, and increasing work capacity and independence.

Keywords: Autism, ASD, applied behavior analysis, ABA, *maqāṣid al-sharī'ah*

Abstrak

Studi ini mengevaluasi terapi analisis perilaku terapan (ABA) untuk individu dengan gangguan spektrum autisme (ASD) dari perspektif *maqāṣid al-sharī'ah*, mengatasi kurangnya penelitian di bidang ini. Pertanyaan penelitian berfokus pada bagaimana terapi ABA selaras dengan prinsip-prinsip *maqāṣid al-sharī'ah* dalam perawatan ASD. Studi kualitatif ini mengumpulkan data dari artikel jurnal, buku referensi, dan sumber internet yang berwibawa, yang dianalisis secara tematik menggunakan pendekatan induktif. Temuan menunjukkan bahwa terapi ABA berperan penting dalam membantu individu dengan ASD mencapai tujuan *maqāṣid al-sharī'ah*, termasuk pemeliharaan agama, kehidupan, akal, keturunan/martabat, dan harta. Terapi ABA ditemukan efektif dalam meningkatkan kemampuan individu dengan ASD untuk memahami dan mempraktikkan ajaran agama, mengurangi perilaku berbahaya, mendapatkan nutrisi yang tepat, meningkatkan fungsi kognitif dan kesehatan mental, menangani perilaku seksual bermasalah, serta meningkatkan kapasitas kerja dan kemandirian.

Keywords: Autisme, ASD, applied behavior analysis, ABA, *maqāṣid al-sharī'ah*

Introduction

Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder that is gaining increasing attention in the fields of medicine and special education. Although scientific research on ASD has progressed rapidly, there remains a significant gap in public understanding and acceptance of this disorder. Children with ASD often appear physically normal, but their unique and unusual behaviors can lead to misunderstandings and stigmas among the general public.¹

ASD was first documented by Leo Kanner in 1943, and since then, public understanding of this disorder has developed significantly.² The prevalence of ASD has increased dramatically in recent decades, with global estimates suggesting that approximately 1 in 100 children are affected by autism.³ In Malaysia, the prevalence rate of ASD is estimated to be around 1.6 in 1000 children.⁴

In efforts to treat ASD, applied behavior analysis (ABA) has emerged as one of the most widely used and empirically supported interventions.⁵ ABA is defined as

¹ Centers for Disease Control and Prevention (CDC), "Autism Spectrum Disorder (ASD)," 2022, accessed 26/12/2023, <https://www.cdc.gov/ncbddd/autism/facts.html>.

² Zainal Abidin, Isti Fatonah, and Linda Septiyana, "Pola Pengembangan Potensi Kecerdasan Emosional dan Spiritual Anak Penyandang Autisme," *AWLADY: Jurnal Pendidikan Anak* 5, no. 2 (2019).

³ Jinan Zeidan et al., "Global Prevalence of Autism: A Systematic Review Update," *Autism Research* 15, no. 5 (2022).

⁴ Kementerian Kesehatan Malaysia, *Prosiding Mesyuarat Membincangkan Hasil Kajian Saringan dan Pengendalian Masalah Autisme: 16 -18 Mei 2006 Hotel Dynasty, Kuala Lumpur* (Kuala Lumpur: Kementerian Kesehatan Malaysia, 2006).

⁵ Catia Cividini-Motta et al., "History and Overview of Applied Behavior Analysis," in *Handbook of Applied Behavior Analysis for Children with Autism*, ed. Matson J.L., Autism and Child

the application of systematic interventions based on behavioral principles, aimed at improving socially significant behaviors, with experiments used to identify variables responsible for behavior change.⁶ ABA is grounded in the theory of "Operant Conditioning" pioneered by psychologist B.F. Skinner (1904-1990), which emphasizes the role of rewards and punishments in shaping behavior.⁷ The term ABA was first mentioned in 1968⁸ as a scientific approach to understanding behavior and how the environment influences it. One of the earliest applications of ABA in ASD treatment was the Lovaas method in the 1980s, which demonstrated significant effectiveness and improvement in the intellectual and social functioning of children with ASD.⁹ This success subsequently positioned ABA therapy as a primary choice in current ASD treatment. Psychologists have used ABA therapy for a long time and has undergone significant development through various research and experiments. However, in Malaysia, ASD issues and ABA therapy have only recently begun to be discussed and highlighted.

Although the clinical effectiveness of ABA has been proven, there is still a lack of studies evaluating the suitability of this therapy from a religious perspective, particularly Islam. In the Islamic context, medical treatment should align with the principles of *maqāṣid al-sharī'ah*, which aim to preserve five main elements: religion, life, intellect, lineage, and property.¹⁰ Therefore, this study aims to fill this research gap by assessing the extent to which ABA therapy aligns with the objectives of *syariah* in treating children with ASD. The main objective of this study is to evaluate the suitability of ABA therapy as a treatment for individuals with ASD according to the perspective of *maqāṣid al-sharī'ah*. Through this study, it is hoped to contribute to a deeper understanding of ASD treatment in the Islamic context, as well as provide valuable guidance for health professionals, policymakers, and families of individuals with ASD in making treatment decisions that align with Islamic principles.

Factors Contributing to ASD

Multiple factors contribute to the likelihood of a child developing ASD, including environmental and genetic factors. Currently, approximately 15% of cases are associated with gene mutations.¹¹ Many genes linked to ASD are involved in

Psychopathology Series (Cham: Springer, 2023).

⁶ John O. Cooper, Timothy E. Heron, and William L. Heward, *Applied Behavior Analysis*, 3 ed. (Pearson Education, 2020).

⁷ B. F. Skinner, *Science and Human Behavior*. (New York: The Free Press, 1965).

⁸ Donald M. Baer, Montrose M. Wolf, and Todd R. Risley, "Some Current Dimensions of Applied Behavior Analysis," *Journal of Applied Behavior Analysis* 1, no. 1 (1968).

⁹ O. Ivar Lovaas, "Behavioral Treatment and Normal Educational and Intellectual Functioning in Young Autistic Children," *Journal of Consulting and Clinical Psychology* 55, no. 1 (1987).

¹⁰ Zulkifli Mohamad al-Bakri, "Bayan Linnas Siri Ke-189: Maqasid Syariah dalam Perubatan," 2019, accessed 3/10/2024, <https://muftiwp.gov.my/en/artikel/bayan-linnas/3541-bayan-linnas-siri-ke-189-maqasid-syariah-dalam-perubatan>.

¹¹ Benjamin J. Sadock, Virginia A. Sadock, and Pedro Ruiz, *Kaplan and Sadock's*

brain formation. The proteins produced by these genes influence various aspects of brain development, including the production, growth, and organization of nerve cells (neurons). Some affect the number of neurons produced, while others are involved in the formation of synapses or dendrites. During brain development, children with ASD have more neurons than usual and excessive growth in the outer surface of the brain (cortex).¹² Abnormal neuronal development and damage to the cortico-striato-thalamo-cortical pathway result in repetitive behavioral symptoms in ASD. Social interaction impairments are a consequence of damage to pathways connecting the ventral tegmental area with the nucleus accumbens and the amygdala with the ventral hippocampus.¹³ In addition to genetic factors, environmental factors also increase the risk of ASD, such as advanced parental age, maternal infections during pregnancy, premature birth, and complications during delivery.¹⁴ However, the contribution of these environmental factors is relatively small and generally does not lead to ASD manifestation in the absence of genetic factors.¹⁵

Symptoms of ASD

ASD begins early in life, but typically becomes noticeable and a concern for parents when children are between 12 and 18 months old, as their language function fails to develop.¹⁶ Male children are at a 4 times higher risk of developing ASD compared to female children.¹⁷ According to the American Psychiatric Association (APA),¹⁸ there are two main criteria for determining whether a child has ASD: impairments in communication and social interaction, and repetitive inappropriate behaviors. Symptoms of communication and social interaction impairments include lack of response to speech, avoidance of eye contact, inability to show facial expressions, lack of spontaneous desire to share joy and happiness, and failure to establish peer relationships. Repetitive inappropriate behaviors include repetitive hand or finger play, frequent repetition of the same words or echolalia, and aversion to changes that disrupt daily routines.

Diagnosis of ASD

Diagnosing ASD can be challenging as there are no medical tests, such as a blood test. Doctors examine the child's developmental history and behavior to make

Comprehensive Textbook of Psychiatry, 10 ed. (Lippincott Williams & Wilkins, 2017).

¹² National Library of Medicine, "Autism Spectrum Disorder," 2021, accessed 3/10/2024, <https://medlineplus.gov/genetics/condition/autism-spectrum-disorder/#inheritance>.

¹³ Alka A. Subramanyam et al., "Clinical Practice Guidelines for Autism Spectrum Disorders," *Indian Journal of Psychiatry* 61, 2 (2019).

¹⁴ Holly Hodges, Casey Fealko, and Neelkamal Soares, "Autism Spectrum Disorder: Definition, Epidemiology, Causes, and Clinical Evaluation," *Translational Pediatrics* 9, 1 (2020).

¹⁵ M. J. Taylor et al., "Etiology of Autism Spectrum Disorders and Autistic Traits Over Time," *JAMA Psychiatry* 77, no. 9 (2020).

¹⁶ Sadock, Sadock, and Ruiz, *Kaplan and Sadock's Comprehensive Textbook of Psychiatry*.

¹⁷ CDC, "Autism Spectrum Disorder (ASD)."

¹⁸ APA, *Diagnostic and Statistical Manual of Mental Disorders :DSM-5*, 5 ed. (American Psychiatric Association, 2013).

a diagnosis. The latest diagnostic criteria used are based on The Diagnostic and Statistical Manual of Mental Disorders, DSM-V.¹⁹ To meet the diagnostic criteria for ASD, children must exhibit all criteria in the aspect of communication and social interaction impairments (Criterion A), including (1) deficits in social-emotional reciprocity, (2) deficits in nonverbal communicative behaviors used for social interaction, and (3) deficits in developing, maintaining, and understanding social relationships. Children must also exhibit two out of four criteria in the aspect of repetitive behaviors (Criterion B): (1) stereotyped or repetitive motor movements, (2) insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior, (3) highly restricted, fixated interests that are abnormal in intensity or focus, and (4) hyper- or hyporeactivity to sensory input. Criterion C requires that these symptoms must be present in the early developmental period. Criterion D states that the symptoms must cause clinically significant impairment in social relationships. Criterion E specifies that these symptoms are not better explained by intellectual developmental disorder or global developmental delay.

ASD is categorized into three severity levels. Level 1 requires support, as without support, patients will show significant problems in social communication. Level 2 requires substantial support, with individuals in this category showing marked deficits in social communication skills, both verbal and non-verbal. Level 3 is specific to those requiring very substantial support, with individuals in this category showing severe deficits in social communication skills that lead to major problems in daily life.²⁰

ASD diagnosis also needs to be specified to facilitate the intervention process, such as whether the ASD is with or without intellectual impairment, with or without language impairment, associated with a known medical or genetic condition or environmental factor, associated with another neurodevelopmental, mental, or behavioral disorder, or catatonia.

ASD Treatments

As the manifestations of ASD vary among individuals, their treatment needs also differ.²¹ ASD cannot be cured as it is not a disease. However, the symptoms of this disorder can be managed with early interventions involving various experts from different fields, aiming to help children with ASD overcome their developmental delays,²² reduce behavioral disturbances, and promote learning, especially in language acquisition, communication, and self-help skills.²³

The Clinical Practice Guidelines (CPG)²⁴ issued by the Ministry of Health Malaysia serve as the primary reference for medical officers in Malaysia regarding

¹⁹ APA, *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*.

²⁰ APA, *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*.

²¹ CDC, "Autism Spectrum Disorder (ASD)."

²² Rozila Sumardi, "Autisme: Adakah Anak Saya Boleh Normal?," 2020, accessed 3/10/2024, <http://www.myhealth.gov.my/austisme-adakah-anak-saya-boleh-normal/>.

²³ Sadock, Sadock, and Ruiz, *Kaplan and Sadock's Comprehensive Textbook of Psychiatry*.

²⁴ Kementerian Kesihatan Malaysia, Malaysian Psychiatric Association, and Academy of

the management of ASD in children and adolescents.²⁵ This CPG categorizes ASD treatments into two main categories: non-pharmacological treatments and pharmacotherapy.

Non-pharmacological treatments include:

- a) Applied behavior analysis (ABA), primarily aimed at increasing or decreasing targeted behaviors.
- b) Interventions focusing on improving communication, such as Responsive Education and Prelinguistic Milieu Teaching (RPMT), Reciprocal Imitation Training (RIT), Augmentative and Alternative Communication (AAC), Picture Exchange Communication System (PECS), and Video modeling.
- c) Occupational therapy, interventions aimed at increasing the involvement of ASD individuals in performing daily life activities.
- d) Cognitive behavior therapy (CBT), aimed at reducing anxiety in ASD individuals with high verbal intelligence.
- e) Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH), targeting learning and development of ASD individuals, particularly communication and social skills, independence skills, and daily life skills.
- f) Other interventions such as music therapy.

Pharmacotherapy for ASD is used only to treat comorbid symptoms, not the ASD symptoms themselves. For instance, atypical antipsychotics are used as short-term treatment for aggressive and dangerous behaviors. Selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants (TCA) are used to help children experiencing depression and anxiety. Methylphenidate and Atomoxetine are used for children with comorbid attention deficit hyperactive disorder (ADHD). For children experiencing sleep disturbances, melatonin can reduce insomnia and provide good sleep effects.

ASD from an Islamic Perspective

Islamic scholars categorize autism as "*al-atah*" or sluggishness. Al-Jurjani defines *al-'atah* as a deficiency in intellect or confused thinking but not to the extent of insanity.²⁶ Some of their speech resembles that of an insane person, while some resembles that of a rational person. This differs from foolishness (*al-safah*), which is negligence that comes to humans and is not inherent foolishness.²⁷

Medicine of Malaysia, *Clinical Practice Guidelines: Management of Autism Spectrum Disorder in Children and Adolescents* (Putrajaya: Malaysia Health Technology Assessment Section (MaHTAS), 2014).

²⁵ Kementerian Kesihatan Malaysia, Malaysian Psychiatric Association, and Academy of Medicine of Malaysia, *Clinical Practice Guidelines: Management of Autism Spectrum Disorder in Children and Adolescents*.

²⁶ Ali Muhammad Al-Jurjani, *al-Tarif* (Beirut: Dar al-Kutub al-'Ilmiyyah, 1983).

²⁷ Zulkifli Mohamad al-Bakri, "Bayan Linnas Siri Ke-150: Fiqh dan Penyelesaian Isu Autisme," 2018, accessed 3/10/2024, <https://www.muftiwp.gov.my/ms/artikel/bayan-linnas/2642-bayan-linnas-siri-ke-150-fiqh-dan-penyelesaian-isu-autisme-2>.

According to Ibrahim Muhammad and Riba Mustafa,²⁸ for ASD individuals with severe symptoms to the point of lacking the ability to understand and differentiate, their ruling is the same as that of an insane person who lacks the capacity to perform actions. Thus, all their actions do not carry implications in terms of Islamic law. As for those with mild or moderate symptoms, who still have the ability to understand and differentiate, albeit not on par with healthy individuals, they are ruled as being similar to discerning children (*mumayiz*).

Mohd Azim Hakim Ibrahim et al.²⁹ state that ASD individuals are exempted from religious obligations as they fall under the category of *al-'atah*, which is included in one of the groups mentioned in the hadith of Prophet Muhammad (PBUH): "The pen is lifted from three: From the sleeper until he awakens, from the child until he reaches puberty, and from the insane person until he regains sanity."

However, this deficiency in ASD individuals does not mean they can be discriminated against or denied their rightful entitlements, such as the right to education. According to Fariza Md Sham et al.,³⁰ it is the parent's responsibility to ensure that ASD children receive three crucial types of education: *fard 'ain* (individual obligations), Quranic education, and emotional management education. Regarding marriage, ASD individuals should marry if there is a need and desire for marriage,³¹ provided that the marriage will not cause harm to the individuals involved.³²

Applied Behavior Analysis (ABA) Therapy as Treatment for ASD Individuals

ABA is a behavioral intervention used to treat ASD and other behavioral disabilities such as attention deficit hyperactivity disorder (ADHD) and obsessive-compulsive disorder (OCD). ABA focuses on applying behavioral science in a practical and observable manner to improve individuals' quality of life in various situations. ABA consists of three components: (1) applied, (2) behavior, and (3) analysis. The first component refers to the application of socially accepted behaviors to real-life situations. The second component, behavior, focuses on observable and measurable behaviors, as ABA aims to modify and shape behavior through encouragement and other techniques. The third component, analysis, involves

²⁸ Ibrahim Muhammad Al-Jawaranah and Riba Mustafa Miqdadi, "Ahkam Marda al-Tawahhud fi al-Fiqh al-Islami Dirasah Ta'siliyyah Fiqhiyyah," *Dirasat Ulum al-Shariah Wa al-Qanun* 46, no. 1 (2019).

²⁹ Mohd Azim Hakim Ibrahim, Khadher Ahmad, and Mustaffa Abdullah, "Autistik dari Perspektif Undang-Undang dan Hukum Islam," *Journal of Quran Sunnah Education and Special Needs* 6, no. 1 (2022).

³⁰ Fariza Md Sham et al., "Panduan Syariah untuk Ibu Bapa Menangani Perilaku Seksual Remaja Autisme," *Jurnal Hadhari Edisi Khas Special Edition* (2017).

³¹ Zulkifli Mohamad al-Bakri, "Pernikahan dengan Individu Autisme," 2023, 3/10/2024, <https://maktabahalbakri.com/2306-pernikahan-dengan-individu-autisme/#>.

³² Jabatan Mufti Negeri Perlis, "Fatwa Perkahwinan Pasangan Autisme," 2023, accessed 3/10/2024, <https://muftiperlis.gov.my/index.php/himpunan-fatwa-negeri/847-fatwa-perkahwinan-pasangan-autisme>.

systematic and scientific behavioral assessment, using data collection and analysis to obtain treatment results and evaluate progress.³³

Objectives of ABA Therapy

ABA therapy targets behavior modification, improving communication skills, social skills, self-care skills, and academic enhancement. The core objective of behavior modification in ABA therapy is to reduce problematic behaviors and encourage positive behaviors. This is implemented by identifying behaviors that are dangerous, disruptive, or hinder learning, then identifying the triggers for these behaviors, and subsequently replacing them with safer, constructive, and socially acceptable alternatives. Positive behaviors are rewarded, while negative behaviors are discouraged. ABA therapy also aims to improve communication skills. For individuals with ASD, communication is a significant challenge. ABA therapy uses strategies such as discrete trial training and natural environment teaching to enhance verbal and non-verbal communication skills.³⁴ Closely related to communication is the development of social skills. ABA interventions are designed to teach social interaction skills, ranging from basic skills like making eye contact to more complex ones like understanding and responding to social cues.³⁵

Another goal of ABA is to foster self-care skills such as dressing, managing personal hygiene, and using the bathroom independently. By breaking down these skills into manageable steps and teaching them frequently, ABA helps individuals become more independent. Additionally, ABA targets academic improvement for individuals with ASD by enhancing attention, concentration, social skills, and memory.

ABA Therapy Methods

ABA therapists assess an individual's needs and ability levels and design therapy programs with specific treatment goals that typically focus on several skill areas such as communication, social skills, self-care, play and leisure, motor skills, learning, and academic skills. In ABA, therapy sessions are usually conducted one-on-one between the student and therapist. This one-to-one ratio allows for more intensive focus and management. Therapists can provide individual attention and adapt ABA techniques based on each student's needs and responses. This facilitates more accurate behavioral analysis. Moreover, the 1:1 ratio enables consistent prompting and reinforcement, subsequently providing significant positive effects on academic outcomes.³⁶

³³ Baer, Wolf, and Risley, "Some Current Dimensions of Applied Behavior Analysis."

³⁴ M. L. Sundberg and J. W. Partington, *Teaching Language to Children with Autism or Other Developmental Disabilities* (Concord: AVB Press, 2010).

³⁵ Ron Leaf, John McEachin, and Jaisom D. Harsh, *A Work in Progress: Behavior Management Strategies & a Curriculum for Intensive Behavioral Treatment of Autism* (New York: Different Roads to Learning, Inc, 1999).

³⁶ Aaron Ng, "5 Reasons Why One-to-One ABA Therapy is More Effective," 2023, accessed 3/10/2024, <https://fitin.edu.my/2023/02/03/why-one-to-one-aba-therapy-is-effective/>.

ABA therapy uses the Antecedent-Behavior-Consequence (ABC) model to analyze and modify behavior³⁷. Antecedent refers to events or situations that occur before the behavior, such as requests or feelings. Behavior is the targeted behavior being observed and analyzed, such as maladaptive behaviors in autistic children. Consequence is the event or outcome that follows the behavior, which can be modified to reduce the occurrence of the behavior. ABA therapists focus on analyzing ABC to understand the function of behavior and determine appropriate consequences for behavior change. Understanding the cause and effect of behavior is crucial in ABA for therapists to manipulate them to effectively modify behavior. Manipulation techniques include providing reinforcement and punishment. Reinforcement and punishment can be positive or negative. All reinforcement (positive or negative) increases the likelihood of behavioral response. All punishment (positive or negative) decreases the likelihood of behavioral response. However, punishment is only used when various reinforcement strategies are ineffective. When punishment is used, it should always be combined with reinforcement for other more appropriate behaviors³⁸. The choice between reinforcement and punishment should be tailored based on the individual's unique needs, preferences, and specific targeted behaviors.³⁹

Effect	Reinforcement	Punishment
Positive	Something is given to increase the likelihood of a behavior. Example: Praise, smiles, stickers, or toys are provided when the desired behavior is successfully performed.	Something is given to decrease the likelihood of behavior. Example: If a child exhibits undesired behavior, the therapist will extend the training time.
Negative	Something is removed to increase the likelihood of a behavior. Example: Homework is waived if the desired behavior is successfully performed.	Something is removed to decrease the likelihood of a behavior. Example: If a child exhibits undesired behavior, tokens will be taken away.

Table 1: Positive and Negative Reinforcement and Punishment.

Learning in ABA is conducted in stages. Skills to be learned are broken down into small steps that are taught gradually according to the level of difficulty and the student's ability. Each step has set performance criteria that must be achieved before the student moves to the next step. When a student successfully masters a step, it is reinforced with positive reinforcement. This increases motivation to continue

³⁷ Cooper, Heron, and Heward, *Applied Behavior Analysis*.

³⁸ Jami Hardy, "ABA Behind the Scenes: Punishment and How Behavior Changes," 2019, accessed 3/10/2024, <https://www.verbalbeginnings.com/aba-blog/aba-behind-the-scenes-punishment-and-how-behavior-changes/>.

³⁹ Bhavika Bhasin, "Reinforcement vs Punishment in ABA Therapy," accessed 3/10/2024, <https://autismcoe.com/blog/aba-therapy/reinforcement-vs-punishment-in-aba-therapy/>.

learning. The rate of learning and assistance is adjusted according to individual progress. Prompts and assistance are gradually reduced as the student becomes more proficient (fading).

One important objective of ABA is ensuring the generalization of taught skills to new situations and maintenance. For this purpose, therapists match stimuli in therapy sessions with natural stimuli in the real environment. This method trains students to respond correctly and independently in various situations, facilitating skill generalization. Learned behaviors are applied in new environments or situations, ensuring that skills are practical and not limited to therapy session settings alone.

Continuous measurement of behavioral data is a crucial component of ABA. It helps therapists monitor the development and progress of individuals with ASD throughout the treatment period. Behavioral data is collected before, during, and after intervention. This data is then analyzed to evaluate the effectiveness of an ABA technique. This objective and continuous data evaluation allows ABA to be modified based on individual responses, ensuring that treatment remains effective and achieves learning objectives.

Effectiveness of ABA

Among the early studies on the implementation of ABA as an intervention for autistic children was conducted by Wolf et al.⁴⁰ This study proved that ABA techniques were effective in reducing aggressive behavior, self-injury, and non-compliance. ABA therapy has also been found effective in improving social skills,⁴¹ communication skills,⁴² language skills,⁴³ and subsequently improving the quality of life for individuals with ASD.

Comprehensive ABA-based interventions have shown improvement effects on intellectual function and adaptive behavior in children with ASD⁴⁴ as well as

⁴⁰ Montrose Wolf, Todd Risley, and Hayden Mees, "Application of Operant Conditioning Procedures to the Behaviour Problems of an Autistic Child," *Behaviour Research and Therapy* 1, no. 2-4 (1963).

⁴¹ Daniela Mece and Edo Sherifi, "Effectiveness of the ABA Method and Individual Education Programs for the Treatment of Autistic Children: A Case Study," *Journal of Educational and Social Research* 12, no. 3 (2022), <https://doi.org/10.36941/jesr-2022-0077>; Ratna Sari Hardiani and Sisiliana Rahmawati, "Metode ABA (Applied Behaviour Analysis): Kemampuan Bersosialisasi Terhadap Kemampuan Interaksi Sosial Anak Autis," *Jurnal Keperawatan Soedirman* 7, no. 1 (2012).

⁴² Peter Vietze and Leah Esther Lax, "Early Intervention ABA for Toddlers with ASD: Effect of Age and Amount," *Current Psychology* 39 (2020).

⁴³ Mece and Sherifi, "Effectiveness of the ABA Method and Individual Education Programs for the Treatment of Autistic Children: A Case Study."

⁴⁴ Theresa Eckes et al., "Comprehensive ABA-Based Interventions in the Treatment of Children with Autism Spectrum Disorder – A Meta-Analysis," *BMC Psychiatry* 23 (12), pmid = 36864429, publisher = BioMed Central Ltd 2023); Vietze and Lax, "Early Intervention ABA for Toddlers with ASD: Effect of Age and Amount."

increased attention span⁴⁵. The study by Vietze & Lax⁴⁶ also proved that early ABA intervention showed significant reduction in ASD symptoms and barriers to learning, especially among young children who began receiving treatment at 28 months or earlier. ABA therapy has also been proven successful in improving gross motor skills and fine motor skills of children with ASD⁴⁷. Although ABA interventions have proven effective, Cerasuolo et al.⁴⁸ state that the effects of ABA are not the same for all children, and the issue of choosing the most suitable intervention remains challenging.

A study conducted by Leif et al.⁴⁹ on 126 families with ASD children found that they felt their children would be more independent and have more opportunities to socialize. Additionally, this study also showed that the level of emotional stress of individuals with ASD and caregivers in managing ASD children decreased after the children underwent ABA therapy.

Due to the effectiveness of ABA therapy, it is widely considered as the gold standard intervention, capable of improving the functional status, behavior, and communication of individuals with ASD⁵⁰. It is also recognized by the American Psychological Association⁵¹ as an evidence-based best practice treatment. This means that the principles of ABA analysis, developed and studied by psychology and efficiently applied in the treatment of various disorders based on this research, clearly fall within the scope of the discipline of psychology and are an integral part of the psychology discipline.

The Role of ABA in Preserving Religion (*Hifz al-Din*)

Maqāṣid al-sharī'ah refers to the main objectives or purposes behind Islamic law, which are to achieve benefits (*maslahah*) and avoid harm (*mafsadah*). The application of *maqāṣid al-sharī'ah* knowledge has now been expanded to other fields, particularly those closely related to human welfare such as justice systems, medicine, education, and others. In the discourse of *maqāṣid al-sharī'ah*, there are

⁴⁵ Titisa Ballerina, "Meningkatkan Rentang Perhatian Anak Autis dalam Pembelajaran Pengenalan Huruf," *Inklusi: Journal of Disability Studies* 3, no. 2 (2016).

⁴⁶ Vietze and Lax, "Early Intervention ABA for Toddlers with ASD: Effect of Age and Amount."

⁴⁷ Atik Badi'ah et al., "The Effect of Applied Behavior Analysis on the Gross Motor Development of Autistic Children," *Open Access Macedonian Journal of Medical Sciences* 9, no. T4 (2021); Alan Patricio da Silva et al., "Applied Behavioral Analysis for the Skill Performance of Children with Autism Spectrum Disorder," *Frontiers in Psychiatry* 14 (2023).

⁴⁸ Mariangela Cerasuolo et al., "Examining Predictors of Different ABA Treatments: A Systematic Review," *Behavioral Sciences* 12, no. 8 (2022).

⁴⁹ Erin Leif, Russell Fox, and Bradley Bloomfield, "Applied Behaviour Analysis, Autism, and a Response to Recent Controversies," 2022, accessed 3/10/2024, <https://lens.monash.edu/@education/2022/06/24/1384821/applied-behaviour-analysis-autism-and-a-response-to-recent-controversies>.

⁵⁰ Qian Yu et al., "Efficacy of Interventions Based on Applied Behavior Analysis for Autism Spectrum Disorder: A Meta-Analysis," *Psychiatry Investigation* 17, no. 5 (2020).

⁵¹ American Psychological Association, "APA policy: Applied Behavior Analysis," 2017, accessed 3/10/2024, <https://www.apa.org/about/policy/applied-behavior-analysis>.

five essential human needs that are aimed to be preserved (*kulliyat khams*), namely preserving religion (*hifz al-din*), preserving life (*hifz al-nafs*), preserving intellect (*hifz al-'aql*), preserving lineage/dignity (*hifz al-nasl/al-'irdh*), and preserving wealth (*hifz al-mal*). ABA Therapy as an ASD Treatment is seen to meet the preservation of all these five *kulliyat khams*

The preservation of religion (*hifz al-din*) is the most important aspect of *maqāṣid al-sharī'ah*. ABA therapy plays a crucial role in helping individuals with ASD understand and practice religious teachings, in line with this principle of preserving religion.

a. ABA Therapy as an Effective Method of Religious Teaching

According to Ahmad Ma'ruf and Lailatul Maghfiroh⁵², the ABA method is proven to help children with ASD by stimulating their brains to receive Islamic religious education lessons and subsequently provide good responses. This is because ABA offers a highly effective structured teaching approach to teach religious concepts to individuals with ASD. Key techniques used include task breakdown, where complex religious concepts are divided into smaller, more understandable parts, allowing individuals with ASD to master each component gradually. ABA also emphasizes the importance of repetition, where important concepts are consistently repeated through various means such as interactive activities or visual materials, to ensure deep understanding and long-term retention. Additionally, positive reinforcement techniques are used to increase learning motivation, where individuals are rewarded when they demonstrate correct understanding or practice of religious concepts. These rewards not only encourage learning but also help increase interest in religious education. Islamic religious education for individuals with ASD aims to raise religious awareness in life, increase independence, help obtain a meaningful life, build spiritual aspects, and form a strong and good personality, ultimately achieving happiness in this world and the hereafter. This simultaneously fulfills the main purpose of syariah in preserving human welfare in all aspects of life.

ABA therapy has also been found effective in helping children with ASD read the Qur'an. The skill of reading the Qur'an begins with recognizing and reading Arabic letters, but for children with ASD, it is a difficult skill due to their reading deficiencies.⁵³ The effectiveness of the ABA method in introducing Arabic letters to children with ASD can be seen within 1-3 months, taking only 5-10 minutes per session with 2-3 letters taught each time.⁵⁴

⁵² Ahmad Ma'ruf and Lailatul Maghfiroh, "Penggunaan Metode ABA (Applied Behavior Analysis) untuk Meningkatkan Pemahaman Anak Autis pada Pembelajaran Pendidikan Agama Islam di SLB Negeri Pandaan," *Al-Murabbi: Jurnal Pendidikan Agama Islam* 2, no. 2 (2017).

⁵³ Rudy Sutadi, Anizar Rahayu, and Alam Zeb Khattak, "The Effectiveness of Smart ABA (Smart Applied Behavior Analysis) in Teaching Children with ASD (Autism Spectrum Disorder) Reading the Arabic Alphabet" (Proceeding of the International Conference on Multidisciplinary Research for Sustainable Innovation, 2024).

⁵⁴ Nur Ratih Arifah, Rohimin, and Nelly Marhayati, "Penggunaan Metode ABA untuk

b. ABA Therapy Enhances the Ability to Perform Worship

ABA therapy has the potential to positively impact the ability of individuals with ASD to perform worship through four aspects. First, ABA therapy has been proven successful in improving gross motor skills and fine motor skills for children with ASD⁵⁵. In the context of Muslim worship, these gross and fine motor skills are important for the performance of worship. Gross motor skills are needed for large movements such as standing, bowing, and prostrating in prayer. Fine motor skills are needed for small and precise movements such as properly washing body parts during ablution, arranging fingers when sitting in *tahiyat*, and holding and turning pages of the Qur'an. Both types of skills ensure that worship can be performed correctly and perfectly.

Second, discipline and routine formation through ABA can help the ability of individuals with ASD to perform daily routine worship such as five daily prayers, daily supplications, and daily remembrances. ABA helps children with ASD form their daily routine activities through several structured approaches and tools such as visual schedules. By providing visual cues and step-by-step instructions, visual schedules can help children understand the sequence of activities that need to be done throughout the day. Consistent and structured visual schedules also help children with ASD reduce anxiety with any changes or uncertainties and increase their independence.⁵⁶

Third, ABA therapy, which has been found to increase the attention span of children with ASD,⁵⁷ can also help increase concentration in worship. Fourth, the reduction of disruptive behaviors such as repetitive movements or aggressive behavior can help facilitate the performance of worship, especially in group situations such as congregational prayers.

The Role of ABA in Preserving Life (*Hifz al-Nafs*)

The preservation of life (*hifz al-nafs*) is the second most important aspect in *maqāṣid al-sharī'ah* after the preservation of religion. ABA therapy not only helps support the well-being of individuals with ASD but also supports the well-being of caregivers, family members, and society surrounding individuals with ASD.

a. ABA Reduces Harmful Behaviors

Self-injurious behavior (SIB) by children with ASD, such as hair pulling, head hitting, biting, choking, skin scratching, and head banging against hard surfaces, can result in serious injuries, including tissue damage, bone fractures, and

Mengenalkan Huruf Hijaiyah pada Anak Autisme di Yayasan Sahabat Rakyat Sejahtera Bengkulu Utara," *Journal on Education* 5, no. 3 (2023).

⁵⁵ Badi'ah et al., "The Effect of Applied Behavior Analysis on the Gross Motor Development of Autistic Children."; Silva et al., "Applied Behavioral Analysis for the Skill Performance of Children with Autism Spectrum Disorder."

⁵⁶ S. Dettmer et al., "The Use of Visual Supports to Facilitate Transitions of Students with Autism," *Focus on Autism and Other Developmental Disabilities* 15, no. 3 (2000).

⁵⁷ Ballerina, "Meningkatkan Rentang Perhatian Anak Autis dalam Pembelajaran Pengenalan Huruf."

even brain injury. SIB can also lead to death if the behavior is not stopped⁵⁸. In addition to self-harm, children with ASD can also act aggressively, endangering those around them by hitting, kicking, biting, or physically injuring others.⁵⁹

SIB and aggressive behavior are expressions of frustration in children with ASD due to their inability to communicate and convey their desires or pain⁶⁰. Social attention given after SIB can also increase the frequency of this behavior. It is also used to obtain desired objects or to avoid unwanted social encounters⁶¹. Individuals with ASD may also self-harm as a way to increase or decrease their sensory stimulation levels. ABA has been proven effective in reducing aggressive behavior in children with ASD⁶². ABA therapy can help children replace these dangerous behaviors with safer ones by rewarding positive behavior. The improvement in communication skills obtained through ABA therapy can also help children with ASD stop these life-threatening behaviors.

b. ABA Helps Children with ASD Obtain Good Nutritional Food for Their Bodies

Children with ASD are more likely to be picky eaters compared to typical children.⁶³ They tend to choose soft-textured foods like purees and consume less fruits, dairy, vegetables, protein, and starch.⁶⁴ More concerningly, children with ASD tend to choose high-calorie and low-nutrient foods like candies and other snacks⁶⁵. This poor eating pattern affects nutrient intake, impacts physical development, and leads to more social, learning, and behavioral problems.

Children with ASD struggle to accept any changes in food types. They are rigid with the same types of food and reject variety. Sensory processing issues also contribute to this problem, where some are very sensitive to food texture, appearance, taste, smell, and temperature⁶⁶. Additionally, more frequent digestive system

⁵⁸ Joseph Guan and Guohua Li, "Injury Mortality in Individuals with Autism," *American Journal of Public Health* 107, no. 5 (2008).

⁵⁹ Suhaily Md Shamsudin and Siti Syuhada Abd Rahman, "Public Awareness on The Characteristics of Children with Autism in Selangor," *ATTARBAWIY: Malaysian Online Journal of Education* 1, no. 2 (2017).

⁶⁰ Gary Shkedy, Dalia Shkedy, and Aileen H. Sandoval-Norton, "Treating Self-Injurious Behaviors in Autism Spectrum Disorder," *Cogent Psychology* 6, no. 1-9 (2019).

⁶¹ Noha Minshawi et al., "The Association between Self-Injurious Behaviors and Autism Spectrum Disorders," *Psychology Research and Behavior Management* 12, no. 7 (2014).

⁶² Wolf, Risley, and Mees, "Application of Operant Conditioning Procedures to the Behaviour Problems of an Autistic Child."

⁶³ Linda G. Bandini et al., "Food Selectivity in Children with Autism Spectrum Disorders and Typically Developing Children," *The Journal of Pediatrics* 157, no. 2 (2010).

⁶⁴ Amy Tanner and Bianca E Andreone, "Using Graduated Exposure and Differential Reinforcement to Increase Food Repertoire in a Child with Autism," *Behavior Analysis in Practice* 8, no. 2 (2015).

⁶⁵ Kathryn M Peterson, Cathleen C Piazza, and Valerie M Volkert, "A Comparison of a Modified Sequential Oral Sensory Approach to an Applied Behavior Analytic Approach in the Treatment of Food Selectivity in Children with Autism Spectrum Disorder," *Journal of Applied Behavior Analysis* 49, no. 3 (2016).

⁶⁶ Sharon A. Cermak, Carol Curtin, and Linda G. Bandini, "Food Selectivity and Sensory

problems among children with ASD, motor issues affecting chewing and swallowing,⁶⁷ behavioral challenges during meals,⁶⁸ and traumatic eating experiences⁶⁹ are factors causing children with ASD to be picky eaters.

ABA therapy is effective in increasing dietary diversity among children with ASD⁷⁰ through techniques of gradual exposure to new foods, use of visual supports, positive reinforcement, and creating consistent meal schedules. A balanced and nutritious diet for children with ASD helps preserve life by ensuring physical health and preventing chronic diseases. Good nutrition enhances immunity, brain function, and quality of life for the child. This aligns with the *maqāṣid al-sharī'ah* in maintaining the well-being and health of children with ASD.

The Role of ABA in Preserving Intellect (*Hifz al-'Aql*)

The preservation of intellect is one of the *maqāṣid al-sharī'ah* to achieve human welfare in this world and the hereafter. ABA can be seen as an effective therapy in developing and protecting the intellectual potential of individuals with ASD.

a. ABA Enhances Cognitive Function Development in Individuals with ASD

Cognitive function refers to the mental processes involved in acquiring knowledge, manipulating information, and reasoning.⁷¹ Children with ASD experience deficits in neurocognitive and social cognitive functions,⁷² both of which are important brain skills in daily life. Neurocognitive functions help humans plan, remember, think flexibly, control actions, and monitor behavior in ever-changing environments. Meanwhile, social cognition allows us to understand the social world, including the ability to perceive social situations, recognize others' emotions, and

Sensitivity in Children with Autism Spectrum Disorders," *Journal of the American Dietetic Association* 110, no. 2 (2010).

⁶⁷ Melanie H. Bachmeyer et al., "Functional Analysis and Treatment of Multiply Controlled Inappropriate Mealtime Behavior," *Journal of Applied Behavior Analysis* 42, no. 3 (2009), <https://doi.org/10.1901/jaba.2009.42-641>; Rinita B. Laud et al., "Treatment Outcomes for Severe Feeding Problems in Children With Autism Spectrum Disorder," *Behavior Modification* 33, no. 5 (2009).

⁶⁸ Jewel Elias Crasta et al., "Feeding Problems among Children With Autism in a Clinical Population in India," *The Indian Journal of Pediatrics* 81, 2 (2014), <https://doi.org/10.1007/s12098-014-1630-1>; Lucia Margari et al., "Eating and Mealtime Behaviors in Patients with Autism Spectrum Disorder," *Neuropsychiatric Disease and Treatment* 11, no. 16 (2020).

⁶⁹ Bachmeyer et al., "Functional Analysis and Treatment of Multiply Controlled Inappropriate Mealtime Behavior."

⁷⁰ Kathryn M Peterson et al., "Randomized Controlled Trial of an Applied Behavior Analytic Intervention for Food Selectivity in Children with Autism Spectrum Disorder," *Journal of Applied Behavior Analysis* 52, no. 4 (2019), <https://doi.org/10.1002/jaba.650>; Tanner and Andreone, "Using Graduated Exposure and Differential Reinforcement to Increase Food Repertoire in a Child with Autism."

⁷¹ Kim M. Kiely, "Cognitive Function," in *Encyclopedia of Quality of Life and Well-Being Research*, ed. Alex C. Michalos (Springer, 2014).

⁷² Tjasa Velikonja, Anne-Kathrin Fett, and Eva Velthorst, "Patterns of Nonsocial and Social Cognitive Functioning in Adults with Autism Spectrum Disorder," *JAMA Psychiatry* 76, no. 2 (2019).

understand their thoughts and feelings.⁷³ Both these skills are crucial for effective social interaction and for navigating daily life successfully.

ABA therapy uses several methods to help children with ASD improve their cognitive skills. Discrete Trial Training (DTT) breaks down complex skills into small parts and teaches them repeatedly, effectively improving attention, memory, and language skills. Pivotal Response Training (PRT) encourages learning through play, reinforcing behavioral flexibility and problem-solving skills. Verbal Behavior Therapy (VBT) helps improve language and communication skills, thus expanding children's understanding and expression of thoughts. Social Skills Training teaches ways to interact with others, such as initiating conversations and recognizing social cues. Functional Communication Training (FCT) helps children express their needs in better ways. All these methods are tailored to each child's needs. By using these methods, ABA therapy helps improve children's cognitive function, which in turn helps them be more successful in school learning, aligning with the principle of protecting the intellect (*hifz al-'aql*) in *maqāṣid al-sharī'ah*.

b. ABA Improves Mental Health of Individuals with ASD and Caregivers

Maintaining mental health is included in the syariah objective of preserving the intellect. It is estimated that 70% of children with ASD have psychiatric comorbidities.⁷⁴ Among the psychosocial problems occurring due to ASD symptoms are anxiety disorders and depression.

Anxiety disorders stem from the failure of children with ASD to function or socialize normally in typical situations. For example, a child with social skills deficits may feel anxious in certain social situations due to previous social failures. Therefore, by improving social skills through ABA therapy, individuals with ASD can interact better and reduce anxiety in social situations.

Individuals with ASD are four times more likely to experience depression throughout their lifetime compared to individuals without ASD.⁷⁵ Among the causes of depression in individuals with ASD are social rejection and isolation by those around them.⁷⁶ Deficits in social communication skills also expose individuals with ASD to frequent negative social experiences such as bullying⁷⁷ which ultimately

⁷³ Melek Hajri et al., "Cognitive Deficits in Children with Autism Spectrum Disorders: Toward an Integrative Approach Combining Social and Non-Social Cognition," *Frontiers in Psychiatry* 13 (2022).

⁷⁴ Emily Simonoff et al., "Psychiatric Disorders in Children with Autism Spectrum Disorders: Prevalence, Comorbidity, and Associated Factors in a Population-Derived Sample," *Journal of the American Academy of Child & Adolescent Psychiatry* 47, no. 8 (2008).

⁷⁵ Chloe C. Hudson, Layla Hall, and Kate L. Harkness, "Prevalence of Depressive Disorders in Individuals with Autism Spectrum Disorder: A Meta-analysis," *Journal of Abnormal Child Psychology* 47, no. 1 (2019).

⁷⁶ Gloria T. Han, Andrew J. Tomarken, and Katherine O. Gotham, "Social and Nonsocial Reward Moderate the Relation between Autism Symptoms and Loneliness in Adults with ASD, Depression, and Controls," *Autism Research* 12, no. 6 (2019).

⁷⁷ Michelle Menezes et al., "Treatment of Depression in Individuals with Autism Spectrum Disorder: A Systematic Review," *Research in Autism Spectrum Disorders* 78, 101639 (2020).

contribute to depressive disorders. ABA can help treat depression by encouraging individuals with ASD to engage in enjoyable leisure activities, reinforcing positive behaviors, and reducing challenging behaviors, all of which can improve their mood and well-being.⁷⁸

Parents of children with ASD also experience high levels of psychological stress⁷⁹ compared to parents of children with other disabilities.⁸⁰ The level of disruptive and aggressive behavior in children, stemming from difficulties in emotional regulation, is found to be directly proportional to the level of stress experienced by parents.⁸¹ Prolonged stress can lead to mental health problems such as depression, addiction, and suicidal tendencies⁸². The study by Leif et al.⁸³ shows that the level of emotional stress of caregivers of children with ASD decreases after the child undergoes ABA therapy. Parents also reported improvements in managing life and dealing with problematic behaviors of children with ASD in public places. Overall, many parents reported an improved quality of life, including a more positive outlook on their children's future.⁸⁴ The high level of parental satisfaction with ABA therapy also leads them to recommend ABA therapy to other parents.⁸⁵

The Role of ABA in Preserving Lineage and Dignity (*Hifz al-Nasl wa al-'Irdh*)

Adolescents with ASD sometimes engage in problematic sexual behaviors such as performing masturbation in public, engaging in premarital sex, dressing inappropriately in public, and violating others' honor.⁸⁶ These behaviors contradict the *maqāṣid al-sharī'ah* in preserving lineage and dignity. Individuals with ASD, biologically, experience the same sexual urges as others. However, they face challenges in understanding social norms and laws related to sexual behavior. They do not understand that these behaviors constitute an offense. They also cannot

⁷⁸ Maya Matheis and Nicole C. Turygin, "Depression and Autism," in *Handbook of Assessment and Diagnosis of Autism Spectrum Disorder*, ed. J. L. Matson, Autism and Child Psychopathology Series (Cham: Springer International Publishing, 2016).

⁷⁹ Annette Estes et al., "Parenting Stress and Psychological Functioning Among Mothers of Preschool Children with Autism and Developmental Delay," *Autism* 13, no. 5 (2009).

⁸⁰ Michael Weinberg et al., "The Relationship between Parental Stress and Mastery, Forgiveness, and Social Support among Parents of Children with autism," *Research in Autism Spectrum Disorders* 81, 101712 (2021).

⁸¹ Amy S. Weitlauf et al., "Mindfulness-Based Stress Reduction for Parents Implementing Early Intervention for Autism: An RCT," *Pediatrics* 145, 1 (2020).

⁸² Yasuhiro Kotera et al., "Mental Well-Being of Czech University Students: Academic Motivation, Self-Compassion, and Self-Criticism," *Healthcare* 10, no. 11 (2022).

⁸³ Leif, Fox, and Bloomfield, "Applied Behaviour Analysis, Autism, and a Response to Recent Controversies."

⁸⁴ Catherine McPhilemy and Karola Dillenburger, "Parents' Experiences of Applied Behaviour Analysis Based Interventions for Children Diagnosed with Autistic Spectrum Disorder," *British Journal of Special Education* 40, no. 4 (2013).

⁸⁵ McPhilemy and Dillenburger, "Parents' Experiences of Applied Behaviour Analysis Based Interventions for Children Diagnosed with Autistic Spectrum Disorder."

⁸⁶ Zuliza Mohd Kusrin et al., "Individu Autisme dan Perlakuan Melanggar Undang-Undang," *Kanun* 31, no. 2 (2019), https://myjurnal.mohe.gov.my/filebank/published_article/98618/02.pdf.

comprehend that their behavior is disliked by victims or those around them due to their social cognitive developmental issues.

ABA therapy through the social story method has been found effective in addressing sexual behaviors of adolescents with ASD⁸⁷. Social story is a technique that uses short stories to teach social skills to individuals with ASD. To address sexual behavior, social stories can be used to explain social norms, teach privacy, clarify bodily changes during puberty, and teach boundaries in relationships. These stories can also illustrate appropriate behaviors in expressing affection, managing sexual urges, and maintaining personal safety.

The Role of ABA in Preserving Wealth (*Hifz al-Mal*)

Studies show that the employment rate of individuals with ASD is very low.⁸⁸ This is due to lack of support to help individuals with ASD obtain employment,⁸⁹ low education levels,⁹⁰ limited cognitive abilities, mental health issues, low language skills, and inappropriate behaviors.⁹¹

ABA therapy has shown positive impacts on the ability to work and be independent for individuals with ASD. A study by Wehman et al. found that ABA-based interventions can improve vocational skills and employability of individuals with ASD,⁹² thus opening up more job opportunities for them. Individuals with ASD who receive ABA therapy also show significant improvements in independent living skills, enabling them to manage daily life more effectively.⁹³ As a result, this increased ability to work and be independent can enhance the income potential of individuals with ASD. From an Islamic perspective, this improvement in the ability to earn a living and manage wealth aligns with the principle of wealth preservation (*hifz al-mal*) in *maqāṣid al-sharī'ah*.

Conclusion

Based on the analysis, this study proves that ABA therapy plays a crucial role in helping individuals with ASD achieve the objectives of *maqāṣid al-sharī'ah*. ABA therapy contributes positively to all five main aspects of *maqāṣid al-sharī'ah*. First,

⁸⁷ Zuliza Mohd Kusrin et al., "Intervensi Individu dengan Autisme Berkaitan Tingkah Laku Seksual," *MANU* 31, no. 1 (2020), <https://jurcon.ums.edu.my/ojums/index.php/MANU/article/view/2156/1616>.

⁸⁸ Martin Knapp, Renee Romeo, and Jennifer Beecham, "The Economic Consequences of Autism in the UK," (2007). <https://www.researchgate.net/publication/30523445>.

⁸⁹ Patricia Howlin et al., "Adult Outcomes for Children with Autism," *Journal of Child Psychology and Psychiatry* 45, no. 2 (2004).

⁹⁰ Knapp, Romeo, and Beecham, "The Economic Consequences of Autism in the UK."

⁹¹ Alisha Ohl et al., "Predictors of Employment Status among Adults with Autism Spectrum Disorder," *Work* 56, no. 2 (2017).

⁹² Paul H. Wehman et al., "Competitive Employment for Youth with Autism Spectrum Disorders: Early Results from a Randomized Clinical Trial," *Journal of Autism and Developmental Disorders* 44, no. 3 (2014).

⁹³ Steven Zauderer, "Autism Life Skills: Daily Living Skills for Independence," 2024, accessed 3/10/2024, <https://www.crossrivertherapy.com/autism/autism-life-skills>.

in the aspect of preserving religion (*hifz al-din*), ABA therapy helps individuals with ASD understand and practice religious teachings better, including improving their ability to read the Quran and perform worship. Second, in the aspect of preserving life (*hifz al-nafs*), ABA is effective in reducing behaviors that harm oneself and others, and helps children with ASD obtain balanced nutrition for long-term health. Third, in the aspect of preserving intellect (*hifz al-'aql*), this therapy enhances cognitive function development and mental health not only for individuals with ASD but also for their caregivers, showing a positive impact on the overall support ecosystem. Fourth, in the aspect of preserving lineage and dignity (*hifz al-nasl wa al-'irdh*): ABA helps address problematic sexual behaviors through techniques such as social stories, helping individuals with ASD understand social norms and maintain personal dignity. Fifth, in the aspect of preserving wealth (*hifz al-mal*), ABA therapy improves the ability to work and be independent for individuals with ASD, thereby increasing their income potential. This study also concludes that ABA therapy for individuals with ASD can be categorized as a *hajiyat* (complementary) need in the context of *maqāṣid al-sharī'ah*. While not reaching the level of *daruri* (basic necessity), ABA significantly improves the quality of life for individuals with ASD and their families, reduces difficulties, and facilitates their lives in various aspects. In conclusion, this study highlights the importance of ABA therapy in the Islamic context, particularly in fulfilling the objectives of *maqāṣid al-sharī'ah* for individuals with ASD. It opens up space for further discussion on the integration of Islamic principles in ASD treatment and the potential development of religious education modules tailored for individuals with ASD. This study also supports the need to increase awareness and support for the use of ABA therapy in Muslim communities, while encouraging further research on the effectiveness and suitability of this therapy from an Islamic perspective.

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