

# Occupational Therapy Approaches in Supporting Students With Sensory Disorders in Islamic Education

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## ABSTRACT

This research aims to identify the specific sensory needs of Students with sensory impairment in SLB 2 Bantul, design an occupational therapy intervention model aligned with Islamic education's values and principles, and evaluate this intervention model's effectiveness in improving students' participation and academic achievement. This research uses a qualitative method with a descriptive approach, where data is collected through observation, in-depth interviews, and document studies. The results showed that sensory integration therapy, structured activity planning, and neurodevelopmental treatment (NDT) were used in the therapy process, involving collaboration between teachers and parents. In conclusion, this learning and therapy helps students with special needs achieve the education curriculum's spiritual, social, knowledge, and skills aspects. This research contributes to integrating occupational therapy's perspective in the context of Islamic education in Indonesia, which has not been widely explored.

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## 1. INTRODUCTION

Education is deliberate guidance or leadership by society towards the physical and spiritual growth of children towards the formation of their personality (Ravi, 2022; Usman et al., 2024). Every human being, including children with special needs or gifted children, has a basic right to education. "Every citizen has the right to obtain education," according to Article 31 Paragraph 2 of the 1945 Constitution. This is further stated in Law Number 20 of 2003 concerning the National Education System, Article 5 Paragraph 2 which states that "a State that has physical, spiritual, mental", intellectual, or social have the right to receive special education" (EMA ASKHABUL, 2019). The inability to maintain focus, regulate activity levels, and control impulsive behavior are

characteristics of attention-deficit hyperactivity disorder (ADHD) (Paule et al., 2000). The main characteristics of this disease include impulsivity, hyperactivity, and inattention. Various groups have been talking a lot about mental health issues. The positive effects of minor problems such as stress, depression, and similar situations (Bandura et al., 1999; Cormier, 2008).

In recent decades, inclusive education has become a global trend that is increasingly being adopted in various countries. This approach emphasizes the importance of providing equal opportunities for all students, including those with special needs, to learn together in a regular educational environment (Gal et al., 2010). In recent decades, inclusive education has become a global trend that is increasingly being adopted in various countries. This approach emphasizes the importance of providing equal opportunities for all students, including those with special needs, to learn together in a regular educational environment (Mitchell & Sutherland, 2020). Recent research from (Fastame, 2020) shows that appropriately designed occupational interventions can increase the participation and academic achievement of students with sensory impairments.

However, there are still gaps in the implementation of occupational therapy approaches in educational environments, especially in the context of Islamic education in Indonesia. A preliminary study conducted at SLB 2 Bantul revealed that there was a need to further explore how occupational therapy approaches could be integrated into the curriculum and teaching practices at the school.

By considering these gaps, this research intends to develop an occupational therapy intervention model that is in line with the values and principles of Islamic education. This approach is expected to facilitate the active participation of students with sensory disorders in the teaching and learning process, as well as improve their overall quality of life. By integrating an occupational therapy perspective in Islamic education, this research has the potential to make a significant contribution to advancing inclusive education in Indonesia.

The main aim of this research is to explore the role of occupational therapy in supporting students with sensory disorders in the context of Islamic education at SLB 2 Bantul. Specifically, this study aims to: (1) identify the specific sensory needs of students with sensory disorders at SLB 2 Bantul, and (2) design an occupational therapy intervention model that is in line with the values and student participation and academic achievement.

This research provides a novel contribution by integrating an occupational therapy perspective in the context of Islamic education in Indonesia. Although the occupational therapy approach has been widely adopted in other countries, its application in the Islamic education environment in Indonesia is still limited. This research will explore how occupational therapy principles can be aligned with Islamic educational values and practices, to provide holistic solutions for students with sensory disorders. In contrast to previous research which focused on the application of occupational therapy in a general education context, this research will explore how this approach can be adapted in an Islamic education environment. This involves a deep understanding of the values and principles of Islamic education, as well as how occupational therapy can be integrated in a harmonious and meaningful way. This research will also take into account cultural and social factors unique to the Indonesian context so that it can provide recommendations that are relevant and can be implemented effectively.

## 2. METHODS

This research uses a qualitative research method with a descriptive approach, namely an investigative method to understand and thoroughly characterize a situation or situation (Creswell, 2010). This kind of research falls into the category of field research. This research was conducted using a qualitative descriptive analysis approach method which generally uses a multimethod strategy. The methods used include observation, interviews, and document review of documentary studies, all of which strengthen, complement, and complement each other (Arikunto, 2019). Data for this research can come from official papers, images, field notes, observation notes, interview scripts, and other sources. The technique used to collect the data required in research is interviews. In this research, interviews were conducted in-depth, namely face-to-face and direct meetings which were carried out in stages (Moeloeng, 2017). The interview technique used by researchers is semi-structured interviews. Researchers start by asking a series of structured questions, and then gradually deepen each question by asking more questions (Emzir, 2014). Thus, the information collected may be related to the history of the institution studied, namely SLB 2 Bantul district. Bantul. Techniques used in developing sensory disorders include sensory integration, structured activities, relaxation techniques, and routine activity planning.

## 3. FINDINGS AND DISCUSSION

Learning activities are designed to help inclusive and other students master the basic skills of PAI subjects. For PAI teachers to fully achieve the basic skills, they must focus on teaching inclusive and other students the value of motivation, context, problem-solving, individualization, learning by doing, social relationships, and direction. Learning for students with disabilities in SLB 2 Bantul is in the spirit of empathy, proof, accountability, and rehabilitation. (Interview with the principal, 2023, 20.12-09.20). The Principal of SLB 2 Bantul conveyed the above explanation, following his explanation as follows:

*"To develop these skills, teachers must design teaching that prioritizes compassion. PAI teachers and inclusion teachers follow the principles of learning for students with disabilities, which include always providing motivation, directed learning, learning relationships with friends, doing, and individualism." (Interview with the principal, 2023, 20.12-09.20).*

Based on the data obtained at SLB 2 Bantul, researchers observed 2 children with sensory impairment. The therapy process is carried out 3 times a week with 45 minutes each meeting. SI therapy (Sensory Integration) 2 meetings and OT therapy (Occupational Therapy) 1 meeting

**Table 1 Research Subjects**

NO.	NAME	AGE
1.	F(Male)	12 Year
2.	A(Male)	10 Year

Table 1 shows the subjects in the research that has been conducted, namely 2 children who are participants in therapy with autism developmental disorders. The purpose of SI therapy at the SLB is so that children can control their motor skills, such as not being able to sit quietly, always

moving their hands, or having difficulty responding to movements. While OT therapy is a method of fine motor development for autistic children, OT therapy focuses on training the strength of their hand motor, the point is that OT therapy is given for supporting activities for fine motor development (Provost et al., 2007). According to Sujarwanto fine motor skills are the ability to effectively use appropriate motor skills, especially finger skills, to perform tasks such as pinching, sticking, and folding fingers (Kholik et al., 2024).

### **Impact of PAI Learning**

Students who learn can modify their cognitive structures through understanding, attitudes through habituation, and abilities through repeated practice. The criteria that can be used to determine the impact of PAI learning in inclusion classes include regular full inclusion classes, regular cluster inclusion classes, and individualized learning conducted at SLB 2 Bantul: KI 1 (Spiritual Aspect), KI 2 (Social Aspect), KI 3 (Knowledge Aspect), and KI 4 (Psychomotor Aspect). Through PAI learning, children can understand and live the teachings of the religion they adhere to (Alandejani, 2022; Chande, 2023).

This is based on an explanation of PAI teachers and school boundaries about the impact of learning, every learning target must be achieved by the first teacher (KI 1). learning targets must be achieved by the first teacher (KI 1) (Akbari & Sahibzada, 2020; Lubis et al., 2022). character development in students such as self-confidence, politeness, co-operation, tolerance, character development in students such as self-confidence, courtesy, cooperation, tolerance, honesty, and mutual love and respect is the second social component (KI 2) in learning. (KI 2) in PAI learning. Third (KI 3): Students' retention of the subjects they learn increased due to PAI learning. Fourth (KI 4): By utilizing the necessary information and skills, students can complete tasks in an authentic setting through PAI learning. As stated by the principal through an interview with the researcher as follows:

*"Learning objectives are focused on the achievement of K1 (spiritual aspects), K2 (social aspects), K3 (knowledge aspects), and K4 (skill aspects) as a result of the use of independent learning" (Interview with the principal, 2023, 20.12-09.20).*

PAI teachers also discuss the goals to be achieved after PAI learning, by outlining four milestones that students should be able to achieve, under the statement of the principal of SLB 2 Bantul. He explained as follows:

*"The four learning successes that I listed in the lesson plan K1 relating to respecting and upholding religious teachings are the foundation of PAI learning that needs to be achieved. Students who follow K2 learn values such as honesty, self-control, discipline, responsibility, politeness, tolerance, love, and respect for one another. Through PAI learning, students can recall the material they have learnt in K3, or knowledge, and K4, or skills, enabling them to practice and apply what they have learned." (Teacher interview, 2023, 20.12-10.00).*

### **Stages of Therapy**

Therapy is defined as healing, the Arabic term "*al-istisyfa*" (from the term *shafa-yasfi-syifa* which means to heal) is used to describe it. Another way to think of therapy is as an organized and deliberate effort to help clients overcome their difficulties. The goal of therapy is to maintain, improve, and restore the client's state so that their heart and mind can function as fully as possible

(Greenberg, 2004). The following steps represent the therapeutic process as observed in the field data. The initial step in the therapeutic process is to identify the children to put them into the right therapeutic category. In this SLB, the therapist first determines the child's abilities through assessment. The therapist may determine that a child's fine motor skills are lacking if he or she is unable to write or has difficulty grasping writing utensils (Kapaun, 2007). In addition, the therapist prepares the facilities and infrastructure needed for the therapy. Based on the author's observations, this institution has all the necessary facilities and infrastructure, including play equipment, tables, and chairs.

The following are several ways and strategies for handling sensory integration occupational therapy:

### **Sensory Integration**

Fundamental theories of central nervous system flexibility, progressive development, central nervous system theory, systems and organization, adaptive responses, and internal drives are components of sensory integration (Schmidt, 1989, Janecka, 2015). The idea that the nervous system can adapt to increased sensory input a phenomenon known as neuroplasticity provides a reasonable justification for sensory integration interventions. Rich experiences and sensory input will help brain synaptogenesis develop. According to developmental growth theory, sensory integration occurs when a child begins to understand and master sensory input naturally (Leisman et al., 2015). While tactile input for hand and mouth exploration begins to develop at 12 weeks gestation, vestibular function emerges during 9 weeks and results in the Moro reflex. The child's sensory system will continue to develop as they grow older. According to the system and structure theory of the central nervous system, the brainstem and subcortical levels are thought to be where the integration of sensory processing takes place..

Some elements exist in sensory integration therapy, namely (Camarata et al., 2020): 1) Providing sensory stimulation: Providing opportunities for children to experience a variety of sensory experiences, including tactile, vestibular, and/or proprioceptive; interventions involve more than one sensory modality (Reynolds et al., 2017). Cooperation in making activity choices: Invite children to play an active role in the therapy process, provide opportunities for children to control the activities carried out, and do not set schedules and therapy plans without involving children.

### **Supporting optimal stimulation**

Ensure that the therapy environment is conducive to achieving or maintaining optimal stimulation, by changing the environment or activities to attract children's attention, engagement, and comfort.

### **Maximizing child success**

Providing or modifying the activity so that the child can succeed at part or all of the activity, resulting in a response to the challenge (Lequia et al., 2012).

An intervention strategy called sensory integration occupational therapy (SIOT) is used to help people, especially children, process and manage sensory input from their environment (Kashefimehr et al., 2018). Children who have difficulty understanding, interpreting, or reacting to touch, sound, light, or movement may find this therapy helpful. Through this sensory

integration, it will be easier for teachers to overcome sensory disorders in children (Etherington, 2012). However, it should be noted again that observation and evaluation are needed to detect sensory problems, this may require behavioral observation, parent or teacher interviews, and special tests. (Sue Stubbs, 2002).

The therapist then offers them a friendly greeting to create a relaxed and happy environment, high-fives them, or engages in other activities that can uplift and improve their mood during the implementation process. For example, therapy does not immediately offer certain activities if the child is still crying, but instead, it takes a moment to resolve the situation. Because the main obstacle that hinders the therapy process is the child's negative attitude. Children can be positioned on the floor instead of chairs. Without realizing it, medication has begun during this process, and as the child learns through everything they do, they become bored. Next, the children were entertained with various games, including putting together puzzles, putting rice into another container, using tongs, jumping on a trampoline, and climbing a balance board to walk on it. Researchers also interviewed teachers who conveyed the explanation above, as follows:

*"The main obstacle that hinders the therapy process is the child's negative attitude. Children can be positioned on the floor instead of chairs. Without realizing it, medication has begun during this process, and as the child learns through everything they do, they become bored." Furthermore, the children were entertained with various games, including putting together puzzles, putting rice into another container, using tongs, jumping on a trampoline, and climbing a balance board to walk on it" (interview with teacher, 2023, 20.12-10.00) .*

Two-way face-to-face communication occurs between the child and the therapist during the therapy process. When a child has difficulty with this two-way communication, therapists will sometimes use their fingers to help the child understand. The therapist thinks the child's lack of motivation stems from his negative mood. The child is reassured and given proper guidance by the therapist.

### **Structured Activity Planning**

The foundations of early childhood development shape experiences and determine the growth that children will bring to the next stage of life (Black et al., 2017). Early life experiences become the foundation for a child's future educational achievements and preparation. Some children face challenges in performing routine tasks once they reach the age of two. The difficulties currently faced by children who are healthy and normal but receive little stimulation, either due to misinformation from parents or caregivers or resistance to providing stimulation. Sensory in the early years.

However, research shows that it is a sensory experience that influences children's daily actions based on the extent to which their families provide them with experience, meaning, and emotion. Based on the results of the evaluation through occupational therapy, appropriate adjustments are needed to hone and train students' disturbed senses, plans are made to control and measure the recovery process felt by students (Christiansen et al., 2024). The role of teachers and parents is to work together to create alternatives in the form of games, sports, or sensory exercises. The researcher directly observed how the activity plan was made by the teacher to continue to hone and stabilize the sensory experience, but it did not take place instantly. Time and prolonged therapy are needed to help relieve the student's sensory disorders. This

structured activity planning was delivered by the teacher who explained the importance of creating structured activities to accompany all the activities that students will undertake later..

*"I provide structured activities for children so that they can be trained in moving their body parts for activities at school or outside school, it takes a long period of habituation and practice to be able to recover slowly for children who experience sensory disorders" (Interview with teacher, 2023, 12-20-10.00)*

### **Neuro Development Treatment (NDT)**

One of the popular therapeutic techniques in intervention strategies for infants and children with neuromotor dysfunction is called Neuro Development Treatment (NDT) (Girolami & Campbell, 1994). On the elements of the success rate of stimulation to increase muscle strength, namely early identification and early intervention carried out consistently with a duration of more than three weeks. The use of this therapy is an effort to shape and strengthen problematic muscles. This is an effort of teachers and parents who work together in overcoming sensory disorders in students, teachers at school help stabilize and provide convenience through alternative media to stabilize the disorders faced by students (Kegel, 1948).

The researcher argues that using this therapy as stimulation in implementing the therapy program, it is important to set up the environment in the room so that children, especially those with severe cerebral palsy, can focus on the task (Law et al., 2007). Of course, there are requirements for the type of room needed to conduct this therapy, such as the use of thick walls (except for rooms with temporary partitions), and a maximum capacity of two children per room with two therapists accompanying so that children can focus. Shared spaces are equipped with furniture and equipment that can be shared, and certain activities such as learning exercises in the environmental adaptation program require collaboration (Berkes, 2017). Activities involving eating and drinking can be done simultaneously. Patients can move more easily with the help of wooden or metal handles.

Children with Cerebral Palsy need handrails to help with mobility. Researchers concluded that through observation of the use of neurodevelopmental treatment as an effort made by teachers to help students who experience sensory disorders to be able to carry out normal activities, of course, it requires quite a long training to achieve normal criteria. Through interviews with teachers who explained the post-therapy conditions including:

*"Children who experience cerebral palsy should receive proper attention and treatment. It is hoped that their development after this therapy can help students in living their daily lives. We contribute and collaborate with students' parents to monitor their daily lives." (Interview with teacher 2023, 20.12-10.00)*

Therefore, the use of this therapy can help parents in overcoming disorders in children, assisted by teachers who communicate with each other to stabilize the disorders that exist in students.

## **4. CONCLUSION**

This research focuses on learning and therapy activities carried out at SLB 2 Bantul to help students with special needs, especially those experiencing sensory disorders. The therapy process is carried out three times a week with a duration of 45 minutes per session, including Sensory Integration Therapy (SI) twice and Occupational Therapy (OT) once. The main goal of this therapy

is to help students control their motor skills, such as not being able to sit still, always moving their hands, or having difficulty responding to movements.

In the therapy process, teachers and therapists use various approaches, such as Sensory Integration, Structured Activity Planning, and Neuro Development Treatment (NDT). Sensory Integration involves providing sensory stimulation, involving the child in choosing activities, creating an optimal environment, and maximizing the child's success. Structured Activity Planning involves structuring activities designed to train and control students' sensory impairments. Meanwhile, NDT is a popular therapeutic technique for intervention in infants and children with neuromotor dysfunction, to form and strengthen problematic muscles. Apart from that, this research also emphasizes the importance of collaboration between teachers and parents in the therapy process and monitoring student progress at home. The ultimate goal of this learning and therapy is to help students with special needs achieve the spiritual (KI 1), social (KI 2), knowledge (KI 3), and skills (KI 4) aspects expected in the educational curriculum.

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