



Fostering Social Skills with Assessment-Based Role-Playing Learning Method with Audio-Visual Media for Autistic Children in Inclusive Kindergarten

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Abstract. Children with autism spectrum disorder (ASD) are neurodevelopmental disorders characterized by deficits in social communication, interaction, and stereotypical behavior. The purpose of this study is to improve the social interaction skills of autistic children with an assessment-based macro role-playing method with audio-visual media in inclusive learning in Inclusive Kindergarten. The type of research is single-subject experimental research with an A-B-A design. Data is collected through behavioral assessments, checklists, and documentation in the aspects of socialization, interaction, and communication. The data were analyzed in a qualitative and quantitative descriptive manner. The results of the study show that the assessment-based macro role-playing method with audio-video media can improve the social interaction skills of autistic children in inclusive learning. With the method of macro role-playing-based assessment with audio-visual media, autistic children experience an increase in skills in social interaction with normal children in an inclusive classroom.

Keywords: Learning methods, role-playing-based assessment, audio-visual media, social skills, inclusive kindergarten.

1 Introduction

Autistic children show poor processing of social signals (i.e. about the social world) [1]; Children with ASD are neurodevelopmental disorders characterized by deficits in social communication, interaction, and stereotypical behaviors [2]; ASD is a neurodevelopmental condition that affects behavior, communication, and social interaction, and learning ability. Medical marijuana (MC) treatment may reduce clinical symptoms in individuals with ASD [3]. ASD is a neurodevelopmental disability associated with deficits in social interactions, unusual development of social communication, and limited or repetitive behaviors, interests, and activities [4]. But how do they learn through social interaction? Inclusive education includes integrating children with diverse learning needs, including autistic children, into regular classrooms. It aims to create a supportive and respectful environment where all children can learn together [5]. Inclusive class-

room learning provides many benefits, such as reducing stigma around autism, fostering positive relationships among students, and increasing autism knowledge and acceptance [6]. Teachers play an important role in creating inclusive classrooms by differentiating teaching based on students' interests and needs. They should also collaborate with family members of students with autism to better understand their specific needs. We are not aware of studies that looked at explicit learning of non-social material where social interaction provides a medium through which material can be learned. Thus, what remains unclear is whether the acquisition of non-social knowledge benefits from the same social interaction in autistic people as in NT during naturalistic interactions. To our knowledge, this question still needs to be explored empirically. [1]. By implementing inclusive practices, teachers can support the academic and social development of all children, including those with autism. Inclusive education is a right for children with autism and can lead to positive outcomes for all children involved.

Implementing inclusive learning for children with autism in inclusive Kindergartens involves creating an inclusive learning environment where all children, including those with autism, are involved in learning [7]. Inclusion can benefit all children and staff in schools, promote positive attitudes towards autism, and foster respectful relationships between children [5]. Teachers play an important role in creating an inclusive classroom atmosphere by differentiating instruction, teaching according to the child's interests and needs, and collaborating with family members to understand the specific needs of children with autism [8]. By differentiating the curriculum and providing options for children, teachers can ensure that children with autism are engaged and successful in their learning in an inclusive classroom environment [6]. Inclusive learning aims to reduce the stigma surrounding autism, teach all children positive social interactions, and increase knowledge about autism in the kindergarten environment.

The purpose of this study was to describe the support methods and interventions that teachers can use to help create social inclusion in kindergarten. To that end, we have leveraged the practical literature and research from early childhood education and early childhood special education to present various strategies to help children establish friendships and develop competencies in peer interaction. The principles and approaches are demonstrated through many illustrations based on observations in pre-school and elementary classrooms. Strategies to improve the social interaction skills of autistic children can be carried out through play therapy, collaborative project learning, and role-play methods. An intensive, interactive, and individual intervention approach (3i), which utilizes intensive developmental play therapy, has been shown to reduce the severity of ASD and improve social interaction skills [1]. Teaching and face-to-face interaction, either in person or through video calls, are optimal learning conditions for neurotypical and autistic individuals, leading to improved learning outcomes [5], [7]. Role-playing methods have also improved social skills, allowing children to practice and develop social-communicative skills such as mutual attention and social reciprocity [5]. This strategy provides opportunities for autistic children to engage in social interactions, develop communication skills, and learn how to interact with others successfully.

The stages of role-playing therapy to improve social interaction skills involve several steps. First, the therapist creates a safe and supportive environment for the participants [9]. This is important to ensure that individuals feel comfortable and willing to engage in role-playing activities. Furthermore, the therapist provides clear instructions and guidelines for role-playing scenarios [7]. This facilitates comprehension of the roles and objectives pertinent to therapy sessions among participants. Subsequently, participants engage in role-playing exercises, assuming diverse roles and practicing social interactions [10],[11]. Throughout this process, the therapist offers feedback and guidance to assist participants in enhancing their social skills [12]. Finally, therapy sessions can include debriefing and reflection, allowing participants to discuss their experiences and learn from each other. The macro role-playing learning method offers a structured and interactive approach to improving social interaction skills. Role-playing with audio-video media involves the use of recorded or live audio and video to simulate scenarios, allowing participants to act out assigned roles and engage in interactive learning.

Assessing the specific needs of autistic children for play therapy involves evaluating their baseline variables such as age, spoken language, gender, and intensity of treatment [3]. In a study using an Intensive, Interactive, and Individual intervention approach (3i), it was found that higher treatment intensity (more than 30 hours per week) was associated with a more significant reduction in ASD severity as measured by the autism diagnosis interview (ADI-R) revised interaction score [7]. In addition, children who were categorized as verbal subjects at the beginning showed better results in terms of interaction and communication scores on the childhood autism rating scale (CARS) and ADI-R. Older patients were also associated with a more significant decrease in ADI-R interaction scores; however, there was no impact on gender, severity of ASD, or comorbidities at the outset.

Assessment of the severity of ASD is usually carried out using standard tools such as the Childhood Autism Rating Scale (CARS) and the Autism Diagnostic Observation Schedule (ADOS-2) [3], [7]. These tools provide an objective measure of ASD symptoms and help doctors diagnose and evaluate the severity of the condition. CARS is a rating scale that assesses a wide range of ASD domains, including social interaction, communication, and repetitive behaviors [8]. ADOS-2 is a diagnostic tool that involves direct observation and interaction with individuals to assess social and recurrent social and behavioral effects. These tools have been widely used in research and clinical practice to provide standardized and reliable assessment of ASD severity, aiding in early detection, intervention planning, and monitoring treatment progress.

Implementing a special needs assessment for autistic children involves evaluating their developmental progress and identifying areas of concern. This assessment is usually carried out using standard tools such as the Childhood Autism Rating Scale (CARS) and the Autism Diagnostic Observation Schedule (ADOS-2) [7] [5]. This assessment measures various aspects of autism severity, including social effects, limited and repetitive behaviors, and overall calibrated severity scores [8]. The assessment process also considers sociocultural factors, such as the child's age, family background, and concerns reported by parents or caregivers. It is very important to consider the child's needs and adjust the assessment accordingly. The results of the assessment help

inform intervention strategies and support services for autistic children, ensuring that they receive appropriate and targeted help.

Factors that hinder the implementation of inclusive learning for autistic children in kindergarten include limited initial education training for teachers on autism [13], lack of continuing professional development (CPD) before educating a child with autism [5], lack of Continuing Professional Development (CPD) before educating a child with autism[6], and the need for teachers to better understand children's needs by meeting with family members of students with autism. These factors contribute to the lack of knowledge and the use of Evidence-Based Practices (EBPs) for autism in general education settings. Teachers who have more experience, receive more training, and have more support from multi-disciplinary professionals tend to have more knowledge about EBP and are hired them more often. Therefore, addressing these factors through increased training, professional development, and support can improve the implementation of inclusion education for autistic children in kindergarten.

The difficulty of strategies to improve social interaction skills through macro role-playing methods can vary. One of the challenges is the fear of making mistakes, which can hinder a child's willingness to engage in role-playing activities [9]. Additionally, a lack of motivation can hinder effective role-playing, as students may not fully participate or invest in the activity [10]. Another difficulty is the need for careful planning and guidance from the instructor to ensure that role-playing scenarios are relevant and meaningful for student learning [11]. Additionally, macro role-playing requires active participation and collaboration among children, which can be challenging if the group does not have involvement or cooperation [12]. Overall, successfully implementing role-playing methods for improving social interaction skills requires addressing these challenges by creating a supportive and motivating learning environment, providing clear instruction and guidance, and encouraging active student engagement and collaboration [14].

Socio-drama learning methods are effective in improving social skills, especially in children. Role-playing methods, such as socio-drama, are the most effective in training and education, increasing interest in specific topics and improving students' skills [12]. Role-playing allows children to explore human problems, respond spontaneously, and engage in purposeful discussions, making them the right teaching method for developing academic skills and knowledge. In the specific context of preschool-age street children, role-playing, such as socio-drama play therapy, has significantly improved their social skills. Therefore, role-play therapy can be considered a practical approach to improving social skills in children.

Play therapy, precisely the Intensive, Interactive, and Individual (3i) approach, has shown promise in reducing the severity of ASD symptoms and improving interaction, communication, and repetitive behaviors in children with ASD [7]. Previous studies have also shown the positive effects of a play therapy approach involving parents in reducing autism symptoms and improving communication in children with ASD. These findings suggest that one-to-one, interaction-centered interventions with parents or caregivers using play therapy can improve interaction language skills and reduce symptom severity in children with ASD. However, further studies, including those with con-

trol groups, are needed to confirm the efficacy of the 3i play therapy approach compared to other interventions. In addition, future research should assess the impact of play therapy on the quality of life of parents and patients and explore the potential benefits of engaging volunteers in play therapy sessions.

Role-playing is an effective method in a variety of educational contexts. It has been shown to improve students' speaking skills and their ability to communicate effectively in a foreign language [9], [10]. Role-playing allows students to practice oral communication and overcome speaking difficulties [11]. It allows students to engage in unstructured tasks, negotiate with each other, and develop problem-solving skills [12]. In addition, role-playing workshops have been found to improve the knowledge and skills of nursing students, especially in geriatric nursing. Using role-playing in teaching has also improved the social skills of preschool-age street children. Overall, role-playing has been shown to have a positive impact on students' speaking skills, professional competence, and social skills in a variety of educational settings.

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Factors that affect the implementation of role-play therapy for autistic children include the mastery of knowledge and skills by young mothers in using role-play methods independently to improve their children's social skills [7]. Role play helps children develop social skills in their environment and communicate with their peers [12]. This method of problem-solving allows children to explore human problems and engage in purposeful discussions [4]. Role-playing also stimulates environmental stimulation, develops skills, and enhances academic knowledge. The role-playing method is also widely used in medical education to study communication. However, it is important to note that the context provided does not specifically address the application of role-play therapy for autistic children.

Audio-visual media can be effective for early childhood learning. It has been proven that live teaching via video call can provide optimal learning conditions, with no difference in learning outcomes between neurotypical and autistic individuals [1]. In addition, role-playing methods often involve audio-visual media to effectively improve social skills in preschool-age street children [5]. However, it is important to note that the use of audio-visual media in early childhood learning can vary depending on the specific context and targeted skills. Further research is needed to explore the specific benefits and limitations of audio-visual media in early childhood education [12].

Social interaction skills are an essential aspect of human communication and social development. In the context of the provided papers, several studies have explored the relationship between social interaction and various factors such as learning, physical activity, socioemotional development, and social anxiety. For example, one study found that live teaching through social interaction provided optimal learning conditions for both neurotypical and autistic adults, emphasizing the importance of social interaction in the learning process [1]. Another study focused on schoolyards and observed that prosocial and antisocial social interactions play an important role in physical activity levels and social-emotional development among children [15]. In addition, research on social anxiety scales highlights the difference between social performance anxiety and social interaction anxiety, pointing to the need for reliable measures to assess different aspects of social anxiety [15]. Finally, a study on parents found that engaging in social activities and community programs can increase appetite and social interaction, positively impacting psychological well-being [12]. These findings collectively emphasize the importance of social interaction skills in various domains of life.

2 Research Methods

The research approach in this study is quantitative, especially the quasi-experimental design. This study aims to test the effectiveness of role-playing methods with audio-visual aids to improve the social skills of preschool-age autistic children in inclusive kindergartens. This study uses Single Subject Research with observation and interviews as data collection methods. The subject of the study is early autistic children who study together with normal children in kindergartens that implement an inclusive education system. The research location is Preschool Montessori 1 and 2 Makassar, South Sulawesi. The method of collecting data by observation uses a checklist instrument and is used to observe the early intervention process in the form of playing together.

The instrument for free variation is a macro role-playing scenario played by autistic children with normal children in a team. Research procedures: 1) preparation of macro role-playing learning scenario instruments, 2) preparation of social interaction and communication behavior observation instruments, 3) testing the validity of research instruments, 4) implementation of macro role-playing learning based on the assessment of the needs of autistic children by a team (special teachers, therapists, and regular teachers). Observers noted any changes that occurred before treatment was administered (baseline; A1), during (intervention; B), and after the intervention (Baseline; A2). Things that need to be considered in the social interaction behavior of autistic children that are used as guidelines in the data collection process are social interaction behavior with indicators of communication behavior, collaboration project interaction, and linguistic verbal interaction between autistic children and normal children in their class, the ability to overcome social problems faced, socially acceptable behavior, and playing an acceptable social role.

3 Results and Discussion

3.1 Result

Based on a literature review and observation of children's behavior as a result of an intervention designed with effective procedures based on the results of assessing the behavior and academic ability of autistic children, the findings of the study can be presented as follows: First, the observation of the typical characteristics and special needs of autistic children carried out by involving teachers and families makes an effective contribution in supporting the implementation of inclusive learning. Adaptive assessment measures a child's ability to engage in unique inclusive learning. Due to the nature of cognitive difficulties in generalizing autism spectrum disorders, such assessments are essential. As with other children with developmental difficulties, acquiring essential capacities for communication, socialization, and daily living skills is an important determinant of developmental outcomes. Significant differences, for example, between performance in highly structured and poorly structured settings or between intellectual skills and adaptive abilities, demonstrate the importance of including a teaching focus on children's social interaction skills across inclusive learning designs. Social interaction skills can be a stark contrast between children with autism in designing learning programs to focus on highly structured social behaviors. Second, assessments can be used to target areas of specific needs for skill acquisition. Third, some relatively typical performance patterns in autistic spectrum disorders can be identified, and some aspects of special needs assessment may contribute to diagnostic evaluation.

The subject of the study was a 7-year-old autistic boy in the B2 group at Montessori Kindergarten Makassar. Data were collected through observation techniques and documentation using observation notes and images. The results showed that the assessment-based macro role-playing method with the help of audio-visual influenced the development of social interaction behavior of autistic children with normal children in their class, which was shown by the total increase in the occurrence of positive behavior after the intervention was given. The total number of behavioral targets that occur on the A1 baseline is 1-4 times in 4 indicators: one-variable indicator with a percentage of 75%, indicator two stable with a percentage of 100%, indicator three-variable with a percentage of 75%, and indicator four stable with a percentage of 100%. The total incidence of behavioral targets in the intervention phase was 1-10 times on 4 indicators: the one-variable indicator with a percentage of 75% while indicators 2, 3, and 4 were stable with 87%. At baseline-A2, the total occurrence of behavioral targets is 1-7 times in 4 indicators: one-variable indicator with a percentage of 50%, indicator 2 and 3 variables with a percentage of 75%, indicator 4 stable with a percentage of 100%.

Description of Baseline-A1 (initial capabilities before intervention)

At the baseline-1 stage, four sessions are conducted. At this stage, subjects are given a series of assessment-based macro role-playing activities with audio-visual media with several sessions to measure their social interaction skills. In each session, the subjects were given macro role-playing activities so that the subjects' initial abilities before being given the intervention could be measured correctly. Before this stage begins, the

researcher's preparation includes the tools used in the baseline-1, intervention, and baseline-2 stages.

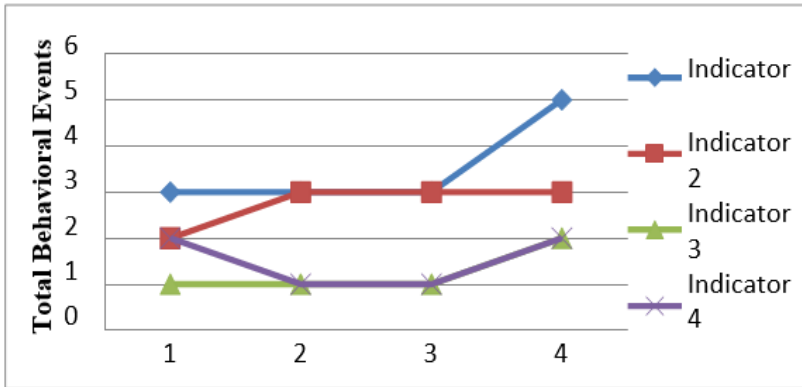


Fig 1. Graph of observation of social interaction behavior in macro role-playing activities on Baseline-A1

The Figure 1 shows that the increase in the intensity of target social interaction in macro play activities with audio-visual media has increased threefold; 4 indicators have increased from the first indicator to four, although some are still said to be stable at baseline-1. The description of the implementation of the intervention (assessment-based macro role-playing with audio-video media) can be measured correctly. There are learning design steps in micro-role-playing learning activities in the intervention session, namely: Core Activities (1) Warm-up; The teacher invites the children to warm up with limb movements with rhythmic movements; (2) introduce autistic children to ordinary classmates to do role-playing games in games together using audio-visual media. (3) Selecting players (participants), children, and teachers, discussing the character of each player, and determining who will play it. (4) arranging a role-playing therapy room; (5) Preparing an observation sheet that will be used by teachers in observing the social interaction behavior of autistic children. (6) learning to play macro roles. (7) Discussion and evaluation: teachers and children discuss the implementation of macro role-playing and evaluate the development of social interaction skills of autistic children. (8) Learning to play macro roles with audio-video media with a recording system for autistic children with normal children with the theme of peace, harmony, and empathy. In the intervention stage, eight sessions were conducted. At this stage, subjects were given a series of macro role-playing activities (drama) with audio-visual media with several sessions to measure their social interaction behavior skills. In each session, the subject is given this therapeutic activity, which aims to develop behavioral abilities of social interaction in the intervention session. It is hoped that it can run better following the direction of the learning design scenario. Closing activity: the play activity ended with a reflection on the role-play therapy activity. Then, with various experiences and conclusions, the children were invited to share their experiences with the theme of macro role-playing that had been carried out and continued by making conclusions. Wonderful teachers, regular teachers, and therapists close the activity by praying with

the children. In the role-play process, observations are made to measure the social interaction behavior of autistic children.

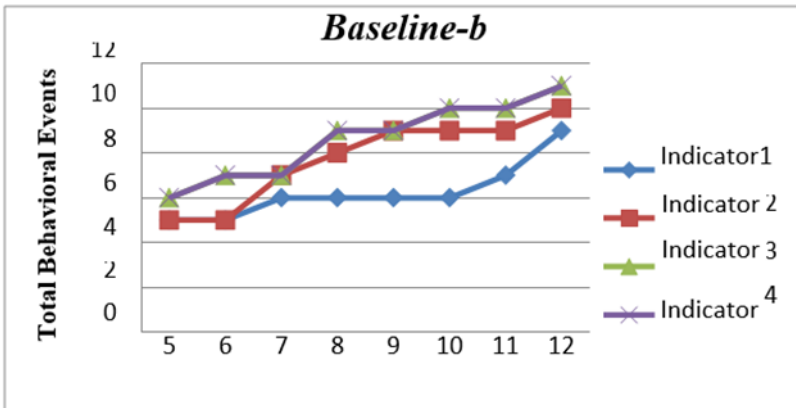


Fig 2. Positive social interaction behavior in implementing macro role-playing activities in Baseline-b.

To clarify the differences in the development of social interaction behavior during the baseline-A1 and baseline-b phases or interventions in the application of macro role-play learning, the following line tables and graphs will be presented describing the data on social interaction abilities in this second stage:

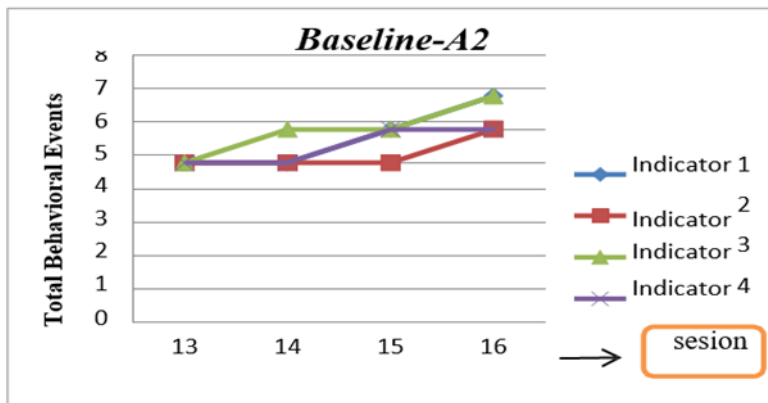


Fig 3. Graph of recording social behavior targets in macro role-playing activities on Baseline-A2

The results showed that the baseline-1 (A1) = 4, Intervention (B) = 8 and baseline-2 (A2) = 4 phases. Based on the results of the analysis in the conditions, it is known that there is a total increase in the occurrence of the target behavior studied. The directional trend at baseline-A1 on indicator one is stable; the intervention phase increased, and the baseline-A2 increased. Indicators 2, 3, and 4 also increased in the intervention phase and the A2-baseline phase and stabilized in the A1-baseline phase. In addition, there was a change in the development of the subjects' social-emotional behavior when given

intervention in the form of sociodrama play therapy with levels in indicator one baseline-A1 phase 3, intervention four, and baseline-A2 2. Indicator 2 phases baseline-A1 1, intervention 5 and baseline-A2 1, indicator 3 phases baseline-A1 1, intervention 5 and baseline-A2 2, and Indicator 4 phase baseline-A1 stable, intervention 5 and baseline-A2 1. Meanwhile, the results of the analysis between conditions, the change in the direction of the baseline-A1 trend with intervention (B) on four indicators were horizontal and increasing; This shows good conditions because the target of social interaction behavior increases. The change in direction between the intervention condition (B) and baseline-A2 increased, suggesting that the condition improved. This is also supported by baseline-A1 data overlapping with intervention (B) to baseline-A2; The four indicators do not exceed 50%.

3.2 Discussion

Intervention in socio-drama activities is a valuable tool in early childhood education to develop social-emotional skills. Play is essential in kindergarten because it allows children to explore and understand their feelings, attitudes, behaviors, and values from different perspectives [9]. Through socio-drama activities, children can engage in role-playing and immerse themselves in the experiences of others, increasing empathy and understanding [7]. This form of educator play helps children develop their social skills by providing opportunities to practice communication, problem-solving, and conflict resolution in a safe and supportive environment [10]. In addition, play-based learning is very effective in promoting children's holistic development, including their social-emotional well-being [10]. Therefore, incorporating socio-drama activities into early childhood education can significantly contribute to the development of children's social-emotional skills and overall growth [12]

Playing socio-drama is a therapeutic activity that aims to provide fun and adaptable activities for early childhood, especially for children with special needs. It involves a series of feelings, words, and actions that individuals address to others, influencing their role in life based on self-perception and judgment by others. This approach can be beneficial for children with special needs because it allows them to engage in therapeutic activities tailored to their characteristics and needs [9].

Children with special needs have unique characteristics that are different from children who are normally developing and may face challenges in their daily lives because of these differences. Special needs can include a variety of conditions, including physical, mental, or emotional disabilities. These deviations from typical development can affect a child's ability to function in various aspects of their lives [13]

Autistic children have disorders in the brain's nervous system, which causes them to experience several problems in several areas of the brain, such as language disorders, fantasies, and social-emotional disorders. Autistic children tend to be aloof and rarely have social contact. Even in two-way social relationships, autistic children find it difficult to make eye contact and negotiate, cannot understand verbal language, and are not used to understanding the feelings of others. In other words, they have difficulty conducting their social relationships, expressing positive and negative emotions in exploring their environment, and developing their social skills [13]

Play is essential for a child's overall development, including physical, intellectual, emotional, and social aspects. In a classroom setting, therapeutic play can be implemented in the presence of a teacher, allowing many children to benefit from it [9]. Play-based activities afford children the chance to engage in social interactions, develop communication skills, and learn how to cooperate and collaborate with others [10]. Children can improve their social skills through role-playing by practicing positive interactions, communication, and following instructions [12]. Play is essential for a child's overall development, including physical, intellectual, emotional, and social aspects. In a classroom setting, therapeutic play can be implemented in the presence of a teacher, allowing many children to benefit from it [9]. Play-based activities afford children the chance to engage in social interactions, develop communication skills, and learn how to cooperate and collaborate with others [10]. Children can improve their social skills through role-playing by practicing positive interactions, communication, and following instructions [12]. Role-playing also offers a natural and fun way for children to learn and acquire language skills and develop vocabulary. Therefore, combining play and role-playing activities in the classroom can contribute to children's social development, fostering their ability to interact successfully with others.

Thus, not only children with autism benefit, but other children in the class can also participate in the group. Sociodrama has three main goals: to improve one's understanding of social situations, to increase one's understanding of the role of a person or several people in a particular social situation, and to allow players to release their emotions by expressing thoughts and feelings about social interactions. Socio-drama, like role-playing, can positively impact children's social interactions, including autistic children, and help them develop closer relationships with their peers. Through socio-drama activities, children can practice and improve their social skills, such as empathy, generosity, cooperation, and helping others [1]. This type of play allows children to engage in interactive and communicative experiences, which are essential for developing social interaction and communication skills [7]. In particular, sociodrama can facilitate learning and practice of social cues, joint attention, and social reciprocity for autistic children, which are challenging for them [10]. Through engagement in sociodrama, autistic children can enhance their social skills and foster greater comfort in social contexts, thereby improving social interaction and developing closer relationships with their peers [5].

Sociodrama, like role-playing, can positively impact children's social interactions, including autistic children, and help them develop closer relationships with their peers. Through socio-drama activities, children can practice and improve their social skills, such as empathy, generosity, cooperation, and help others [1]. This type of play allows children to engage in interactive and communicative experiences, which are essential for developing social interaction and communication skills [7]. For autistic children in particular, socio-drama can provide an opportunity to learn and practice social cues, mutual attention, and social reciprocity, which are difficult for them [10]. The utilisation of sociodrama has been demonstrated to facilitate the enhancement of social competencies and the reduction of social anxiety in autistic children, thereby promoting more proficient social conduct and the formation of closer interpersonal relationships with their peers [5].

Because it requires many children, it is beneficial for educators to develop behavior and social skills. Recognizing and responding appropriately to social situations defines human interaction. For individuals with ASD, this core deficit in social interaction impairs their ability to understand and relate to others in the appropriate and expected way. In this approach, social competence is defined as a complex combination of cognitive, social, and emotional abilities that come together when a social situation or social interaction arises.

Social skills refer to the abilities that form an individual's "social intelligence" and enable them to learn and acquire social skills for use in social interactions. These skills include various aspects of communication and social interaction, such as implicit imitation, shared attention, social perception, pragmatic use of language, and influencing sharing [1]. They are fundamental to effective communication and the comprehension of others' emotions and behaviours [16]. Emotion regulation skills training, for example, aims to improve individuals' ability to regulate their emotions and respond effectively in social situations [17]. Assessing social anxiety also involves evaluating social performance and interaction anxiety, which are different aspects of social anxiety [18]. In addition, role-playing effectively improves social skills in preschool-age street children [12].

The findings in this study show that the development of positive social-emotional behaviors studied in this study can be developed with the application of an early intervention model through socio-drama play therapy. Subjects were given intervention through sociodramatic play therapy which aims to provide stimulation through social activities. When socio-drama therapy is applied, the ability of positive social interaction behavior of ME increases. The increase was characterized by an increase in the total incidence of target behavior at the intervention stage compared to before the application of therapy, namely at the baseline-A1 stage. At the baseline-A1 stage, it can be seen that children's positive social-emotional behavior occurs 1-5 times per indicator; Based on these figures, children's social-emotional behavioral abilities are still floating and still need appropriate guidance and stimulation to improve behavior. In the intervention stage (B), the socio-interaction skills of the subjects studied showed a total increase in behavioral events. It was seen that the behavior studied occurred 1-10 times per indicator during eight days of application or eight sessions. At the baseline-A2 stage, it can be seen that children's positive social-emotional behavior occurs 1-7 times per indicator; Based on these data, the behavior decreased compared to the intervention stage (B), but when compared to the baseline-A stage, the behavior studied increased. Data overlap in the first session of baseline-A1 with intervention (B) did not overlap, while in the baseline-A2 session with intervention, there was also no overlap; This shows that the smaller the percentage of overlap, the better the effect of the intervention on the change in target behavior in this study.

4 Conclusion

Based on the results of the research and discussion that have been presented and connected with the formulation of the problem in this study, conclusions can be drawn,

namely: (1) The ability of social interaction behavior of autistic children before the application of the macro role-playing method shows that the behavior begins to develop based on observations during the Baseline-A1 phase. The total behavioral incidents in Baseline-A1 of each indicator show one to five times the behavioral performance studied. Appropriate stimulation is needed to develop the social interaction behavior of the child or subject in this study. (2) The picture of children's social interaction behavior in the intervention phase (B) has improved. Observations showed a total increase in the incidence of behavioral targets. It was seen that the learned behaviors developed as expected in each indicator over eight days or eight macro role-play therapy implementation sessions. The graph results also show an overview of the increase or addition of total behavioral events in addition to the analysis results, changes in the trend of the direction of baseline-A1 with intervention (B) on four horizontal and increasing indicators; This shows good conditions because the target of positive social interaction behavior increases. (3) Based on the results of the research and discussion, it can be concluded that the application of assessment-based macro role-playing learning methods with audio-video media can improve the development of positive social interaction behavior of autistic children in kindergarten. This is shown by an increase in the intensity of the development of social interaction and communication behavior, which is characterized by an increase in the total incidence of target behavior that is studied in the results of the initial ability observation (baseline-A1) with the results of the final ability observation (baseline-A2) or after the intervention using the macro play learning method. Data overlap in the first session of baseline-A1 with intervention (B) did not overlap, while in baseline A2 session with intervention also did not overlap; This suggests that the smaller the percentage of overlap, the better the effect of the intervention.

For teachers, assessment-based macro role-play therapy with audio-video media can be used as an alternative therapy game used in developing the social interaction skills of autistic children in kindergarten. Autistic children can be more active in joint play activities and social interaction activities in an inclusive learning system. In addition, it can increase social behavior and positive emotions so that autistic children can make friends outside the family sphere. 2. For parents, this research is expected to be an input to improve social interaction skills with the application of appropriate macro role-playing therapy for their children with autism. 3. For other researchers, it is hoped that the results of this study can be used as a reference to overcome the problem of special needs of autistic children and as a therapeutic means so that autistic children can have skills in social interaction in the classroom and inclusive learning.

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