

ENHANCING THINKING SKILLS AMONGST CHILDREN WITH AUTISM SPECTRUM DISORDER THROUGH PLAY THERAPY: A CASE STUDY IN AN INCLUSIVE CHILDCARE CENTRE IN KUCHING, SARAWAK

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ABSTRACT

Most children naturally engage in play as they progress through life. Play refers to enjoyable physical or mental activities that enhance children's abilities to negotiate, solve problems, master manual dexterity, work in a team, share, make decisions, and work with others. However, those with autism spectrum disorder (ASD) typically experience the numerous play stages in fragments or do not undergo them at all. With this in mind, this study seeks to understand how interventions with play therapy impacts the development of thinking skills amongst children with ASD by asking the following questions: 1) How does play help enhance the development of thinking skills amongst children with ASD? 2) What are the play therapy strategies employed by nursery caregivers and occupational therapists (OTs) in enhancing thinking skills amongst children with ASD? The study sample consisted of 6 children with ASD aged 3-5 years old who were enrolled in an inclusive childcare centre in Kuching, Sarawak. For 3 months, nursery caregivers and OT at the childcare centre carried out interventions using play therapy strategies and observations focusing on the children's thinking skills in interacting with peers their age who do not have ASD. Data were collected through observational checklists and video observations while secondary supporting data were collected via parental interviews, focusing on parental observation of their children's thinking skills at home. Thematic analysis revealed that play therapy encouraged the development of these skills amongst children with ASD, particularly in problem solving and organisational skills daily. This qualitative study hopes to provide a richer understanding and insight into the impact of play therapy on children with ASD. It hopes to encourage educators and nursery caregivers in inclusive childcare centres to employ play therapy in interventions to improve thinking skills for children with ASD.

Keywords: play therapy, autism spectrum disorder (ASD), thinking skills, nursery caregivers, occupational therapist

INTRODUCTION

Most children naturally engage in play as they progress through life. In the most basic sense, play refers to enjoyable physical or mental activities that enhance children's abilities to negotiate, solve problems, master manual dexterity, work in a team, share, make decisions, and work with others (Elbeltagi et al., 2023). Lester and Russell (2010) assert that in spite of disagreements over the

definitions of play and its various forms, evidence strongly indicates its positive impact on the health, development, and well-being of children. Play provides children with opportunities to learn and develop thinking skills, problem-solving skills, social skills, communication skills, language development as well as motor skill development.

In 1932, Mildred Parten, who was an American sociologist and researcher at the University of Minnesota's Institute of Child Development, developed the theory of six stages of play that children typically progress through. The stages are: 1) unoccupied play, 2) solitary play, 3) onlooker play, 4) parallel play, 5) associative play, and 6) cooperative play (Parten, 1932). These various play stages encourage the development of children's thought processes and actions to become more complex, imaginative, and creative.

However, children with autism spectrum disorder (ASD) typically experience the different play stages in fragments or do not undergo them at all (Mastrangelo, 2009). Mastrangelo (2009) explains that this is due to the many issues they experience during play, including struggling with "motor planning, expressive and receptive communication, imitation, and fine and gross motor movements" (p. 13). Additionally, research shows that the frequency and play behaviours of children with ASD differ largely from their typically developing peers or those with other cognitive or developmental conditions (Boutot et al., 2005; Francis et al., 2019). For example, they may display repetitive behaviours (Wing et al., 1977) or show a distinct difference in how they participate in imaginative or pretend play (Hobson et al., 2009). Hobson et al. further posit that thinking skills form the fundamentals of social skills amongst children with ASD. They state that many people believe that these children (a) do not have the capacity to think of ideas to foster creativity in imaginative play, (b) struggle with transitioning between reality and fantasy, and (c) lack enthusiasm for play activities. However, studies have shown that with proper intervention, children with ASD do display these skills, although they occur much later than in typically developing children (Marcu et al., 2009; Worlberg, 2009).

Therefore, to ensure that children with ASD can experience the various play stages like other typically developing children and benefit from play, purposeful and effective interventions are necessary for them from an early age. However, in places like inclusive childcare centres, it is common for those with ASD to not undergo effective interventions. This is due to challenges that include stigmatisation of children with ASD by parents of typically developing children, the inexperience, low wages, and inadequate training of nursery caregivers, and lack of funding allocated for essential intervention services provided by occupational therapists (Brennan et al., 2002). In addition, the lack of trained occupational therapists that specialise in ASD also presents a barrier to inclusion in inclusive childcare centres. Without properly trained staff as well as other necessary support, children with ASD in inclusive childcare centres usually get neglected instead of experiencing successful inclusion.

With all these in mind, this case study seeks to understand how interventions with play therapy impacts the development of thinking skills amongst children with ASD. This study is guided by the following research questions: 1) How does play help enhance the development of thinking skills amongst children with ASD? 2) What are the play therapy strategies employed by nursery caregivers and occupational therapists (OTs) in enhancing thinking skills amongst children with ASD? This case study involved 6 children with ASD aged 3-5 years old who were enrolled in an inclusive childcare centre in Kuching, Sarawak. This paper will first discuss relevant literature that explores play therapy and the development of thinking skills in children with ASD. This is followed by a brief discussion of the methodology employed in this study and a discussion of the research

findings. This paper concludes with a discussion of limitations and recommendations for future research.

LITERATURE REVIEW

Play and Its Impact on the Brain

Elbetagi et al. (2023) posit that engaging in play facilitates the integration of cognitive growth with a child's social development. Thus, play-based interventions help foster both thinking and socio-emotional skills in children with ASD. Elbetagi et al. further state that play encourages important physical alterations in the brain that can then influence the overall performance of the brain. This includes decision-making, development and expression of personality, suppression of impulse, and overall cognitive flexibility (Yogman et al., 2018). Play also encourages overall brain integration, including sensory integration and processing for individuals with ASD (Elbetagi et al., 2023). It allows the child to integrate the "creative, emotional, and expressive functions of the right brain with the logical, rule-oriented, and analytical functions of the left brain" (p. 8). Elbetagi et al. further explain that play helps those with ASD to regulate their motor or physical movements and engage their emotions to help give them a sense of safety through repetitive motor, emotional, and sensory interactions within the brain's neural network, leveraging the child's brain plasticity.

Play Therapy

Play therapy is mostly used to help children communicate their feelings, both good and bad. Children unconsciously communicate their experiences through play (Landreth, 2012). Landreth further states that this is because young children often struggle to express what they feel because they lack the developmental capacity to properly verbalise their thoughts and emotions and this often leads to frustration. Similarly, Woodard and Chung (2018) posit that challenges in communication and sensory processing in children with ASD impairs their ability to process what is required to interact with others. They often find it difficult to verbalise their own feelings or empathise with others as well as pay attention, respond to, and take turns in conversations. Kasari et al. (2006) add that non-verbal cues such as facial expressions, body gestures, and tone of voice are often challenging for children with ASD to comprehend.

Despite not having the necessary skills, children with ASD can still learn and benefit from play. Play therapy can help them to develop necessary skills to express their thoughts freely and comfortably. Children can reveal their inner thoughts and feelings by projecting them onto the toys and symbols that they choose during play therapy (Landreth et al., 2009) since verbal expression can be challenging for children with ASD. There is currently no known standardised play therapy that is specific for all children with ASD since ASD is a spectrum and every child's condition and needs are unique. More research is needed to explore the impact of play on children with ASD, particularly on the development of their thinking skills that are fundamental to the development of their socio-emotional skills. This case study hopes to add to the literature to establish which strategies of play therapy work in developing thinking skills in children with ASD.

METHODOLOGY

This study employed the case study method to add to the context-specific understanding of play therapy and its impact on children with ASD. Crowe et al. (2011) concur with this point, stating that the main goal of case studies is “to explore an event or phenomenon in depth and in its natural context” (p. 1). Yin (2009) adds that findings from case studies are used to “explain, describe, or explore” events or phenomena in their specific contexts.

To understand the impact of play therapy in the context of an inclusive childcare centre in Kuching, Sarawak, 6 children with ASD aged 3-5 years old who were enrolled in the centre were involved in this study. Children from this age range were selected because the intervention corresponds to the period when they are actively developing necessary skills and preparing their entry into the school environment through a childcare centre. Their parents were informed and asked to consent the children’s participation in the study.

For 3 months, nursery caregivers and OT at the childcare centre carried out interventions using play therapy strategies and observations focusing on the children’s thinking skills in interacting with peers their age who do not have ASD. Observations were done weekly for 3 months from Mondays to Fridays and lasted 1 hour each day. During the intervention period, the OT and nursery caregivers carried out play therapy interventions based on the needs of each child using a checklist based on Parten’s Six Stages of Play.

Data were collected through observational checklists and video observations while secondary supporting data were collected via parental interviews, focusing on parental observation of their children’s thinking skills at home. The interviews were semi-structured and lasted for 10-15 minutes. Parents were asked to reflect and respond to the following interview prompt: “In your opinion, what are the differences you have observed in your child before and after his/her participation in the play therapy intervention?”

To analyse the data collected, thematic analysis was used given its flexibility in its process of identifying patterns within qualitative data (Maguire & Delahunt, 2017). The video recordings and informal parental interviews were transcribed and analysed to identify common threads and recurring themes in the data.

RESULTS AND FINDING

This section will discuss the results and findings for each child involved in the play therapy intervention carried out in the inclusive childcare centre. The findings are presented under the following two themes which correspond to the play stages identified as beneficial for the development of the children’s thinking skills. The results and findings highlight how play therapy enhanced the thinking skills of children with ASD and what strategies were used by the nursery caregivers and OT to enhance these skills.

Associative Play Stage

Four out of the six children involved in this study were identified as having needs that could be enhanced through associative play. The first child (Child A) is 3 years old and was diagnosed with global developmental delay (GDD), the second child (Child B) is also 3 years old and has

Autism Spectrum Disorder (ASD), the third child (Child C) is 4 years old and has a speech delay, and the fourth child (Child D) is 5 years old and has ASD. After diagnosing the children's needs, the OT and caregivers decided to focus on the associative play stage to help improve their thinking and problem-solving skills in day-to-day life. In particular, they planned intervention play activities that involved encouraging the children to 1) use symbols in their play, 2) play with mechanical toys, 3) take turns with other children, 4) play with 2 or 3 children in a group, 5) talk about their feelings, 6) experience associated feelings of shame when caught doing the wrong thing, and 7) associate symbolic and object playing.

After the intervention period, each child displayed almost similar developmental rates. Children A, B, and C displayed an ability to think about and understand the steps involved in associative play and even tried to practice the steps on their own. When interviewed, Child A's parents stated that she refused to interact or play with her friends prior to being involved in the play therapy. They also shared that she would ignore their instructions most of the time or did not understand what she was asked to do. During the interview, they stated that she began to try to dress herself up independently after the intervention period. Child B's parents, on the other hand, shared that he previously used to refuse to participate in any play or activity except for the ones that he chose to do on his own. After the intervention began, he started playing with more materials with finer textures such as barley, uncooked rice, Indian herbs and so on. They noted that he was now more open to approaching and experimenting with different materials. In contrast to Child A and Child B, Child C's parents did not notice any changes in their child at home before and after participating in the play therapy intervention.

Child D's observed developmental rate differed slightly from Children A, B, and C. The OT and caregivers noticed that after undergoing the intervention, Child D seemed to display an understanding of single words given to her during play and was able to analyse if the words matched the pictures given during her play therapy session. She also displayed improved thinking skills when she tried to practice the steps of the vocabulary matching game on her own. Her parents shared that after participating in the play therapy intervention, she showed improvements in her thinking skills at home by storing her toys and belongings according to their different categories. They shared that prior to this, she would keep all her stationeries, animals, blocks, fruits, and so on in the same place without giving the activity of sorting out her things much thought.

Cooperative Play Stage

The remaining two children involved in this study were identified as having needs that could be addressed by focusing on the cooperative play stage. The first child (Child E) is 4 years old and has GDD while the second child (Child F) is 5 years old and has speech delay. To improve their thinking and problem solving skills, the OT and caregivers decided to use activities that provided opportunities for the children to do the following in cooperative play: 1) playing with other children with shared aims within play, 2) playing imaginatively (e.g. playing in the home corner by dressing up and cooking), 3) engaging in games with simple rules (e.g. hide and seek), 4) engaging in play which includes themes they never personally experienced, and 5) negotiating during play.

Both children experienced the same developmental rate after the intervention period. They could both think about and evaluate the instructions given to them when playing with other children, either imaginatively or not, and were able to listen to and understand simple rules. For example, when the OT and caregivers instructed the children to paste a sticker note onto their friend's palm, they were able to follow this simple instruction.

When interviewed, Child E's parents shared that prior to the intervention, he was more reclusive and would not interact much with other people. After the play therapy intervention, he showed an increased interest in approaching other toddlers his age such as his cousins. Child F's parents also shared a similar observation, stating that before the intervention, their child was more withdrawn and would not interact with other children around his age. After the play therapy, he increasingly showed an initiative in approaching his younger sister to interact and play with her.

DISCUSSIONS, RECOMMENDATIONS, AND CONCLUSION

The purpose of this case study was to do a preliminary examination of how interventions with play therapy impacts the development of thinking skills amongst children with ASD in an inclusive childcare setting. A simple case study involving 6 children aged 3-5 years old was conducted with play therapy interventions carried out in the span of 3 months.

Research generally concurs that play has immense benefits in supporting the development of children's cognitive, socio-emotional, language, and sensorimotor domains (Mastrangelo, 2009). However, there is still much to learn about how play impacts the development of these domains in children with ASD since the use of play therapy amongst young children with ASD is still a developing research area.

The results from this case study supports the notion that play therapy has a positive impact on the development of thinking skills in children with ASD. Researchers argue that children with ASD often display more deficiency in mastering developmental skills such as processing thoughts for verbal and non-verbal communication as well as sensory processing (Kasari et al., 2006; Landreth, 2012; Woodard & Chung, 2018). For the 6 children involved in this case study, a 3-month intervention using play therapy helped to enhance their thinking skills which then improved the way they responded to simple instructions as well as communication prompts. Loncola and Craig-Unkefer (2005) posit that the repetitive nature of play therapy interventions helps provide opportunities for children to practice skills repeatedly for retention, get feedback and positive reinforcement of accepted social behaviours as well as skill maintenance and generalisation. They further posit that most importantly, play provides the necessary contextual considerations for children to practise the skills necessary to navigate thinking and problem solving in their daily lives. For most of the children involved in this case study, they showed a development in their thinking and problem-solving skills in day-to-day situations as observed by their parents.

There were several limitations of this study. First, these findings are preliminary since this is a small case study carried out to examine the development of thinking skills through play in children with ASD in an inclusive childcare setting. Additional research with a larger sample size would be useful to get more insight into the needs of various children on the ASD continuum. Secondly, the case study focused solely on the development of thinking skills in children with ASD through play. Future research that considers investigating and understanding how play therapy develop other skills necessary for children with ASD to thrive would be useful to fully understand how play therapy interventions can support their developmental needs. Thirdly, some of the materials prepared by the caregivers and OT did not suit the readiness level of the children because some materials were too easy and some were too advanced. With materials that were too advanced, the caregivers and OT had to do most of the prompting and answering which did not give the children ample opportunities to develop their own thinking skills. Future research

should therefore make use of materials or activities that are planned with a better consideration of the children's needs and level of readiness.

Results of this case study may have practical implications for nursery caregivers in inclusive childcare centres. Results of this study were observed with just one-hour interventions daily for 3 months with repeated play activities with minimal preparation and using simple materials. As such, nursery caregivers elsewhere can carry out similar interventions easily in their own settings or adapt and adopt them to suit the needs of the children under their care. However, additional research is needed to explore if more structured play activities that consider the level of cognitive readiness of children with ASD would be more impactful in enhancing their thinking skills. Overall, this case study suggests that play therapy interventions hold a promising future in developing the thinking skills of children with ASD which are critical in supporting a myriad of other skills in their daily lives.

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