
II. REVIEW OF LITERATURE

The existing literature on the current research topic is comprehensively reviewed, demonstrating the researcher's familiarity with the body of knowledge, establishing the credibility of the work, delineating the trajectory of prior research, and elucidating the connections between the current study and past investigations, thereby illuminating potential avenues for future research. The related studies relevant to the present study entitled “Effectiveness of Traditional and Modern Games on Socio-Cognitive Development of Children in Biswanath, Assam” were reviewed and grouped in following heads:

2.1 Social Development among Children (6-8 Years)

2.2 Cognitive Development among Children (6-8 Years)

2.3 Factors Influencing Socio-Cognitive Development of Children

2.4 Traditional Games on Socio-Cognitive Development of Children

2.5 Modern Games on Socio-Cognitive Development of Children

2.1 Social Development among Children (6-8 Years)

The process of socialization is fundamental to a child's development, as it enables them to internalize the linguistic, cultural norms, values, behaviors, expectations, and social skills of their family and community. Similarly, social development involves the cultivation of capacities, perspectives, and behavioral patterns necessary for relating to others, establishing relationships, and actively engaging in social groups. This enculturation enables children to develop the skills necessary to function within their social world (Alberg, 2018).

As children mature and perceive their own identity within their community, they also acquire skills to communicate with others and process their actions. Social development predominantly refers to how a child develops friendships and other interpersonal relationships, as well as how they navigate conflicts with peers. This showcases growth and development not only on physical, mental, and emotional levels, but also on the social level. The child's social activities expand over time, through the socialization process, which persists throughout one's lifespan (Sundram, 2020).

The development of social interaction skills, which are crucial to various aspects of our lives, commences in infancy and continues to evolve throughout an individual's growth and maturation. These skills, including trust, empathy, cooperation, and emotional regulation, are cultivated during early childhood. For most children, the necessary social interaction capabilities are acquired naturally through the process of engaging in spontaneous

interactions within their primary environments, such as the home and early educational settings. As children mature, friendships and peer groups become increasingly significant, serving as platforms for listening, observing, practicing, and internalizing these vital social skills (Alberg, 2018).

The key components of social development in early childhood include joint attention, peer relationships, and social play and social competence in home as well as school (Campbell et al., 2016). Joint attention refers to the ability of a child to coordinate their attention with another person, often through eye contact, pointing, or other nonverbal cues (Hahn, et al., 2018). Peer relationships involve the child's capacity to form and maintain friendships with other children, which is crucial for their social well-being (Monks & Rix, 2024). Social play and social competence among children encompass the child's ability to engage in cooperative and imaginative play with peers, as well as their capacity to navigate the social dynamics of home or school environment (Ogden, & Hagen, 2018).

Peer relationships, which occur between individuals of roughly the same age and developmental stage, provide opportunities for social learning, collaboration, and the establishment of friendships. Social skills, enable effective communication with others, including active listening, empathetic expression, perspective-taking, cooperation, sharing, and conflict resolution. In addition, prosocial behaviour encompasses selfless actions that benefit others or promote social harmony, such as sharing, assisting, collaborating, and demonstrating empathy (Shoshani et al., 2022).

Healthy social connections and interactions have a positive impact on emotional well-being, as social support, companionship, and a sense of belonging enhance mental health, resilience, and overall life satisfaction. Furthermore, play creates a rich environment for social interactions, facilitating children's development of social abilities (Kaizar & Alordiah, 2023). These includes skills that helps individuals to interact effectively with others and build positive relationships (Putri & Sujana, 2020, Zakiyah & Nurhafizah, 2021).

Turn-taking: At the onset of formal schooling, 6-year-old children are often required to engage in activities that promote social development, such as waiting in line, sharing resources, and taking turns during playtime. These experiences cultivate essential skills, including patience, respect for diverse perspectives, and an appreciation for collaboration and fairness.

Cooperation: During the 6–8-year-old age range, children's engagement in cooperative activities, team games, and pretend play scenarios facilitates the development of collaborative skills. Collaborative play enables children to cultivate cooperation, problem-solving abilities, and the capacity to work collectively towards shared goals (Jaggy et al., 2023).

Negotiation: Children often navigate and reconcile diverse interests, perspectives, and goals through negotiation and compromise during play activities. In these scenarios, they develop skills in expressing their needs, actively listening to others, identifying shared ground, and resolving conflicts through peaceful negotiation strategies.

At age 6, children must learn to interact effectively with peers and adults in more organized and rule-governed ways, as the formation of close, mutual friendships becomes increasingly important. Identifying the factors associated with successful navigation of social tasks at different developmental stages has enhanced our understanding of the key components of social competence, which encompass an individual's "external" and "internal" skills and characteristics, such as social-cognitive and emotional abilities. Prosocial behavioral skills, including cooperation and helpfulness, are linked to successful friendship formation and peer acceptance. Conversely, deficits in prosocial behavior or the presence of maladaptive behaviors, like aggression, are related to adverse outcomes, such as a lack of friends and peer rejection. Additionally, the ways individuals interpret social interactions, including their social goals and attributions, play a crucial role in their navigation of various social tasks and, consequently, predict their social adjustment (Kingery et al., 2020).

While social development is not a sudden process, it is shaped through imitation and habitual behaviors within the child's immediate environment. During ages 6-8, children have opportunities to develop and enhance their capacity for empathy, understanding different perspectives, and recognizing and managing emotions through play experiences. Play enables children to assume various roles, viewpoints, and situations. Through imaginative play, children learn empathy by putting themselves in others' positions, appreciating diverse viewpoints, and identifying and addressing others' feelings. This type of play also allows children to develop perspective-taking skills and an awareness that others may have different thoughts, emotions, and intentions. Play facilitates children's ability to observe, comprehend, and respond to other people's emotions. Additionally, children learn to interpret facial expressions, body language, and verbal cues through play, or group activities, enhancing their capacity to understand and react to others' emotions (Nijhof et al., 2018).

Social play is crucial for developing children's social competence. Through play, children acquire essential social skills and learn to navigate social settings effectively. The playful environment provides a safe space for children to confront and resolve difficulties. Children engage in bargaining, problem-solving, and consensus-building during play. Furthermore, playful interactions can help children in the classroom learn crucial conflict resolution techniques, such as active listening, compromise, and seeking win-win solutions. Children aged 6-8 can enhance their self-esteem and confidence through play activities that involve challenges, successes, and positive social interactions (Gibson et al., 2017). Play allows them to experience a sense of achievement, fostering their feelings of competence and gaining approval from peers and adults. Additionally, play encourages the development of assertiveness, enabling children to communicate their needs, preferences, and views confidently and politely (Kaizar & Alordiah, 2023).

Engaging in play is crucial for children to cultivate healthy peer relationships and establish supportive social networks. Through playful interactions and shared activities, children can connect with peers, forge meaningful relationships, and build friendships. In the school setting, play enables children to enhance their social bonds, discover common interests, and foster trust among their peers. Collaborative play activities encourage children to cooperate, delegate responsibilities, and work towards collective goals. These encounters facilitate the development of positive connections, reciprocity, and mutual trust. Furthermore, play allows children to expand their social circles and build relationships with individuals beyond their immediate surroundings. Children aged 6-8 years can engage with diverse classmates through play, promoting social inclusion, embracing diversity, and cultivating supportive social networks (Yogman et al., 2018).

2.2 Cognitive Development among Children (6-8 Years)

The term Cognition encompasses a set of mental processes essential for organizing and interpreting perceptions. The ability to mentally represent and gain fundamental knowledge about one's environment represents a critical developmental achievement within a child's first two years. Cognitive development unfolds gradually, necessitating the coordination and interplay of cognitive and emotional capacities, ultimately facilitating the individual's adaptation (Bamicha & Drigas, 2022).

Cognitive development encompasses the progression and maturation of an individual's cognitive capacities and processes. It involves the acquisition, organization, and application of knowledge, as well as the enhancement of mental abilities and cognitive

functions (Abilkassym et al., 2021). Children acquire the ability to think, reason, and communicate through language, which are essential to their overall growth and maturation (Haddad et al., 2019). This process entails the development of language and knowledge, as well as the capacity for thinking, memory, decision-making, problem-solving, and exploratory behaviors.

Cognitive development is a multifaceted process that unfolds through distinct stages within children. As they mature, children traverse the sensorimotor, preoperational, concrete operational, and formal operational stages, each marked by advancing intellectual capacities. While the pace of progress varies, a child's thought processes continually evolve, demonstrating the dynamic nature of cognitive development. Understanding this critical process is essential for understanding the progression of a child's intellectual abilities, a fundamental aspect of human growth and learning (Vela-Maina, 2023). Cognitive development progresses from the establishment of object permanence, causality, and symbolic thinking with concrete learning, to the development of abstract thinking and the embedding of implicit to explicit memory processes (Malik & Marwaha, 2023). The following elements are included in the cognitive development framework-

Attention: Attention refers to the ability to focus on and maintain mental effort on specific stimuli or activities. It involves concentrating on pertinent information while disregarding irrelevant details. Attention is crucial for comprehending information and learning (Commodari & Blasi, 2014).

Memory: Memory encompasses the capacity to encode, store, and retrieve information. It encompasses both working memory, which temporarily stores and manipulates data, and long-term memory, which refers to the retention of knowledge over an extended period.

Problem solving: Problem solving encompasses the ability to identify, assess, and resolve issues. It entails employing logical reasoning, critical analysis, and innovative strategies to overcome obstacles and reach desired outcomes (Rahman, 2019).

Language acquisition: Language acquisition is the process of acquiring and using a language. It encompasses various aspects, including vocabulary development, syntax, semantic understanding, and pragmatic skills.

These cognitive abilities are crucial for children's overall development and learning (Astarina et al., 2023).

Piaget's theory of cognitive development is widely regarded as a seminal framework for elucidating the progression of children's cognitive capabilities (Emerson & Bursch, 2020). According to this theory, children actively construct their understanding of the world, encountering discrepancies between their existing knowledge and new discoveries, and subsequently adjusting their ideas to accommodate these new experiences.

According to Piaget, children aged 6-8 are in the concrete operational stage. This stage is characterized by the emergence of logical reasoning capabilities, but these are predominantly applied to concrete objects and events. Key competencies acquired during this period include: Conservation- the understanding that the quantity of an object remains constant despite changes in its physical appearance; Classification- the ability to organize objects into categories based on their shared characteristics; Seriation- the skill of ordering objects along a specific dimension or scale; Reversibility- the capacity to mentally undo or reverse actions and Decentration- the consideration of multiple aspects of a situation simultaneously. While logical reasoning shows improvement, it remains firmly grounded in tangible experiences. Abstract or hypothetical concepts continue to pose challenges for children in this stage. However, the concrete operational stage represents a significant advancement from the preoperational phase, laying the groundwork for the formal operational thought processes (Mishra & Singh, 2019; Ribaupierre, 2015).

Play is a vital component of children's cognitive development and advancement. It fosters creativity, resourcefulness, and problem-solving skills, enabling children to overcome challenges, obstacles, and puzzles. Through opportunities for innovative exploration and diverse thinking, play promotes creativity. Playful environments encourage creative expression and innovative thought, enhancing cognitive flexibility and the ability to think beyond the present (Vogt & Hollenstein, 2021). Play experiences help children develop executive functioning capacities, including organization, planning, decision-making, and self-regulation. Navigating through scenarios, planning, and structuring actions are all part of play activities that assist children in setting goals, ordering their steps, and anticipating outcomes (Slot et al., 2017). It fosters language development through social interaction and symbolic representation. Furthermore, play enhances executive functions such as attention, memory, and self-regulation, crucial for learning and academic success. Through playful exploration, children construct knowledge, develop cognitive flexibility, and build a foundation for future learning (Kaizar & Alordiah, 2023).

2.3 Factors influencing Socio-Cognitive Development of Children

According to Deki (2016), globally more than 200 million children under five years fail to reach their potential in cognitive and social development due to poverty, poor health, malnutrition, and deficit care. Five main factors identified in contributing to growth and developments at early childhood are nutrition, parent's behaviours, parenting, social and cultural practices, and environment. Understanding the extent and magnitude of these problems especially within 1000 days of child includes from the date of conception till the child attends 2 years of age is very important. If timely interventions are taken within this critical period, the problems are reversible and will gain maximum benefits. A healthy child especially within this age will have better cognition and learning capabilities, and consequently have impact on social and cognition.

Drago, et al (2020) investigated the effect of psychosocial and environmental determinants on child cognitive development measured by the Wechsler Preschool Primary Scales of Intelligence (WPPSI) at 5 years of age using multivariable linear regression. They found that Socio-economic status was most strongly associated with child cognitive development. Modest associations between the organization of the home environment and its opportunities for cognitive stimulation and child cognitive development were also found. Hence, better understanding of the role of these factors is needed to inform interventions aiming to alleviate the burden of compromised cognitive development for children.

Sartika et al., (2021) conducted scoping review to determine the factors that are related to the cognitive development of children. The method of this scoping review used 4 databases (Pubmed, Wiley Online Library, Science Direct, and Springer Link) and the search was limited to articles published in the last 10 years (2010-2020). The findings of this scoping review were the factors that are associated with children's cognitive development are parental factors (maternal depressive and anxiety disorder) and child factors (child's condition at birth, stunting, and hemoglobin levels).

Bulgarelli et al., (2022) focused on children's ability to reason about the mind as one central aspect of social cognition by utilizing the terms Theory of Mind (ToM), mind reading, and mental-state reasoning interchangeably. The ToM Storybooks measure five components: Recognition of basic emotions, ability to distinguish between physical and mental entities, awareness that perception leads to knowledge, and understanding desire and beliefs. The study outlined the interactions between social cognition, with a focus on ToM, and language development, with a focus on lexicon, syntax, and conversation. The study focused on social

correlates relating to parents, siblings, and peers known to be associated with children's social-cognitive development. Additionally, Prosocial behavior might be a mediating factor between social cognition and peer relations.

According to Tulviste et al., (2019) the physical and social setting, the family configuration, parents' ethno theories about appropriate child rearing practices and parenting styles, and the broader social, governmental, educational, and economic context influence the course of the child's social and cognitive development. Children learn a great deal over the preschool years as they interact with people in their social networks who help shape various aspects of their social development. Understanding the role of culture is integral to having a more complete, deeper understanding of children's development in their everyday social worlds.

Crotty et al., (2023) described that cognitive development in children begins with brain development. Early life exposures may both positively and negatively influence cognitive development in children. Children learn best in secure, nurturing environments and when attachment to a consistent caregiver is present. They suggested that Pediatricians can screen for both social determinants of health and developmental milestones to address barriers to care and promote positive cognitive and learning outcomes. Also suggested that Pediatricians may support caregivers to talk with their children, read to their children, and avoid/reduce screen time.

Joy, (2023) explored both the positive and negative impacts of technology on children's social and cognitive development. On the one hand, technology can provide children with the opportunity to learn and engage in activities that may not be available in their home environment. This can lead to increased confidence and improved problem-solving skills. On the other hand, technology can lead to a decrease in physical activity, an increase in feelings of isolation and loneliness, an over-dependence on technology, and a decrease in creativity and problem-solving skills.

Kent et al., (2020) in their study aimed to examine factors that may predict cognitive development among a sample of 126 four-year-old children across socio-economically disadvantaged areas in Ireland, who were involved in a randomized controlled trial. The study considered the extent to which child's gender, attempt of breastfeeding, household income, maternal education and cognition, mother-child attachment, parent-child interactions and intervention intensity contributed to the prediction of cognitive development. The analysis

revealed that gender, attempt of breastfeeding, income and intervention intensity were statistically significant predictors of cognitive development, explaining a considerable amount of the variance in children's cognitive scores.

Gonzalez et al., (2024) in their work aimed to analyse the role of socioeconomic positions, measured via various indicators collected longitudinally, in cognitive development at 7-11 years of age, evaluating the role of family context as a potential mediator. The study found that lower socio-economic position is associated with lower cognitive scores in children. Family context also plays a significant mediating role in the relationship between socioeconomic positions and cognitive development. Specifically, aspects of family context such as cognitive stimulation, parental stress, and parenting styles were linked to child cognitive outcomes. These factors mediated the effect of family social class on cognitive development by varying percentages (5.2% for cognitive stimulation, 5.5% for parental stress, and 10.8% for parenting). The findings suggest that both socioeconomic position and family context are crucial for child cognitive development. The authors advocate for equalizing policies and positive parenting programs as potential strategies to enhance cognitive development in children.

Wang, (2023) in his study aimed to clarify the specific influence of early family nurturing environment on children's social development through longitudinal observation to provide theoretical reference for promoting the healthy development of children's bodies and minds. The children's physical and mental development, family rearing environment and emotional and social development were investigated by questionnaire. Results found that the early family environment affects children's physical, mental, emotional and social development. There were significant differences in positive rates of adaptive ability, social behavior, language, developmental quotient score and emotional sociality among children in different families. Language/cognition was significantly positively correlated with adaptive ability, social behavior, language and developmental quotient, and social adjustment/self-care was significantly positively correlated with adaptive ability, social behavior, language and developmental quotient.

2.4 Traditional Games on Socio-Cognitive Development

Traditional games are leisure activities that do not have standardised rules but are indicative of cultural and societal values. They evolve over time and are then passed down through generations. This form of game can be played by people of all ages, but it is most popular among children (Mulyani 2016). Traditional games play an important role in

providing children with life skills due to their cultural values and beliefs (Baradaran et al., 2018). The advent of technological advancements in the digital age has generally transformed children's play activities. Due to technological advancements, children have become accustomed to utilizing various digital devices such as smartphones, tablets, and laptops. As a result, electronic games have gained greater popularity among children compared to traditional games. By conducting a thorough examination of the relevant scholarly literature, researcher leverage secondary data derived from a range of empirical investigations and prior academic studies that maintain salience to the content of this research. The results indicate that traditional games have been found to significantly contribute to the holistic development of children, encompassing their cognitive and social well-being. In contrast, modern electronic games tend to primarily serve as a means of passing time and may even foster sedentary behaviors in children. Additionally, the excessive engagement with such games has been observed to lead to addictive patterns, which can limit children's interactions with their surrounding environment (Gul 2023). As a result, children's social interactions have decreased, which may potentially impede the development of their social competence as well as impact the cognitive outcomes of children in this digital era (Dasmadi et al., 2023; Muppalla et al., 2023).

The research conducted by Gul, (2023) aimed to demonstrate the significance of traditional Kashmiri games in fostering the balanced development of children's personalities. The study utilized primarily qualitative data sources, including books, personal accounts, journal articles, newspapers, websites, and government records. The findings revealed that traditional games can positively influence both the cognitive and social development of children. Furthermore, the study emphasized the importance of preserving these traditional games as a means of imparting cultural values and identity to children. The researcher recommended the integration of these traditional children's games into the teaching and learning processes during the early childhood period.

Raval, (2023) research emphasizes the unique and enriching opportunities that traditional outdoor games offer for children to engage with their peers and foster social development. The study highlights the significance and impacts of play, particularly traditional outdoor activities, in shaping children's social skills. Outdoor games have the potential to cultivate a range of abilities, including social skills, interpersonal relationships, self-confidence, interaction, independence, curiosity, coordination, balance, and the capacity to navigate challenging situations.

Santhosh et al., (2019) spoke about the Indian games (Tamil origin) which helps in focusing on improving the children attention and concentration, memory, problem solving and improves their physical health along with team co-ordination. It was an exploratory study which helps a new gateway for the field of Clinical Psychology. The study attempted to explore the Indian culture games (Tamil Origin) on improving the children's cognitive functions and associated functions which make them to excel in their curricular and co-curricular activities. And it's a great opportunity to bring the good old games as a therapeutic approach to train the children who has problem with their attention and concentration, problem with memory, problem solving and improves their physical health in terms being fit with appropriate to the age, avoiding some problems like overweight, restless, fatigue. And the main need for the children is team coordination that will be developed in the therapeutic process. By introducing the south Indian folk games as a therapeutic approach will be a new attempt in the field of clinical psychology and neuro psychology.

According to Gulia and Dhauta (2019), Various traditional games are part and parcel of Indian tradition. A number of leading traditional games which had Indian origin are Teerandaji, kabbadi, kho-kho, Polo, shatranj, and Martial Art etc. All these games require technical and tactical skills along-with other physiological components like speed, strength, stamina, agility and coordinative abilities. Apart from these, Indian traditional games require very little equipment and they are less expensive in comparison to the modern games, and as a result traditional games of Indian origin became more popular amongst the masses. Yet much needs to be done at the government level so that they can be well promoted and Indians can retain their glorious heritage.

Rahman et al. (2024) in their study explored the method of adaptation of traditional Indian games for children with cerebral palsy of varying functional levels. A total of 10 traditional games were selected based on their health benefits using an operationalised conceptual model. The *CHANGE IT* model of adapted physical activity was used to systematically adapt each game. Validation of the model was then performed on children with Cerebral Palsy [a smaller sample size, $n = 10$] with different levels of functioning. The games varied in playing positions, surfaces and phases. Modifications included changes in game rules, play environment, equipment and time duration. The study validation through informal interview among the parents of Cerebral Palsy children revealed that adapted traditional game protocol shown improvements in their children's activity levels and participation. While this is a preliminary exploration, no firm conclusion can be drawn. The model presented in the

study lays the foundation for future randomised controlled trials to validate the effects of adapted traditional Indian games on children with cerebral palsy of different functional levels.

Gulia et al., (2021) in their study aimed to find out the school children's preferences of traditional games played by them in Rewari district of Haryana. The data pertaining to the study was collected from three schools out of three blocks in Rewari district involving a total of 75 subjects playing traditional games ranging between 12 to 16 years of age. The research findings revealed using a percentile method that there are one hundred games which are the preferences of the children in the Rewari district. As a matter of fact it's a great sign of preserving and passing our cultural values to our children in the form of regional traditional games. it was concluded that there are near about one hundred different sort of traditional games which are the preferences and played by the school going children in the Rewari District of Haryana to improve their quality of life with a great sign of preserving and passing Indian cultural values on which the foundations of society rests to our children in the form of Indian regional traditional games.

Roy & Lama, (2020) in their study overviewed the obsolete traditional sports and games spread in the North Bengal rural and urban places. The researcher brought out the procedure of play (rules and regulation) with scoring methods, type of games, and purpose of play of traditional games. Most of the data were collected from the rural and urban people of eight districts in North Bengal, India. The researchers selected the entire North Bengal and the data collected from the people who were played and come across in their lifestyle of traditional games. The methods used for collecting data are interviews, photos, and live play demo, etc. All together seventeen famous traditional games are played in the villages of North Bengal. These games were designed to develop skills such as logical thinking, building strategy, concentration, basic mathematics, aiming, and so on. While playing the games, the students learned and understood the spirit of sportsmanship. Obsolete traditional sports were evaluated from the North Bengal states of West Bengal and found that, these traditional games and sports were played in the different regions in the previous era. This study concluded that traditional games which was the primary pastime activity of West Bengal, and carries moral value, cultural heritage and develops integrity among the people.

Dhankar, (2018) in his study suggested that India has great history of games and toys which the children enjoyed during their childhood. While some of the games such as kabaddi and kho-kho have made their place at the national and international level, most of these are at the verge of extinction. These games kept the players attached with the mother earth, ground,

soil and mud which led to their physical development in natural surroundings thus developing immunity. Children learnt many desirable social values through these games and their emotional and social development was taken care of through play way method. As aim of education is holistic development of the learner. It would be great if the Indian home and street games and toys are brought back as these have great educational value. It would reduce mental stress which present system of education is putting on children due to its total examination and result orientation.

Edezhath, (2015) in his study collected and arranged some of the major games of south Indian state and attempted to analyse them from various angles. The study listed 120 important games and they were analysed. From a gender perspective, it was found that most of the games could played without gender distinction. With regard to the place of play more than 60 per cent of the games are outdoor ones, most of them requiring physical exertion. From the angle of participation of players almost two thirds of the folk games required children to participate individually as against becoming part of a competing team. Looking at the play accessories used, a great majority of the games required play materials, but almost all of them were objects from around the yard and not any sophisticated readymade play materials. Attempting a classification of the collected games using the fourfold scheme of competition, imitation, chance and vertigo, it was found that about 79 percent of the games involved competition, which is indicative of heightened motivation and competitive spirit of the communities involved. The study tried to examine the beneficial effects of folk games upon the players. Taking the feed back of the experts and former active players 14 major benefits of individual folk games were listed with the two major benefits of ‘interior freedom’ and ‘physical exertion’ getting the highest scores. While considering folk games as a whole 8 more general benefits were further highlighted, among which ‘self-confidence’ and ‘leadership’ received the top preference.

Singh, (2024) in his study aimed to explore and document selected traditional children's games of Manipur such as Se Se Seboti, Tongdrumbi, Kei Yen Sanaba, Phibul Habi Sanaba, Uraobi, Laphu Phukpi Nom Nom Sagaitong, Uchi Chi Chi Khangmeitat. He suggested that the traditional games of children have crucial roles in fostering various aspects of personal growth, behaviour, and social learning. The growing urbanization and modernization process have hugely impacted traditional games. The cultural significance and moral values embedded in traditional children's games is lost due to influence by different cultures, societal norms, technological advancements, changing preferences for

entertainments and recreation. Preserving and fostering such traditional children's games culture systematically and effectively poses a significant challenge.

Farahani et al. (2024) examined the relationship between traditional games and children's social development. They found that, traditional games can result in a positive effect on various aspects of children's social development, including self-help general, self-help in dressing, self-help in eating, interaction with others, self-regulation of behaviors, socialization, physical activity, profession, and occupation.

Nur et al., (2020) aimed to examine the influence of traditional games programs (integrating social behavior) to develop social behavior. Experimental method pretest-posttest control group design with more than one experimental group was used in the study. The design is used by involving more than one experimental group. In this study, the experimental group I received the treatment of traditional sports game activities integrated with social behavior, the experimental group II received the treatment of traditional sports game activities, while the control group was given academic extracurricular learning activities. The result indicated that traditional games programs with intentionally structured with integrating processes there were significantly influenced to develop social behavior.

Alvisari et al., 2024 studied on "The Effectiveness of The Traditional Game Congklak in Developing Children's Cognitiveness at Kindergarten". The findings of this study demonstrate that children who engaged in the traditional Congklak game showed significant improvements in their cognitive skills, particularly in numeracy and analytical abilities. The data also revealed a positive impact on the concentration levels of children who participated in the Congklak intervention, highlighting the potential of traditional games as effective learning tools at the kindergarten level. Furthermore, this research incorporates cultural aspects and local values inherent in the game, enriching the early childhood educational experience.

Iroh (2024) in his study seek to identify traditional games, its uses and importance to the overall development (physical, mental, social, moral and intellectual) of the child. Ten traditional games were selected and used by the researcher for the experiment. The results found that a child's imaginative and problem-solving abilities are enhanced when they participate and play together as a group. The work therefore recommends the application and use of the traditional games in the education of the child as this will invariably lead to the production of a sound individual capable of contributing to the growth of the nation.

Supeni et al., (2019) in their study aimed to provide a solution for the use of traditional Javanese children's learning media "Dakon" as one of the character education for Early Childhood Education and to strengthen the character of children through the use of instructional media to be used by the education community, both at school, at home, and in society. In collecting data, the researchers utilized literary studies, interviews, observation, documentation, and experiments. The data were analyzed with psychological, educational, and socio-cultural approaches, with qualitative descriptive analysis. The results showed that it is more effective to use the game "Dakon" as a learning medium in Early Childhood Education. Proven to be able to be done as character education in early childhood as a learning media that is easy to apply, obtain, and still maintain local wisdom.

Dese et al., (2023) in their study aimed to identify the effect of traditional game-based physical activities on the psychological well-being of elementary school children at MI Sabilul Huda Jimbaran. The results indicated that physical activities based on traditional games significantly affect elementary school children's psychological well-being.

Erlangga (2022) in his literature review research aimed to find out whether traditional games can affect children's cognitive development. He concludes that traditional games are beneficial for early childhood cognitive development, emphasizing their cultural importance and the need for further exploration in this area. The findings advocate for the inclusion of traditional games in educational settings to enhance children's learning experiences.

Harahap (2023) in his study aimed to ascertain how cognitive behavior therapy and traditional games in children could improve their social skills. This research was a single-subject experimental study. The participant was a 6-year-old kindergarten student going by the alias "Kila". The data was collected using interview and observation methods. The CBT techniques are puppets, storytelling, visualization, and imagery techniques. Traditional games were used after the CBT sections. These games involved peer groups to increase the social skills of the participants. The traditional games used were the ones that Indonesian people used to do, such as "Cublak-cublak Suweng," "Clogs," "Cardboard Bridge," "Jump Rope," and "Word Game.". The result showed that the CBT technique for children could change the participant's negative automatic thoughts about her friends. Those traditional games could also improve Kila's social skills, especially in her interpersonal behavior, such as making friends, communicating, giving feedback to her peers, and being involved in some interactions and communications. CBT techniques and traditional games have an impact on

increasing the social abilities of participants. This can be seen from the improvement in participants' social skills, such as interpersonal behavior, self-behavior, academic behavior, peer acceptance, and communication skills.

Usman & Yusuf, (2022) in their study aimed to understand and describe the roles of traditional games in facilitating children's development. The results showed that traditional South Sulawesi Bugis games, with or without equipment, act as media for children's social and cognitive development. The games become an important means for children to socialize, learn to become a society member, and learn to respect the society's rules. In the game-and-play situations, children can also develop mathematical abilities and reasoning.

Astarina et al., (2023) in their study investigated how Sundanese traditional games can promote the development of children's cognitive, affective, and psychomotor abilities. Based on the analysis, it was found that the various types of traditional games employed by singing, guessing riddles, doing role play, and involving physical activities could promote the development of children's cognitive, affective, and psychomotor capacities in three main ways. First, they provided children with game activities that could stimulate their thinking, counting, remembering, and solving problems capacity. Second, they helped develop children's emotional quotient through the values learned and rules implemented in the games. Lastly, they involved physical activities that could improve the children's strength, durability, flexibility and balance.

Haverkamp et al., (2020) conducted a meta-analysis of studies investigating the effects of physical activity interventions on cognitive outcomes and academic performance in adolescents or young adults. Results showed that acute interventions significantly improved processing speed, attention and inhibition. In a subsequent meta-regression, shorter duration of intervention was significantly associated with greater improvements in attention and cognitive flexibility. Chronic interventions significantly improved processing speed, attention, cognitive flexibility, working memory and language skills (Haverkamp, 2020).

Matura et al., (2024) studied to determine the teacher's activities in developing the cognitive abilities of young children at the Kasih Bunda Kindergarten in South Aceh through the traditional congklak game. The findings of this study were this game is not only played but can improve the cognitive abilities of young children in terms of recognizing the concept of numbers.

Kacar and Ayaz-Alkaya (2022) conducted a study to determine the effect of traditional children's games on internet addiction, social skills, and stress level. The results showed that traditional children's games may be effective in reducing internet use and increasing social skills, however they do not affect stress level. Childhood is important for physical, cognitive, and psychosocial development. Therefore, in the school settings, traditional children's games can be used for the protection and promotion of children's health.

Play has a significant relationship with the development of domains in children. Children are involved in various forms of social interactions, experiences, and the setting of environments in outdoor play areas that support children's social growth. It is necessary because the environment leaves a memorable experience for children. Other than that, it is crucial for their training and physical coordination. Through outdoor play they acquire social competence with a combination of different experiences through shared or solitary experiences. Additionally, variety of outdoor games with engaging spaces that offer attractions imminently stimulates game-based learning in contributing to the social competence of children (Mohamad et al., 2022).

Melianasari & Suparno (2018) in his study aimed to obtain information about the importance of traditional games as a medium of stimulation of personal relationships of children aged 5-6 years. The method used in this study was a survey with a descriptive type of survey approach. The results showed that 94% of learning in kindergarten had not used traditional games to stimulate children's personal relationship abilities. While 45% of learning activities that use traditional games and even then, to stimulate the motor skills of children. Most of the lessons use the methods already contained in the curriculum and previous teaching references.

Gelisli and Yazici (2015), carried out a study to evaluate traditional child games which are a part of Turkish culture and about to disappear in terms of development fields of children. The study was a descriptive survey and the data of the research was obtained through personal interviews. The data was collected through "Interview Form for Traditional Child Games". The study found that traditional games contribute to the motor, linguistic, cognitive and social emotional development fields of children and to their self-care to a great extent.

According to Chanpura & Nandha, (2023), different play methods like physical and gross motor, fine motor skills, play in class, playground, outdoor and indoor, with group or individuals showed the relation with all the domains, improving their growth or development and decreasing the risk of diseases and providing healthy lifestyles.

Gultom et al., (2022) in their study highlighted the successful integration of traditional games into the educational framework, particularly during the COVID-19 pandemic. This integration has been shown to enhance character education among elementary school students, making learning more engaging and culturally relevant. The results indicate that traditional games contribute significantly to various aspects of student development. These include improvements in physical-motor skills, socio-emotional development, moral values, cognitive abilities, and language skills. The paper emphasizes that these games provide a holistic approach to education, addressing multiple developmental needs of children.

Madondo & Tsikira, (2021) in their study demonstrates the richness of traditional children's games as an instructional tool for promoting holistic child development at the early childhood development (ECD) level. The study examines traditional children's games from rural Zimbabwe. Findings suggested that traditional children's games take cognizance of children's socio-cultural context and are thus culturally relevant. The researchers recommend that ECD educators should maximize use of traditional children's games in teaching. The skills that children develop in the classroom through cultural heritage resources like games are useful and sustainable in everyday life and the future.

Tasnim et al., (2022) in their study aimed to prove the improvement of social development through the traditional game of mallogo for children aged 5-6 years at Ponre, Gantarang. The results show an increase in social development through traditional mallogo games for children. In addition, this research provides a new perspective on children's social development through the traditional game method.

Raguan et al., (2024) in their study suggested that traditional sports games play a significant role in character building for early children, offering a necessary counterbalance to the pervasive influence of digital games. By fostering cooperation and cultural values, these games can contribute positively to children's social development.

Pramanik & Bhattacharya (2019) studied on "Play and indigenous games of children: a cultural heritage of western Odisha, India". They concluded that as a significant part of

culture, traditional games reflect the day today life like preparing food items, collecting firewood, and other food products from forest, selling and buying of agricultural products, different traditional working culture, rites rituals, and festivity of a given social community. There are number of games in western odisha which succinctly depict the cultural profile of this area. like any other artifact, traditional games also have an incredible impact in a given culture. Traditional games are not only for physical strength, it is also a mean for mass entertainment. impulsive exchange of lore element of given community is also done in between the performance. Performance of traditional games creates bridge of unity between playgroups as well as in society. The players also learn successful application of skill and imitative knowledge from traditional games; and this knowledge is transmitted from one generation to next generation. In this way the traditional games has a great educative value, it is like an educational institution where the performers learns the behaviour, friendship, and cooperation. after all traditional games are a link between past and present of a given society. In the street, particularly in the nooks and crannies of public space not under the watchful gaze of adults, children may thus begin forming a public identity and establish their own selfhood and independence.

Rahman et al., (2020) suggests that due to the ease of acquisition, low costs, and widespread acceptability, indigenous folk games can be incorporated to facilitate and improve physical fitness among children with neurodevelopmental disabilities. They studied on the analysis of the therapeutic benefits of traditional Indian folk games. Ten traditional Indian folk games were selected through purposive sampling and videotaped on skilled players. Results found that Folk games encompass a variety of functions and can potentially be used for therapeutic purposes in children with neurodevelopmental disabilities.

Krishnaveni and Shahin, (2022), aimed to throw light on how traditional games indirectly promotes pro-social behavior by enhancing social skills among young individuals with peer groups. Study concluded that traditional games supplement the desire of voluntary learning of social skills which help to understand others by communicating effectively with people around. Imitation capacity with language adequacy can be improved as vicarious experiences while playing in groups and it is reported to foster social skills with socialization factors that immensely help in the natural process of self-development among the younger generation.

Moran, (2019) in her study stated that from the very ancient period, many traditional games have been played in the villages of Assam and other north eastern states of India. The

mostly played games are such as “Tang-Guti”, Lukaluki, siu siu, Bhel kutkut, Bhalta Khel, Bagh Goru, Phatik Teteli etc. it can be assumed that these games and sports of fun and enjoyment are discovered and for the prepare of relation from hard work, refreshment, encouragement and enhance concentration in daily works. A part from their many other games are played in traditional way in Villages of Assam. But unfortunately, because of the modern social life and lack of awarness these traditional games are about to be lost in Assamese society. Many traditional folk songs are also related to these refreshing and beautiful games. If these games are preserved then these can re-invent the ancient flavour of games spirit and give encouragement to the new generation.

Mazumder, (2014) in his study stated that like any other state of India, Assam too has its share of traditional games and sports, which are bound securely to the heritage and culture of the land. The purpose of this study was to evaluate the role of media in promoting the traditional games and sports of Assam, many of which are today on the verge of being forgotten. The methodology which was adopted for the study was that of an In-depth Study, with an exploratory approach. The major finding of the study had been that – Media is a reflection of the society and if something is missing in the society itself, it can never be found in the media. In an In-depth Study, generalizations cannot be made about the results because small samples were chosen and random sampling methods were not used. In-depth study, however, provides valuable information for the subject, particularly when supplementing other methods of data collection in Qualitative Research. This holds true for the present study also. However the results of this study can be of great importance in starting the endeavour to give a new lease of life to the dying and near extinct traditional games and sports of Assam. Traditional Games and Sports are an Identity Landmark and Milestone in the evolution of the Culture, Heritage and Tradition of the ancient land of Pragjyotishpur, now Assam.

According to Boro et al., (2015) from the very beginning the Bodo community of Assam have some sports & games and their recreation centres with their own methods. They played them to forget their tired and to busy for next works, and to enjoy in their busy life. Some of the most important games and sports of the Bodos are highlighted on this paper. So, the main aim of this paper was to collect the traditional sports and games which is mostly related to recreations of the Bodos, analyse them in scientific way, preserve them and spread all over the world community. The present study paved a way to develop a co-relation between the physical and mental development of the Bodo society. Through this research traditional games and recreation of the Bodos will be enhanced in scientific platform. It is

expected that the Traditional games and recreations of the Bodo will be spread to the other community of this challenging world.

Baruah & Saikia (2020), in their study, an overall discussion on the traditional games of Assam is presented in this research paper “An Introduction to the Traditional Games of Assam”. They suggested that the traditional games are played with different rules and they are also named differently. Importance of these games for well-being and development of the physical and mental aspects of a person is immense. Traditional games carry the identity of heritage and the state of development of a nation. Besides providing enjoyment of leisure time and mental satisfaction, the traditional games prevailing in Assam also play important role in development of physical, psychological and intellectual development of children as well as adults.

Saikia, (2020) in her study stated that since time immemorial, various traditional games have been being played in Assam as leisure time activity or on the occasion of different festivals. Initially, people were not competitive regarding these games. They usually resorted to frolicking after a day of hard work, to rid themselves of the physical and mental fatigue. Some of the folk games received royal patronage and were recognized as state games. With the passage of time, the rules for the traditional games were, to some extent, changed. Some of the games have disappeared over the years. On the other hand, some games have been modified and transformed. The games that were patronized by the Ahom rulers (Swargadeo), have been recognized as the state games of Assam. One such popular game of ancient Assam was Kori Khel. Usually played during Bohag Bihu, Kori Khel can be played by men and women of all age groups. This game was popular even in the inner circle of the Tai-Ahom royalty. Another game that was popular in ancient Assam was Haugudu. Young boys played this game by singing and forming a circle. As times changed, these games also went through various changes. It can be said that a popular game of the present times, Ludo is a descendant of Kori Khel and Haugudu was an ancestor of the now popular Kabaddi. This research paper made an attempt to highlight the significance of Haugudu and Kori Khel in the Assamese folk culture and the evolution thereof.

Bhattacharjee and Somnath (2024) in their study stated that different tribal groups of India also have some of their own traditional games and sports, which reflect their cultural identity and means of recreation and entertainment in leisure time. In Assam the cultural heritage of the Dimasa Tribe has its own resemblance. They are primarily dwelling in the

Karbi Anglong and Dima Hasao district of Assam. They are autochthones of the region and they have multiple traditional cultures of their own and some unique ethnic games and sports as well. In this paper an attempt has been made to focus on the various ethnic games of the Dimasas. The studied people of these villages are very much aware of their folk cultural traditions, particularly of their ethnic games and sports. This paper was an attempt to discuss about their different ethnic games; as well as the significance of such ethnic games among the concerned people, with a special reference to their emerging problems and prospects. However, there are some emerging consequences, where the concerned players are not getting enough recognition. It is expected that, the state government will seriously look into the matter to protect and preserve this rich ethnic heritage of the state and concerned ethnic group.

Gogoi, (2020) in her study stated that traditional games are not just games they were designed in such a way that one can develop lot of skills like logical thinking, building strategies, concentration, basic mathematics, aiming, physical fitness and lot more. Traditional games act as learning aids. Like all other communities and tribes, Karbis has a great tradition of folk games which not only for children but also for the adults too. But due to the advancement of technologies and video games these folk games are in verge of extinction. So, in her study an attempt was made to explore different types of traditional games of the Karbis and their procedures and an attempt was made to study its cultural importance to the Karbi society. Researcher also revealed that a good number of Karbi traditional games are on the verge of extinction. Globalization and Westernization have had a negative impact on tradition and local cultural identities. Mobile gaming, video games, commercially produced games and toys possess a great threat to traditional games. Still, Karbi traditional Sports Association (KTSA) which is a new organization of Karbi Anglong had taken measures to preserve Karbi Traditional games and sports floated during a meeting held at KLA office, on 10 May 2019. KTSA resolved and pledge to promote and protect traditional games. They also appeal to all Karbis for support towards their effort in preservation and promotion of traditional games.

Daimary, (2019) in his study revealed that the traditional folk games of the Bodos disclose their ethical features. These games are also considered as a part of their folk culture as well as of folk literature. Traditional folk games and sports played among the Bodos are Naojaunai gelenai (boating), Dwiao sanshrinai gelenai (swimming), Tengnabari gelenai,

Ongkhri onghkam gelenai, Guti gelenai (counting), Chi danai gelenai (weaving), Khwina gelenai, Hui gelenai, Dang gelenai (catching game), Thakhumalainai gelenai (hit and hide) etc. These folk games have contributed generally to development and growth of the physical, social and psychological aspect of Bodo people. Due to the involvement in modern games for better scope, some folk games have been disappearing in the Bodo society by leaps and bounds.

Sheikh (2020) in his study endeavours to shed an insightful light on games enjoyed by the Assamese Miya society. It was observed that there are more than 50 traditional games are prevalent in Miya society. But most of the games are now on the verge of extinction. The ignorance of government, educated youth, intellectuals, journalists and the conscious group of people are mainly responsible for the vulnerability of these sports and games. Though, modern games like virtual games on mobiles, laptops, TVs, etc. which are also equally responsible for people to lose interest in traditional games. On the other hand, the easy accessibility of internet services, social networks such as Facebook, Twitter etc. are also rapidly indulging into the Miya community. It has become addictive and eventually, these people are losing interest in the traditional games. The researcher suggested that the government can do a lot to revive and popularize these traditional games in the region. The government and other Cultural organizations can take steps like organizing various cultural programs, archiving visual and documented records of the traditional games under various schemes or through various media. This will enrich the cultural environment of “Char-Chaparis” and save their unique cultural identity from the verge of extinction.

A study of Irmansyah et al., (2020), aimed to help children shape their social skills through the traditional games provided by physical education teachers with their comprehensive playing activities. The method used in this research was a qualitative approach, by doing some observations and unstructured interviews to teachers and students. The format of the game used in this research was the modification of traditional games called ‘Gobak Sodor’ which is adapted to the multilateral development of children and the theory of sports education. The result of observation and interview shows that the modified traditional games ‘Gobak Sodor’ can help children to shape their social skills, such as personal and social responsibility, teamwork, communication and the care of each other in the game. It can be concluded that the social skills of children cannot be created instantly. It requires time and continuous learning process.

Rukmini, (2022) aimed to analyse the effect of traditional games (congklak) on cognitive and fine motor development in children under five. The study was a quasi-experiment study with pre and post-test design conducted at Gembong Sawah, Surabaya, East Java. A total of 33 children under five was selected by random sampling. The dependent variable were cognitive and fine motor development. The independent variable was traditional game (congklak). Results found that traditional game (congklak) effectively improves cognitive and fine motor development among children under five.

Sulistyaningtyas and Fauziah (2019) stated it was very important to provide stimulation for early childhood development that can be done by parents and teachers. Early children were in the golden age which has high sensitivity to receive the given knowledge. The process of providing stimulation for early childhood was through playing games. One of the game activities that can be done was a traditional game. Why traditional games? The existence of traditional games has increasingly eroded, if teachers and parents did not early introduce the traditional games to them, over time the games will be replaced by gadgets, whereas the traditional games are the cultural heritage of Indonesia. Traditional games have many benefits in all aspects of early childhood development that include physical-motor, socio-emotional, moral, cognitive, and language development. This study aimed to find out the application of traditional games in early childhood education (ECE). The research method employed was survey and data were collected by using questionnaires. The research subjects were 40 ECE teachers. The results showed that as many as 55% of subjects often apply traditional games, but as many as 45% of them still rarely apply traditional games. In conclusion, traditional games apparently have many benefits in early childhood development, and this study suggests the use of traditional games in ECE.

Madondo & Tsikira, (2021) in their study demonstrates the richness of traditional children's games as an instructional tool for promoting holistic child development at the early childhood development (ECD) level. The study examined traditional children's games from rural Zimbabwe. Valuable insights were drawn from different dimensions of indigenous knowledge systems, ranging from linguistics, crafts, cognitive skills, and clinical psychology. In this grounded theory study, participants included 10 ECD educators from rural schools in five selected Zimbabwean provinces. The researchers employed systematic random sampling technique. Data were generated using questionnaires, face-to-face interviews, and observations conducted in the five participating schools. The multiplicity of data generation

methods enhanced validity of the data through triangulation. Findings suggested that traditional children's games take cognizance of children's socio-cultural context and are thus culturally relevant. The researchers recommend that ECD educators should maximize use of traditional children's games in teaching. The skills that children develop in the classroom through cultural heritage resources like games are useful and sustainable in everyday life and the future.

Kamid et al., 2022 in their study aimed to introduce and preserve traditional games which are the heritage of the Indonesian nation by implementing and integrating the traditional kite game into mathematics learning in geometry material in the fourth grade of Primary school. The sample used is students with a total of 80 active students. This study uses a mix method research with explanatory design with SPSS 25 which examines the descriptive, differences, and relationships of students' interests and attitudes towards learning mathematics on geometry material that is integrated with the traditional kite game. The results of the statistical T-test of product and service solutions show that each school has different interests and process skills for each student. by doing a correlation test it was found that there was a relevant relationship between students' interest in learning in process skills. So, the implications of this research are to foster better interest and skills in students with educators being able to make learning fun through the traditional game of kites.

Pramanik R. & Bhattacharya S. (2018) in their study made an endeavour to intricate how different types of traditional games of rural children is being enriched with cultural heritage of a society and act as a source of transmission of knowledge. It also makes a critical examination of the changing scenario of children's games in contemporary society. The study has been conducted among the school going children in the rural pockets of Western Odisha where local populace is getting dodged and western forms of entertainment is gaining popularity Children play because they want to—and it is the process of playing that counts. The rules come from the children themselves. Play is rich in symbol and metaphor, helping children to figure out the affective world as well as the physical and social worlds. Through play, children learn about themselves and who they are in relation to others. Children differ in many ways. While play can bridge those differences, it can also emphasize them. Boys' and girls' play, for example, has similarities and glaring differences that challenge the teacher to extend children's horizons as they acknowledge their preferences. Play can be a "social bridge" among children from different cultures, since all children play. Culture influences

both how children approach play and how their adults see play. There are many games lost due to lack of proper promotion; even older people also not able to recall that exactly.

Tripathi, (2022) in his study provides an understanding of the ethno motor traits of Traditional Sporting Games in India as a way to shape original embodied material culture. Studies showed significant differences in influence in implementing traditional game programs on the development of social behaviour of children. It can be concluded that a traditional game can still play a good role as a fun learning tool especially in this Information and Communication Technology (ICT) era, for healthy development of children and adolescents. Indian traditional games are the activity that does not use technology and excessive costs, but having a "happy" effect. In this scenario, there is dire need to promote traditional games about its benefits, and its pleasure for healthy life through social media (i. e., Facebook, What's Up). It suggests that traditional indigenous games can be an effective tool for fun, entertainment as well as healthy development and quality of life.

Adhe et al., (2023) stated that memory in early childhood is a part of development because it is closely related to children's cognitive abilities. The study aimed to determine the impact of traditional games on children's short-term memory. Short-term memory in this study was used because all activities were repeated in early childhood. The traditional game in this study was ongsrotan. The population and sample in this study were kindergarten-age children in the Gresik area, with a total of 41 children in public and private kindergartens. This study concludes that there is an effect of traditional ongsrotan games on the short-term memory ability of children aged 5–6 years. This is supported by the value of $t = 2.427$ and a probability of 0.025 ($p < 0.05$). This result is also supported by the average score on indicator 1 reaching a pretest of 3.5 then the posttest showing an average of 4. Indicator 2, namely the pretest score shows a score of 3 and the posttest meets a score of 4. Indicator 3 shows an average pretest score of 3.5 and the post-test showed an average of 3.8. Indicator 4 shows the average pretest score of 3 and then the average post-test score. of 4.

Kacar, & Ayaz-Alkaya, (2022). Stated that traditional children's games can protect the physical, emotional, and mental health of children. This study was conducted to determine the effect of traditional children's games on internet addiction, social skills, and stress level. A pre-test/post-test quasi-experimental design with a control group was used. The population of the study consisted of a fifth- and sixth-grade students studying at two secondary schools in a city of Turkey. A total of 42 students - 20 in the intervention group and 22 in the control

group - were included in the study. The Family-Child Internet Addiction Scale, the Social Skills Assessment Scale, the Social Skills Scale, and the Perceived Stress Scale in Children (8-11 years) were used to collect the data. The intervention group received eight weeks of traditional children's games. There was no significant difference between the intervention and control groups in terms of internet use, social skills, and stress level in the pre-test ($p > 0.05$). There was a statistically significant difference between groups in terms of daily and weekly internet use in the post-test ($p < 0.05$). The mean scores regarding social skills of the intervention group increased after the games compared with the control group ($p < 0.05$). There was no statistically significant difference between the groups in terms of stress-level mean scores ($p > 0.05$). The results showed that traditional children's games may be effective in reducing internet use and increasing social skills, however they do not affect stress level. Childhood is important for physical, cognitive, and psychosocial development. Therefore, in the school settings, traditional children's games can be used for the protection and promotion of children's health.

According to Erlangga, (2022) Traditional games are fun games that are passed down from generation to generation to the younger generation so that they remain sustainable. Cognitive development is a child's growth and development in knowing and understanding the circumstances around him. This literature review research aims to find out whether traditional games can affect children's cognitive development. Therefore the authors want to compare several related journals with the same title. The method used in writing 'literature review' begins with selecting a topic, determining keywords to search for journals so that several journals are selected for analysis. Searching for this journal through Google undergraduate is limited from 2010 to 2020. Based on several explanations from various studies that have been put forward, that traditional games have an effect on cognitive development.

2.5 Modern Games on Socio-Cognitive Development

Modern games are structured leisure activities that use play materials, toys, and technological devices while adhering to set rules and techniques. These games are designed to encourage cognitive engagement and the acquisition of specific academic subjects or skills, allowing children to broaden their conceptual knowledge while also reinforcing their overall developmental progress through play.

Ces et al. (2024) conducted a systematic review of the scientific literature between 2011 and 2024 to identify the benefits of playing board games for school-age children in terms of emotional competence. They found that for school-age children, board games seem to be an interesting tool to help in reducing problem behavior, support pro-social behaviors and to develop intrapersonal emotional competencies.

Venkatesan and Lokesh (2020) in their study sought to try out the test along with two other non-verbal tests of intelligence to derive profiles of performance on children with learning disabilities. The distribution of chronological vs. mental ages during test performance and the extent, level, or degree of congruence between the tests is reported. Results indicated a decreasing gradient of scores and increased performance errors on all the tests with advancing age. This means that easier items are passed at younger age levels, and difficult ones are failed. The nature, types, and distribution of errors were listed along with implications for understanding the deficits in eye-hand coordination, graphomotor and visual-spatial deficits, fine-motor speed, foresight, perceptual planning, general reasoning, and problem-solving.

Murty et al., (2020) in their study, characterized memory for dynamic social interactions during a computerized task in children ranging between 4 and 6 years of age. Specifically, we probed memory for the characters children interacted with, the decisions they made, and the valenced-feedback from those interactions. We found that while there were differences in discriminating between old and new characters, there were no age-related differences in the ability to remember which decision a child made or the feedback from that decision when a character was successfully identified. These findings support a model by which basic foundations of social memory develop early in childhood; however, the number of social memories and the incorporation of feedback into these memories may be limited in early childhood. Using this novel behavioral paradigm, they found that children in each group showed significant memory for characters they previously encountered, the decisions they made upon those encounters, and the social feedback received because of those decisions.

Ruggeri et al., (2019) investigated whether active control of study leads to enhanced learning in 5- to 10-year-olds. Children played a simple memory game. In Experiments 1 and 2, the goal was to remember as many as possible from 64 objects. In Experiment 3, the goal was to learn the French names for the same objects. For half of the materials presented, participants could decide the order and pacing of study (Active condition). For the other half,

they passively observed the study decisions of a previous participant (Yoked condition). Recognition memory was more accurate for objects studied in the active as compared to the yoked condition. However, the active learning advantage was relatively small among 5-year-olds and increased with age, becoming comparable to adults by age 8. Our results suggest that the ability to effectively control study emerges and develops during early childhood and leads to memory benefits over a week delay.

Vita-Barrull et al. (2023) studied the use of board games in the classroom to train executive functions and academic skills. Found that the use of board games during school hours could be as good or better methodology for cognitive training and learning academic skills than regular classes.

Kumar et al., (2024) explored the effectiveness of persistent maze-solving as an accessible intervention to enhance attention among children with epilepsy. 37 children aged 8-12 years were assessed using the Coding test, Children's Color Trail Test (CCTT-1 and CCTT-2), and variables influencing attention. A one-month maze-solving intervention was administered under parental supervision. Results of Baseline assessment revealed varying levels of attention impairment in children with epilepsy. Negative and positive correlations were found between attention and factors such as screen time and age at the first seizure episode respectively. Persistent maze-solving had a positive impact on attention, providing a feasible at-home intervention for these children. Further research with larger sample sizes and extended intervention durations is warranted to validate and expand upon these findings.

Karina et al., (2024) in their study addressed the challenge of low student learning outcomes and limited group learning engagement. Specifically, it sought to enhance students' thematic learning outcomes by implementing the Jigsaw learning model. The study employed a classroom action research design conducted over three cycles. The subjects of this research were 34 students from class VI.B at Elementary School 25 Palembang. Data collection techniques included observation, tests, and documentation to gather comprehensive student performance and engagement insights. The research findings indicated a significant improvement in student learning outcomes due to applying the Jigsaw learning model. The Jigsaw learning model helps students improve learning outcomes during thematic learning. In addition, learning by applying the Jigsaw learning model helps students think critically in finding solutions to problems given, providing opportunities for students to collaborate with others. friends, actively involved in group activities, responsible for their duties and training

students' courage to display their work in front of the class with confidence. Researcher suggested that jigsaw learning model is a solution in dealing with the problem of students who do not have a good cooperative attitude with their friends when in groups.

Al-Kreimeen, (2024) in their study endeavored to ascertain the effect of employing the Jigsaw II instructional strategy on the augmentation of thinking skills and proficiencies related to cognitive evaluation amongst female undergraduates majoring in Child Education at Al-Balqa Applied University. Implementing a quasi-experimental design, the research engaged a sample of 65 students, all enrolled in the "Play and Child Education" course for the summer term of the 2022-2023 academic year. These participants were arbitrarily allocated into two distinct groups: a control group (n=32), receiving instruction through traditional pedagogical methods, and an experimental group (n=33), experiencing the application of the Jigsaw II strategy. A set of assessments designed to measure thinking skills and cognitive evaluation competencies were administered both prior to and following the intervention for each group. In conclusion, the study highlighted the significant effectiveness of the cooperative learning-based teaching strategy, Jigsaw II, in enhancing the overall thinking skills of students majoring in Child Education at Al-Balqa Applied University, particularly in the context of the Play and Child Education course. Furthermore, it demonstrates the strategy's substantial impact on developing cognitive assessment competencies across various levels, including recall, comprehension, and application.

Erviana (2019), studied with the purpose to determine the steps of the development, also to determine the feasibility of Ludo learning media for 5th-grade Social Studies learning the material. This research was Research and Development. The subjects of the testing were the 5th grade students as many as 28 students in Abean 3 Elementary School, and the objects were Social Studies learning outcomes and Ludo media. Techniques of the data collection were by questionnaire, documentation, and tests. The data analysis technique was descriptive analysis according to the development procedures carried out. The results showed that Ludo media is feasible to be implemented. Quantitative data analysis was in the form of assessment by media expert which obtained the score of 95 with "very good" category, by learning material expert obtained score of 78 with the "good" category, by learning expert got the score of 95 with "very good" category. The analysis of teacher and student responses to the product testing was obtained the average score of 87.41, which is in the "very good" category. The analysis of teacher and students' responses to the product implementation was obtained the average score of 91,95 fall in the category of "very good". Research on Ludo

media development to improve Social Studies learning outcomes of the 5th grade elementary school has relevance to previous studies. The previous research [11] explained that image media can improve students' learning outcomes

Puspitosari (2022) studied on Attention Deficit and Hyperactivity Disorder (ADHD) is a disorder experienced by children with characteristics including hyperactivity, impulsiveness, and inattention things that affect the occupational performance of children in their activities. Occupational therapy play a role in handling ADHD children through play therapy methods. One of the children's games that have therapeutic value is the modified ludo game. Modified ludo game can be applied to decreasing symptom ADHD. Methods: Quantitative with pre-experimental research design, one group pretest-posttest with a sample size of 36 children with ADHD in RSUP Dr. Sardjito Yogyakarta. The sampling technique was purposive sampling, inclusion criteria: being able to understand simple commands, aged 3 - 6 years old, no motor impairment and able to move. Three rules modified ludo games models are provided in each session. The measuring instrument use ADHD rating scale that is valid and reliable. The data analysis method uses a paired sample t-test. Results: Paired sample t-test results showed that $p\text{-value} < 0.05$. Play therapy modified ludo games intervention have a positive and significant effect on hyperactivity, impulsivity, and inattention in children with ADHD ($p = 0.001$). Conclusion: Play therapy modified ludo games has an effect on decreasing hyperactivity, impulsivity, and inattention in children with ADHD, so it's recommended as an alternative game for occupational therapy for ADHD children.

Sivakumar (2022) stated that gamification in education has become the focus of attention in recent years. While "gamification is the practice of using game design elements, game mechanics and game thinking in non-game activities to motivate participants". Educational gamification is a teaching method that requires learners to participate in competitions according to preset rules. It has been an interdisciplinary and prevalent tool for educators to utilize in teaching in the past few years. The aim of this study was to find out the effectiveness of a memory game on academic performance of primary school students. The Experimental method was used for this study. The total sample was 80 students of IV standard. It consisted of 40 students in Control group and 40 students in Experimental group. The data were collected using appropriate tools and it was analyzed by t' test. The finding is that the academic performance of experimental group Students were higher than the Control

group Students. The results of the post test for the experimental group are so better than the controlled one which show that games have a good effect on improving the achievement for the primary stage and to create an interactive environment. It is recommended to use games since they are very effective especially for the primary stages in teaching and games are helpful for the teacher as a procedure for subject acquisition.

Co-operative-creative game programs have a significant impact in social development, by increasing various positive social behaviors and decreasing many negative social behaviors; by increasing assertive cognitive strategies and prosocial resolution of interpersonal problems; and by enhancing relationships and positive communication among group members. Additionally, in cognitive development, by increasing verbal intelligence, verbal and graphic-figurative creativity, as well as creative personality behaviors and traits (Garaigordobil et al., 2022).

Tian et al. (2020) studied on “The Development and Measurement of Block Construction in Early Childhood: A Review”. Results found that block building is highlighted as a significant activity in early childhood that serves as an indicator of various developmental skills. It is believed that proficiency in block construction can reflect children's cognitive, spatial, and motor abilities, which are crucial for their overall development.

Research also indicates that children who engage in block play later demonstrate superior academic achievement. It has been discovered that playing with blocks improves spatial reasoning, problem-solving, and creativity. Children gain a deeper comprehension of fundamental concepts, such as shape, size, and measurement, through block play (Lyu, 2023).

Estrada-Plana et al., (2024) studied on effectiveness of cognitive interventions based on modern board games in school settings to improve memory outcomes and math skills. The results showed significant transfer effects of both memory and math trainings. In third grade, they found that playing math games showed medium–large effect sizes in visuospatial short-term memory and updating memory, number operations and number ranking compared to the control group. In fourth grade, they found that playing memory games showed significant small effect sizes in problem solving compared to the control group. Hence, playing board games could be a methodology that enhances cognitive and mathematical development in children.

Moreover, research found that children feel motivated to learn using board game. In addition, collaborative work is evidenced, and soft skills are enhanced such as teamwork, problem solving, analytical thinking and autonomy (Espinoza-Espinosa et al., 2022).

Ludo game as learning media aims to enhance students' collaboration skills through an engaging game format. Study suggests that the Ludo game not only captures students' attention but also serves its educational purpose effectively. Ludo game also effectively fosters teamwork and cooperative learning among students (Novianti et al., 2022).

Moreover, Ulhusna et al., (2020) studied to find out effect of Ludo game in improving students' collaborative skill. This research was quasi-experimental with the sample of 21 students on third grade in SD 19 Nan Sabaris. The conclusion showed that there were significant different on students' collaborative skill between the students who were taught by using Ludo and the students who were taught by using conventional learning.

Alfaini et al., (2023) studied effectiveness of using crossword puzzle games to help students. According to the research findings, there is a noticeable difference in students' vocabulary proficiency before and after using crossword puzzle games to teach them. Thus, it can be stated that employing crossword puzzle games to teach kids vocabulary is beneficial because there is a noticeable change in their vocabulary achievement before and after the application of the strategy.

Cooperation is the ability to work together to complete a task with others. The process of working together children is trained to be able to suppress individual personalities and prioritize group interests. Farida et al., (2022) in their study aimed to improve children's cooperation skills through puzzle games at Kenanga Raya Kindergarten Medan. Based on the results of the study, it was concluded that puzzle games improve the cooperative ability of children.

According to Mayer, (2020) game-based learning occurs when playing a game causes a change in the player's academic knowledge (including cognitive skill). The research examined how to design computer games and simulations that foster academic learning in players by taking an approach that is grounded in a cognitive theory of how people learn and based on research evidence from scientifically sound experiments. According to the cognitive theory of game-based learning, game playing may foster generative processing (i.e., cognitive processing aimed at making sense of the material and attributed to the player's motivation),

but it may also create extraneous processing caused by the distracting glitzy features of the game (i.e., cognitive processing that does not support the instructional objective of the game). Designing effective educational games requires a balance of instructional features that minimize extraneous processing and manage essential processing and game features that promote generative processing. Three research genres of experimental research on game-based learning are value-added experiments, cognitive consequences experiments, and media comparison experiments. Future directions include conducting replication studies, identifying boundary conditions, broadening the context of study, focusing on learning outcomes, and focusing on learning processes.

Kaizar and Alordiah, (2023) in their study investigates how play supports school children's cognitive, social, and emotional development. It integrates the sociocultural theory of Vygotsky with the cognitive development theory of Piaget to create a thorough understanding of play's effects on several aspects. The emphasis is on cognitive development, including advantages including problem-solving, creativity, and language and reading development. Social development is examined through peer interactions, social skills, and prosocial conduct. The importance of emotional development is highlighted, along with its advantages for self-control, expressiveness, and intelligence. The study also covers the contexts and settings of play, highlighting the value of safe places and cultural influences. The research offers and evaluates evidence-based play therapies and programs that support school-age children's cognitive, social, and emotional growth, emphasizing their results and advantages. The study's ramifications for parents, teachers, lawmakers, counsellors, psychologists, and educational assessors are examined.

Garaigordobil et al., (2022) in their work presented the results of four cooperative-creative game programs (Game Programs). In all four studies, experimental designs with repeated pretest-posttest measures and control groups were used. Validation samples ranged from 86 to 178 participants, randomly assigning participants to the experimental and control conditions. Before and after each program, a battery of assessment instruments was applied to measure the variables under study. The intervention consists of conducting a weekly game session during the school year. The results of the posttest covariance analyses confirmed a significant impact: (1) in social development, by increasing various positive social behaviors and decreasing many negative social behaviors; by increasing assertive cognitive strategies and prosocial resolution of interpersonal problems; and by enhancing relationships and positive communication among group members; (2) in emotional development, by improving

self-concept, peer image, and emotional stability; and (3) in cognitive development, by increasing verbal intelligence, verbal and graphic-figurative creativity, as well as creative personality behaviors and traits. The work provides empirical evidence of the relevance of cooperative-creative play in child development.

Eriksson et al., (2021) in their study stated that board games are a common social activity for many children, but little is known about the behavioral effects of this type of game. The current study aims to explore the behavioral effects of cooperative and competitive board games in four-to-six-year-old children ($N = 65$). Repeatedly during 6 weeks, children in groups of four played either cooperative or competitive board games in a between-subject design, and shortly after each game conducted a task in which children's cooperative, prosocial, competitive, and antisocial behavior were observed. The type of board game did not have an effect on cooperative, prosocial or antisocial behavior. Cooperative and competitive board games elicited equal amounts of cooperative and prosocial behavior, which suggest that board games, regardless of type, could have positive effects on preschoolers' social behavior. Their results suggest that children may compete more after playing competitive board games; but the measure of competitive behavior in particular was unreliable. Preschoolers enjoyed playing cooperative board games more than competitive board games, which may be one reason to prefer their use.

Weng, (2022) in his study explored the influence of creativity and learning attitude through game-based learning. The subjects were sixth grade elementary school students, and a logical thinking game was developed to stimulate the students' learning interests. The result shows that the students' creativity has a significant and positive effect on their learning attitude and problem-solving ability. In addition, learning attitude has a significant and positive effect on the students' problem-solving ability. Moreover, creativity elicited a direct effect on problem-solving ability. This study verified that the proposed puzzle-type logical thinking game can train and improve the logical thinking ability of learners.

Moreover, Aisyah (2021) suggested that there is an influence between puzzle game with the child's memory ability. Puzzle games in addition to memory skills can also train children to solve problems, develop eye and hand coordination, develop cognitive skills.

Grafiyana et al. (2021) in their study aimed to determine the ability to solve problems and teamwork (teamwork) in children aged 10 years using puzzles. The data collection in this

study was the acquisition of time in the preparation of puzzles. The results of this study indicate that the experimental group has faster problem solving than the control group because of the learning outcomes of teamwork.

Moreover, Kesuma et al. (2021) found that jigsaw-type cooperative learning model based on critical thinking, communication, collaboration, and creativity can improve students' problem-solving ability.

Sivakumar, (2022) studied on “Effectiveness of memory game on academic performance of primary school students”. The major finding of the study revealed that memory games of matching pair cards game more effective. It improves the academic performance of primary school students. It is better than the traditional method of learning. It brings a new kind of experiences for the students. Therefore, the investigator desires that a greater number of educational institutions should use memory games of matching pair cards game to teach and make the process of teaching and learning more effective.

Lyu (2023), stated that cognitive, social, as well as affective development are significantly influenced by early childhood development. This study investigates how block play and pretend play independently or jointly influence the development of young children. The positive effects of block play and pretend play on early childhood development include language and communication skills, problem-solving abilities, social skills, and emotional regulation. In addition, research indicates that children who engage in block play later demonstrate superior academic achievement. It has been discovered that playing with blocks improves spatial reasoning, problem-solving, and creativity. Children gain a deeper comprehension of fundamental concepts, such as shape, size, and measurement, through block play. In this paper, the author discussed that block play and pretend play should be emphasised in the toddler years so as to promote the development of young children. This paper provides parents, educators, and policymakers with insights for fostering children's cognition, sociability, and emotion through play-based learning environments.

Dughi et al. (2022), conducted a study to identify a progression in the memory skills of children aged 3 to 6 years, using three memory development techniques: memorization, retelling with images and memory games. The evaluation of the subjects within the applied methods was done physically, within the instructive-educational activities with the preschoolers and a form was completed with their results in all three situations. During

memorization activities, the voluntary memory and the comprehension of the text were practiced. The chosen research methods proved to be useful and effective in improving the memory of preschoolers, according to the results obtained. By using image-based retellings improves the reproduction of content in memory. Memory games are an effective way to practice memory, but much more fun. These games target the visual memory of preschoolers.

The study of Lige et al. (2022) aimed to determine whether the Maze educational game tool is effective in improving the cognitive development of children aged 5-6 years. Based on the results, it can be concluded that the effectiveness of the Maze Educational Game Tool (APE) is quite effective in helping to improve the Cognitive Development of children 5-6 years. It can be concluded that APE maze is able to help children's cognitive development well, such as helping children to practice problem solving skills, recognizing and knowing numbers, recognizing and mentioning number symbols and children can know various alphabets.

Faizah et al. (2023) in their study found that playing maze games can help children's early cognitive skills grow and develop to their full potential, especially during the golden years. Teacher motivation, as well as the availability of adequate facilities and infrastructure, contribute to children's cognitive development through the use of maze games.

Ulkhatiata and Purnama (2023), aimed to determine the effect of the lego games in increasing the development of creativity in children aged 4-5 years at TK Aisyiyah ABA Konang Glagah Lamongan. Following the problems found in the field, the lack of learning the media used by teachers results in children feeling bored more quickly in carrying out teaching and learning activities and only emphasizing their academic development so that the development of creativity is not given enough attention. Design/methods/approach – This type of research uses a quantitative approach with a pre-experimental type and a one-group pretest-post-test design in collecting the data, namely making initial observations before being given treatment, treatment, and final observations after being given treatment. Data collection techniques used observation and documentation; data analysis used IBM SPSS with paired samples t-test. In this research, researchers conducted data mining using research instruments on children aged 4-5 years in TK Aisyiyah ABA Konang Glagah Lamongan. The results of the study showed that the influence of the use of lego games increases the development of children's creativity using lego games.

Kamal and Gabr, (2023) in their study aimed to explore the design of outdoor play spaces in Cairo that provide an enjoyable play experience, along with opportunities for enhancing child social and cognitive developmental skills through play features incorporated in their play spaces to achieve this goal. The study adopted a qualitative methodology to examine the effectiveness of natural, customized and elevated features on social and cognitive play behaviors of 6–8-year-olds. Data were gathered in three different play settings; a play space inside a social club, a park and a schoolyard. Data gathering relied on observations, written descriptions of play patterns and recordings of children's conversations. Additionally, the researcher utilized sketching diagrams to illustrate children's preferences for play with each feature. The results of the study indicated that incorporating natural, elevated and customized play features into children's play spaces can enhance their environment and provide opportunities for fostering their social and cognitive skills.

Goswami & Parekh (2023) analysed the impact of screen time on child development and found that excessive screen time was associated with negative outcomes in all of the areas. Specifically, prolonged screen time was found to negatively impact attention, language, memory, and motor skills development. Moreover, excessive screen time was linked to increased risk of obesity, reduced physical activity, and sleep disturbances, as well as social and emotional problems. The findings suggest that excessive screen time can have detrimental effects on child development. Although some studies report positive impacts of screen time, particularly in educational contexts, the vast majority suggest that a limited and monitored exposure to screens is needed to avoid negative outcomes.

Gupta et al., (2021) reviewed literature to find out the evidence related to effects of screen-based media and excessive screen time on children's health; and to formulate recommendations for limiting screen time and ensuring digital wellness in Indian infants, children and adolescents. The Group recommends that exposure should be limited to less than two hours per day for children 5-10 years age. Screen time must not replace other activities such as outdoor physical activities, sleep, family and peer interaction, studies, and skill development, which are necessary for overall health and development of the children. Families should ensure a warm, nurturing, supportive, fun filled and secure environment at home, and monitor their children's screen use to ensure that the content being watched is educational, age appropriate and non-violent.

Kesalainen et al., (2019), aimed to study how children's play behaviour was related to their cognitive skills and vocabulary development in integrated early childhood special education (ECSE) groups. The longitudinal study is part of the LASSO research project, which concerns children's stress regulation, learning and quality of early childhood education, including special education. Children with and without special needs should be supported according to their diversity of individual needs as equal members of a learning community. The study aimed to discover how this was realised by assessing children's various learning paths. The data were collected between 2012 and 2015 and involved 289 children, including 121 with special educational needs (SEN). The children's cognitive skills and vocabulary were measured with standardised psychological tools: the Wechsler Preschool and Primary Scale of Intelligence (WPPSI) and the Developmental Neuropsychological Assessment (NEPSY). Play behaviour was evaluated with the Preschool Play Behaviour Scale (PPBS). In this study, we hypothesised that progress in children's social play boosts cognitive functions and duly boosts learning. The results indicated that all skills improved for all of the children during the research period, although there were differences in results between children's status groups.

Senol et al. (2023) carried out a study in order to determine the digital game addiction tendency levels of children and to examine the correlation between the results obtained and the social development of the children. As a result, the increase in digital game addiction in children has negatively affected social development. Active parental guidance strategy prevented children's digital game addiction tendency, while digital oriented guidance and free parental strategies increased addiction tendency.

Astria et al. (2024) investigates the psychological impacts that arise from excessive exposure to digital technology during children's development. The authors findings indicated a correlation between excessive gadget use and negative impacts on children's psychological well-being, including mental health problems, decreased social abilities, and attention disorders. Practical implications and preventative suggestions are also presented to help parents and educators manage children's gadget use wisely. By understanding the possible psychological impact, this paper provides a comprehensive view of the role of technology in children's development, emphasizing the importance of a balanced and forward-looking approach to gadget use at critical developmental stages.

Kaoru & Tim, (2016) conducted a study to investigate the development of abstract thinking in preschool children (ages from three years to four years old) in a nursery school in England. Adopting a social influence approach, the researcher engaged in 'close listening' to document children's ideas expressed in various representations through video observation. The aim was to identify behaviours connected with features of the functional dependency relationship – a cognitive function that connects symbolic representations with abstract thinking. The article presents three episodes to demonstrate three dominating features, which are (i) child/child sharing of thinking and adult and child sharing of thinking; (ii) pause for reflection; and (iii) satisfaction as a result of self-directed play. These features were identified as signs of learning, and were highlighted as phenomena that can help practitioners to understand the value of quality play and so provide adequate time and space for young children and plan for a meaningful learning environment. The study has also revealed the importance of block play in promoting abstract thinking.

Baidalieva & Bobrova (2021) in their article dealt with the issue of overcoming preschool children with special educational needs through play activities. The significance and influence of play activity on the development of communication and social interaction of a child with special educational needs are considered; the characteristic features of play activity aimed at the formation of the personality of preschool children with special educational needs are described; play activity, which also contributes to the development of voluntary behavior, develops the motivational and need-based sphere of the child, and also serves as a child's sphere (space) in which he can show initiative, carry out tests, make (make) choices, show independence and activity. Thus, the introduction of play activities into the educational and educational process is one of the important tasks for the development of all mental processes of the child. Play is a natural form of learning about the world for a child. Interacting with the child through play, we teach children not how it is convenient for us to give educational material, but how it is convenient and natural for children to take it.

Huang, (2023) in his paper analysed use of digital devices and children's cognitive development and revealed that prolonged use of digital devices can have negative effects on children's cognitive development, such as attention issues, delayed language development, and decreased learning abilities. However, appropriate and targeted use of digital devices can positively enhance children's cognitive development.

Fitriana et al., (2023) stated that critical thinking skills require an active learning process that involves deciding whether to agree or disagree with the information, making judgments to ensure correctness, and correcting inaccurate information to generate new ideas. This study employed Classroom Action Research (CAR) with the main objective of identifying learning models that can increase student involvement in learning mathematics and improve students' critical thinking skills. This study aims to improve students' critical thinking skills using the Jigsaw cooperative learning model. The teacher conducting the study used the applied learning model, while the researcher acted as an observer. This activity involved twenty-five tenth grade and was conducted at Madrasah Aliyah Al Muayyad Surakarta. The results showed that by implementing the Jigsaw cooperative learning model, there was an increase in the process of learning mathematics in both cycles. The results showed the jigsaw learning model could improve students' critical thinking skills with an average increase of 43% in critical thinking skills before the study.

Sina et al. (2023) in their study found that the duration of exposure to contemporary digital media, including smartphones and internet as well as media multitasking, are positively associated with emotion-driven impulsiveness and cognitive inflexibility.

Ersoy & Sahbaz (2023), examined digital game addiction and children. The study addresses the effects of digital games on children, addiction symptoms, and the impact of addiction on children's social, academic, and psychological development. According to the results of the research, symptoms of digital game addiction include excessive time spent playing games, loss of control, preoccupation with games, developing tolerance, neglecting social and academic responsibilities, and experiencing physical health problems such as sleep disorders and eye strain. Digital game addiction can negatively impact children's social skills, academic performance, and psychological well-being, thus reducing their quality of life. Therefore, it is recommended for parents and teachers to limit children's use of digital games and encourage them to engage in other activities. Parents and teachers should monitor children's use of digital games, recognize addiction symptoms, and take necessary precautions.

Trebjesanin and Kopunovic-Torma (2024) suggested that excessive use of modern communication technology contributes to changing our traditional, immediate interpersonal relationships as well as peer relationships which are being damaged. Today's children who are on the Internet for hours every day often do not know how to listen to each other, they are

impatient to express what they want. They lack essential social skills to navigate the real social environment because they do not have enough opportunities to develop the power of empathy in direct contact with their loved ones. Digital violence is particularly widespread on social networks among young people and children, precisely because they do not have developed empathy, emotional and social intelligence, and therefore are not aware of the consequences of their inappropriate social behavior on other people.

Muppalla et al. (2023) examined the effects of screen time on many developmental domains and covers management and limitation techniques for children's screen usage. Screen media has a wide range of cognitive consequences, with both beneficial and detrimental effects noted. Screens can improve education and learning; however, too much time spent in front of a screen and multitasking with other media has been related to worse executive functioning and academic performance. As screen time reduces the amount and quality of interactions between children and their caregivers, it can also have an impact on language development. Contextual elements like co-viewing and topic appropriateness are key in determining how language development is impacted. Additionally, excessive screen usage has detrimental effects on social growth, including a rise in the likelihood of sleep disorders, and mental health conditions including depression and anxiety. It can obstruct the ability to interpret emotions, fuel aggressive conduct, and harm one's psychological health in general. Setting boundaries, utilizing parental controls, and demonstrating good screen behavior are all techniques that parents may use to manage children's screen usage. excessive use of technology can negatively affect toddlers, including delayed language development, poor social skills, and behavioral problems.

Mulyana and Nurcahyani, (2022) conducted a study to determine the effect of a puzzle playing method on improving the cognitive development of children aged 4-6 years in TK Nurul Iman, Sukakarsa Urban Village, Sukarame Subdistrict, Tasikmalaya District. A quantitative pre-experimental pretest-posttest design was used and data were collected through questionnaires. Respondents in this study included 40 students of TK Nurul Iman in Sukakarsa Urban Village. Data analysis involved the Mann-Whitney U-Test. The results of the pretest showed that 32 participants (80%) were in the low category, and the posttest results showed that 26 children (65%) were in the good category; this difference was significant ($p < 0.01$). This showed that there was an effect of the puzzle playing method on improving the cognitive development of the children aged 4-6 years in TK Nurul Iman,

Sukakarsa Urban Village, Sukarame Subdistrict, Tasikmalaya District. This research is expected to be used as a reference for other teachers in helping develop children's cognitive abilities. Keywords: puzzle playing method, improving cognitive development.

Hygen et al. (2019) studied to investigate whether the quantity of time children spend on electronic gaming is related to their social development. they examine prospective relations between time spent gaming and social competence in a community sample of Norwegian 6 year olds ($n = 873$) followed up at ages 8, 10, and 12, controlling for socioeconomic status, body mass index, and time spent gaming together with friends. Results revealed that greater social competence at both 8 and 10 years predicted less gaming 2 years later and that more age-10 gaming predicted less social competence at age 12 but only among girls.

Chaarani et al. (2022) on their study showed very small levels of enhanced cognitive performance measured on inhibitory control and working tasks in children who played video games vs those who did not, although the video gamers had significantly higher attention problems, depression, and attention-deficit/hyperactivity disorder scores compared with the those who did not play video games.

Fricitarani and Maksum, (2020) in their study stated that low student learning activities make teachers often find students confused, students do not do assignments according to systematic work steps so they are in a hurry to do practicum so as not to be late for further learning. This situation is supported by the number of students who score below the KKM, which is 20.53% and the number of students who score above the KKM is 79.45%. Limited space and tools cause students to learn practicum in groups, the teacher teaches with the lecture method so that researchers plan to change the teaching method by applying a jigsaw-type learning model. This study aims to analyze the effectiveness of the jigsaw cooperative model on increasing student activity and student learning outcomes. This type of research is classroom action research with the model of Kemmis and Mc Taggart. The subjects of this study were 33 students in grade eleven. Data collection techniques through observation sheets, performance appraisal sheets, essay tests, and documentation. Data were analyzed descriptively. The results showed: The application of the jigsaw model can increase learning activities as evidenced by the average student learning activities in the first cycle reached a percentage of 57.6% in the second cycle increased to 90.9%; and student learning outcomes increased to reach the Minimum Completeness Criteria (KKM) in the pre-cycle by

83.3%, increased 20% to 90.9% in the first cycle and increased 10% to 100% in the second cycle. So, the Jigsaw model can improve the activity and learning outcomes of eleventh-grade students.

Wahyudi and Sabat, (2023) studied on the effects of online gaming on social development of ULA Sekolah Setara pupils where findings revealed there is a tendency for children to exhibit more aggressive behaviors as a result of their gaming experiences. This aggression can manifest in their social interactions, potentially leading to conflicts with others. Additionally, children who spend significant time gaming may lack interaction with those around them. This reduction in face-to-face communication can hinder their social development and ability to form healthy relationships.

Muminah et al. (2023) in their study aimed to examine the correlation between online games and the social behavior of high school students in the Bangil District. The research indicates a strong negative relationship between online gaming and the social behavior of high school students. The study found that excessive gaming leads to issues such as the use of harsh language, neglect of responsibilities, and a decline in empathy towards others.

According to Septiani et al., (2020) Social attitudes are needed by students in improving communication and collaboration skills in the industrial revolution era. This study aimed to identify the effect of the jigsaw learning model as a community learning strategy on students' social attitudes in digestive system material. This quasi-experimental research was using a non-equivalent pretest-posttest control group design. The population used was eighth-graders in Padang. The samples involved were two groups selected through a simple random sampling technique. The instrument used was observation sheets to measure four aspects of social attitudes, including social discipline, tolerance, self-confidence, and collaboration. Data were analyzed using one-way ANCOVA. The result showed that the jigsaw as a community learning strategy has a significant effect on students' social attitudes (p -value < 0.05). As a recommendation, the jigsaw learning model can be applied to promote students' social attitudes.

Kam et al., (2009) reported on exploratory studies with three communities in North and South India to show some problems with digital games that fail to match rural children's understanding of games, designing games that are culturally meaningful to them. They describe 28 traditional village games that children play, based on their contextual interviews.

Researcher analyzed the mechanics in these games and compare these mechanics against existing videogames to show what makes traditional games unique. Their analysis helped to interpret the playability issues that researcher observed in their exploratory studies, and informed the design of a new videogame that rural children found to be more intuitive and engaging.

Utami et al., (2020) in their research aimed to analyze the effect of Jigsaw cooperative learning methods on four dimensions of self-efficacy from a neurocognitive perspective and the difference between male and female students. Those dimensions are self-efficacy in social resources, self-efficacy for academic achievement, self-efficacy for self-regulated learning and self-assertive efficacy. This research employed a mixed method use Sequential Explanatory study with a sample of 280 high school students. In phase 1, quantitative data was collected using a self-efficacy questionnaire that was adopted from the Self-Efficacy Scale developed by Bandura, and through testing validity and reliability, consisting of 26 questions. The results of this study showed that female students in the jigsaw method group had high self-efficacy in enlisting social resources and self-assertive efficacy. The Jigsaw method has no effect on male and female self-efficacy for academic achievement. The dimensions of male self-efficacy for self-regulated learning in the conventional group were higher than in the Jigsaw group. Perceptions, motivations, and social cohesion abilities of students affect the dimensions of self-efficacy in the jigsaw learning method.

Fatourehchi et al., (2024) stated that play as children's work and activity in daily life plays an important role in developing children's creative thinking. Children are born creative, but the creativity of many of them drops around the age of ten, which can be seen as the main factor in formal and informal education environments. The purpose of this research is to develop and validate the game-based creativity protocol and to investigate its effectiveness on the social-emotional skills of primary school students. The current research is applied in terms of its purpose and in terms of mixed method (qualitative-quantitative). The data-based theory method was used to achieve the game-based creativity protocol, and in the second stage, the experimental method was used with pre-test-post-test, with two experimental and control groups. The research community was interviewed in the qualitative section, including experts in the field of creativity, game and community psychology. The statistical population in the quantitative part of the research included students of girls' and boys' primary schools in district 1 of Tehran in 2018, aged 7-9. The data collection tool included a semi-structured

interview guide sheet, social-emotional competence questionnaire, and Torrance's creativity questionnaire. To analyze the data in the qualitative part, open, axial and selective coding was used, and in the quantitative part, multivariate covariance analysis test was used. In explaining the findings of this research, we can say According to experts, 15 main components were identified and training sessions were designed based on these 15 components. The results showed that the game-based creativity protocol had an effect on the social-emotional skills of the children in the experimental group and significantly increased those skills. The result is that a game-based creativity protocol can be developed based on the analysis of texts and interviews with experts. Also, the use of game-based creativity protocol in primary school children helps to promote and nurture their creativity and improves the social-emotional skills of primary school students.

According to Abidin, (2023) Cognitive ability is an inner skill that uses the brain that is needed to perform tasks or anything that is simple to the most complex tasks. Games in education for students will help them develop the ability of cognitive structures in themselves, with the development of cognitive skills, students will also foster social attitudes in themselves and will help them socialize in society. The purpose of his study was to examine the effectiveness of educational games in improving students' cognitive and social skills. This research was conducted to understand that educational games can improve students' cognitive skills and can also develop students' social attitudes, while this research will also illustrate whether these educational games can be applied to all levels of education in schools. The method used in this study is a quantitative method in which in this case, the data collection used is by means of a questionnaire, with the correlation method to be applied through SPSS statistical software. Respondents involved in this study are students who are currently studying elementary school education and the results of the preparation of students who are used as assessment materials. The results obtained from this study explain that the effectiveness of educational games in improving students' cognitive and social skills has a good impact on students who are taking elementary school education, educators can also find out the effectiveness of educational games in improving students' cognitive and social skills. The conclusion obtained from this research outlines the effectiveness of educational games in improving the cognitive and social skills of students who are still studying in elementary school. With educational games can also find out the cognitive skills possessed by students and can also find out their attitudes in their social environment. Educational games can also develop students' cognitive and social attitudes.

Patil et al., (2020) stated that home Environment of a child comprises of toys, books and stimulating play materials which are critical for promoting early development. Parents, family and atmosphere at home play a key role in stimulating child's physical, cognitive and socio-emotional developments. This assessment was done in rural settings of forest buffer zone of Bor Tiger Sanctuary in Vidarbha to have a baseline picture about availability of play materials at households that promote child development and parent's view about these play materials. This was a cross-sectional survey which included assessment of 894 households in 45 villages from Seloo block of Wardha district. Survey tools included pretested questionnaire and home observation checklist which was administered at home visit and during interviews of parent-child dyads. Data was collected in android based ODK app and exported to server. Data imported from server was analysed using STATA-11. Results revealed that availability of play materials as represented by Mean Item Availability Score (MIAS) was significantly associated with family structure, wealth index and parent's education and occupation. Though 84.2% households had materials for moving around and outdoor play, only 26.9% households had materials for promoting coordinated gross-motor movements, 41.6% households had materials meant for stacking, constructing. Only 19.8% households had materials for learning shapes and colours, 29.8% households had picture books/charts, 32.4% households had materials for drawing and writing and only 11.3% children had materials promoting counting. Obvious gap can be seen in terms of play materials available for under 5 children in rural and urban settings. Remote rural areas in this region need a well framed parenting program to sensitise parents about Early Child Development that can be blended with the existing ICDS program activities.

Ersoy & Sahbaz (2023) examined digital game addiction and children. The study addresses the effects of digital games on children, addiction symptoms, and the impact of addiction on children's social and psychological development. According to the results of the research, digital game addiction can negatively impact children's social skills and psychological well-being, thus reducing their quality of life. Therefore, it is recommended for parents and teachers to limit children's use of digital games and encourage them to engage in other traditional and modern games. Parents and teachers should monitor children's use of digital games, recognize addiction symptoms, and take necessary precautions.

By considering all those reviews it was observed that digital games can enhance skills like quick decision-making, hand-eye coordination, and technological literacy, they often lack the rich interpersonal interactions and physical engagement provided by traditional and

modern games. Traditional games foster collaboration, empathy, and communication, enhancing children's social skills, while also promoting critical thinking, memory, and problem-solving, crucial for cognitive development. modern games also such as board games, puzzle etc. foster critical cognitive functions like spatial awareness, logical reasoning, creativity, memory and attention while promoting social bonding and empathy through face-to-face interactions. Therefore, a balanced approach of traditional games, modern games and digital games is vital that allows children to have overall benefit for both social as well as cognitive development.