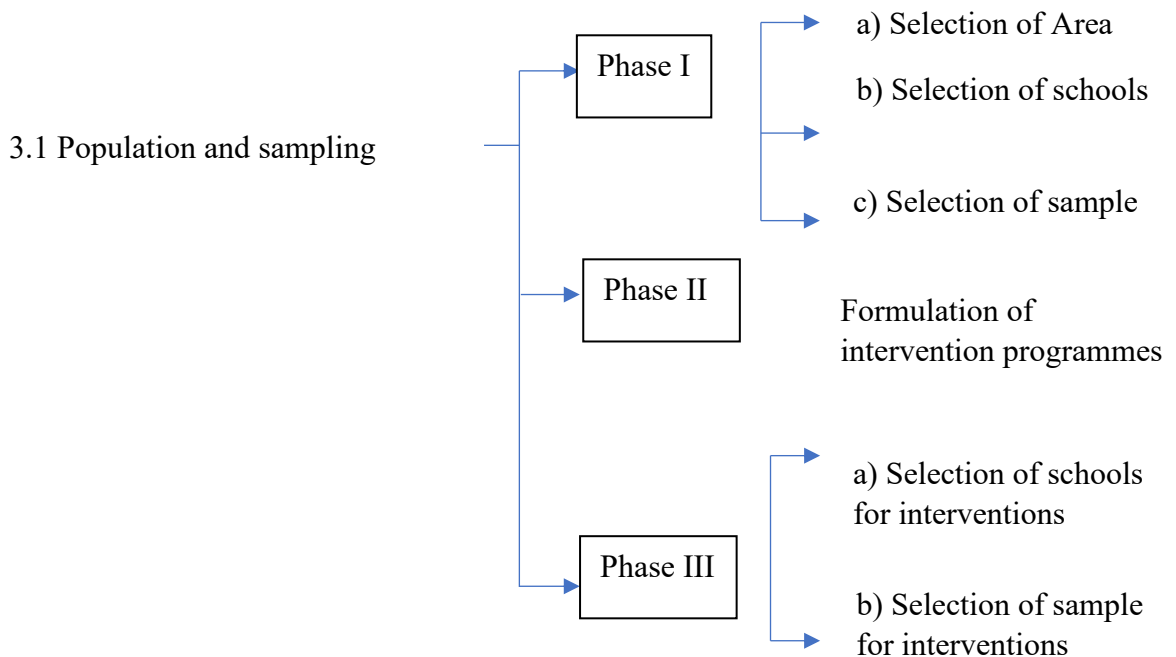
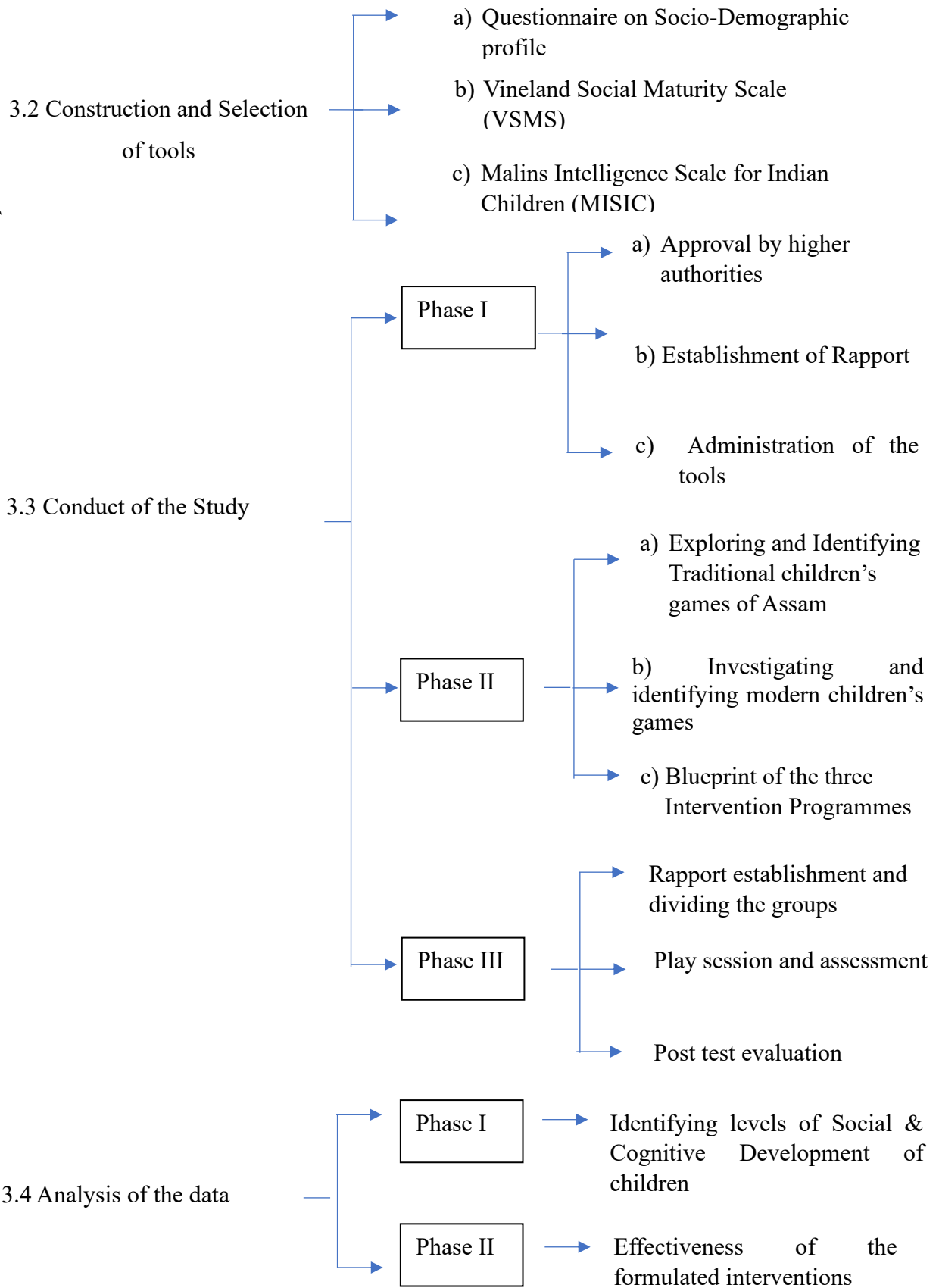

III. METHODOLOGY

The term "Early childhood" typically denotes the developmental stage spanning from birth to eight years, during which children undergo crucial milestones and acquire essential skills forming the foundation for subsequent learning and behavior. This period is characterized by rapid physical, cognitive, emotional, social, and linguistic development. The early childhood environment has both beneficial and detrimental effects on a child's development and well-being, making it a crucial factor in determining developmental outcomes. Play is a fundamental component of early childhood, offering children numerous developmental benefits. Through play, children can explore their creativity, express their emotions, and develop an understanding of the world in a safe and enjoyable manner. Additionally, engaging in play allows children to build self-esteem and confidence as they master new skills and achieve goals within a playful context.

Based on the theoretical framework, the compiled literature, and the studies covered in the previous chapters, the methodology of the study, **“Effectiveness of Traditional and Modern Games on Socio-Cognitive Development of children in Biswanath, Assam”** provides a thorough explanation of sample selection, formulation of intervention package and its implementation under the following heads-





3.5 Operational definitions

The present study identified following variables-

- **Dependent variables:** Social development, Cognitive development
- **Independent variables to determine the effect of the socio-demographic factors:** age, gender, educational status of parents, occupation of parents, family income, type of family, no. of children, type of living area and game preference.

3.1 POPULATION AND SAMPLING

Based on the study purpose, the population and sampling methods for the current study were discussed concerning the defined three phases of the study as below.

3.1. (i) Phase I: Identify the levels of social and cognitive development of children

A probability random sampling procedure was adopted for the first phase of the study. The sampling procedure was conducted as described below.

3.1.1. (a) Selection of Area: The current study was carried out in the Biswanath district, which is situated in the northeastern Indian state of Assam. It was officially declared a district in 2015 and the district is named after Biswanath Chariali. Biswanath district in Assam is divided into several administrative blocks, each contributing uniquely to the district's cultural, economic, and social fabric. These blocks include Baghmara, Behali, Biswanath, Chaiduar, Pub Chaiduar, Sakomatha and Sootea. Biswanath Chariali, the district head quarter and its largest bustling town, serves as a commercial and administrative hub was selected as the area of the study for the following reasons. In terms of education Biswanath district has made strides in recent years with the establishment of schools, colleges, and healthcare facilities. The government has focused on improving access to education services for the students of the district. The population of Biswanath district comprises various ethnic and linguistic groups, reflecting the cultural diversity of Assam. Out of the 612,491 people living in the Biswanath district, 31,368 (5.12%) reside in urban areas, according to the 2011 census. The ratio of females to males in Biswanath was 968 to 1000. Geographically, the Biswanath district is in northern Assam, surrounded between the Himalayan foothills of Arunachal Pradesh and the mighty Brahmaputra River. The district, which is mostly plain, is bordered to the north by Arunachal Pradesh, to the south by Golaghat, to the east by Lakhimpur, and to the west by Sonitpur. The figure 3.1 illustrates the geographic region selected for the research study.

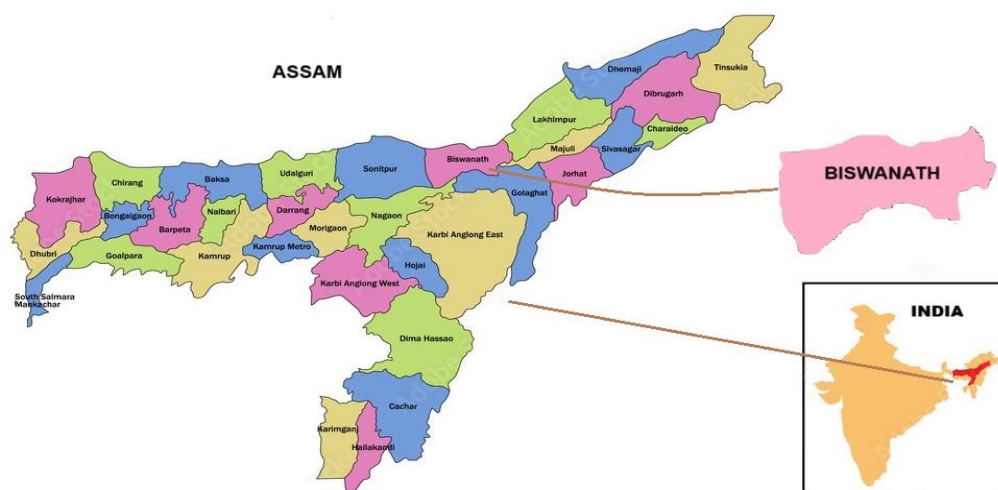


Fig. 3.1 Geographic map of the study area

3.1.1. (b) Selection of schools: The researchers established specific criteria to select the participating schools, aiming to ensure uniformity among them in terms of geographical area and school type. The detailed inclusion and exclusion criteria for the study are provided below:

Inclusion Criteria:

- *Biswanath block:* The reason for setting up this criterion was due to many numbers of schools situated in and around Biswanath block as it is the main hub of the district.
- *Rural and urban area covering north, south, east, west and central zone:* To ensure representative data by reducing biasness and to embrace the diversity of the population, including variations in geography, demographics, socio-economic status, and cultural factors.
- *Government school children:* Samples drawn from government schools are representative and diverse in nature. They generally include students from a variety of backgrounds, economic classes, and geographic areas within the region. This diversity makes the target community an ideal research sample as it increases generalisability of findings and provides better insights about the population.
- *Children aged 6-8 years:* As children starts formal education, they encounter a new environment that requires adaptation to structured learning and interaction with peers and teachers. The “industry versus inferiority stage”, is a critical phase of psychosocial development that typically starts in the age of 6 years. It lays the foundation for a child's self-esteem and confidence, where children start to develop a sense of competence and

mastery through their academic achievements and social relationships. In addition, children in this stage transition into the "concrete operational" phase, where they use their cognitive abilities to process information and make inferences about the world around them based on observable facts. Social interaction during the learning process aids in the development of higher cognitive functions in children by allowing them to collaborate with their peers and receive guidance from adults.

Exclusion criteria:

- *Special children:* Compared to typical children, special children would be more challenging to reach out because of their distinct needs and developmental challenges.
- *Other districts of Assam.*
- *Above 8 years of age.*

3.1.1. (c) Selection of sample: Early childhood is a crucial time for brain development because it establishes the social, and cognitive abilities that influence learning and wellbeing throughout life. Through interactions with their surroundings and caretakers during these formative years, children gain vital skills that will impact their future academic achievement and personal development (Likhar et.al 2022). Additionally, children start formal education at age 6 and is vital for industry vs inferiority stage which lays the foundation for a child's self-esteem and confidence playing a significant role for overall development (Remy Meraz, 2023).

To choose the sample, the researcher obtained a list of 208 government primary schools in Biswanath block and selected 5 schools from each zone: north, south, centre, east and west through random sampling technique. Initially, the researcher's goal was to cover a broader population, therefore one additional school was selected from the central zone via random selection because many number of schools in the central zone was situated than that of other zones of the block, resulting in a total of six schools- north (1), south (1), central (2), east (1) and west (1) zones for the collection of data. Children of 1st standard, 2nd standard, and 3rd standard aged between 6 to 8 years from the six chosen schools were sampled, regardless of gender, for a total of 590 children.

However, the sample was selected with the approval of the authorities and based on predetermined inclusion and exclusion criteria. Figure 3.2 gives an overview of the population and the sampling procedure adopted in Phase I.

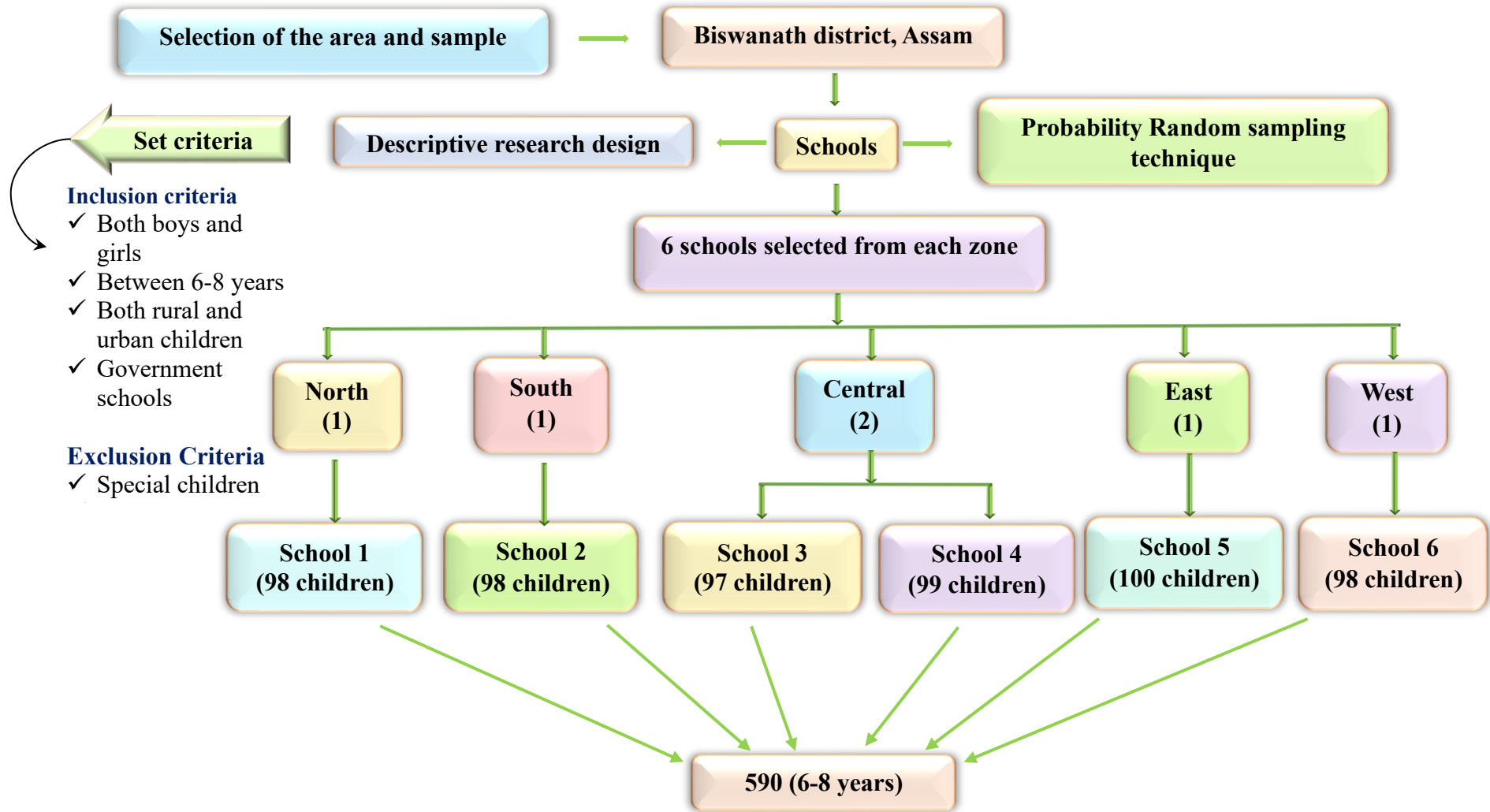


Fig. 3.2- Population and Sampling – At a glance
Phase I

3.1. (ii) Phase II: Formulation of intervention programmes

After assessing Social and Cognitive development among children, the study further chooses to give intervention to the children to understand the effectiveness in their developments. Hence, the second phase of the study involved designing an intervention program based on Traditional, Modern and Blended games in order to assess its effectiveness on the children's socio-cognitive development.

3.1. (iii) Phase III: Effectiveness of the formulated interventions

Phase III of the study involved implementation of the intervention program based on Traditional, Modern and Blended games in order to assess its effectiveness on the children's socio-cognitive development. Consequently, the following describes how the school and sample were chosen-

3.1.3 (a) Selection of school- Out of the six schools identified with a sample size of 590, the researcher selected two schools through the fishbowl technique. Prior to further study, consent from schools was taken, and they were ready to cooperate during the implementation of the intervention program for about three months among the experimental groups. Children from the school with the lowest social and cognitive development scores out of these two were chosen as the experimental group for the intervention program, while the other school children were designated as the control group for further analysis.

3.1.3 (b) Selection of sample - Thus, during the third phase of the study, the sample consisted of all children in the age range of 6-8 years in two schools. In the school (selected for the experimental group), the researcher created three new groups, including children of all ages (6-8 years), resulting in a heterogeneous composition, with a total of 100 children in the experimental groups. Out of the 100 children, the experimental group 1 included 34 children, and an equal (33) number of children were in the experimental group 2 and group 3. Later, children who were irregular in attending all the sessions of the intervention program were excluded from further analysis. Additionally, children who had high performance in both social and cognitive development were also excluded from further analysis. Consequently, a total of 90 children constituted the final experimental groups, with each experimental group having 30 children. To create an equal sample for the control group, the researcher selected 30 children from the school (selected for the control group), within the age group of 6-8 years, who were in the low and average categories in social and cognitive development, and

compared this group with all three experimental groups. Thus, a total of 120 children were further analysed for control and experimental groups under study. Figure 3.3 gives an overview of the population and the sampling procedure adopted in Phase III.

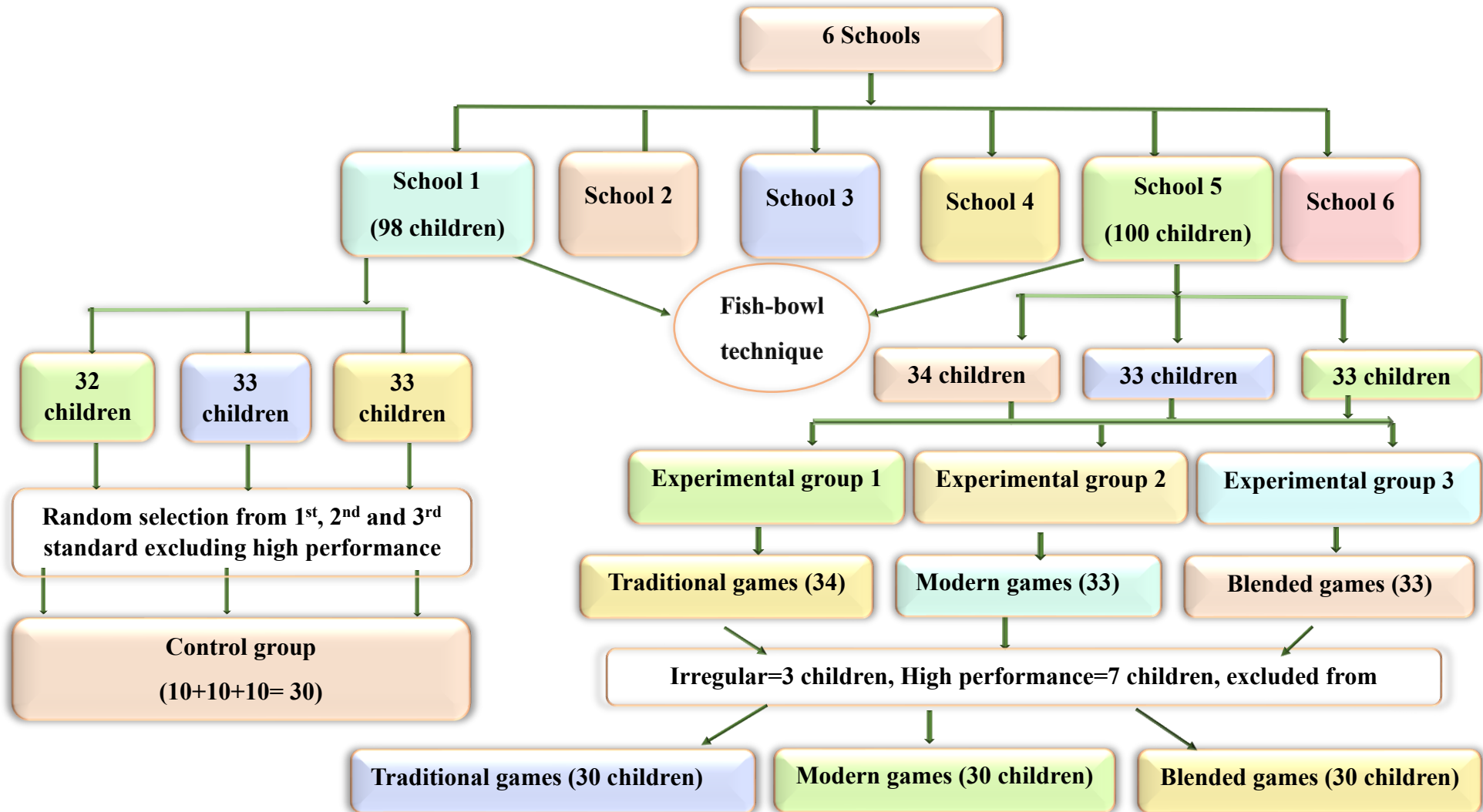


Fig. 3.3- Population and Sampling – At a glance
Phase III

3.1 (iv) Ethical consideration

Prior to conducting research, researcher obtained ethical clearance from the respective block the sample was collected from. A written consent form was used to inform the parents and children about the research because of ethical considerations. Furthermore, information regarding the study was shared with the class teachers and senior authorities of the chosen schools. The study also allowed participants to make their own decisions. Additionally, the application form outlining the research study's design and protocols was submitted to the Institutional Human Ethics Committee (IHEC), and approval was granted. The approval number for the study was AUW/IHEC/HD-21-22/XPD-25. The clearance certificate issued by the Institutional Human Ethical Committee was furnished as Appendix – 1

3.2 CONSTRUCTION AND SELECTION OF TOOLS

As human behaviours were always complicated to measure and were unreliable, a careful selection of tools was made to assess the same. The researcher formulated a questionnaire for the study's initial phase in order to gather data on the respondents' sociodemographic characteristics. To assess social development of children standardized tool Vineland Social Maturity Scale (VSMS) and for cognitive development Malins Intelligence Scale for Indian Children (MISIC) was used for the study.

3.2 (a) Questionnaire on Socio-Demographic Profile: A questionnaire was developed to gather data on the socio-demographic profiles of the respondents. The questionnaire included variables such as age, gender, parents' educational background, parents' occupation, family income, family structure, number of children, type of residential area, and children's game preferences. In addition, the researcher included questions on the types of games the children played and their preferences in an effort to learn more about their play interests. Data were collected prior to the assessment of the children's social and cognitive development.

3.2 (b) The Vineland Social Maturity Scale (VSMS), developed by J. Bharat Raj in 1992, assesses a number of aspects of children's adaptive behaviour and social skills. These areas encompass various domains that are crucial for holistic development. The areas assessed in VSMS includes-

3.2.b. (i) Self-Help General: This section assesses the child's independence in carrying out simple self-care tasks. It includes activities such as washing hands, brushing teeth, using

the toilet, and basic hygiene practices. The scale evaluates the child's level of independence and proficiency in managing these self-help skills.

3.2.b. (ii) Self-Help Eating: This section mostly addresses the child's feeding and eating abilities. It assesses the child's ability to feed themselves, use utensils appropriately, chew and swallow food safely, and demonstrate good table manners. The scale considers factors such as independence in meal preparation, food choices, and mealtime behaviours.

3.2.b. (iii) Self-Help Dressing: The ability of the child to dress and undress on their own is the main focus of this domain. It assesses skills such as putting on and taking off clothing, fastening buttons or zippers, tying shoelaces, and managing clothing items like coats, hats, and shoes. The scale evaluates the child's level of mastery in dressing tasks based on age-appropriate expectations.

3.2.b. (iv) Self-Direction: This domain evaluates the child's ability to take initiative, make decisions, and manage daily activities independently. It includes skills related to organizing tasks, following schedules, planning activities, setting goals, and problem-solving. The scale measures the child's autonomy and self-regulation across a variety of life areas.

3.2.b. (v) Occupation: This area assesses the child's engagement in meaningful and productive activities, such as play, learning tasks, chores, and leisure activities. It evaluates the child's ability to participate in age-appropriate activities, sustain attention and interest, follow instructions, and complete tasks effectively. The scale considers the child's interests, preferences, and performance in different occupational roles.

3.2.b. (vi) Locomotion: This area evaluates the child's mobility and movement skills. It includes activities such as walking, running, climbing stairs, balancing, jumping, and navigating different environments. The scale assesses the child's coordination, strength, agility, and safety awareness during locomotor tasks.

3.2.b. (vii) Communication Skill: The child's communication skills, including both expressive and receptive language ability, are assessed in this domain. Understanding spoken language, following instructions, and giving appropriate responses to questions are all components of receptive language skills. A child with expressive language abilities is able to communicate both verbally and nonverbally about their needs, desires, and feelings.

3.2.b. (viii) Socialization Skill: This domain focuses on the child's behaviours, relationships, and social interactions. It assesses abilities including starting up discussions, participating in group activities, sharing, taking turns, cooperating, demonstrating empathy, settling disputes, and adhering to social norms. The scale considers the child's social awareness, communication style, emotional regulation, and adaptability in social settings.

The Vineland Social Maturity Scale (VSMS) assesses children's ability to perform daily activities and provides an estimate of their social quotient. The items are organized according to the "normal average life progression" and arranged in increasing order of difficulty. The assessment process typically involves structured interviews with caregivers, teachers, or other individuals familiar with the child's behaviour and abilities across these domains. The information obtained from the responses offers important insights about the child's general adaptive functioning level, areas that require support, and strengths. The VSMS by Bharat Raj emphasizes cultural sensitivity, ensuring that the assessment items and scenarios are relevant and appropriate for children in the Indian context, considering cultural norms, family dynamics, and societal expectations.

3.2.b. (ix) Scoring: Items are assessed based on a child's performance of tasks. For positive behaviour, the response option "always" should receive a score of "+1." Half credit (0.5) is given for the option "sometimes," and if the child can complete the task with assistance from others. If these half credits fall in between two '+' items, they are given full credit. The last option, which represents the least amount of positive behaviour, receives a score of '0'. After adding up the scores where the child passed the test and whatever raw score the child obtained, it needs to be checked with the VSMS manual to ascertain the child's social age. After determining the social age, the social maturity is calculated using the formula-

$$S.Q.= \text{Social Age}/\text{Chronological Age}*100$$

3.2 (c) Malin's Intelligence Scale for Indian Children (MISIC): Arthur J. Malin developed the Malin's Intelligence Scale for Indian Children (MISIC) in 1969 as a standardised assessment instrument for measuring Indian children's cognitive abilities. It is modified from the Wechsler Intelligence Scale for Children (WISC) to accommodate India's linguistic and cultural environment. The MISIC evaluates various cognitive domains through a comprehensive battery of subtests. These subtests are categorized into two primary areas: Verbal and Performance. The Verbal subtests include-

3.2.c. (i) Information Test: The Information subtest comprises a set of questions concerning factual understanding of individuals, places, and common occurrences. The questions are designed to be age-appropriate and reflect the cultural and educational context of Indian children.

3.2.c. (ii) General Comprehension Test: The test questions focus on specific behaviours and practices in certain contexts. It evaluates socially acceptable knowledge as well as conventional knowledge.

3.2.c. (iii) Arithmetic Test: Questions in the test are based on basic mathematical computations that may be completed mentally without the aid of paper and pencil.

3.2.c. (iv) Analogy and Similarity Test: Two subtests, Analogy and Similarity, comprise this test. They are as follows: Analogy: The test consists of four unfinished phrases that the subject must fill in using analogies. In the similarity test, the participant must identify the similarities between the two items by answering questions. It assesses the development of verbal concepts.

3.2.c. (v) Vocabulary Test: The vocabulary subtest asks the child to define or use a list of words in a sentence. The words range from common to increasingly complex.

3.2.c. (vi) Digit Span Test: Digit Span Forward and Digit Span Backward are the two components of the Digit Span subtest. The forward task involves the child repeating numbers in the same sequence that is shown. The child performs the backward task by repeating numerals backwards.

The Performance subtests consist of-

3.2.c. (vii) Picture Completion Test: Measures attention to detail and the ability to identify missing elements in the given pictures.

3.2.c. (viii) Block Design Test: Assesses spatial visualization and problem-solving skills using coloured blocks to repeat designs given in the booklet according to specific geometric designs within a specified time limit.

3.2.c. (ix) Object Assembly: Tests the ability to perceive and mentally assemble parts to form a whole object. The child is presented with pieces of a puzzle and is required to assemble them to form a complete meaningful design.

3.2.c. (x) Coding: There are specific symbols on the test that are matched with shapes or numbers. The child must learn them and associate them with the correct matching

numbers. The task is to fill in the correct symbols in a sequence as quickly as possible. It evaluates speed and accuracy in visual-motor coordination and symbol translation.

3.2.c. (xi) Maze: evaluates one's capacity for planning and strategy when negotiating mazes. The test challenges the participant to navigate the maze and arrive at the destination within the allotted time.

3.2.c. (xii) Scoring: To administer the MISIC, the child is individually tested in a quiet, distraction-free environment. The examiner follows standardized procedures, presenting each subtest according to the manual's guidelines. In order to score the test, the 'T table' in the manual is used to convert the raw results of all the subtests into Test Quotients (TQs). Following the conversion to TQs, the average for every group needs to be totalled together and determined separately. Each subtest's results are then added together to get Verbal, Performance, and Full-Scale IQ scores, which give an in-depth understanding of the child's cognitive capacities.

3.3 CONDUCT OF THE STUDY

This phase involves the actual implementation and execution of the research plan. It includes every action made to collect and examine data in accordance with the objectives of the study. Essentially, it's the stage where the research is carried out based on the methodology outlined in the planning phase. The present study was conducted in two phases, which are described below-

3.3.1 Phase I: Identifying the levels of social and cognitive development of children

Phase I was carried out in three stages, which are detailed below:

3.3.1 (a) Approval by higher authorities: Initially, permission from Biswanath Block was obtained in order to conduct the study. Then, using a set of inclusion and exclusion criteria, schools were selected for the study. According to the selection criteria, the sample was made up of all the children of the selected schools who were between the ages of six and eight. Hence, the researcher made an effort to individually meet with the higher authorities of each school and conveyed the significance of the study in order to obtain permission from the school authority as well as consent from parents to carry out the study.

3.3.1 (b) Establishing a rapport in order to get preliminary data: Building rapport with the target population was essential to gaining their trust and ensuring their willingness

to participate in the study especially with the target population would help them behave spontaneously and cooperatively throughout the entire assessment period, as the study involved assessing both social and cognitive development. To ensure a smooth study process and maximize the number of valid responses, the researcher made efforts to establish a strong connection with the administrator, teachers, and most importantly, the children. The researcher established rapport with the mothers of the children in order to collect data on their social development.

3.3.1 (c) Administration of tools: After building rapport and obtaining consent with the school authority and parents, the researcher sought to collect thorough information on the respondents' socio-demographic profiles, by considering independent variables such as age, gender, academic level, parents' educational status, parents' occupation, family income, family type, living area, and the number of children in the household. Furthermore, the researcher sought children's play interests by gathering information on the types of games they played and their preferences. An inquiry was done to ascertain whether children were familiar with traditional games of Assam and, if so, whether they enjoyed playing them. In addition, the investigator asked the participants to list traditional games the children engaged in. Throughout the data collection procedure, extensive information of the play behaviour of the children was gained, as well as insights into how sociodemographic factors might affect their social and cognitive development.

In order to assess the social development of the children, the researcher used the Vineland Social Maturity Scale (VSMS) and obtained data from the mothers in a quiet and private setting. The data were acquired through home visits. The researcher followed the VSMS manual's instructions meticulously for recording and scoring the responses. Every effort was made to address any concerns of the mothers during data collection process ensuring their answers were both accurate and clear.

Once rapport was established with the children, the researcher sought assistance from the school authorities to organize the procedure for assessing the children's cognitive development. After setting up the space, the researcher used Malin's Intelligence Scale for Indian Children (MISIC) to assess each child individually for cognitive development. All essential steps were implemented to make sure children were comfortable and cooperative during the assessment procedure. Participants were allowed to perform their activities at their

own time, so they didn't feel rushed or forced. To help with their understanding and comfort, all queries raised by the children were thoroughly addressed. Each respondent's time spent on each activity was recorded and the results were assessed using the guidelines of the MISIC manual.

During the time of data collection, the respondent's informed consent was obtained for the study and they were reassured that their information would remain confidential. This approach not only made it easier to gather trustworthy data, but it also encouraged openness and confidence between the participants and the researcher. The responses from the participants during the process of collecting information were favourable.

3.3.1 Phase II: Formulation of Intervention programme

The intervention was designed for the study's second phase. As indicated in the fig. 3.3 'Population and Sampling', the intervention programme was developed based on Traditional games, Modern games and Blended games which was implemented among the 3 groups. The stages in the formulation and implementation of the intervention were done based on following criteria-

- a. Exploring and identifying traditional children's games available in Assam
 - b. Investigating and recognizing modern children's games
 - c. Blueprint of all the three interventions
- a. Exploring and identifying traditional children's games available in Assam:** A detailed process was used to explore and identify traditional Assamese games for children. The selection procedure of traditional games included in the intervention for children aged 6-8 years was carefully prepared to ensure cultural relevance and developmental appropriateness. Initially, a literature review was undertaken to discover and prepare a complete list of traditional games of Assam, from academic sources and cultural studies. Further, while collecting socio-demographic data, researcher also gathered information from the parents on the types of games the children prefer to play, how often they play. All collected data was recorded and evaluated to uncover common patterns and trends, providing for a more complete knowledge of the significance of traditional games in children's lives. After a list of traditional games identified, educators and child development experts reviewed it and selected the best games that are not just important historically but are also played by many children nowadays. The game was chosen based

on a number of factors, such as developmentally appropriate, age based, safety measures, ease of use, and potential to improve socio-cognitive development of children aged 6 to 8 years.

- b. Investigating and identifying modern games for children:** The study began with a comprehensive review of current literature, including publications, educational magazines, and child development journals focused on children's play. Initial criteria were established, emphasizing age-appropriate content, educational value, potential for active engagement, ease of understanding, and benefits for social and cognitive development. To identify games that have been shown to enhance these developmental areas, a thorough evaluation of the literature was conducted. Additionally, consultations with educators and child development experts were held to validate the selected games, ensuring those games effectively support the socio-cognitive development of children. However, this study did not include digital games due to its negative impact on child's development and parents were also denied inclusion of digital games in intervention.
- c. Blueprint of all the three interventions:** The selection procedure for traditional games in the intervention programme was carefully planned to ensure children participation, and positive developmental effects for children aged 6 to 8 years. A comprehensive review of the literature was conducted as part of this process to find games that may have contribution on socio-cognitive development. The games were chosen those are suitable for the developmental domains of the children, based on games complexity level and safety of the children. Furthermore, expert recommendations were sought to evaluate the games' appropriateness and engagement potential. Similarly, the list of modern games was selected by carefully examining all of the available information and consultation with subject experts from education, psychology, and human development. The games were chosen based on age appropriateness and availability of play materials and those were selected to support children's social development by utilising their experience with modern play activities and encouraging cooperative play and problem-solving as well as cognitive development. Both types of games were essential for the intervention as each of them will make a distinct contribution to the children's overall socio-cognitive development. The intervention programmes for the experimental groups are discussed under the following-

-
- i) **Traditional Games Intervention:** For children in the age-group of 6-8 years, nine traditional games were chosen to provide a successful intervention that would enhance their development. These games—Luka bhaku, Along dolong, Tekeli bhonga, Ganga rani, Sit pokhila, Kut kut, Aire amar togor, Rumal sur, and Borof and pani—each represent vital features that jointly contribute to a child's development. They encourage cooperation and a sense of teamwork among participants by encouraging turn taking, sharing and helping each other. These games also improve communication skills both verbally and nonverbally by promoting listening, following instructions, and initiating peer conversations. Playing these games also entails taking risks, which improves one's capacity for critical thinking and decision-making. The games additionally assess children's memory, concentration, reasoning, and problem-solving abilities. Playing these traditional games can significantly improve children's cognitive and social skills, which are essential to their overall development.
- ii) **Modern Games Intervention:** Nine modern games were chosen to prepare the modern game intervention: Ludo, Building Blocks, Jigsaw Puzzle, Checkers, Maze, Crossword Game, Seriation Board Game, Memory Game and Matching Game. These games are made to impart to children a variety of essential skills. For example, children can enhance their creativity, problem-solving skills, and spatial awareness by playing with building blocks and Jigsaw puzzles. Children learn to follow rules and take turns while playing games like Checkers and Ludo, which foster teamwork, logical reasoning, and strategic thinking. While the matching game and seriation board game teach children about classification, visual discrimination, and seriation; the maze and crossword games improve vocabulary, critical thinking, and memory. Retention of information and attention span are further enhanced by the Memory Game. Children who engage in these modern games improve not only their cognitive skills but also their social competencies. They acquire cooperation skills, adhering to rules, and efficient verbal and nonverbal communication skills. Thus, these modern games are essential for supporting children's overall socio-cognitive development.
- iii) **Blended Games Intervention:** To assess the influence of both traditional and modern games on children's social and cognitive development, researcher

planned another intervention named as Blended Games Intervention. This program combines the modern and traditional games selected for the first two interventions to offer a distinctive and inclusive approach for children's socio-cognitive development. The purpose of combining both types of games was to establish a strong framework that maximises learning outcomes and enhances socio-cognitive abilities among children. The main attributes that traditional games promote are cooperation, teamwork, and communication because of their rich cultural legacy and emphasis on community involvement. These games also help children develop problem-solving skills and encourage them to take risks and think critically in a social context. Modern games, on the other hand, are frequently distinguished by the use of equipment and play materials. They provide distinct but equally valuable benefits. These games improve creativity, memory, focus, and strategic thinking. They frequently include following difficult instructions, figuring out challenging puzzles, and developing adaptable techniques, all of which help children's cognitive development. Therefore, the Blended Games intervention would provide children with the greatest possible developmental benefits by combining traditional and modern games.

Figure-3.4 gives a bird view of lists of games selected for the intervention of Traditional, Modern and Blended games.

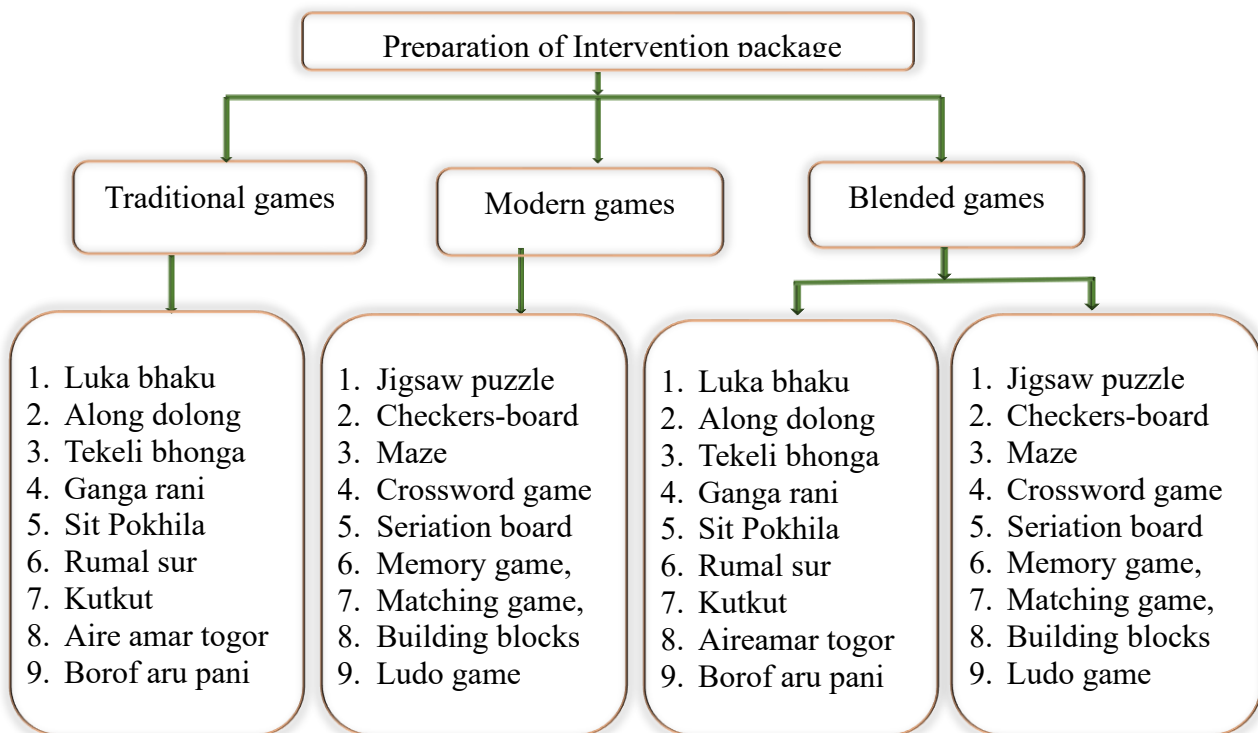




Fig. 3.4-lists of Games selected for Intervention programme


Tables 3.1 and 3.2 describe the traditional and modern games used in the intervention programmes.

Table 3.1- Traditional games selected for the intervention programme



Game name	Game procedure	No. of players	Benefits of the game	Picture
1. Luka Bhaku	<ul style="list-style-type: none"> • The children get together, eagerly anticipating a thrilling game of hide-and-seek. • One child takes charge, discreetly cracking the knuckle of a single finger behind their back. • They then reveal all their fingers to the group and invite the other children to each select one. • The child who chooses the cracked finger must now cover their eyes against a nearby wall or object and begin counting to a predetermined number. • As the counting commences, the remaining children swiftly and quietly find suitable hiding spots, determined to avoid detection. • Once the counting concludes, the child opens their eyes and searches for the hidden participants. • If they successfully locate any of the hidden children, that child then takes a turn as the counter, continuing the captivating cycle of the game. • There are no winners or losers in this engaging activity, which the children can continue playing until they are ready to move on. • To ensure the safety and 	Group of children without limit	<p>This game promotes cooperation and social interaction among peers, helps in understanding and following rules, helps in emotional regulation and encourage peer connection and empathy among them.</p> <p>Moreover, this game stimulates imagination and creativity, strategic thinking and decision making. problem solving skills, development of working memory and attention among children.</p>	


	<p>well-being of all involved, it is crucial to select a suitable play area, free from potential hazards.</p>			
<p>2. Along Dolong</p>	<ul style="list-style-type: none"> Initially, the children must choose two leaders who are taller than the rest. One leader will be designated as the King (Roja), and the other as the Queen (Rani). The leaders will interlock their fingers, holding each other's hands. Subsequently, they will raise their hands to form a bridge-like structure and repeatedly sing the provided song. “Olong Dolong Korise, Roja Rani Ahise Kook Kook” The children form a line, placing their hands on the shoulders of the person in front of them. The child at the front of the line sings "Kook-Kook" and walks under the bridge created by the leaders. Whenever the leaders desire, they lower their arms and grasp a child from the line. The leaders then take the child aside and ask them to choose between "Roja" and "Rani". The child must select one of these options, and the leaders then set the child aside accordingly. This process continues until all the children have been divided into two teams - one for "King" and one for "Queen". Once the teams are 	<p>Group of children without limit</p>	<p>This game helps children learn cooperation and teamwork, improves communication skills, helps in emotional regulation and peer bonding. Moreover, this game promotes problem solving skills, critical thinking and strategic decision-making skills among children.</p>	

	<p>formed, each group stands in a line, with the leaders at the front. The children tightly hold the waists of the children in front of them, interlocking their fingers. A line is drawn between the two teams.</p> <ul style="list-style-type: none"> • One team's leader interlocks their fingers, and the opposing leaders place their hands across the interlocked fingers. • This creates a tangled web of hands. At the starting signal, the teams begin a tug-of-war, pulling against each other. • Whichever team crosses the middle line is considered the losing team. • Sometimes, the teams may not cross the line but instead fall towards their own side, in which case they can play the tug-of-war again. 			
<p>3. Tekeli Bhonga</p>	<ul style="list-style-type: none"> • An earthen pot is placed upside down on the ground, before the game begins. • The player has to stand around 10-15 feet away from the pot. • At first, the child is allowed to take a glimpse of the pot to get a rough sense of the distance. • Then they give the child a stick with one end to hold and balance on their shoulder. • The child is then correctly blindfolded using some kind of cloth. • Then, for him to be confused about the direction, another child can 	<p>Group of children without limit</p>	<p>This game helps children develop their social skills and communication abilities by promoting cooperation, verbal coordination, and strategic planning. Also encourages peer engagement and improves cooperation, turn-taking, and active listening skills. The game also helps children in</p>	


	<p>spin him around once.</p> <ul style="list-style-type: none"> • Generally, as soon as the child is faced, he or she is told to stand in front of the earthen pot. • Then, the child is asked to take a step forward and hit / touch the pot with the stick that the child is holding. • If the child fail to strike the pot, he or she is out of the game, and the next child takes his or her turn in the pot. • If the child is able to touch the pot, it is considered successful. If more than one child can hit the pot, they win. 		<p>sensory learning and spatial awareness.</p>	
<p>4. Ganga Rani</p>	<ul style="list-style-type: none"> • This interactive game for children involves creating a circular human barrier by joining hands. • A single participant is positioned inside the circle and tasked with breaking through the human chain to escape. • The child within attempts to distract the others by engaging them in conversation. • Those forming the barrier typically respond by singing rhyme-like verses. • The game incorporates various examples of these verbal interactions between the encircled child and those maintaining the circle. • A child in the middle starts by bending down, hands at foot level, chanting: "Eeman Eeman Pani" Other children respond: "Ganga Rani" • The central child raises 	<p>Group of children without limit</p>	<p>The game improves peer relationships, communication skills, helps learning vocabulary and comprehension skills. It also encourages active cooperation and teamwork among peers. It also increases concentration and problem-solving skills through strategic thinking .</p>	

	<p>hands to knee height, saying: "Eeman Eeman Boka" Group replies: "Sahab Dada"</p> <ul style="list-style-type: none"> • Middle child lifts hands to waist level, repeating: <ul style="list-style-type: none"> • "Eeman Eeman Pani" <p>Others answer: "Gher Gher Rani"</p> <ul style="list-style-type: none"> • Center child continues: "Eeman Eeman Boka" Group responds: "Narikolor Sukura" <ul style="list-style-type: none"> • This pattern repeats, with the middle child gradually raising their hands. When hands reach head level, the group declares: "Rojar Gharor Bandi Toi Jabi Keni" The center child then approaches the human chain, asking: "Eifaale jamne?" The chain replies: "Najabi, Rojai Gaa dhuwa ghat" <ul style="list-style-type: none"> • Moving to the opposite side, the middle child inquires again: "Eifaale jamne?" The human barrier responds: "Najabi, Rojai Saul dhuwa ghat" Center child: "Eifaale jamne?" Barrier: "Najabi, Rojai kapor dhuwa ghat" <ul style="list-style-type: none"> • This questioning continues as the middle child seeks a weak spot. Upon finding an opening or distraction, they must break through the linked hands and flee. <ul style="list-style-type: none"> • The other children then chase the escaping player. <ul style="list-style-type: none"> • In the next round, a new child takes the central 			
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	role, and the game continues.			
5. Sit Pokhila	<ul style="list-style-type: none"> In this exciting game, a leader will be picked from the group of children. Once the leader has been chosen, conversation will start between the leader and the rest of the group. The leader will say Let's have fun and see who can find the object the fastest! and speaks about objects in his surroundings, for example: "Sith pokhila sith pokhila" "Nila sati tu kot dekhila?" Following this announcement, the children must take action! Their aim is to move fast across the given area, locate, and touch the mentioned thing. Each child is asked to identify and physically touch the object. After successfully contacting the object, they must return to their starting point as swiftly as possible. It is vital to note that any child who is unable to locate and touch the object in time will be eliminated from the game. 	Group of children without limit	The game enhances listening skills, ability to follow commands, problem-solving abilities, and quick response. Children also become more accurate in identifying objects, increase awareness and knowledge from their surrounding environment, and develop their attention span.	
6. Rumal Sur	<ul style="list-style-type: none"> This children's game requires participants to form a circle while seated. One child, carrying a handkerchief, walks around the outside of the circle. The goal is to discreetly place the handkerchief 	Group of children without limit	The game encourages cooperation, turn-taking, and peer interaction. It also enhances attention, quick decision-making,	

	<p>behind another child without their knowledge.</p> <ul style="list-style-type: none"> • After completing a full circuit, the child with the handkerchief taps the person behind whom they dropped it. • If the seated child fails to notice the handkerchief, they must surrender their spot to the first child and take on the role of walking around the circle. • However, if the seated child detects the handkerchief, they must quickly grab it and attempt to tag the first child before they reach the vacant seat. • Alternatively, the seated child can throw the handkerchief at the first child; if it makes contact, the first child's attempt is considered unsuccessful, and they must try again. • Players must move in a single direction, and those seated should remain vigilant, checking behind them after the handkerchief-bearer passes. • The game continues with different children participating, and there are no winners or losers. 		<p>reasoning, spatial awareness and memory as children anticipate and react to cues.</p>	
<p>7. Kutkut</p>	<ul style="list-style-type: none"> • In this game, a court is created by combining single and double cells on the ground. • Players have the option to expand the number of cells without altering the established pattern, which remains as one double cell adjacent to one single cell. • Initially, one further cell must be created. First, the 	<p>Group of children without limit</p>	<p>The game improves concentration, strategic action, number recognition, and problem-solving skills. It also fosters cooperation, turn-taking, and communication</p>	


	<p>player places the flat stone in the initial cell of the court.</p> <ul style="list-style-type: none"> • The player must then jump to the second cell using one of their legs, bypassing the first cell of the court. • The player subsequently encounters the double cells. In this scenario, both feet must be used to jump into each compartment simultaneously. • The player must hop using only one leg when encountering a single cell, or two legs when there are two or more cells available. • Upon reaching the final cell, the player must reverse direction and traverse back to the starting point via the same sequence of hops. • The player picks up the flat stone and exits the court by jumping off, before putting it in another cell. • The player now places the flat stone in the second cell and proceeds similarly to the initial step. • In the third round, the player needs to position the flat stone in cell three. • When moving forward, the person must jump with one leg, exiting cell three and entering cell four. • The player is unable to access the cell containing the flat stone. • The game must be continued with the remaining cells played in the same manner. 		<p>skills and following rules.</p>	
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	<ul style="list-style-type: none"> • On the way back, the player performs a one-legged jump to cell 4, subsequently takes up a flat stone, and then jumps again in cells 3 and 4 with both feet touching, with the remaining actions remaining the same. • During the game, if the child fails to position the flat stone within the cell boundary, the next child will then have the opportunity to participate. • This game continues until the flat stone is successfully placed in the last cell of the court. 			
<p>8. Aire Amar Togor</p>	<p>Children are divided into two teams and play this game. The number of players on each team should be equal. One team leader must be chosen by each group. Two lines are drawn on the ground, ideally separated by around seven to ten steps. Every team should take a seat facing one another in their assigned lines. Both teams must sit back and face one another at the start of the game. The members of each team are given pseudonyms by the leaders. If one group chooses to name different flowers, the other group may choose different bird names. Each member of the team has to remember the names that their leader has given them. The teams are then required to sit facing the other team and turn around. The leaders of the groups now have to take turns, with the leader of the</p>	<p>Group of children without limit</p>	<p>This game emphasises group engagement, team spirit, peer connections and communication through verbal and nonverbal exchanges. It also improves concentration, memory and critical thinking abilities among children.</p>	



	<p>first team going to the second, and so on. This is followed by the leader of the opposite side blindfolding all of their opponents with his/her hands. The team leader must use their pseudonym to call on any team member after ensuring proper blindfolding. Now, the child with the pseudonym has to go up to the blindfolded child in total silence, pull his/her hair or tickle on the forehead, and then go back to his/her own place while maintaining saliency. Every member of the team must clap when the child reaches his/her assigned location. Following that, the child wearing the blindfold must be freed and given back to the other team. After observing each team member and trying to read their faces, she or he must finally guess and identify the name of the child who tugged his/her hair or tickled the forehead. Now, the blindfolded child can jump ahead of the queue for their team if she accurately predicts the tickling child; if she doesn't, the tickling child can move ahead of their queue by one step. The child must remain seated as before and hop like a frog while doing this. The group leader renames the child once they are called for tickling. After a single round, the other team takes turns, and the opposing leader has to blind fold any of the opposing team's children. The game</p>			
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	continues in the same manner as the last round.			
9. Borof aru Pani	<p>This children game begins with one player secretly hiding a small piece of grass in the fold of one of their fingers, then presenting his/her closed fists to the group. The other players take turns choosing a finger to touch, and the player whose finger conceals the grass becomes the "ice". The remaining players must now escape this "ice" player, who chases them and tries to freeze them by touching them, turning them into statues. However, the game has a smart twist - at times, some players may switch between being ice and water. If a water player can touch a frozen statue, the ice players become water again, and the game continues. The goal for the ice player is to freeze all the water players, at which point they are declared the winner, and the game starts anew. To catch their breath, water players can signal a rest period by forming a "T" with their hands, the duration of which is predetermined. But if the ice player tires of chasing the water players and fails to freeze them all, the other players must rush to touch the ice player, and the last one to do so becomes the ice player for the next round. This engaging game not only requires physical agility but also strategic thinking and quick reflexes.</p>	Group of children without limit	<p>This game improves logical thinking of children by encouraging problem-solving, pattern recognition, and understanding of cause-and-effect. It also encourages quick response, decision making abilities, think critically and adapt to changing situations and also improves their concentration level.</p>	


Table 3.2- Modern games selected for the intervention programme


Game name	Game procedure	No. of players	Benefits of the game	Picture
1. Jigsaw puzzle	<ul style="list-style-type: none"> • A jigsaw puzzle is a game consisting of a picture or design that has been cut into various interlocking pieces. • The objective is to fit the pieces together to recreate the original image. • Puzzles can vary in the number of pieces and complexity, with simpler ones featuring larger pieces and fewer elements. • It is necessary to select a puzzle suitable for children’s age and skill level and a flat, spacious surface is ideal for assembling a jigsaw puzzle. • Children often sort the pieces by color or edge shape, starting with the edge pieces to create the border of the puzzle. • Once the frame is complete, they fill in the interior by matching colors and patterns, using trial and error to fit the pieces together. • As the pieces come together, children can see the image forming, which can be quite rewarding. The final piece is often the most exciting to place. 	The game can be played by 3-6 no. of children	The game improves creativity, spatial reasoning, problem-solving abilities, logical thinking, memory, decision making skills and attention span among children. it also helps learning cooperation among peers while playing in group.	
2. Checkers Board game	<ul style="list-style-type: none"> • Checkers is a strategic board game played on an 	The game can be played by 6	The game encourages	


	<p>8x8 grid.</p> <ul style="list-style-type: none"> • The game can be played by two players, 4 players, 6 players etc. and each player is assigned a colour. • The goal is to either block the opponent's pieces or capture all of their pieces to prevent them from moving. • Players set up their pieces on their respective rows, occupying the dark squares. • Each player will start with 12 pieces arranged on the first three rows closest to them. • Players take turns moving their pieces in a clockwise direction. • Each player can move one piece per turn. The pieces advance diagonally to a nearby dark square that is empty. • If a player lands on an opponent's piece, they can jump over it to capture it. • A player must jump over the piece of an opponent if they are able to do so. • The game encourages capturing as a primary strategy. • Players can capture multiple pieces in one turn if they can continue jumping. • A piece is crowned a "king" when it reaches the back row of the opponent. • The game goes on until the player stops the opponent from making a legal move or captures all 	<p>children.</p>	<p>cooperation, peer interaction, turn taking ability, following rules, strategic thinking, independent decision-making ability, memory, mathematical and logical thinking, problem solving ability, memory, and concentration among children.</p>	
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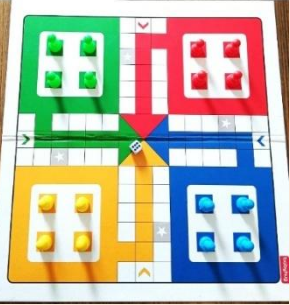
	of their pieces.			
3. Maze game	<ul style="list-style-type: none"> • A maze game is a puzzle or challenge in which players navigate through a network of paths, aiming to find their way from a starting point to an endpoint, often called the "exit." • Paths are the routes players can take, often leading to dead ends or loops. • Children must analyse the paths to find the correct route. • Walls are the barriers that outline the maze and block certain pathways, creating obstacles that children must navigate around. Start and end points clearly defined locations where the children begins and where they must finish. • The goal is to successfully navigate from start to finish. As children navigate, they may encounter dead ends, requiring them to backtrack and try different routes. • The game concludes when a child successfully reaches the endpoint. 	The game can be played by 3-4 no. of children.	The game improves problem-solving skills, spatial awareness, strategic thinking and logical reasoning. They also improve communication, cooperation, and turn-taking when played in groups, promoting teamwork and shared goal-setting.	
4. Crossword game	<ul style="list-style-type: none"> • Children's crossword puzzles are entertaining and educational word games that test players' ability to fill in a grid with words using provided clues. 	The game can be played by 4-8 no. of children.	The game enhances children's cognitive development by improving vocabulary,	

	<ul style="list-style-type: none"> • These puzzles typically feature a simple layout with fewer and easier clues, making them accessible and engaging for children. • A square or rectangular grid full of black and white squares makes up a usual crossword. • The black squares are used for splitting words, and the white squares are where the words will go. • Each word is associated with a clue, including image related to the word. Clues are usually numbered, corresponding to their placement in the grid. • Words can be filled in either horizontally (across) or vertically (down). • The grid will indicate which direction the clues correspond to, usually labeled as "Across" or "Down." • As players fill in words, they can use the letters already in the grid to help solve other clues. For example, if a letter from a completed word intersects with another clue, it can assist in identifying the correct word. • If players get stuck, they can revisit the clues they haven't filled in yet. • The game continues until all the words are filled in correctly. • Some puzzles have a 		<p>memory, and problem-solving skills. Socially, it fosters collaboration, communication, and turn-taking when played in groups, promoting peer interaction.</p>	
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	<p>theme, making it more engaging for children as they learn new words related to that theme.</p>			
<p>5. Seriation board</p>	<ul style="list-style-type: none"> • Seriation is an educational board game designed to help children develop skills in ordering, sequencing, and logical reasoning. • It typically involves a set of objects, cards, or tiles that players must arrange according to specific criteria, such as size, color, number, or pattern. • The game usually includes a variety of items, such as cards, blocks, or tiles, each featuring different characteristics that can be sorted (e.g., colors, shapes, sizes). • Clear rules or guidelines help children understand how to sort the items and what criteria to use. • Children can play the game by arranging items from smallest to largest or vice versa, grouping items by color, sorting based on different shapes or patterns. • Children take turns or work collaboratively to arrange the pieces according to the chosen criteria. • This can involve-children examine the characteristics of each item to determine where it fits in the sequence and encouraging 	<p>The game can be played by 4-6 children</p>	<p>This game improves cognitive development by encouraging logical reasoning, sequencing and pattern recognition. Socially, they promote cooperative play, turn-taking, and communication skills, helping children communicate constructively with their peers.</p>	

	<p>discussion about why certain items are placed in specific positions.</p>			
<p>6. Memory Game</p>	<ul style="list-style-type: none"> • A memory game for children, is an engaging activity designed to enhance memory and cognitive skills. • The game typically consists of a set of cards, with each card featuring an image, word, or symbol, with pairs of identical cards included. • In order to play, the cards are shuffled and arranged in a grid pattern, face down. • Finding matching pairings is the goal as each player turns over two cards at a time. • A player keeps the cards and takes another turn if they find a matching pair. • When the cards don't match, they are once more placed face down, requiring players to recall where they are for subsequent turns. • The game goes on until every pair has been matched. • The winner of the game is the one who has the most pairings at the conclusion. • Variations of the game can include themed cards (like animals, letters, or numbers) to align with specific learning objectives, further enhancing the educational value while keeping children 	<p>The game can be played by up to 10 no.s of children</p>	<p>Memory games improve children's cognitive development by boosting attention, concentration, and information retention. These activities also help to promote working memory and problem-solving abilities. They also encourage turn-taking, teamwork, and peer interaction when played in groups.</p>	

	engaged and entertained.			
7. Matching Game	<ul style="list-style-type: none"> • A matching game for children is a fun and educational activity that helps children develop memory, cognitive skills, and pattern recognition. • Typically played with a set of cards or tiles, each featuring a picture, word, or symbol, the goal is to find pairs of identical items. • The cards are jumbled and arranged in a grid, face down, to begin the game. • In order to find matches, children alternately turn over two cards at a time. • A child receives a point and keeps the pair of cards if they find two matching cards. • To help children remember their placements for upcoming turns, cards that don't match are turned face down once again. • The game proceeds until every pair have been found. • The final winner is the child with the most matches. • Variations can include themed sets focusing on animals, letters, numbers, or even matching objects with their names, enhancing vocabulary and learning. 	The game can be played by up to 10 no.s of children	<p>Matching games help children's cognitive development by boosting their memory, attention, and problem-solving abilities. Socially, they promote cooperative play, communication, and turn-taking, thereby develops interpersonal skills. These games also encourage emotional regulation and patience among children.</p>	
8. Building Blocks	<ul style="list-style-type: none"> • Block games are creative play activities 	The game can be played by up	Building blocks game promotes	

	<p>involving interlocking plastic bricks, known as LEGO bricks, that children use to build various structures, models, and designs.</p> <ul style="list-style-type: none"> • Children can start with a specific LEGO set that includes themed pieces (like cars, houses, or animals) or a loose collection of bricks from different sets. • If using a set, children can follow the provided step-by-step instructions to create the intended model. • This helps them learn to follow directions and understand sequencing. • Alternatively, children can use their imagination to build freely, creating anything they envision-castles, vehicles, or abstract sculptures. • Children can also play with friends, sharing bricks and ideas and work together to build larger structures or engage in friendly competitions. 	<p>to 10 no.s of children</p>	<p>cognitive development by improving problem-solving abilities, spatial awareness, and fine motor skills. The game also promotes creativity, focus, and logical thinking. Playing in groups encourages collaboration, communication, and sharing among friends.</p>	
<p>9. Ludo</p>	<ul style="list-style-type: none"> • Ludo is a board game that is a strategy-based game played by two to four players, with the objective of moving all of one's pieces from the starting point to the home area, which is located in the center of the board. • The Ludo board is square and has coloured tracks that lead to the centre of each player's 	<p>The game can be played by maximum 4 no.s of children</p>	<p>Ludo promotes social development by motivating peers to take turns, following rules, cooperate, and communicate. Cognitively, it improves strategic thinking, number identification, counting, memory</p>	

	<p>cross-shaped path.</p> <ul style="list-style-type: none"> • Each arm of the cross is marked with the colors corresponding to each player (usually red, blue, green, and yellow). • Each player has four pieces of their designated color. A single dice is used to determine movement. • Players choose their colors and place their four pieces in the starting area (the colored corner of the board). • Each player takes turns rolling the die. To move a piece from the starting area onto the board, a player must roll a six. • If they roll a six, they can place one piece on the starting square (the first square of their track) and roll again. If they don't roll a six, their turn passes to the next player. • Once a piece is on the board, players move their pieces according to the number rolled on the die. • Players must move one piece the total number of spaces indicated by the die. • A player sends an opponent's piece back to their starting area if they land on a square that the opponent's piece is occupying. • The player earns an additional turn for capturing an opponent's 		<p>and problem-solving abilities and cognitive flexibility.</p>	
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	<p>piece.</p> <ul style="list-style-type: none">• Some squares are marked as safe spaces (often represented by circles or special colors).• A piece on a safe space cannot be captured. To enter the home area (the center of the board), a player must roll the exact number needed to reach the last square of their track.• If a player overshoots, they cannot enter that turn.• The winner of the game is the first player to land all four of their pieces in the home area.			
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Plate - 1
Glimpses of Data Collection



Plate - 2
Glimpses of Traditional Games



Plate - 3
Glimpses of Modern Games

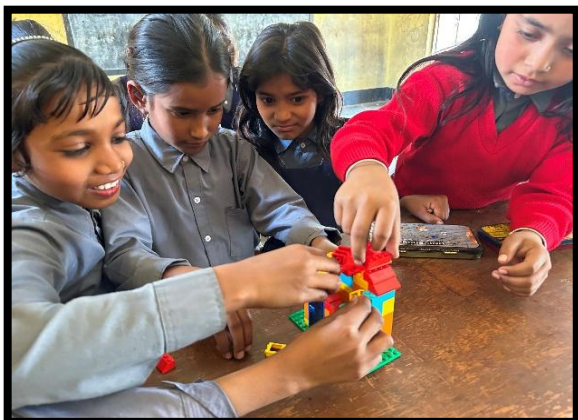


Plate - 2 & 3 (contd...)
Glimpses of Traditional and Modern Games



3.3.3 Phase III: Effectiveness of the formulated Intervention programmes

According to the interventions' blueprint, phase III of the study was carried out with three experimental groups. The entire intervention programme was carried out across three months. The total sessions were 54 sessions, each lasting one hour. For the intervention of every experimental group, two sessions were held each week. Every day, a single session was conducted. The study's stage-by-stage process is described below.

Stage 1 - Trust building and dividing the Groups

To begin the intervention, the researcher organised icebreaking activities, such as creating a circle while holding hands without breaking the line, to assist the children feel relaxed and engaged. Following these exercises, the children, aged 6 to 8, were divided into three diverse groups to ensure a fair distribution of ages within each group, regardless of gender. The first group was assigned to Traditional games intervention, which included games of Assamese cultural and historical importance. The second group was allocated to Modern games intervention and the third group was selected for the Blended games intervention, involving components of both traditional and modern games.

The researcher was an active participator while providing the intervention to the children. Initially, the researcher learnt the traditional games selected for the study and then taught the games to children while participating in the session. Researcher also sought help from the school authority whenever needed. Children's ability to learn through social interaction is highlighted by Lev Vygotsky's Zone of Proximal Development (ZPD), which is efficiently addressed when games are taught in a peer group setting. The ZPD illustrates the difference between what a child can accomplish on their own and with assistance. When the researcher teaches games, an interactive platform for children is created to collaborate and learn from one another, utilising their different skills. The combination of challenges, peer supports, and a secure space for exploration makes game-based learning a potent tool in social and cognitive development among children.

Stage 2-Play Session and Assessment

Week-1, Session 1 and 2 (1st experimental group): The researcher conducted the first experimental group to play the traditional game "Luka Bhaku," and was directly involved in leading the session 1. The game "Luka Bhaku" provides an amazing environment for children to learn and develop through sensory engagement. It improves listening and rule-following abilities, both of which are necessary for regulated play and social interactions. Additionally,

it encourages turn-taking, which fosters patience and respect for other players' roles in a game. Furthermore, this game promotes peer interaction, emphasising the value of cooperation and teamwork. The game was continued throughout the session and children were enthusiastically participated in the whole session.

In the 2nd session, another traditional game, "Along Dolong," was introduced, and the researcher continued to manage and oversee the group's participation in this new game throughout the session. This game assist children develop a variety of vital skills, such as decision-making, problem-solving, cooperation, and team spirit. Cooperation and team spirit are established as children work together to achieve common goals, and interaction skills are promoted through structured communication and collaborative exercises. The game also requires children to solve problems and make decisions, helping them develop critical thinking and strategic decision-making skills. Throughout the entire session, children were in an environment that promoted engagement, cooperation, and enjoyment.

Week-1, Session 3rd and 4th (2nd experimental group): In the 3rd session, the researcher demonstrated the rules of the modern game "Jigsaw Puzzle" to the second experimental group. The researcher provided puzzles sets for the game and gave a detailed explanation of how to complete the puzzle, emphasising its importance of active engagement from the children. The game helps children in developing problem solving skills and logical reasoning. It also aids in learning spatial awareness of children. Furthermore, jigsaw puzzle improves creativity of children, helps in increasing memory and attention span. It also helps improving eye hand coordination as well as increase attention span of children. It also helps in learning cooperation with peers while playing in groups. The session ran smoothly, with participants participating and successfully completing the puzzle.

The researcher proceeded to a memory game in the 4th session. The game's rules and instructions were thoroughly explained, ensuring that all children understood how to play. The memory game helps children improve their short-term memory, attention span, and visual recall. Children's concentration and critical thinking skills also are enhanced by this game. Group play of these games helps children develop their social skills. Through engaging in interactive play, children can develop cooperation, teamwork, and communication skills—all essential elements of social interaction. Throughout the session, the researcher answered all questions and cleared up any confusions that emerged. She made a strong effort to encourage children who were not actively engaged, offering encouragement and motivation

to assure their participation. By the end of the session, all of the children were actively participating, and the session was a success.

Week-1, Session 5th and 6th (3rd experimental group): Starting with the third experimental group in the 5th session, the researcher introduced the traditional game "Luka Bhaku". The game helps children to learn and develop through sensory engagement. It improves listening and rule-following abilities, both of which are necessary for regulated play and social interactions. Additionally, it encourages turn-taking, which fosters patience and respect for other players' roles in a game. Furthermore, this game promotes peer interaction, emphasising the value of cooperation and teamwork. The session was completed smoothly, with active participation where children were able to completely involve themselves in the traditional game and enjoy it fully.

The 6th session then started with the introduction of a modern game called "Jigsaw Puzzle." The researcher provided puzzle sets and facilitated the session to ensure that everything went as planned. To ensure understanding and participation, the researcher answered every question and provided all the information needed during the session. The game intended to help children in developing problem solving skills and logical reasoning. It also aids in learning spatial awareness of children. Furthermore, jigsaw puzzle improves creativity of children, helps in increasing memory and attention span. It also helps improving eye hand coordination as well as increase attention span of children. It also helps in learning cooperation with peers while playing in groups. The session ran smoothly, with children participating and successfully completing the puzzle.

Week-2, Session 7th and 8th (1st experimental group): In the 7th session, the first experimental group was taught to a new traditional game known as "Tekeli Bhonga." This game was intended to motivate peers to take turns and actively participate in group activities. "Tekeli Bhonga" also promotes spatial awareness and sensory learning. The session ended smoothly, with the children fully engaged and showing active participation.

In the 8th session, the children were taught to another traditional game known as "Ganga Rani." The researcher directly participated in the game and provided detailed instructions on how to play it. "Ganga Rani" game was chosen for its ability to improve communication skills, promote active cooperation, develop team spirit, improve concentration, encourage speedy decision-making, enhance vocabulary and memory and also

stimulates imagination. The researcher encouraged them to actively participate in the game, and by end of the session, they were completely enjoying it.

Week-2, Session 9th and 10th (2nd experimental group): During the 9th session, the children in the second experimental group were introduced to the modern game "Checkers" board game. The children had to follow the rules and directions of the game. This board game was chosen for its multiple benefits, which include improved logical thinking and reasoning skills, as well as the development of problem-solving and decision-making ability. Playing Checkers also helps to improve memory as well as understanding of cause and effect. Furthermore, the game teaches children directional concepts including backward, forward, and diagonal moves. It also emphasises turn-taking abilities, active participation and the significance of following directions. Throughout the session, the children enthusiastically engaged in the game.

In the 10th session, the same group was given the "Maze" game, which required them to find a secret path to get from the beginning to the end. This game was chosen to help with a variety of skills, including visual-motor integration, critical thinking, reasoning, and problem solving. Additionally, playing the "Maze" game sought to improve concentration and memory. It also aimed to improve executive functioning skills in children, such as planning, organisation, and cognitive flexibility. The children were excited about the task and enthusiastically participated throughout the session.

Week-2, Session 11th and 12th (3rd experimental group): The 11th session introduced children to the traditional game "Along Dolong", which required active involvement. The session aimed to improve the children's vocabulary, sense of responsibility, teamwork, and independent decision-making abilities. As children learned the rules, they started to really love the game.

The 12th session switched to a modern game that used "Checkers" board to encourage logical thinking, reasoning, and problem-solving skills. This game also taught children about cause and effect, as well as directional ideas like backward, forward, and diagonally. The children showed great excitement, enjoying the variety of games provided in each session. Their participation throughout the games demonstrated their increased interest and adaptability to new learning opportunities.

Week-3, Session 13th and 14th (1st experimental group): In the 13th session, the third experimental group was introduced to the traditional game "Sith Pokhila". This game was picked because it has the potential to improve listening skills, the capacity to follow orders, problem-solving abilities, and quick responses. Through "Sith Pokhila," children increase their object identification accuracy and learn many concepts about their surroundings. The children's eager and active participation throughout the session was evident, as they greatly loved playing with the game.

The 14th session started with the introduction of "Rumal Sur," another traditional game. This particular game was selected due to its ability to foster vital abilities in children, like cooperation, sharing, focus, and logical thinking. The children's active engagement in the game showed that they enjoyed the game throughout the session.

Week-3, Session 15th and 16th (2nd experimental group): Given to the second experimental group, the session 15th started with a "Crossword" game. Children were given a full explanation of the rules before the game started to make sure they understood how to play. This particular game was selected due to its capacity to enhance critical thinking, vocabulary, memory, and problem-solving abilities. Additionally, the children's sense of cooperation and teamwork also enhances by working together to finish this game. The children engaged in the entire session, indicating that the goals of the session were successfully met.

During the 16th session, the children were given a seriation board to organise. The goal of this exercise was to improve a number of critical abilities, such as problem-solving, logical reasoning, and pattern and shape recognition. The game also attempted to enhance the children's understanding of cause-and-effect linkages and their ability to match and sort things. By practicing sorting objects in a logical order while using the seriation board, children will strengthen the abilities they need to master.

Week-3, Session 17th and 18th (3rd experimental group): During the 17th session, the third experimental group children were exposed to the traditional game "Tekeli Bhonga". This game was carefully chosen for its capacity to increase peer interaction, teach the value of turn-taking, and improve children's ability to focus while playing. The game also promotes spatial awareness and sensory learning. Throughout the session, the children actively participated, taking turns and interacting with their friends, creating an enjoyable friendly environment. The game challenged students to pay great attention to their surroundings and use their senses in order to move around and succeed.

The children were subjected to a modern game, "Crossword," at the 18th session. This game was picked specifically for its benefits, which include expanding vocabulary, strengthening problem-solving abilities, increasing memory, and encouraging active involvement. As children engaged on the crossword puzzles, they were encouraged to think critically and recall terms, developing their vocabulary and strengthening their memory. The interactive component of the game encourages active engagement, as the children work together to solve the riddles.

Week-4, Session 19th and 20th (1st experimental group): During the 19th session, the first experimental group was exposed to the traditional game "Kutkut". This game intended to improve several essential abilities in the participants. Its primary goal was to teach children the value of taking turns, which is essential for developing patience and respect for others. The game also emphasised following directions, which is a vital skill that improves listening and understanding ability. Collaboration with peers is another important feature, as it promotes teamwork and social engagement. Furthermore, the game "Kutkut" is very useful for enhancing concentration and the ability to focus on certain objects or tasks, which increases participants' attention span.

In the 20th session, the children were introduced to another traditional game, "Aire Amar Togor," with the goal of improving both nonverbal and verbal interaction, resulting in better interpersonal interactions among the participants. It also encourages teamwork and the capacity to follow instructions, both of which are necessary for cooperative play and social cohesiveness. The game also focuses on improving memory and concentration, which aids the children's cognitive growth.

Week-4, Session 21st and 22nd (2nd experimental group): The 2nd experimental group children were introduced to a modern game the "matching game," during the 21st session. This activity aimed at enhancing children's visual memory, short-term memory, and pattern recognition. This game additionally strengthens children's concentration skills and also encourage them to cooperate with their peers when playing in groups.

The 22nd session began with a building block activity designed to encourage the children's creativity and imagination. This game also encourages peers to cooperate and share their views. Furthermore, it helps to improve spatial awareness, focus, visual-motor skills, and logical reasoning among children.

Week-4, Session 23rd and 24th (3rd experimental group): The session 23rd was began with a traditional game “Ganga rani” among the 3rd experimental group. The game aims to improve peer interaction by encouraging active cooperation, a sense of team spirit, increased awareness, and faster decision-making. Even improves vocabulary and memory while stimulating the imagination.

The goal of the modern game "Maze" included in the session 24th was to improve a range of abilities, such as problem-solving, critical thinking, visual-motor integration, and reasoning. Playing the "Maze" game also enhances memory and focus. Additionally, it sought to enhance children's executive functioning abilities, including organisation, cognitive flexibility, and planning.

Week-5, Session 25th and 26th (1st experimental group): The 25th session began with the introduction of another traditional game, "Borof aru Pani," to the 1st experimental group. This game was chosen primarily to assist children understanding the idea of reversibility. It also attempted to encourage people to cooperate and help one another. Furthermore, playing this game was intended to help with the development of quick decision-making abilities. Through "Borof aru Pani," children not only learn to think critically and adapt to changing situations, but they also develop important social skills by cooperating and supporting one another and assures that the game efficiently promotes cognitive as well as social development.

The 26th session was started with “Luka bhaku” game which was a repetition of previous game and continued until the end of the session to strengthen their desired skills. “Luka Bhaku" provides an amazing environment for children to learn and develop through sensory engagement. It improves listening and rule-following abilities, both of which are necessary for regulated play and social interactions. Additionally, it encourages turn-taking, which fosters patience and respect for other players' roles in a game. Furthermore, this game promotes peer interaction, emphasising the value of cooperation and teamwork. The game was continued throughout the session and children were enthusiastically participated in the whole session.

Week-5, Session 27th and 28th (2nd experimental group): The session on the 27th began with the game "Ludo," among the second experimental group which helps to strengthen logical and spatial reasoning skills. This game stimulates the brain areas responsible for memory and complex mental processes. Ludo also promotes social connections, enabling children to bond and form closer relationships with their peers. It improves concentration and

focus in children, allowing them to pay attention for longer durations. Furthermore, Ludo promotes problem-solving skills and allows children to practice and understand mathematical ideas in a fun and engaging environment.

The session 28th was continued with the previously played game “Jigsaw puzzle” to strengthen their expected skills. The game help children in developing problem solving skills and logical reasoning. It also aids in learning spatial awareness of children. Furthermore, jigsaw puzzle improves creativity of children, helps in increasing memory and attention span. It also helps improving eye hand coordination as well as increase attention span of children. It also helps in learning cooperation with peers while playing in groups. The session ran smoothly, with participants participating and successfully completing the puzzle.

Week-5, Session 29th and 30th (3rd experimental group): The session 29th was started with a traditional game “Sit Pokhila” taught to the 3rd experimental group to improve listening skills, following orders, problem-solving abilities, and quick responses. Through this game, children also increase their object identification accuracy and learn many concepts about their surroundings.

In the 30th session, the children were introduced to a modern "Memory game" with the goal of improving their short-term memory, attention span, and visual recall. This game improves both children's focus and critical thinking abilities. Playing these games in a group environment provide extra benefits by developing the children's social abilities. Through interactive play, the children were able to build teamwork, communication, and cooperation, all of which are necessary components of social interaction.

Week 6, 7, and 8- Re-assessment of children: The children were re-assessed to evaluate their social and cognitive development using the same tool as the initial data collection, Vineland Social Maturity Scale and Malins Intelligence Scale for Indian Children respectively. The re-assessment sought to track progress made since the initial sessions, thus providing insight into the interventions' effectiveness.

Week-9, Session 31st and 32nd (1st experimental group): The traditional game "Along Dolong" which was played in a prior session, was reintroduced to the 1st experimental group in the 31st session. The purpose of this activity was to improve their capacity for problem-solving, teamwork, cooperation, and peer interaction.

The 32nd session was also a repetition of previously played session that is “Tekeli bhonga” game to strengthen their skills on turn taking, cooperation skills, promoting spatial awareness as well as sensory learning.

Week-9, Session 33rd and 34th (2nd experimental group): In the 33rd session, a memory game intended to improve short-term and visual memory was presented to the second experimental group. The game was designed to help children become more focused, develop their critical thinking and problem-solving abilities, and strengthen their cooperation abilities.

The session 34th was started with the previously played game “Checkers” board game to strengthen their skills on logical thinking, reasoning, and problem-solving skills. This game also helps children to learn about cause and effect and directional ideas like backward, forward, and diagonal.

Week-9, Session 35th and 36th (3rd experimental group): The 3rd experimental group was introduced a traditional game “Rumal sur” in session 35th intended to foster vital abilities in children, like cooperation and sharing skills. It also helps in focusing and logical thinking skills among children.

Seriation board game was introduced as another modern game to the same group in the 36th session, where the children will learn problem-solving skills, logical reasoning, and pattern and shape recognition. The game also enhances the children's understanding of cause-and-effect relations and their ability to match and sort things.

Week-10, Session 37th and 38th (1st experimental group): The 37th session of the first experimental group began with a previously played traditional game called "Ganga rani" to strengthen their skills in active cooperation and team spirit, communication skills, vocabulary and memory, attention, decision-making skills, and imagination.

The session 38th was started with another traditional game “Sit pokhila”. This game has been played in the previous session and repeated it to help children develop their ability to listen, obedience, problem-solving, and fast thinking skills. It also helps children learn a lot about their environment and enhance their accuracy in identifying objects.

Week-10, Session 39th and 40th (2nd experimental group): The 39th session began with the repetition of modern game "maze," among the second experimental groups which helped the students improve their reasoning, visual-motor integration, problem-solving, and critical thinking abilities. The "Maze" game improves concentration and memory as well. It also

aimed to improve children's executive functioning skills, which include planning, organising, and cognitive flexibility.

The 40th session was started with another game "Crossword game" which was a repetition of modern game previously played. The game was repeated to expand vocabulary, problem-solving abilities, increased memory and encouraging active involvement. As children engaged on the crossword puzzles, they were encouraged to think critically and recall words, developing their vocabulary and strengthening their memory. The interactive component of the game encourages active engagement, as the children work together to solve the riddles.

Week-10, Session 41st and 42nd (3rd experimental group): The session 41st was started with a traditional game "Kutkut" among the children of third experimental group to improve children's skills on learning value of taking turns, which is essential for developing patience and respect for others. It also improves skills on following directions, which is a vital skill that improves listening and understanding ability. Additionally, the game teaches collaboration with peers thereby promotes teamwork and social engagement. Furthermore, the game "Kutkut" is very useful for enhancing concentration and the ability to focus on certain objects or tasks, which increases participants' attention span.

The session 42nd was engaged with a modern game "Matching game" This game helps in enhancing problem solving skills, visual memory, short-term memory, and pattern recognition. Additionally matching game strengthens concentration skills of children and it also encourage children to cooperate with their peers when playing in groups.

Week-11, Session 43rd and 44th (1st experimental group): The session 43rd was started with previously played traditional game "Kutkut" with the first experimental group to strengthen their skills on taking turns, developing patience and respect for others. It also improves skills on following directions, listening skills, collaboration with peers and promotes teamwork and social engagement. Furthermore, the game also helps in enhancing concentration and the ability to focus on certain objects or tasks.

The session 44th played traditional game "Aire amar togor" game to the same experimental group to strengthen the skills of both non-verbal and verbal interactions, encourages teamwork and the capacity to follow instructions, cooperation and social cohesiveness. The game also focuses on improving memory and concentration, which aids the children's cognitive development.

Week-11, Session 45th and 46th (2nd experimental group): The session 45th was played with a seriation board game given to the 2nd experimental group to strengthen their critical thinking abilities, such as problem-solving, logical reasoning, and pattern and shape recognition. The game also attempted to enhance the children's understanding of cause-and-effect relations and their ability to match and sort things.

In the session 46th the “Matching game” was replayed with the same experimental group to help in enhancing visual memory, short-term memory, pattern recognition and to improve problem solving ability. Additionally matching game strengthens concentration skills of children and it also encourage children to cooperate with their peers when playing in groups.

Week-11, Session 47th and 48th (3rd experimental group): The session 47th was started with a traditional game “Aire amar togor” among third experimental group to improve both nonverbal and verbal communication skills, to encourage teamwork and following instructions, co-operation and social cohesiveness. The game also focuses on improving memory and concentration, which aids the children's cognitive growth.

The session 48th was began with a “Building blocks” game with the same experimental group to help children to strengthen the children's creativity and imagination. This game also encourages peers to cooperate and share their ideas. Furthermore, it helps to improve spatial awareness, focus, visual-motor skills and logical reasoning among children.

Week-12, Session 49th and 50th (1st experimental group): The 1st experimental group was repeated with the game “Borof aru pani” in the 49th session. It will strengthen children’s concept of reversibility. It will also encourage children to cooperate and help each other. Furthermore, it will help them to develop quick decision-making abilities, learn to think critically and adapt to changing situations. Also, they will develop important social skills by cooperating and supporting one another.

The 50th session concluded with children from the same experimental group playing the traditional game "Rumal Sur”. The game was played again to assist children learn critical social skills because it required players to successfully interact and share resources. Additionally, the game forced children to focus intensely on their actions and strategies in order to beat their opponents. Furthermore, this game required children to use logical thinking, as they had to properly plan and execute their movements to achieve victory.

Week-12, Session 51st and 52nd (2nd experimental group): The session 51st was repeated with “Building blocks” game with the 2nd experimental group to help children in strengthening the children's creativity and imagination. This game also encourages peers to cooperate and share their ideas. Furthermore, it helps to improve spatial awareness, focus, visual-motor skills, and logical reasoning among children.

The same group was repeated with “Ludo” game in the 52nd session which helps to strengthen logical and spatial reasoning skills. This game stimulates the brain areas responsible for memory and complex mental processes. Ludo also promotes social connections, enabling children to bond and form closer relationships with their peers. It improves concentration and focus in children, allowing them to pay attention for longer durations. Furthermore, Ludo promotes problem-solving skills and allows children to practice and understand mathematical ideas in a fun and engaging environment.

Week-12, Session 53rd and 54th (3rd experimental group): In the session 53rd the third experimental group was introduced with a traditional game “Borof aru pani”. The session was intended to teach children regarding the concept of reversibility. It will also encourage children to cooperate and help each other. Furthermore, it will help them to develop quick decision-making abilities, learn to think critically and adapt to changing situations. Also, they will develop important social skills by cooperating and supporting one another.

In the session 54th the same group was provided to play “Ludo” game to help in learning logical and spatial reasoning skills. This game stimulates the brain areas responsible for memory and complex mental processes. Ludo also promotes social connections, enabling children to bond and form closer relationships with their peers. It improves concentration and focus in children, allowing them to pay attention for longer durations. Furthermore, Ludo promotes problem-solving skills and allows children to practice and understand mathematical ideas in a fun and engaging environment. Figure 3.5 gives a bird view of implementation of the intervention programme.



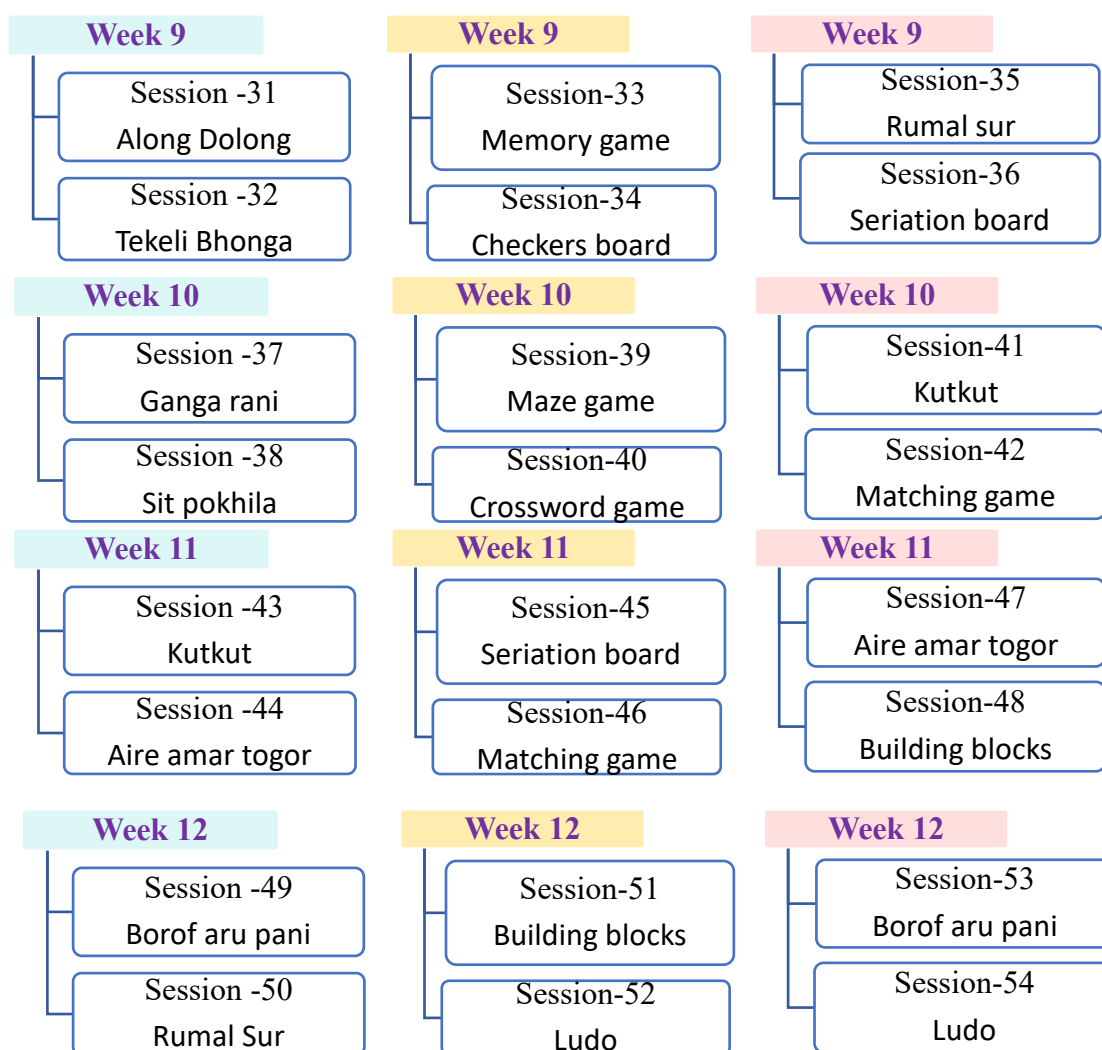


Fig. 3.5: Implementation plan of weekly Intervention programme for children

Stage 3- Post-Test Evaluation

Post-intervention data was collected from each intervention group after the three-month intervention programs to assess the effectiveness of the programs on the socio-cognitive development of the children. Data for the control group were obtained at three different periods, with no intervention programme provided.

This extensive collection of data process was intended to compare the developmental progress of the experimental and control groups. By analysing the data collected before, during, and after the intervention, the study sought to draw significant conclusions on the effect of traditional, modern and blended games on children's socio-cognitive development.

3.4 ANALYSIS OF DATA

The data analysis and method of computation for all the phases of the study were as below:

Phase I: Identifying the levels of Social and Cognitive development of children

The acquired data was statistically analysed. The Shapiro-Wilks test for normality was computed to know whether the data were normally distributed. The findings of results revealed that the mean scores for social and cognitive development, the dependent variables of phase 1, were normally distributed and hence parametric tests were performed. Percentage analysis was used to analyse the levels of social and cognitive development in the selected children aged 6 to 8.

To assess the effect of socio-demographic factors on social and cognitive development of children both qualitative and quantitative analyses were computed. Independent sample t test (Quantitative measure) was performed to test mean difference of social and cognitive development among the children based on gender and type of family. The mean difference in the social and cognitive development of children by age, parental education, occupation, family income, living area, number of children in the household, and game preferences was tested using one-way ANOVA. Additionally, a multiple regression test was performed to measure the strength of relationship between several predictor variables (independent variables) and social and cognitive development (dependent variables).

Phase III: Effectiveness of the formulated interventions

The Shapiro-Wilks test for normality was also computed for the third phase of data and the test results revealed that data were normally distributed. Therefore, parametric tests were performed. To analyse the effectiveness of intervention programme based on Traditional, Modern and Blended games by comparison between before, during and after test outcomes of social and cognitive development among the experimental and control groups, the analysis used was sequenced below:

To compare differences in mean score on social and cognitive development among the three experimental groups of children to check if the intervention effect differs by time measures (Before, During and After) with an overall objective of assessing the effectiveness of the Traditional, Modern and Blended games in improving social as well cognitive development MANOVA of repeated measures [3 (experimental groups) x 3 (Before, During

and After evaluation scores of the two dependent variables, Social and cognitive development)] was computed. Independent t-tests were used to assess the pre-test and post-test comparison between experimental and control groups, and Cohen's *d* was used to determine the interventions' effect size.

Figure 3.6 gives a bird's eye view of the analysis of data used in the current study in both phases.

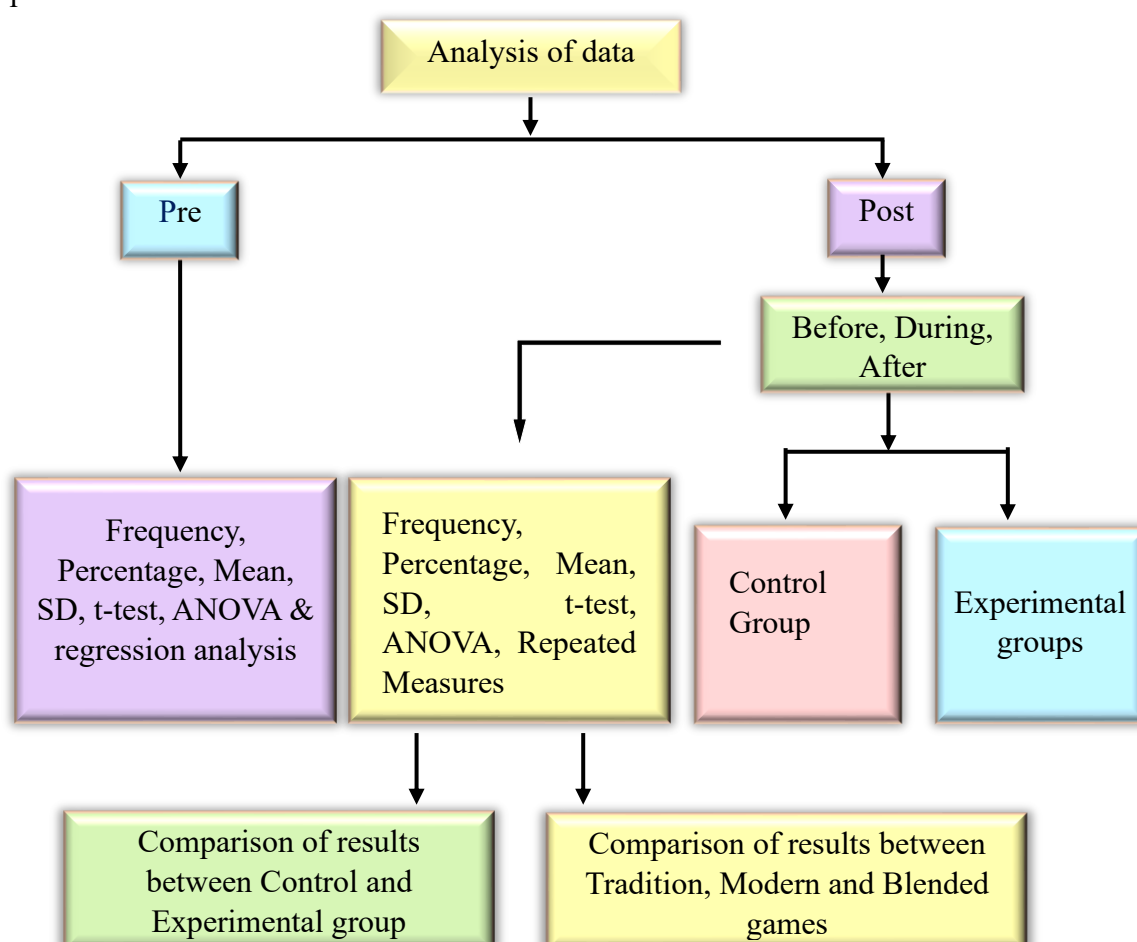


Fig. 3.6 Analysis of Data for Phase I and Phase III

3.5 Operational definitions

- **Early childhood:** Early childhood, which ranges from birth to age eight, is seen as an essential period for growth and development that establishes the foundations for cognitive, social, emotional, language and physical development, as it's when the brain is most receptive to learning (NEP, 2020). Child's brain development accelerates between the ages of 6 to 8, as they learn new concepts and mental skills at school. They become more curious and interested in exploring the world around them,

and begin to solve problems on their own when provided stimulating and supportive environment.

- **Social development:** A process of learning to engage with people, build relationships, and develop an awareness of self, so helping children learn vital skills including communication, empathy, collaboration, and dispute resolution (Nurmalitasari, 2015). Parents, peers, teachers, and the surrounding environment all play important roles in influencing children's social development, particularly in the early years. Learning in a social setting allows students to naturally acquire self-regulation and connect with others, developing acceptable behaviour and responses.
- **Cognitive development:** Cognitive development is the progress of a child's thinking, understanding, and information processing skills throughout the span of their early years (Nua et al., 2023). It encompasses various mental abilities, from attention and perception to memory and language. Relationships between the growth of the brain, nervous system, and experiences that aid in environmental adaptation lead to cognitive development (Maghfuroh, 2018).
- **Traditional games:** Traditional games are recreational outdoor activities that have been passed down through generations, usually within specific cultural or community contexts. These games are often distinguished by their simplicity, reliance on physical ability, and the use of little or no equipment ((Gulia and Dhauta, 2019). These games not only serve as sources of entertainment, but also tools for teaching cultural values, promoting social interaction, physical movement and dexterity, and skill development in children. Furthermore, traditional games produce emotional states and promote collaborative and inclusive learning environments, which improve critical thinking, communication, and problem-solving abilities group (Satyam, and Goswami, 2022).
- **Modern games:** Organized form of play involve electronic gadgets and other materials played formally in structured environment with reference to rules (Azhara & Sutapa, 2019). These games are goal oriented and thoughtful rather than physical exercise, which help children learn certain subjects or skills, expand concepts and reinforce development, through trial and error using play materials.
- **Blended games:** In present study the term refers to the combination of Traditional and Modern games used for the study.