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Research Article

The Effect Of Pre-Learning Skills On Early Childhood Development: A Correlational Study Among Toddlers Aged 18–36 Months

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ABSTRACT

This study demonstrates how Pre-learning skills effect early childhood development in toddlers aged 18 to 36 months. Pre-learning skills like sitting tolerance, attention ,joint attention, sustained attention, eye contact, eye gaze, and compliance are necessary for academic readiness and social communication later in life. The study aimed to find out how the importance of these early abilities relate to broader child development milestones.

50 toddlers from Wakad, Pune, were assessed using two standardized tools. The *Pre-learning Behaviour Checklist* was administered to calculate each child's Pre-learning Skills (PLS) score. Then, the *ComDEALL Child Development Checklist (*CDCC*)* was administered to evaluate various domains of development including gross motor skills, Fine Motor skills, Activities of daily Living, Receptive language ,Expressive Language , Cognitive domain, emotional domain and social development domain.

The results demonstrated a positive correlation (r = 0.718) between prelearning skills and child development. This demonstrates that Toddlers who possess adequate pre-learning skills are more likely to show good development across multiple child development domainsGM,FM,ADL,RL,El,COG,SOC,EM). In simple terms, Toddlers who have better Sitting Tolerance ,Attention ,Joint attention ,Command following tend to move forward in their journey of covering developmental milestones.

The study brings into light the important role that pre-learning skills play in providing a base for a child's future learning and growth. The recognition and exposure to these skills early in age by Parents, Teachers , and professionals can help children build a stronger foundation for lifelong development and success.

Keywords: Pre-learning Skills, Child Development

Introduction :

Children with developmental disabilities often experience difficulties in social-emotional skills and communication, which can lead to challenging behaviours that negatively affect their overall growth (Evans, 2021). These behavioural patterns frequently interfere with learning and hinder positive social interactions. Parental interventions play a crucial role in shaping early development, as research indicates that engaged parenting enhances cognitive growth in young children (Lucas et al., 2018). As the cognitive skills improve , in turn, there is positive impact on motor and language development, which leads to the foundation for effective learning. Moreover, physical activities including play significantly contribute to mental health, helping a child's overall well-being (Chakrabarti et al., 2019). Estimates suggest that approximately 250 million children under the age of five face developmental risks due to challenges in health, nutrition, and psychosocial factors (Lai et al., 2018).

Pre-learning skills emerge early in age, providing abilities in sensory development and processing of cognitive skills. These skills begin when infants start visually tracking objects—such as a pencil or rattle—and responding to familiar voices with smiles or gestures. Due to their vital role in early childhood development, this study explores the correlation between pre-learning skills and overall developmental progress, emphasizing their effects on toddlers, who represent a key stage in early learning.

A prerequisite for prelearning skill development is exposure to different activities at home .Also the excessive exposure to screen time is spoiling the attention span among children and is a big hindrance in development of pre linguistic skills leading to speech delay.

2.LITERATURE REVIEW

In this section, Researchers explore what previous studies have discovered about the role of pre-learning skills in early development, especially among toddlers aged 18 to 36 months. By looking at what has already been learned, it give better understand why these early abilities matter and how this current study fits into the broader picture.

Quantitative findings from recent studies highlight the importance of early interventions in supporting children's developmental outcomes. Brady et al. (2021) emphasize the significant role that early support for gross motor skills plays in a child's overall development. According to Donald et al. (2019), the involvement of trained specialists is crucial, particularly when working with very young children with developmental disabilities—where individualized care and expertise can make a meaningful difference. More recent research by Evans (2021) points to the growing focus on early diagnosis, as identifying developmental delays at an earlier stage allows for more effective support strategies. Additionally, Beisly et al. (2022) found that children's executive functioning and learning behaviors are closely linked to their future academic success, underlining the long-term benefits of early developmental support.

research across various contexts continues to highlight the foundational role of early developmental skills in shaping children's future outcomes. A study conducted by Veziroglu-Celik and Acar (2018) with 140 preschool children from an urban school district in Turkey (average age 62.56 months) found a strong link between learning behaviours and social competence. This suggests that children who demonstrate positive learning behaviours are more likely to develop effective social skills during the early years.

In India, the Communication DEALL (COMDEALL) program has been recognized as an effective approach to assess and support language development in very young children. Studies by Ruth Deborah et al. and Vaideeswaran & Prathiba (2021) emphasize the importance of using this tool with children aged 0 to 2 years. By assessing speech perception, audition, intelligibility, and language abilities, COMDEALL enables early identification and support. The findings indicated that children who received early cochlear implants showed stronger developmental progress, supporting the case for early intervention and motivating the use of COMDEALL in the current research.

The impact of maternal education on child development has also been well-documented. A study by Cui, Liu, and Zhao (2021), using data from the China Family Panel Studies, explored the effects of a compulsory schooling reform. Results showed that higher levels of maternal education led to better academic outcomes for adolescents—such as improved school enrolment, math performance, and internal motivation—as well as enhanced mental health and physical development. These improvements were attributed to increased family resources, better parenting, and improved maternal well-being.

Further evidence of the importance of early developmental interventions comes from a case study on twins with language delay by Ruth Deborah et al. (n.d.). Through individual and group therapy incorporating symbolic and associative play, the study observed notable improvements in both language and social communication. Children demonstrated increased spontaneity, reciprocal interaction, questioning, and use of linguistic markers—highlighting the role of play in language development.

Overall, current literature strongly supports early and targeted interventions in childhood development. For instance, Brady et al. (2021) demonstrated that early intervention in gross motor skills significantly benefits overall developmental progress. Similarly, Donald et al. (2019) stress the need for specialized therapeutic support for young children with developmental disabilities, especially during the early stages. Evans (2021) adds that timely diagnosis is gaining growing attention as a critical factor in shaping positive academic and functional outcomes. Finally, Beisly et al. (2022) point to a direct relationship between executive functioning, learning behaviours, and academic success—emphasizing the importance of fostering cognitive skills early in life.

3 Research Gap

While several studies have explored the impact of pre-learning skills on child development, most have focused on individual domains such as gross motor skills or social development, rather than providing a comprehensive analysis across all developmental areas. Additionally, previous research has predominantly involved teachers in administering assessment checklists, whereas this study introduces a psychologist-led evaluation, utilizing parental feedback for scoring. This unique approach offers a different perspective on early childhood development assessment. Furthermore, there is a lack of studies conducted in the Pune (Wakad) region, making this research the first of its kind in this area.

4. RESEARCH QUESTION

Is there a relationship between pre-learning skills and early childhood development among toddlers aged 18-36 months?

5. RESEARCH METHODOLOGY

Study Population: Toddlers (Age 18-36 months) from Wakad, Pune.
A **quantitative correlational research design** has been employed to examine the relationship between pre-learning skills and early childhood development.

Variables

- **Independent Variable (IV): Pre-learning skills**

(These include foundational behaviors such as attention span, sitting tolerance, eye contact, joint attention, and other skills that support readiness for structured learning.)

- **Dependent Variable (DV): Early childhood development**

(This refers to the developmental progress across domains such as cognitive, motor, social, emotional, and language development in toddlers.)

The Pre-requisite Learning Behaviour (PLB) Checklist
This is a questionnaire-based Assessment .It is developed by Dr Pratibha Karanth . A questionnaire, with questions that could evaluate the child's pre-learning skills based on the following criteria will be used. Made by whom

- **Joint-attention**- This is a communicative and social behaviour in which two people are made to focus on same object or event for interaction with each other.
- **Sustained attention**- This involves maintaining the response persistence and the continuous effort over periods of time. This can check the need to ignore distractions and inhibit the attention shifts to activities that are irrelevant.
- **Eye contact-**This is a critical component of non-verbal communication that carries subtle engagement rules.
- **Eye gaze**- This is to estimate the line of regard of the eye by observing the direction of the eye**.**
- **Sitting tolerance**- This involves attentiveness, manipulating objects and being able to learn and apply new skills.
- **Compliance**- This is the degree to which the children actively do what they are asked to do and they retain from doing what they are asked not to do.

The psychologist retrieves the status of the child under study from the caretaker using the dedicated standardized questionnaire. The overall PLB Assessment score is the sum of the scores of all the questions answered under all the listed categories. On comparing the calculated score with the standard threshold value for each age group, the learning skills of a child will be concludes as i) adequate and ii)inadequate.
For the age group – (1 to 2 years), a score of 26-29 will be considered as adequate and a score that is less than 25 will be considered inadequate.
Similarly, for the age group- (2.1 to 3 years), a score of 31 to 35 will be considered adequate and any score less than 30 will be considered inadequate.

COMMUNICATION DEALL DEVELOPMENT CHECKLIST (CDDC) SCORE:
This is also a questionnaire-based Assessment for finding developmental disabilities. A questionnaire that could evaluate the child's development through a checklist that could measure a variety of skills, based on the responses received from their caretakers will be used. Checklists prepared by clinicians will be used as a reliable tool that targets sensitive and specific areas like motor or mental capabilities, or language and speech skills(Kandasamy, 2018). Table below shows the list of 8 domains that will be used for the CDDC Assessment.

Table 1: Domains used for CDDC Assessment

SL.NO	DOMAIN NAMES	DESCRIPTION
1	**MOTOR**	
I	Gross motor	Skills that require full body movement for standing, running, walking, sitting upright.
II	Fine motor	Skills for coordination between child's eyes and small muscles in wrists, hands and fingers.
III	Activities of Daily Living(ADL)	Skills for eating, dressing, toileting, walking, personal hygiene.
2	**COMMUNICATION**	
IV	Receptive Language	Skills to understand language used around children
V	Expressive Language	Skills to request for objects, ask questions, make choices, answer questions and to describe events.
3	**HIGHER COGNITIE SKILLS**	
VI	Cognitive	Ability of children to think, explore and to figure out things.
VII	Social	Abilities for good mannerism, effective communication with others, and being able to express personal needs.
VIII	Emotional	Ability of the child in being sensitive to emotions.

On finding both the scores, the proposed research will make use of Correlation statistical tool for analysing the average and correlation between the scores.

6.RESEARCH OBJECTIVES

To evaluate the impact of pre-learning skills on early childhood development through a correlational study, highlighting their significance in shaping early cognitive, motor, and social growth.

Alternate HypothesisH1: There will be a correlation between the pre-learning skills of a child and early childhood development.

8.SAMPLE SIZE

Sample Size: The researcher used a **convenience sampling method** to select children between **18 and 36 months** old. This age range was chosen because most pre-learning skills develop between birth and three years, and any developmental concerns usually become easier to notice after 18 months. For this study, **50 children** were selected.

9. RESEARCH DESIGN

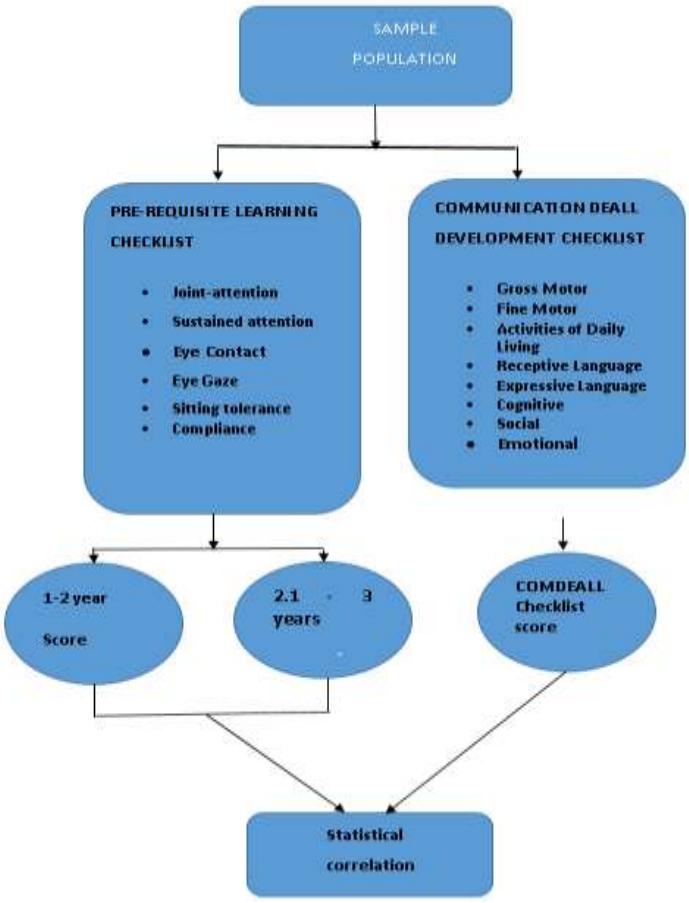

Figure 1: Flow diagram of the Proposed Research work

10. Result :

Table 2: Correlation between Pre-Learning Skills and Child Development

Measure	Mean	SD	Pre-Learning Skills	Child Development Score
Pre-Learning Skills Score	20.18	5.19	1.000	0.718
Child Development Score	265.3	92.88	0.718	1.000

The findings of the study present a compelling picture: children who displayed stronger pre-learning skills—such as the ability to focus, remain seated for brief periods, and engage in basic interactive behaviors—also tended to have significantly higher overall developmental scores. The average score for pre-learning skills was **20.18**, and for child development, it was **265.3**, with a standard deviation of **5.19** and **92.88** respectively.
Most importantly, the **Pearson correlation coefficient** between the two variables was **0.718**, indicating a **strong positive correlation**. In simpler terms, as a child's pre-learning skills improve, so does their general developmental progress. This robust link supports the hypothesis that a child's early skillset serves as the bedrock for future growth across cognitive, physical, emotional, and social domains. Based on this evidence, the hypothesis—**that there will be a correlation between pre-learning**

Discussion

The early years of a child's life—especially the first three years are often described as a period of *growth ,exposure, strengthening of muscles, development of brain* .It is during this time that the child is learning ideation , thinking and motor planning , execution and social interaction with the world. The present study aimed to explore the relationship between pre-learning skills and early childhood development, particularly focusing on toddlers between 18 to 36 months. The study set out with a simple, yet powerful question: *Does a child's ability to sit still, focus, and engage with their surroundings impact their overall development?*
The answer, as the findings suggest, is a resounding yes.
Curiosity and eagerness to explore the environment develop in early years of age. Before Reading the following of patters and attention is important, same way before writing visual perception, sitting tolerance and attention, joint attention is important. Although these skills might seem no importance early in life , they are in fact foundational to shape how a child will eventually learn to communicate, relate socially, follow routines, and grasp new concepts. Moreover, difficulties such as poor handwriting, reading challenges, and copying tasks in academic settings are frequently linked to deficits in visual-motor integration, attention, and body regulation. By systematically developing pre-learning competencies, children not only improve in specific skill areas but also experience more balanced overall developmental trajectories.
The results confirmed a significant positive correlation between these variables, aligning with the hypothesis that foundational pre-learning abilities contribute meaningfully to broader developmental progress.
Previous research has often addressed only one domain of development, such as gross motor or social skills. However, the present study emphasizes a holistic view, showcasing how pre-learning skills—such as sitting tolerance, attention span, joint attention, and eye contact—serve as prerequirement to complete developmental achievements. These skills are not only important for early sensory-motor integration but also establish the groundwork for structured academic learning.
Lai et al. (2018) emphasized the role of play in facilitating child development, and Beisly et al. (2020) found a strong relationship between early learning behaviors and academic performance in later childhood. Our findings demonstrate these results to even earlier stages, reinforcing the critical window of 0–3 years as essential for early interventions.
We require pre learning skills like attention for walking(GM),sitting tolerance for pre writing(FM),pre linguistic skills for speech and language. **As we all know that Pre learning skills are Pre Linguistic skills as well. (Prelinguistic Communication Development May 2016 DOI:10.1007/978-981-10-0713-2_2 In book: Prelinguistic and Minimally Verbal Communicators on the Autism Spectrum (pp.9-32) Authors: Elizabeth University of North Carolina at Chapel Hill Billy Ogletree Western Carolina University)**

Prelearning skills directly impact the ability to gain receptive and expressive language. If sitting tolerance and attention are affected it's difficult to identify and speak the particular noun or verb .
As discussed in *Prelinguistic Communication Development* (May 2016), pre-learning skills area also the prelinguistic skills and important to gain speech and language development. Inadequate attention or sitting tolerance can lead to delays in receptive and expressive communication, further affecting social cognitive and emotional growth. Strengthening these skills thus promotes not only linguistic abilities but also social interaction, emotional regulation, and academic readiness.
This study adds to focus on toddlers—those just beginning their developmental journey. It emphasizes that parents, caregivers, and educators should not wait for a child to show red flags to intervene. Instead, they should look for early signs—perhaps the child avoids eye contact, cannot sit through a short activity, or struggles

to focus even briefly. These are not just passing behaviors; they may be early indicators of broader developmental concerns.

Based on over five years of professional experience in special education and child psychology, it has been consistently observed that strengthening pre-learning skills can significantly enhance the attainment child development milestones. Toddlers who initially have attentional difficulties, restlessness, or social withdrawal often show marked improvements when provided with structured and consistent interventions targeting foundational skills. Delays in areas such as copying from the board or expressive language are frequently rooted in underdeveloped pre-learning abilities.

Furthermore, children exhibiting hyperactivity or flickering attention often considered exhibiting bad behaviour —demonstrate positive behavioral and cognitive changes when exposed to goal based, play-based activities that promote self-regulation and attentional control. These structured interventions not only facilitate task-oriented learning but also support broader developmental domains. With consistent guidance and activity-based engagement with parents and teachers , these toddlers gradually acquire improved focus, enhanced self-regulation, and more adaptive behavioral patterns, contributing to more balanced and steady developmental outcomes.

Children who experience academic challenges—such as difficulties with handwriting, reading, or copying from the board—can often make meaningful progress when their pre-learning skills are intentionally and systematically supported. Focusing on key areas such as attention span, sitting tolerance, coordination, and visual-motor integration enables educators and therapists to provide effective strategies that empower children to advance confidently in their educational journey.

Importantly, the benefits of enhancing pre-learning skills extend beyond academic readiness. Improvements in these foundational competencies contribute to increased self-confidence, greater independence, and emotional stability. In a context where early academic expectations are intensifying and developmental concerns are increasingly recognized; the role of early pre-learning interventions becomes even more critical for supporting holistic child development.

Conclusion

The results of this study establish a clear and meaningful correlation between pre-learning skills and early childhood development, underscoring their critical role in a child's holistic growth. Strengthening these foundational abilities is essential for achieving key developmental milestones. Recognizing this relationship allows caregivers and educators to implement timely interventions, fostering the cognitive, motor, social, and linguistic capacities necessary for long-term learning and developmental success.

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