

## COMPARATIVE ANALYSIS OF DAYCARE AND HOMECARE ENVIRONMENTS ON EARLY CHILDHOOD DEVELOPMENT IN PAKISTAN'S TWIN CITIES

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### ABSTRACT

*Background: This study investigates the impact of daycare and homecare settings on early childhood development, highlighting the critical role childcare environments play in fostering children's growth. Methods: Using a comparative cross-sectional design and a quantitative approach, the study assessed 200 children (N=100 in daycare, N=100 in homecare), aged 12 to 24 months, using the Ages and Stages Questionnaire-3 (ASQ-3), which evaluates five developmental domains. Findings: Statistical analysis, including independent sample t-tests and logistic regression, revealed significant developmental differences between the two settings. Children in daycare exhibited higher proficiency in communication, gross motor, and personal social skills compared to those in-home care. This was attributed to the diverse interactions and experiences offered by daycare environments. Conclusion: The findings have practical implications for early childhood education policy and suggest that enhancing the quality of daycare centres can positively impact children's development.*

**Keywords:** Early Development, Daycare Setting, Homecare Setting, Communication, Gross Motor, Fine Motor, Problem-solving, Personal Social, Portage Guide, ASQ-3.

### INTRODUCTION

Childcare facilities are crucial for children. Parents' attitudes and views play an energetic role in the selection of the type of daycare environment. In other words, the choice of daycare type depends on the parents' choices and views. The child daycare concept is relatively new for a country like Pakistan. That is why there are a small number of daycare centres in built-up and semi-urban areas of Pakistan. Two major areas of research have highlighted preschool child care and children's later development. Researchers are of the view the better the early development the better cognitive and social development a child has. These effects in children vary in range from

mild to moderate but they are linked with children's performance (Whitebook et al., 1989). Researchers believe that both long and short-term effects have been studied by considering the development of children from various perspectives. The stronger advantage and disadvantage associated with child care is the risk of family background. The more advantageous background one has the better he would be, the less advantageous background a child has there would be more chance of failure (Kontos, 1995).

In 2018, a study conducted by Schmerse and colleagues demonstrated that the learning, care, and education of a child depends on

certain factors. The researcher took 377 children as his sample and measured their development for almost 3 years. When the children reached the stage of 3, he found that the children's level of understanding or performance was closely associated with their family background instead of the quality of the daycare centre (Schmerse et al., 2018). The findings demonstrate that the two-year-old child doesn't show any significant correlation between extra-familial care or quality daycare and later development. However, on some points, there was an indication of considering daycare settings more beneficial (to cognitive skills). Children who spend time in daycare settings have richer vocabulary words than children who spend time in home care settings. Children with daycare are less prone to develop problematic behaviour (Schmerse et al., 2018). Previous research has failed to produce consistent evidence on the effects of daycare quality and quantity. Several studies, for example, have shown that higher process quality childcare (e.g., teachers' positive perceptions toward children and responsible interaction with children) is found to be associated with higher socio-emotional competence and fewer behaviour problems in childhood (Camilli et al., 2010).

Early childhood research has clarified socio-emotional abilities in terms of both positive (pro-social behaviours) and negative behaviour problems; Social competence is defined as adaptable, emotionally stable, and generally pro-social behaviours that promote effective social interaction. Meanwhile, behavioural issues include aggression towards others, excessive anxiety, and a lack of attention and self-regulation. The importance of accessible high-quality childcare, which allows parents to engage in the workforce while ensuring a stimulating learning environment for their children, is a central focus in discussions surrounding economic development, as highlighted in initiatives like the US Build Back Better framework. A substantial body of research underscores the lasting benefits of high-quality universal preschool for children aged 3 to 6 years (Havnes and Mogstad, 2011; Herbst, 2017; Cornelissen et al., 2018; Garcíá et al., 2021; Duncan et al., 2022; Cascio, 2023; Gray-Lobe et al., 2023).

Despite these positive impacts, a trend observed in OECD countries is the increasing number of parents rejoining the workforce when their child is one year old or younger, sparking debates regarding the implications of early daycare enrollment on children's development.

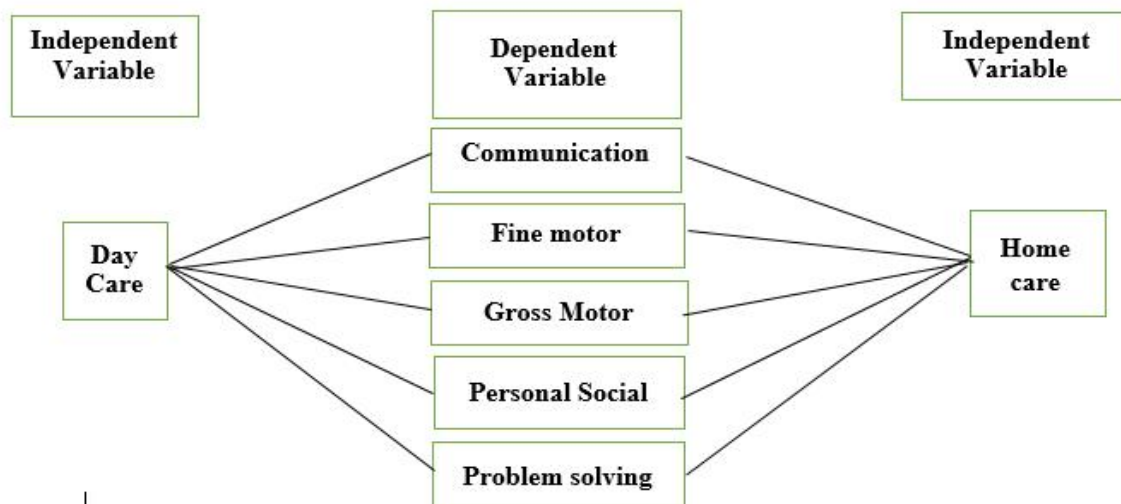
The existing literature on daycare enrollment and child development for children under two years old presents mixed findings. The variations in quality between parental and non-parental care may help explain these divergent results. For instance, Fort et al. (2020) argue that studies from Norway (Drange and Havnes, 2019) and Germany (Felfe and Lalive, 2018) demonstrate positive effects of early enrollment, particularly in less affluent samples where daycare quality is presumed to be higher than parental care due to lower general education levels. Factors such as poverty, parental education, and the quality of childcare play significant roles in these outcomes (Booth, 2000). In situations where the mother does not work, families may struggle financially, potentially living at or below the poverty level. Conversely, dual-income households often afford women more opportunities to make informed choices regarding their families' nutrition and education (Sultana et al., 2012).

Some studies revealed that children who have women's parents scored better on intelligence tests (Gershaw, 1988). Working mothers were seen as better able to manage stress than non-working women. Gershaw, (1988), highlighted the educated women's role in children's development where he emphasized working women and elaborated that the children of working women have more cognitive skills. Educated Mothers are more aware of the strategies to enhance children's cognitive performance. Several studies have been conducted to investigate the parents' value as an important component of childcare (Premani et al., 2021). The findings of those studies suggest that family settings, careers, academic uses, separation anxiety, and perfection play a vital role in deciding whether to put a child in a childcare centre or not.

The current dilemma faced by parents revolves around the choice between homecare and daycare for their children, influenced by shifting societal views on

child development. This decision is particularly challenging for mothers who are the primary earners, as staying at home may conflict with financial responsibilities. While homecare offers personalized attention within a familiar environment, daycare exposes children to diverse social settings and learning opportunities. However,

both options come with concerns such as potential lapses in care at home and the risk of illness transmission in daycare settings. This complex scenario underscores the need for a balanced approach that considers the well-being and development of children alongside practical and financial considerations.



**Figure 1 Conceptual Framework for the Impact of Daycare and Homecare Setting**

**METHODS**

**Research Approach & Design**

This research adopts a qualitative approach considering Pakistan as the focal point of the investigation. The researcher opted for a comparative cross-section research design to complete this study. The developmental milestones, problem-solving skills, communication skills, fine motor skills, social skills, and gross motor skills of a child were assessed with the help of the ages and stages questionnaire which is a global screening tool.

**Population & Sample**

Children who were spending time in daycare and homecare settings were the participants. The total sample size was 200 participants. 100 children were taken from the childcare centres and 100 children were taken from their homes. Convenience and purposive sampling techniques have been used to create a sample for the study. The children of both groups belonged to the age bracket of 12 months to 24 months. Both males and females were included in this study.

**Data Analysis**

Table 1: Descriptive Statistics of the Demographic Variables of Homecare and Daycare Children. (N= 200)

Variables	Categories	<i>F</i>	%
Age	12 Months	100	50.0
	24 Months	100	50.0
Gender	Male	100	50.0
	Female	100	50.0
Socioeconomic Status	Upper Middle Class	104	52.0
	Middle middle Class	92	34.0
	Middle Lower Class	28	14.0
Hours spend in Day care	6 hours	32	16.0
	8 hours	42	21.0
	None (never joined)	100	50.0
Family System	Nuclear Family	108	54.0
	Joint Family	92	46.0
Setting	Daycare	100	50.0
	Home care	100	50.0
Child Birth Order	First Born	72	36.0
	Second Born	86	43.0
	Middle Born	16	8.0
	Last Born	26	13.0
Joining Month of Daycare	3-4 months	68	30.4
	5-6 months	20	8.9
	More than 6 months	12	5.4
	Didn't join	100	44.6

**Table 2: Descriptive Statistics of the demographic variables of Homecare and Daycare Children Parents. (N= 200)**

Variables	Categories	F	%
Marital Status	Married	170	86.6
	Divorced	25	12.5
	Widow	05	2.5
Relationship of child with caregiver	Mother	102	51.0
	Father	58	29.0
	Relative	22	11.0
	Maid	18	9.0
Mother Occupation	House Wife	100	50.0
	Working Women	100	50.0
Mother Qualification	Graduate	111	55.5
	Post Graduate	89	44.5
Father Occupation	Government Job	96	48.0
	Private Job	104	52.0
Father Qualification	Graduate	102	51.0
	Post Graduate	98	49.0

**Table 3: Pearson Correlation among Communication, Gross Motor, Fine Motor, Problem-solving & Personal Social Scale for Homecare Children (N=100)**

Variables	1	2	3	4	5
Communication	-	-	-	-	-
Gross Motor	.719**	-	-	-	-
Fine Motor	.026	.074	-	-	-
Problem-Solving	.034	.102	.928**	-	-
Personal Social	.727**	.705**	-.065	.001	-

**Table 4: Pearson's Correlation among Communication, Gross Motor, Fine Motor, Problem-solving & Personal Social Scale for Daycare Children (N=100)**

Variables	1	2	3	4	5
Communication	-	-	-	-	-
Gross Motor	.980**	-	-	-	-
Fine Motor	-.007	-.044	-	-	-
Problem-Solving	-.033	-.063	.972**	-	-
Personal Social	.813**	.797**	-.010	-.039	-

**Table 5: Independent Sample T-Test of ASQ-3 Scale for a clear comparison of the 5 domains for daycare and homecare (N = 200)**

Variables	Homecare (n = 100)		Daycare (n= 100)		T	p	95% CI		Cohen d
	M	SD	M	SD			LL	UL	
Communication	21.7	8.77	41.6	11.4	13.77	.000	17.0	22.6	17.35
Gross Motor	21.9	9.47	41.4	11.2	13.29	.000	16.6	22.4	17.38
Fine Motor	31.1	14.0	30.6	13.0	-.260	.795	-4.29	3.29	-0.038
Problem-Solving	30.0	14.0	30.1	12.6	.026	.979	-3.67	3.77	0.003
Personal Social	22.5	7.89	37.5	9.19	.12.4	.000	12.6	17.4	1.636

**Table 6: Summary of Logistic Regression Analysis for Communication, Gross motor, Fine motor, Problem-solving, and Personal Social Domain for Homecare Children and Daycare Children (N=200).**

Homecare vs Daycare	B (SE)	95% CL for Odd Ratio		
		Lower	Odds Ratio	Upper
Communication	-3.17 (281.3)	.000	-.042	1.21
Gross Motor	-.271 (/058)	.681	.763	.854
Fine Motor	-.003 (.010)	.982	1.003	1.024
Problem-Solving	.000 (.011)	.979	1.000	1.021
Personal Social	-.359 (.074)	.605	.698	.807

### FINDINGS

Before conducting the analysis, raw scores for communication, gross motor, fine motor, problem-solving, and personal-social skills were calculated to assess their normality. The sum of these five variables was computed in a separate cell. The sample was then divided into two groups—daycare and homecare—based on their settings to test the hypotheses. Results from the independent t-test showed significant differences between the groups. Children in daycare scored higher in communication and gross motor skills compared to those in-home care. Additionally, children in daycare demonstrated more advanced social skills in the personal-social domain. The paired sample t-tests supported these findings, confirming the hypotheses.

Harknett, Schneider & Luhr (2022) highlighted that working parents need to arrange something for their children to concentrate completely on work and win bread for them. The concept of "work-life balance" refers to the state of balance between one's professional, personal, and family life (Duxbury et al., 2014). Women often face difficulties in achieving this balance, as studies have shown that their dual roles lead to increased time pressure and dissatisfaction with work-life balance (Hilbrecht et al., 2008). It highlights that children developed in homecare settings are better in fine motor skills. Children in homecare settings have equivalent problem-solving skills to daycare children. The studies of homecare settings show that children who spend more time with their mothers develop trustworthy relationships with their parents.

The early development of a child plays an important role in the later development and lifestyles of children. The study highlighted how daycare and homecare settings

influence a child. Early development hence enhances certain skills in a child. Gialamas et al., (2014) represent how early development creates a change in children's ways towards practical life. This is the reason researchers identified the children in homecare and daycare settings to assess which children are more developed according to the five major domains of the portage guide.

Lowe & Weisner, (2004) highlighted that the mother is one of the crucial figures that play an important role in a child's social, emotional and his/her cognitive development. Working women do influence children's overall development. Women especially working women are not only faced with workplace issues, and time constraints they are also faced with the guilt of not giving much time to their children because of the working schedule. The study highlighted how children's development is influenced by the setting they are in. The family members must support the working women, especially the husband. The state should also set manageable routines for these women. Maternity leaves and other opportunities would also be given or good daycares should be provided at workplaces. The mothers are worried about their children a quality daycare would surely help those mothers grow better in their work routines (Lowe & Weisner, 2004).

Daycare and homecare are distinct forms of childcare services offered in Pakistan. Daycare facilities enable parents to leave their children under supervision during working hours, while homecare involves a caregiver visiting the child's residence to provide childcare. A United Nations Children's Fund (UNICEF) report indicates a significant rise in the number of daycare centres in Pakistan between 2012 and 2017, witnessing a 45% surge (Black et al., 2017).

This growth reflects the increasing demand for childcare services, driven by more women joining the workforce.

In Pakistan, home care is also widely favoured by parents as it allows children to receive quality care within the familiar surroundings of their own homes. Research published in the International Journal of Social Sciences and Humanities Research affirms the preference for home-based childcare, aligning with the cultural norm of keeping children within the family circle. Homecare, on the other hand, involves a caregiver visiting the child's home to provide childcare services. This arrangement allows children to remain in the familiar surroundings of their residence while receiving personalized care.

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