ICDS And The Nutritional Status Of Children In Punjab: Progress Made And The Path Ahead

Dr Jatinder Singh[1], Dr Maninder Deep Cheema[2], Dr Jagsir Singh[3]

[1]Assistant Professor, Centre for Research in Rural and Industrial Development, Chandigarh; ORCID ID: 0000-0001-9038-8763
[2]Assistant Professor, Department of Economics, Multani Mal Modi College, Patiala, Punjab; ORCID ID: 0000-0003-1715-2353
[3]Assistant Professor, B.N. University College, Mithra, Kapurthala, Punjab, ORCID ID: 0009-0005-8541-1822

Abstract
The paper broadly aims to examine the contribution of ICDS programme in improving the well-being of its beneficiaries. Using Punjab as a case study, it looks at the progress in beneficiary coverage and the nutritional status of children below 6 years of age. Scientific evidence shows that early childhood growth depends heavily on a loving, safe, and nurturing environment along with adequate nutrition. Nearly 80 per cent of brain development takes place by the age of three.
The findings show that ICDS has played a positive role in improving both nutrition and pre-school education for young children. Punjab has made faster progress compared to the national average. As per NFHS-5 (2020–21), India's malnutrition rate is more than double that of Punjab. However, universal coverage of ICDS services in Punjab remains far from achieved. More than half of the eligible population is still not receiving ICDS benefits. Low coverage is associated to individual-level factors (such as status consciousness and preference for private pre-schooling) as well as policy gaps (inadequate and irregular supply of SNP, poor infrastructure, etc.). To build trust among uncovered beneficiaries, the government needs to address these policy-level challenges. Ensuring healthy childhood growth is essential for India to convert its demographic advantage into meaningful economic development.
Key Words: Nutrition, Early Childhood, Malnutrition, Human Capital, Pre-school education.

1. INTRODUCTION

What is one of the best ways a country can boost shared prosperity, promote inclusive economic growth, expand equitable opportunity, and end extreme poverty? The answer is simple: Invest in early childhood development.
World Health Organization (2018)
Adequate care and optimal developmental support during early childhood exert a profound and enduring influence on an individual's social and economic outcomes throughout life. Therefore, investing in early childhood improves education, employment, and income outcomes. The period from pregnancy to three years of age is the most crucial for a child's physical and mental development. During this time, the brain develops rapidly as children learn to communicate, interact, and form their identity. Research shows that about 80 per cent of brain growth occurs by the age of three (WHO, 2018). This growth depends on a loving, safe, and nurturing environment**,** along with proper nutrition. Thus, positive early childhood

experiences lay the foundations for healthy societies, while neglect can cause lifelong negative effects.

Despite the growing recognition of how important early childhood is, many children still lack access to quality care. Nearly 250 million children under five in low- and middle-income countries are exposed to a risk of poor development (Black et al., 2017; WHO, 2018). Such deficiencies affect learning and productivity and can be passed on to future generations. In underdeveloped countries, such deficiencies become more critical because of low level of economic development. In such countries, families alone often cannot invest enough in a child's growth, making state intervention essential.

Given this, it is widely argued that investment in children is a public good (Strober, 2004). Some countries, such as the United States, have even recognized child care as part of social infrastructure**,** supporting it through major public funding programs like the American Rescue Plan. Just as public spending on health and education creates social and economic benefits, public investment in early childhood care is a long-term investment in human development. It yields positive outcomes such as better child growth, higher productivity, reduced maternal depression, and greater workforce participation by mothers (CRRU, 2003). Moreover, it helps build a more inclusive society, where every healthy child has an equal opportunity to thrive.

India recognized the importance of investing in early childhood soon after gaining independence, marking an early commitment to child welfare and development. The Central Social Welfare Board, established in 1953, aimed to implement programmes for childcare and the welfare of pregnant women. Later, the Applied Nutrition Programme (1963) was introduced to raise nutritional awareness and improve the well-being of children. Although no specific nutrition standards were set, financial support of 50 paise per woman per day and 25 paise per child per day was provided for 52 days a year to promote nutritional intake (Planning Commission, 2011; Singh and Kumar, 2012). The programme emphasized educating rural communities about the importance of nutrition and encouraged them to produce and consume nutritious food, particularly for pregnant women, nursing mothers, and children.

In spite of the initiation of various healthcare, educational, and social welfare programmes, the intended benefits did not reach a large section of the target population (Planning Commission, 2011). It was largely due to the lack of coordination among departments implementing various schemes for the welfare of children, pregnant women, and nursing mothers. In response, the Government of India adopted the National Policy for Children in August 1974, which recognized children as the "supremely important asset" of the nation and emphasized the state's responsibility to ensure their full physical, mental, and social development.

Following this, a unique community-based programme called the Integrated Child Development Scheme (ICDS) was launched on October 2, 1975 The main aim of this programme was to improve the health and nutrition of young children**,** pregnant women, and lactating mothers, especially in rural and disadvantaged areas. Over time, ICDS has grown and expanded across the country, but its main focus has remained to ensure proper nutrition, healthcare, and early education in the early childhood years. According to the District Manual (2017), ICDS works around four main areas of early childhood development: (i) Early Childhood Care, Education and Development (ECCED)**,** which focuses on learning and overall growth; (ii) Care and Nutrition Counseling for mothers and families; (iii) Health Services for children and women; and (iv) Community Mobilisation, Awareness, Advocacy, and Information, Education and Communication (IEC) to spread knowledge and encourage community participation. It is worth mentioning that all the eligible beneficiaries, irrespective

of social and economic class, are entitled to avail services provided under ICDS programme. Earlier studies related to ICDS have raised the concerns about the coverage under ICDS scheme especially relating to children. These studies argue that even after more than four decades of the initiation of the scheme, the coverage is still very low (Planning Commission, 2011; Singh and Kumar, 2021). In some components of ICDS scheme, coverage has not even reached upto 50 per cent of total eligible population.

Against this background, it is critical to conduct a systematic study for analyzing the progress in terms of coverage of different types of beneficiaries. It is equally important to understand the factors hindering in realization of the objective of universal coverage. Earlier studies on the impact of ICDS programme have examined various aspects such as beneficiary coverage, implementation challenges, policy-related issues, etc. (Gopalan, 2001; Gupta, et al., 2005; Dreze, 2006; Gragnolati, 2006; Adhikari and Bredenkamp, 2009; NITI AAYOG, 2015; Dixit, et al., 2018; Chakrabarti, et al., 2019; Behera and Acharya, 2020). However, no systematic study in the recent past has assessed the effectiveness of ICDS programme specifically for Punjab. Wherever relevant, comparisons with the all-India situation have also been made to provide a broader perspective. Specifically, the paper analyses the coverage of ICDS across different categories of beneficiaries. It also assesses the improvements in the nutritional status of the target beneficiaries. It is important to note that the analysis in this paper is limited to two key components of the ICDS scheme: (i) supplementary nutrition programme (SNP)[1] and (ii) pre-school education (PSE)[2].

The paper is organized into four parts, including an introduction. The second section discusses about the data sources and methodology used in the paper. The third section analyses the data on three main themes: (a) number of AWCs and number of different types of beneficiaries availing benefits under ICDS scheme; (b) the coverage of beneficiaries both under ICDS scheme and the factors causing low coverage of beneficiaries; (c) the impact on the nutritional status of beneficiaries. The fourth section summarizes the major conclusions and outlines key policy implications.

2. DATA AND METHODOLOGY

To analyse the above set objectives, the data is collected mainly from secondary sources. The secondary information is primarily collected from the monthly progress report published by the Department of Social Security and Women and Child Development, Government of Punjab. This information is supplemented with the National Family Health Survey (NFHS) data of different rounds 3, 4 and 5). The NFHS is India's largest and most comprehensive household-level health and demographic survey. For this particular research, data for children under the age of 5, born to women aged 15–49 years, interviewed during the survey is used. The parameters used are particularly relating to child nutrition and anthropometric measures to assess undernutrition, overweight, stunting and wasting. Mainly weight for age criterion was used to analyse the nutritional status of beneficiaries from 6 months to 6 years of age since

[1] Under SNP, additional food is offered to the children between the age group of 6 months to 6 years, in order to ensure their proper growth, through AWCs without any cost. Further, the scheme also provides SNP to pregnant women and nursing mothers (upto the age of 6 months of new born) owing to the fact that a healthy mother can give birth to a healthy child.

[2] Pre-School Education (PSE) is provided at Anganwadi Centres (AWCs) for all children aged 3 to 6 years. Anganwadi Workers (AWWs) teach children through play-based methods and use toys and activities to help develop their skills and thinking abilities.

AWCs did not have information for children up to the age of 6 months because the children in this group avail benefits through their lactating mothers.

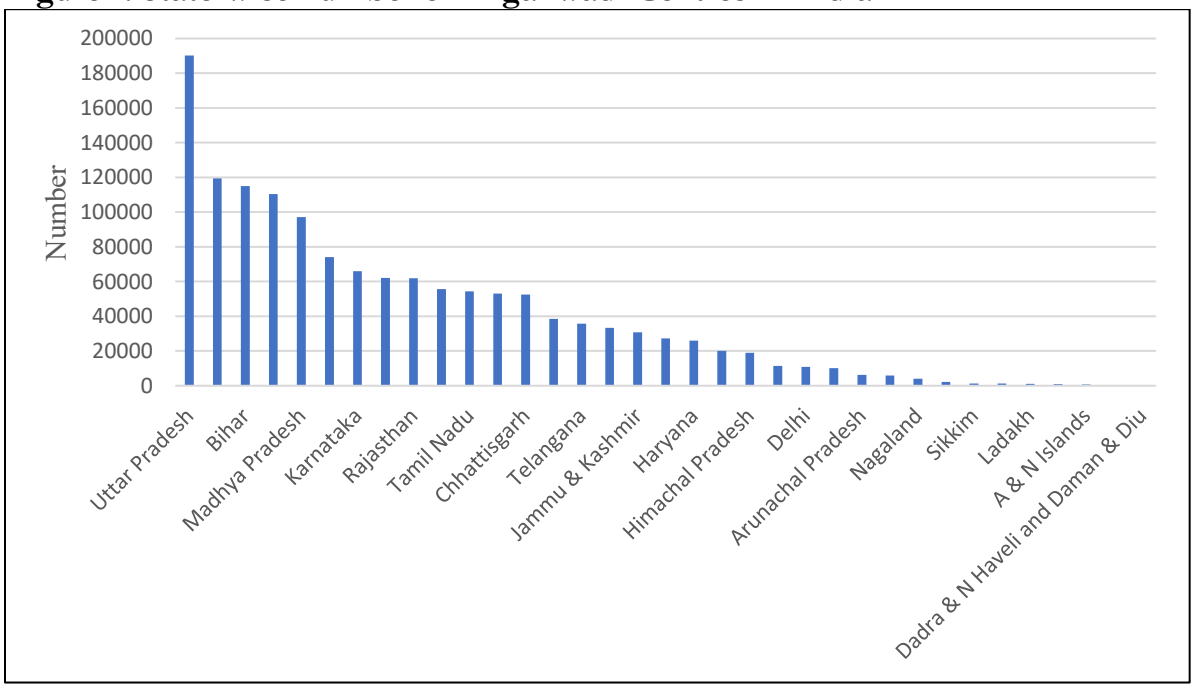
To analyse the quantitative and qualitative information gathered through field survey as well as from secondary sources, a simple descriptive analysis has been carried out. Mainly, percentage change has been used to analyze the inter-temporal changes in the services offered under the ICDS scheme. Further, we have calculated the coefficient of variation to understand the extent of inequalities across districts. To understand the nutritional status, we have used the weight for age index which allows us to understand the magnitude of malnourishment, if any, among the selected children. On the basis of this index, children are classified into three groups namely normal, moderately underweight and severely underweight.

3. Empirical Analysis

The focus of this section is to empirically examine the contribution of ICDS scheme to the overall development of its targeted beneficiaries. The analysis is based on the expansion of Anganwadi Centres, the coverage of target groups, improvement in the nutritional status and pre-school education of registered beneficiaries. Further, the discussion was also carried out on the factors which hinder the effectiveness and coverage of beneficiaries.

Figure 1 presents the number of AWCs across Indian states and union territories. All the services provided under ICDS programme are provided to beneficiaries through AWCs. The total number of AWCs in India was 1.38 million in 2020. The state-wise distribution of number of AWCs reveals that Uttar Pradesh has the highest number of AWCs (0.19 million) and it is followed by West Bengal (0.12 million), Bihar (0.12 million), Maharashtra (0.11 million) and so on. On the other hand, Haryana has the lowest number of AWCs (0.03 million) in 2020 among major 20 states in India.

Figure 1: State-wise number of Anganwadi Centres in India



Source: Rajya Sabha Unstarred Question No. 628 (2020).

Since the focus of this study is confined to the state of Punjab only, we have provided the distribution of number of AWCs across districts of Punjab (See Table A1 in Annexure). The total number of registered AWCs has increased from 26711 to 27295 between 2017 and 2020

i.e. 584 new AWCs have opened up in Punjab during this period. District wise analysis shows huge variation. It is interesting to note that all the districts of Punjab have witnessed an increase in the number of AWCs during 2017 and 2020. Ludhiana tops in terms of number of AWCs (2487) across districts in 2020 (See Table A1 in Annexure). It was followed by Gurdaspur (2054), Hoshiarpur (1926) and Amritsar (1859). Faridkot has the lowest number of AWCs (545) in Punjab in 2020.

3.2. Beneficiaries registered under ICDS scheme and path to cover

Broadly there are three main types of beneficiaries covered under ICDS programme. The first category of beneficiaries includes children between the ages of 6 months and 3 years. They are entitled to receive supplementary nutrition (SNP) and vaccination. The second category includes children between the ages of 3 and 6 years, who are eligible for supplementary nutrition, vaccination, and pre-school education under the ICDS programme. The third category comprises pregnant and lactating women, who are entitled to medical check-ups, delivery care, and supplementary food under the ICDS programme.

Table 1 outlines information on the number of SNP beneficiaries registered with all the AWCs in Punjab during 2017 and 2020. The number of all types of registered beneficiaries with the AWCs in Punjab was 1,131,742 in 2017 and 938,465 in 2020. Out of different types of beneficiaries, highest percentage of beneficiaries belonged to the children in the age group of 6 months to 3 years. This category of beneficiaries accounted for 46 to 48 per cent of total registered beneficiaries during 2017 and 2020. It is followed by the children in the age group between 3 to 6 years which accounted for around 30 per cent of all types of registered beneficiaries during the reference period. Combined share of pregnant women and nursing mothers varied between 20 to 23 per cent during 2017 and 2020.

Among all the 22 districts, Amritsar accounted for highest percentage of total beneficiaries both in 2017 and 2020. In 2017, Amritsar accounted for around 11 per cent of total registered beneficiaries and its share in 2020 stood at around 10 per cent. Another set of districts namely Ludhiana, Gurdaspur and Patiala accounted for more than 7 per cent each of total registered beneficiaries in both the years. Another set of districts namely Faridkot, Fatehgarh Sahib, SBS Nagar, and Barnala accounted for around 2 per cent each of total beneficiaries of Punjab in both the years, that is, 2017 and 2020.

Table 1: Number of SNP beneficiaries in Punjab, 2017 to 2020

	2017				2020			
District	**6 m - 3 years**	**3 - 6 Years**	**Preg. & Lact. Women**	**Total**	**6 m - 3 years**	**3 - 6 Years**	**Preg. & Lact. mothers**	**Total**
Amritsar	58,371	36,381	26,510	121,262	42672	24619	23112	90,403
Bathinda	28406	16918	12149	57,473	24,065	11,631	10,339	46,035
Faridkot	12285	8105	5570	25,960	6666	6239	2914	15,819
Ferozepur	23038	18964	10945	52,947	30633	19985	11316	61,934
Fazilka	23320	20107	14163	57,590	20914	14498	11000	46,412
Fatehgarh Sahib	12043	6343	4664	23,050	10511	5048	4392	19,951
Gurdaspur	41609	26256	19037	86,902	34405	18458	17352	70,215
Hoshiarpur	29559	15954	13136	58,649	23352	14810	11133	49,295
Jalandhar	24,113	18,989	10,706	53,808	18705	16548	9289	44,542
Kapurthala	14646	9907	6275	30,828	13579	8715	6034	28,328
Ludhiana	42,101	35,719	17,857	95,677	30292	28581	14107	72,980
Mansa	20969	11017	8780	40,766	18906	6340	8442	33,688
Moga	15518	12760	6701	34,979	15865	10439	6973	33,277
Shri Muktsar Sahib	16787	11327	8287	36,401	14307	7463	6802	28,572
SBS Nagar	12422	7649	5926	25,997	9531	6122	4488	20,141
Pathankot	18710	10395	7784	36,889	17370	5670	7211	30,251
Patiala	39324	20657	17465	77,446	34726	18262	15497	68,485
Rupnagar	16045	7328	6822	30,195	14689	6594	6465	27,748
Sangrur	32331	20146	15402	67,879	27093	16136	12821	56,050
SAS Nagar	9,607	7,997	4,275	21,879	13268	7884	5627	26,779
Tarn Taran	33581	25544	16510	75,635	19630	17086	12762	49,478
Barnala	9356	6124	4050	19,530	9,533	4,359	4,190	18,082
Total	534,141	354,587	243,014	1,131,742	450712	275487	212266	938,465

Sources: Monthly Progress report, March 2017, 2018, 2019 and 2020.

Table 2: Percentage of pregnant women & lactating/nursing mothers registered for SNP benefits

Items	2017	2020
Average	79.4	75.2
Minimum	54.3	47.3
Maximum*	100	96.5
CV**	15.2	18.1

Source: same as Table 1.

Note: ** CV (coefficient of variation) is calculated using percentage of coverage of beneficiaries across 22 districts of Punjab.

*Minimum and maximum values also based on coverage of beneficiaries across 22 districts.

Table 2 presents the trends on coverage of pregnant women and lactating mothers during 2017 to 2020. On an average, total percentage of eligible population that is registered for SNP benefits has fallen from 79.4 per cent in 2017 to 75.2 per cent in the latest year. The interesting fact is that average figure of state hides the variation across districts. The variation across 22 districts of Punjab remained significant during 2017 and 2020, the gap has even widened overtime. It is evident as value of coefficient of variation was 15.2 per cent in 2017 which increased to 18.1 per cent in 2020. This implies that there is a huge difference in terms of coverage of beneficiaries in top performing districts as well as poor performing districts. Alternatively, coverage of beneficiaries in some districts remained very low whereas percentage of coverage of beneficiaries in few districts was very high.

The information collected from National Family Health Surveys 3, 4 and 5 are presented in table 3 and figure 2[3]. Children aged 0 to 6 years are divided into six age groups. Overall, ICDS beneficiary coverage has increased over time (Table, 3). In Punjab, only 13.9 per cent of children aged 0–35 months received any ICDS benefit in 2005–06, which rose to 63.8 per cent in 2015–16. Similarly, those receiving supplementary food increased from 12.6 per cent to 60.8 per cent. For children aged 36–71 months, beneficiaries rose from 14.9 per cent to 55.2 per cent, and those receiving supplementary food increased from 13.3 per cent to 52.7 per cent during the same period (Table, 3). Further, in 2020-21, the performance of Punjab as compared to all India average remained low in all the services offered under ICDS (Figure, 2). In case of Punjab, the proportion of eligible beneficiaries covered under ICDS in any service (SNP, Immunization, pre-school, etc.) remained less than 50 per cent of total eligible population; whereas national level average was reported to be over 50 per cent in terms of coverage of beneficiaries in all the ICDS services.

The information on the beneficiary coverage under ICDS, drawn from National Family Health Surveys (NFHS) 3, 4 and 5, is presented in Table 3 and Figure 2. Children aged 0 to 6 years are divided into six age groups (Table 3). Overall, ICDS beneficiary coverage has increased over time. In Punjab, only 13.9 per cent of children aged 0–35 months received any ICDS benefit in 2005–06 and this figure increased to 63.8 per cent in 2015–16. The proportion of children receiving supplementary food increased from 12.6 per cent to 60.8 per cent during the reference period. For children aged 36–71 months, the percentage of those receiving supplementary food rose from 13.3 per cent to 52.7 per cent during the same period (Table 3).

[3] Since NFHS 5 does not provided age-wise segregation of children who received benefits under ICDS, a separate figure has been prepared based on the available NFHS-5 data.

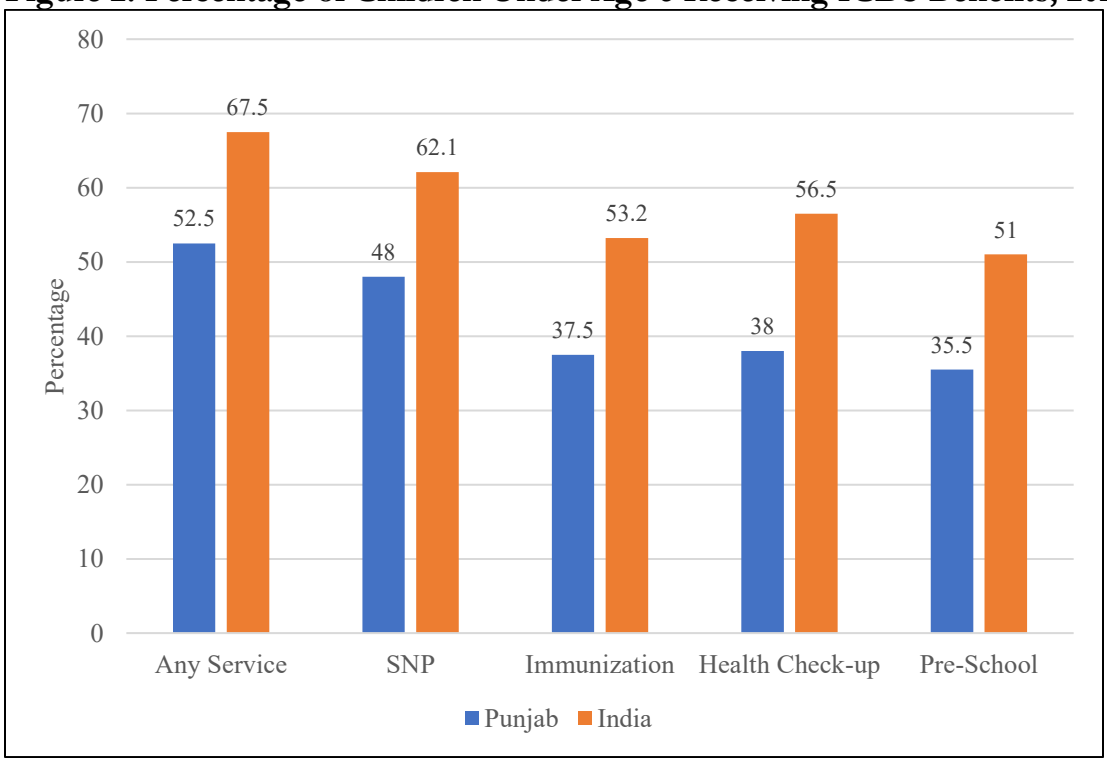
Instead of showing improvement, the coverage of eligible beneficiaries under ICDS actually declined in 2020–21. Punjab performed worse than the all-India average across all ICDS services (Figure 2). In Punjab, less than 50 per cent of eligible beneficiaries received any service (whether SNP, immunisation, or pre-school education) while the national average remained above 50 per cent for all services. In 2020–21, Punjab's coverage ranged between 35.5 per cent and 48 per cent, compared to the all-India average which ranged from 51 per cent to 67.5 per cent.

Table 3: Percentage of Children Under Age 6 Receiving ICDS Benefits

Age in months	2005-06		2015-16	
	Any benefits*	Supplementary Food	Any benefits*	Supplementary Food
<12	12.3	11.0	60.4	56.5
12-23	13.2	11.4	67.7	64.3
24-35	16.1	15.4	63.0	61.3
36-47	20.0	18.7	64.4	61.6
48-59	10.9	10.3	55.3	53.1
60-71	12.3	11.2	46.7	44.3
0-35	13.9	12.6	63.8	60.8
36-71	14.9	13.3	55.2	52.7

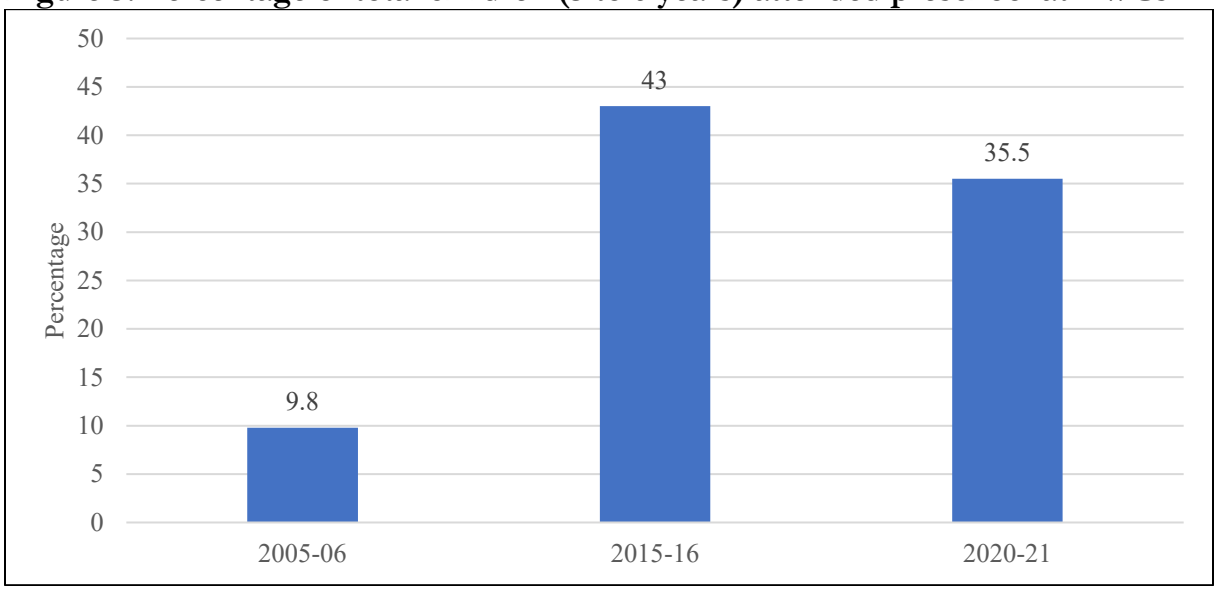
Source: NFHS-3 and NFHS-4.;
Note: *Under ICDS, 6 services are offered, beneficiaries could have availed any service out of 6.

Figure 2: Percentage of Children Under Age 6 Receiving ICDS Benefits, 2020–21



Source: NFHS-5.

Figure 3: Percentage of total children (3 to 6 years) attended preschool at AWCs



Source: NFHS 3, 4 and 5.

The analysis of the eligible children aged 3 to 6 years who attended pre-school at Anganwadi Centres in 2005–06, 2015–16, and 2020–21 in Punjab is presented in Figure 3. In general, the attendance of eligible children in AWCs pre-schools has improved over time. For instance, in 2005–06, only 9.8 per cent of eligible children attended pre-school at AWCs. This figure increased to 36 per cent by 2020–21, showing a steady rise in participation and a growing acceptance of early childhood education among families.

Despite this improvement, a large proportion of eligible children in Punjab still remained deprived of pre-school education. This is a matter of concern because early learning plays a key role in shaping a child's overall development. It is reported that over 85 per cent of brain development occurs by the age of 6 years. Research shows that pre-school exposure helps children develop better IQ levels, stronger communication skills, readiness for school, and the ability to think creatively and critically. Children who receive structured early learning and mental stimulation perform significantly better than those who miss out on these experiences (Koshy et al., 2025).

3.2. ICDS and Nutritional Status of Children

ICDS scheme was initiated to address any kind of deficiency (nutritional, health-related, or developmental) among the children below the age of 6 years. Such deficiencies often stem from a range of factors including poor maternal health, weak socio-economic conditions at the household level, and limited awareness among mothers regarding child nutrition and care. To analyse the nutritional status of young children, this study uses the weight-for-age index, a widely accepted anthropometric measure. This index provides a comprehensive picture of both chronic and acute undernutrition and is particularly useful for identifying children who are underweight. Based on their weight-for-age scores, children are categorised into three groups: normal**,** moderately underweight**,** and severely underweight. These classifications help in assessing the severity of malnutrition and in determining the need for targeted interventions under the ICDS programme. Besides analysing the weight-for-age status, we also examined the the trend of stunted children over time, as stunting is one of the most critical indicators of chronic undernutrition. Stunting reflects long-term nutritional deprivation and repeated

infections, and it is strongly linked to delayed cognitive development, poor school performance, and reduced productivity in adulthood. By examining how the prevalence of stunting has changed across different NFHS rounds, we aim to understand whether the nutritional and health interventions under ICDS have translated into meaningful improvements in children's growth outcomes.

Table 4: Distribution on the basis of nutritional status (weight for age) of children (0 to 5 years) in Punjab

Year	Normal	Moderately Underweight	Severely Underweight	Total no. of children weighted
2017	1373090 (84.3)	256325 (15.7)	262 (0.02)	1629677 (100.0)
2018	1301699 (86.0)	212476 (14.0)	152 (0.01)	1514327 (100.00)
2019	1327753 (87.7)	186211 (12.3)	368 (0.02)	1514332 (100.00)
2020	1325239 (89.9)	148292 (10.1)	315 (0.02)	1473846 (100.00)

Source: Same as Table 1.

Table 4 presents the nutritional status of children in Punjab, and the data show that most children are well-nourished. Throughout the years 2017 to 2020, between 80 and 90 per cent of children fall in the "normal nutrition" category. For example, in 2017, 84.3 per cent of children were normally nourished, and this share steadily increased to 89.9 per cent by 2020. Correspondingly, the proportion of moderately undernourished children declined significantly, from 15.7 per cent in 2017 to 10.1 per cent in 2020. Thus, the percentage of severely undernourished children has remained very low over the years, reaching only 0.2 per cent in 2020.

Although the trend clearly shows improvement, a sizeable proportion of children in Punjab still experience some form of malnutrition. This highlights the need for continued efforts to ensure that every child receives adequate nutrition and care during early childhood.

Table 5 presents the trends in malnourished children in Punjab and India between 2005–06 and 2020–21. Overall, the proportion of malnourished children has declined in both Punjab and India during this period, except for infants below six months. However, the reduction has been much sharper in Punjab, especially after 2015–16 (Table 5). For example, in India, the share of malnourished children aged 6–8 months and 9–11 months was 26.7 per cent and 31 per cent, respectively, in 2015–16. These figures fell to 25.1 per cent and 27.5 per cent in 2020–21. In Punjab, the decline was even more significant. For the same age groups, malnourishment dropped from 13.2 per cent and 24.1 per cent to 11.2 per cent and 13.1 per cent, respectively.

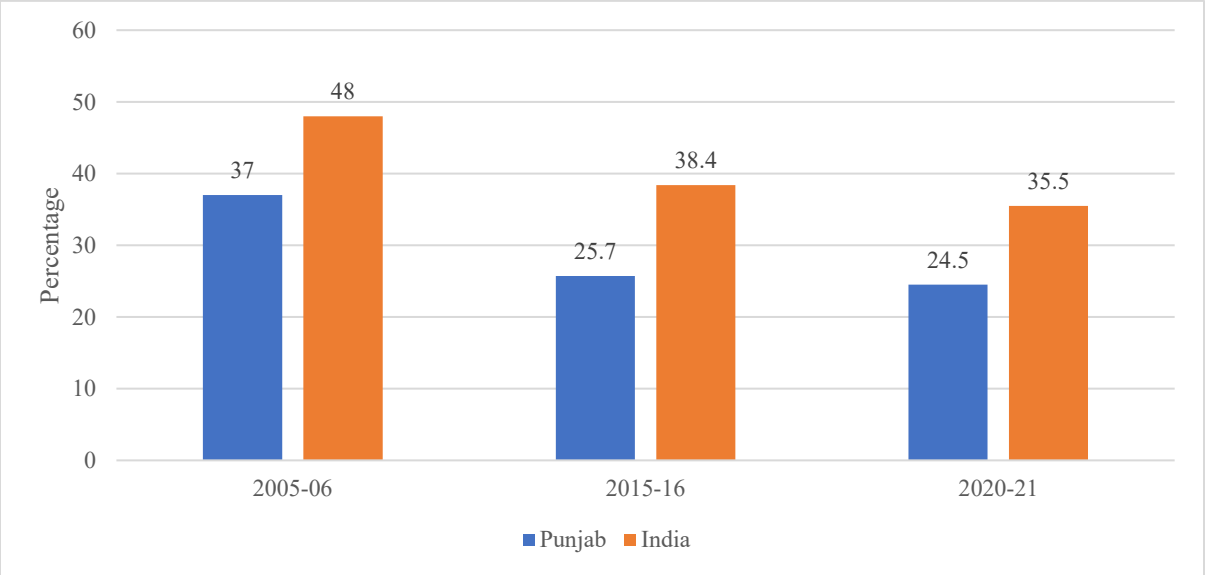
Table 5: Share of malnourished children in India and Punjab (in %)

Age in months	2005-06		2015-16		2020-21	
	India	Punjab	India	Punjab	India	Punjab
<6	29.5	17.3	26.7	30.2	28.5	23.4

6-8	34.7	21.0*	26.7	13.2	25.1	11.2
9-11	36.7		31.0	24.1	27.5	13.1
12-17	40.2	26.9*	32.8	17.2	29.2	16.1
18-23	45.9		37.3	24.3	33.1	16.5
24-35	44.9	25.4	37.6	21.7	33.7	17.8
36-47	45.6	28.1	38.2	21.7	34.1	16.0
48-59	44.8	24.9	39.1	21.0	34.2	16.1

Source: NFHS-3, 4 and 5.
*Data for 6-11 months and 12-23 months children is given collectively in NFHS 3 for Punjab.

Figure 4: Percentage of stunted children under 5 years (height-for-age)



Source: Same as Table 1.

The analysis of stunted children under five years of age (height-for-age)[4] is shown in Figure 4. Between 2005–06 and 2020–21, India saw a noticeable decline in the proportion of stunted children. This means that fewer children were experiencing long-term growth problems. An important point to note is that Punjab consistently performed better than the national average throughout this period. The gap between Punjab and the all-India average remained more than 10 percentage points in every round of the NFHS survey (Figure 4). For instance, in 2005–06, about 37 per cent of children in Punjab were stunted, and this fell to 24.5 per cent in 2020–21. For India as a whole, the decline was from 48 per cent to 35.5 per cent during the same period. This shows that although both India and Punjab made progress, Punjab continued to maintain a stronger position in reducing stunting among young children. However, despite this better performance, the number of stunted children in Punjab is still a matter of concern. Nearly one-fourth of children under the age of five continued to show a mismatch between their height and age, indicating that stunting remains a significant issue in the state.

3.4. Factors hindering universalisation of SNP and pre-schooling under ICDS

[4] Height-for-age tells us whether a child is growing well. When a child's height is below –2 SD from the healthy standard, the child is called *stunted*. This means the child has faced long-term poor growth. If the height is below –3 SD, the child is *severely stunted*. These children have very serious growth delays.

Above analysis has clearly indicated that coverage under different components of ICDS is far from universalization. In some components (pre-school and SNP for children), coverage is very limited. Discussion with Anganwadi workers (AWWs), supervisors and district and block level officials have pointed out various factors hindering the objective of universalization of services offered through ICDS (based on Singh and Kumar, 2021 study).

Table 6 outlines the reasons reported behind low coverage under some components of ICDS scheme. It is important to note that 36 surveyed AWWs have given 135 reasons. On an average, more than three reasons have been cited by each AWW. All the reasons highlighted by the respondents are grouped into five main points. The commonly cited reason for low coverage is status consciousness of the beneficiary households. All 36 AWWs have reported that well-off families do not prefer to send their children to AWCs either for availing SNP benefit or pre-schooling. Such households feel that it is below their dignity to avail benefits from AWCs. For pre-schooling, such households prefer to send their children to private pre-school in order to show their economic status. In such cases, neither government nor AWCs can do anything. Besides, limited and irregular supply of SNP to AWCs has also emerged as an important reason for low coverage under ICDS.

Table 6: Reasons for low coverage under SNP and pre-schooling (in Nos.)

S.No.	Reasons	Responses
1	Status consciousness	36 (100.0)
2	Preference for dry ration	26 (72.2)
3	Insufficient daily quantity of SNP	22 (61.1)
4	Limited and irregular supply of SNP to AWCs	31 (86.1)
5	Lack of infrastructure/cleanliness at AWCs	20 (55.6)
Total respondents		36 (100.0)
Total responses		135 (375.0)

Source: Field survey.

Note: Figures in parentheses indicate the percentage of total respondents.

AWWs have also reported that the quantity of SNP they receive from the department is not enough to provide supplementary food to each and every eligible beneficiary. Moreover, the supply of SNP is very irregular which discourages some of the eligible population to not register themselves for benefits. Third highly cited reason is the preference towards dry ratio, 26 out 36 AWWs have reported it. They state that eligible population does not prefer to get cooked ration, owing to hygiene or other concerns.

Similarly, various other reasons were reported by the officials for low coverage under pre-schooling. It was reported that a large proportion of eligible population does not send their children to AWCs due to poor infrastructure at the AWCs. The situation is so bad that most of these centres do not have even material for teaching, chairs and/or tables for seating the

children. The discussions with block and district level officials also supported the views of AWWs.

4. MAJOR CONCLUSIONS

The broader objective of this paper is to examine the impact of ICDS programme on the overall well-being of its beneficiaries. Specifically, the paper analyses the coverage of ICDS across different groups of beneficiaries and assesses the improvements in their nutritional status. For this, the data has been mainly collected from secondary sources including the monthly progress report of the Department of Social Security and Women and Child Development, Government of Punjab, and various rounds of the National Family Health Survey. Besides, some insights are drawn from qualitative information collected from primary survey.

The empirical analysis shows that the number of AWCs in Punjab has increased over time. This expansion is important because most of the ICDS services are delivered through these centres. Accordingly, the number of different types of registered beneficiaries in Punjab also increased. The increase is not uniform, as Amritsar remained the district with the highest number of registered beneficiaries both in 2017 and 2020. Another set of districts namely Ludhiana, Gurdaspur and Patiala accounted for more than 7 per cent each of total registered beneficiaries in Punjab in the selected years.

With regard to beneficiary coverage, the share of eligible beneficiaries under ICDS has increased over time. In 2005–06, only 13.9 per cent of children aged 0–35 months received any ICDS benefit in Punjab, and this rose sharply to 63.8 per cent in 2015–16, with the improvement continuing in the subsequent years. A similar trend was observed in the case of supplementary nutrition and pre-school education. However, despite this progress, a sizeable proportion of eligible beneficiaries remained outside the purview of ICDS services in Punjab in 2020–21. A comparison with the all-India average shows that Punjab performed poorly on almost all ICDS indicators during this period.

The results on the nutritional status of registered beneficiaries are also encouraging. Both Punjab and India have shown noticeable improvement over the years. In Punjab, the proportion of malnourished children dropped by nearly 5 percentage points between 2017 and 2020. During the same period, the share of normally nourished children increased from 84.3 per cent to 89.9 per cent. To understand the trend more closely, children aged 0–59 months were divided into eight sub-age groups. Except for infants below six months, malnutrition levels declined in all age groups between 2005–06 and 2020–21. The decline remained much sharper in case of Punjab than the national average. According to NFHS-5 (2020–21), the proportion of malnourished children in India is more than twice that of Punjab, except in the 0–6 months age group.

The analysis clearly shows that achieving universal coverage of ICDS benefits for all eligible populations is still a distant goal. Apart from individual-level factors (status consciousness and a preference for private pre-school education), several policy deficiencies also need to be addressed to encourage eligible beneficiaries to use ICDS services. It is important to recognize that proper growth in early childhood has a lasting impact on an individual's health and future earnings. The period from pregnancy to three years of age is crucial, as physical and mental development during these years is unmatched at any other stage of life. Early childhood growth depends largely on the child's environment and the adequate supply of nutrition.

Therefore, quality early childhood care is essential for building strong human capital, which is critical for long-term sustainable growth. As India is the youngest country in the world, with a large working-age population, often referred to as a demographic advantage, it becomes even more important to ensure healthy growth during early childhood so that this demographic potential can translate into meaningful economic development.

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Annexure

Table 4.1: Number of AWCs in Punjab during 2017 to 2020

District	2017	2018	2019	2020	Increase between 2017 to 2020
Amritsar	1853	1858	1859	1859	6
Bathinda	1385	1391	1391	1391	6
Faridkot	541	545	545	545	4
Ferozepur	1139	1257	1261	1261	122
Fazilka	1020	1035	1060	1061	41
Fatehgarh Sahib	693	700	699	699	6
Gurdaspur	2052	2052	2053	2054	2
Hoshiarpur	1896	1911	1925	1926	30
Jalandhar	1653	1654	1654	1654	1
Kapurthala	885	893	911	911	26
Ludhiana	2409	2487	2487	2487	78
Mansa	799	807	839	840	41
Moga	975	983	983	983	8
Shri Muktsar Sahib	842	876	893	894	52
SBS Nagar	783	791	792	792	9
Pathankot	826	831	831	831	5

Patiala	1800	1815	1826	1826	26
Rupnagar	854	856	867	872	18
Sangrur	1908	1950	1961	1963	55
SAS Nagar	615	639	644	645	30
Tarn Taran	1115	1128	1132	1132	17
Barnala	668	667	669	669	1
Total	26711	27126	27282	27295	584

Source: Monthly Progress report, March 2017, March 2018, March 2019 and March 2020.