



## Original Research Article

# PREVALENCE OF OPTIMAL INFANT AND YOUNG CHILD FEEDING PRACTICES (IYCF) AMONG EMPLOYED MOTHERS OF CHILDREN AGED 0–36 MONTHS IN KHAMMAM

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### ABSTRACT

**Background:** Optimal Infant and Young Child Feeding (IYCF) practices are crucial for child survival, growth, and neurodevelopment during the first two years of life. Despite recommendations by the World Health Organization and United Nations Children's Fund, suboptimal feeding practices remain prevalent, particularly among employed mothers who face work-related constraints. **Objective:** To assess the prevalence of optimal IYCF practices among employed mothers of children aged 0–36 months in Khammam and to determine factors associated with these practices.

**Materials and Methods:** A cross-sectional analytical study was conducted from January 2024 to June 2025 among 300 employed mothers attending a tertiary care teaching hospital in Khammam. Data were collected using a pretested semi-structured questionnaire based on WHO IYCF indicators. Optimal IYCF was defined using composite criteria including early initiation of breastfeeding, exclusive breastfeeding for six months, timely complementary feeding, and achievement of minimum meal frequency and dietary diversity. Data were analyzed using SPSS version 25, and associations were assessed using the Chi-square test with  $p < 0.05$  considered statistically significant.

**Results:** Early initiation of breastfeeding was reported by 62% of mothers, and 60.9% practiced exclusive breastfeeding for six months. Timely complementary feeding was observed in 65.8% of children, while 47.4% met the minimum acceptable diet criteria. Overall, 46% of mothers practiced optimal IYCF. Maternity leave ( $p < 0.001$ ) and shorter working hours ( $p = 0.002$ ) were significantly associated with optimal feeding practices.

**Conclusion:** Less than half of employed mothers practiced optimal IYCF. Strengthening maternity benefits and workplace lactation support is essential to improve feeding practices and child nutritional outcomes.

**Keywords:** Infant and Young Child Feeding, Exclusive Breastfeeding, Complementary Feeding, Maternal Employment, Maternity Leave.

## INTRODUCTION

Optimal Infant and Young Child Feeding (IYCF) practices are fundamental to ensuring child survival, growth, and cognitive development during the first two years of life, a period often described as the critical window of opportunity.<sup>[1]</sup> The World Health

Organization and United Nations Children's Fund recommend early initiation of breastfeeding within one hour of birth, exclusive breastfeeding for the first six months of life, and continued breastfeeding up to two years and beyond, along with timely and adequate complementary feeding.<sup>[2]</sup> Appropriate feeding practices during this period significantly reduce the risk of malnutrition, infections, and

mortality, while promoting optimal physical and neurodevelopmental outcomes.<sup>[3]</sup>

Despite well-established global and national guidelines, suboptimal IYCF practices remain a major public health concern, particularly in low- and middle-income countries.<sup>[3]</sup> In India, although breastfeeding is nearly universal, early initiation and exclusive breastfeeding rates remain below desired targets in several regions.<sup>[4]</sup> Rapid urbanization, changing family structures, and increasing female workforce participation have introduced new challenges in sustaining recommended feeding practices.<sup>[5]</sup> Employed mothers, especially those with limited maternity leave and long working hours, may face practical and social barriers that hinder exclusive breastfeeding and appropriate complementary feeding.<sup>[6]</sup>

Maternal employment has been identified as an important determinant influencing infant feeding behaviours.<sup>[7]</sup> Workplace policies, availability of maternity leave, flexibility of working hours, and social support systems play critical roles in shaping feeding decisions.<sup>[8]</sup> Understanding the prevalence of optimal IYCF practices among employed mothers is therefore essential for designing targeted interventions, strengthening workplace support mechanisms, and informing public health policy at regional and institutional levels.<sup>[10]</sup>

In this context, the present study aimed to assess the prevalence of optimal Infant and Young Child Feeding (IYCF) practices among employed mothers of children aged 0–36 months in Khammam and to examine factors associated with these practices.

## MATERIALS AND METHODS

This cross-sectional analytical study was conducted in the Department of Community Medicine at Mamata Medical College, Khammam, Telangana, over a period of 18 months from January 2024 to June 2025. The study aimed to assess the prevalence of optimal Infant and Young Child Feeding (IYCF) practices among employed mothers of children aged 0–36 months. The study population comprised employed mothers attending the pediatric outpatient department and immunization clinic of the tertiary care teaching hospital attached to the institution.

The sample size was calculated based on an anticipated prevalence of optimal IYCF practices of 50%, with a 95% confidence interval and 5%

absolute precision, yielding a minimum required sample of 300 participants. A total of 300 employed mothers who met the inclusion criteria were enrolled using a consecutive sampling technique. Mothers who had children aged 0–36 months and were engaged in any form of paid employment (government, private, or self-employed) were included. Mothers of children with congenital anomalies affecting feeding, serious chronic illnesses, or those unwilling to participate were excluded from the study.

Data were collected using a pretested, semi-structured questionnaire based on World Health Organization (WHO) IYCF indicators. Information regarding socio-demographic characteristics, obstetric history, employment details, and feeding practices was obtained through face-to-face interviews after obtaining informed written consent. Operational definitions for early initiation of breastfeeding, exclusive breastfeeding, minimum meal frequency (MMF), minimum dietary diversity (MDD), and minimum acceptable diet (MAD) were applied according to standard WHO guidelines.

The collected data were entered into Microsoft Excel and analyzed using Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics were expressed as frequencies and percentages. The prevalence of optimal IYCF practice was determined using composite WHO criteria. The association between independent variables (such as maternity leave and working hours) and optimal IYCF practices was assessed using the Chi-square test, and a p-value <0.05 was considered statistically significant. Ethical clearance was obtained from the Institutional Ethics Committee prior to commencement of the study.

## RESULTS

Among the 300 employed mothers included in the study, the majority were aged 25–30 years (42%), followed by 31–35 years (28%). Nearly half of the mothers were graduates (44%), and 18% had postgraduate education. Most participants were employed in the private sector (46%), while 30% were self-employed and 24% worked in government jobs. Half of the mothers reported working 7–8 hours per day (50%), and two-thirds (66%) had availed maternity leave. The majority belonged to the middle socioeconomic class (56%), followed by lower (24%) and upper class (20%). [Table 1]

**Table 1: Socio-Demographic Characteristics of Employed Mothers (n = 300)**

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	<25	48	16
	25–30	126	42
	31–35	84	28
	>35	42	14
Education	Up to Primary	36	12
	Secondary	78	26
	Graduate	132	44
	Postgraduate & above	54	18
Type of Employment	Government	72	24
	Private	138	46

	Self-employed	90	30
Working Hours/Day	≤6 hours	84	28
	7–8 hours	150	50
	>8 hours	66	22
Maternity Leave Availed	Yes	198	66
	No	102	34
Socioeconomic Status	Lower	72	24
	Middle	168	56
	Upper	60	20

With respect to child characteristics, the largest proportion of children were aged 13–24 months (32%), while 24% were 0–6 months and 22% each belonged to 7–12 and 25–36 months age groups. Slightly more than half of the children were males

(52%). Nearly half were first-born children (46%), followed by second-born (40%) and third or higher order births (14%). Most deliveries occurred in government hospitals (58%). [Table 2]

**Table 2: Characteristics of Children (0–36 months) (n = 300)**

Variable	Category	Frequency (n)	Percentage (%)
Age Group (months)	0–6	72	24.0
	7–12	66	22.0
	13–24	96	32.0
	25–36	66	22.0
Gender	Male	156	52.0
	Female	144	48.0
Birth Order	First	138	46.0
	Second	120	40.0
	≥Third	42	14.0
Place of Delivery	Government hospital	174	58.0
	Private hospital	126	42.0

Regarding breastfeeding practices, early initiation of breastfeeding within one hour of birth was reported by 62% of mothers, and 84% provided colostrum. Pre-lacteal feeding was practiced by 26% of mothers. Exclusive breastfeeding for six months was observed

in 60.9% of eligible infants. Continued breastfeeding was reported in 70.4% of children at one year and 54.5% at two years, indicating a gradual decline with increasing child age. [Table 3]

**Table 3: Breastfeeding Practices among Employed Mothers (n = 300)**

IYCF Indicator	Frequency (n)	Percentage (%)
Initiation of breastfeeding within 1 hour	186	62.0
Colostrum given	252	84.0
Pre-lacteal feeds given	78	26.0
Exclusive breastfeeding for 6 months (among infants 6–12 months, n=138)	84	60.9
Continued breastfeeding at 1 year (n=162 children ≥12 months)	114	70.4
Continued breastfeeding at 2 years (n=66 children ≥24 months)	36	54.5

Among children aged 6–36 months (n=228), timely initiation of complementary feeding at six months was practiced by 65.8% of mothers. Minimum meal frequency was achieved in 71.1% of children, while

minimum dietary diversity was met by 55.3%. Only 47.4% fulfilled the criteria for minimum acceptable diet. Bottle feeding was reported in 42.1% of children. [Table 4]

**Table 4: Complementary Feeding Practices (n = 228 children aged 6–36 months)**

Indicator	Frequency (n)	Percentage (%)
Timely initiation of complementary feeding (at 6 months)	150	65.8
Minimum Meal Frequency (MMF) achieved	162	71.1
Minimum Dietary Diversity (MDD) achieved	126	55.3
Minimum Acceptable Diet (MAD) achieved	108	47.4
Bottle feeding practiced	96	42.1

Overall, 46% of employed mothers demonstrated optimal IYCF practices, whereas 54% had suboptimal practices, indicating that less than half of

the study population met the recommended composite IYCF indicators. [Table 5]

**Table 5: Overall Optimal IYCF Practice**

Category	Frequency (n)	Percentage (%)
Optimal IYCF Practice	138	46.0
Suboptimal IYCF Practice	162	54.0

A statistically significant association was observed between maternity leave and optimal IYCF practice. Among mothers who availed maternity leave, 57.6% practiced optimal IYCF compared to only 23.5%

among those who did not avail leave ( $\chi^2 = 18.42, p < 0.001$ ), highlighting the strong positive influence of maternity leave on feeding practices. [Table 6]

**Table 6: Association Between Maternity Leave and Optimal IYCF Practice**

Maternity Leave	Optimal IYCF n (%)	Suboptimal n (%)	Chi-square	p-value
Yes (n=198)	114 (57.6%)	84 (42.4%)	18.42	<0.001*
No (n=102)	24 (23.5%)	78 (76.5%)		

Working hours per day were also significantly associated with IYCF practices ( $p = 0.002$ ). Mothers working  $\leq 6$  hours demonstrated the highest prevalence of optimal IYCF (64.3%), followed by those working 7–8 hours (44.0%), whereas only

27.3% of mothers working more than 8 hours practiced optimal feeding, indicating that longer working hours adversely affected appropriate feeding practices. [Table 7]

**Table 7: Association Between Working Hours and Optimal IYCF**

Working Hours	Optimal n (%)	Suboptimal n (%)	p-value
$\leq 6$ hours	54 (64.3%)	30 (35.7%)	0.002
7–8 hours	66 (44.0%)	84 (56.0%)	
>8 hours	18 (27.3%)	48 (72.7%)	

## DISCUSSION

Our study found that 46% of employed mothers in Khammam practiced optimal IYCF, with early initiation of breastfeeding at 62%, exclusive breastfeeding for six months among eligible infants at ~61%, and gradual decline in continued breastfeeding by two years (54.5%). These results indicate that while a substantial proportion of mothers follow recommended behaviours, gaps remain in achieving universal optimal IYCF, particularly for complementary feeding indicators (MAD 47.4% and MDD 55.3%). The overall pattern, moderate early initiation and exclusive breastfeeding but suboptimal complementary feeding and composite IYCF coverage—is consistent with recent Indian data showing improvements in some breastfeeding indicators but persistent shortfalls in meeting all WHO IYCF targets.<sup>[1]</sup>

The association we observed between maternity leave and optimal IYCF (57.6% optimal among those who availed leave vs 23.5% among those who did not;  $\chi^2 = 18.42, p < 0.001$ ) echoes findings from multiple studies that maternal leave and workplace support strongly influence breastfeeding duration and exclusivity. Community and hospital-based analyses from India and other settings report higher exclusive-breastfeeding rates among mothers with longer, protected leave and workplace accommodations for breastfeeding or expressed milk. For example, a study of working mothers in urban India reported marked reductions in exclusive breastfeeding when mothers returned to work early, and systematic analyses show employed mothers have lower odds of exclusive breastfeeding compared with non-employed peers.<sup>[10,11]</sup>

Longer working hours in our sample were also associated with lower prevalence of optimal IYCF (optimal practice 64.3% for  $\leq 6$  hours vs 27.3% for >8 hours,  $p = 0.002$ ). This finding aligns with

international and Indian evidence that full-time or longer working hours shorten breastfeeding duration and reduce adherence to recommended feeding schedules—unless compensated by workplace policies such as on-site crèches, paid breaks for nursing, or facilities for milk expression and storage. Older cohort and observational studies demonstrate that part-time work or flexible schedules are less disruptive to breastfeeding than full-time, rigid hours, reinforcing the need for employer-level interventions.<sup>[12]</sup>

Taken together, our results support policy and program measures to improve IYCF among employed mothers: enforceable maternity leave policies aligned to WHO/Indian recommendations, workplace lactation support (breaks, private spaces, crèches), and targeted counselling for working mothers during antenatal and postnatal contacts. Strengthening implementation of national IYCF guidelines and workplace protections may help close the gap between awareness and practice among working mothers—an objective emphasized by global bodies including the World Health Organization and United Nations Children's Fund.<sup>[1,13]</sup>

## CONCLUSION

The present study demonstrates that less than half (46%) of employed mothers of children aged 0–36 months in Khammam practiced optimal Infant and Young Child Feeding (IYCF), highlighting substantial gaps in adherence to recommended feeding guidelines. While early initiation of breastfeeding and exclusive breastfeeding rates were moderately satisfactory, complementary feeding indicators and the composite minimum acceptable diet remained suboptimal. Maternity leave and shorter working hours were significantly associated with better IYCF practices, underscoring the critical

role of workplace policies and maternal support systems. Strengthening implementation of IYCF guidelines through enhanced maternity benefits, workplace lactation support, and targeted counselling for employed mothers is essential to improve child nutrition outcomes and promote optimal growth and development.

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