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THE PATTERN OF COMPLEMENTARY FEEDING PRACTICES AMONG JOINT AND NUCLEAR FAMILIES PREVAILING IN JODHPUR

Home Science

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ABSTRACT

Background: As there is not much information available on the complementary feeding habits of the mothers from the joint and the nuclear families, the present study assessed the pattern of complementary feeding habits among joint and nuclear families from Jodhpur.
Methods: This descriptive cross-sectional study was conducted among mothers who had visited the pediatrics clinic Vashundhara hospital and Shivam hospital, Jodhpur(Rajasthan) in the study period. Mothers with babies who are in the age group of 6 months to 24 months were included after they signed the informed consent. A pre-formed questionnaire was given to all the study participants and a formal interview was conducted. All the data thus obtained were included in the Microsoft Excel format and statistical analysis was conducted using SPSS software.
Result: In this study total of 600 participants were included. In the present study mothers from both joint and nuclear families reported to have knowledge about complementary feeding and initiated complementary feeding for their children. In 55.3% of subjects from the joint family reported having started complementary feeding after 6 months compared to 47.2% of the mothers from the nuclear families. 97.9% of the children from the joint family background were normally nourished while 100% of the children in the nuclear family showed normal nourishment (*P=0.01)*.
Conclusion: In conclusion, this study reported that mothers from nuclear families provide better complementary feeding habits in children who are below 2 years of age.

KEYWORDS

Joint family, complementary feeding habits, nuclear family, knowledge, breastfeeding

INTRODUCTION

In infancy and early childhood appropriate nutrition is required for the growth and development of every child. It has been reported that malnutrition is especially caused in early childhood because of improper feeding habits. In a recommendation published by World Health Organization, exclusive breastfeeding for the first 6 months of life was shown to be important. After 6 months, when breast milk is not sufficient to meet the nutritional requirement of a child it was recommended to feed the child with complementary foods along with breastfeeding till they reach the age of two (Saadeh, 2003).

In the initial phases of life, children are at increased risk of developing malnutrition. Initiation of complementary feeding too early can cause growth retardation. Breastfeeding is recommended for the first 6 months and the introduction of complementary feeding at this period can significantly hamper the developmental process. Besides, it can result in the displacement of breast milk resulting in the development of diarrhoea and weight loss. However, initiation of complementary feeding too late also can lead to malnutrition. After 6 months only breast milk is no longer sufficient to meet the nutritional requirements and hence complementary feeding should be started (Rao et al., 2011). Moreover, it is also reported that babies under six months of age are not ready physiologically for the complementary feeds as their gastrointestinal system is not yet completely developed. Proper breastfeeding and complementary feeding practices can significantly reduce the infant mortality rate (Dagne et al., 2019). It was reported that knowledge about the timing of starting the complementary feeding is inadequate in India and maximum cases mothers do not start complementary feeding at the proper time (Chand et al., 2018).

However, there is not much information available that has shown the association of family size with the feeding habits in this region. The paucity of literature on the complementary feeding practices in this region prompted us to evaluate the same in this region. We believe that the result of this study will help in educating and providing knowledge to prospective mothers about the importance and timing of complementary feeding.

MATERIALAND METHOD

This descriptive cross-sectional study was conducted among mothers who had visited the pediatrics clinic in the study period. The approval of this study was collected from the instructional ethics committee. Mothers with babies who are in the age group of 6 months to 24 months were included after they were agreed to be included. Unwilling mothers were excluded from this study. A pre-formed questionnaire was given to all the study participants and a formal interview was conducted based on the questionnaire. The awareness, knowledge of the feeding habits, demographic parameters, practices regarding breastfeeding, knowledge about complementary feeding, and family background was reported.

All the data thus obtained were included in the Microsoft Excel format and statistical analysis was conducted using SPSS software. Appropriate statistical evaluation was done as per the type and category of the data obtained.

RESULT

In this study total of 600 participants were included. Among the study participants, 282 participants were from joint family background and 318 participants were from a nuclear family (Table 1). Irrespective of whether they belong to a joint or nuclear family all the participants were well aware of the complementary feeding. All the participants (100%) were aware of the timing of the initiation of the complementary feeding and also have done exclusive breastfeeding for the first 6 months. 100% of the participants were aware that breastfeeding should be continued with complementary feeding.

Table 1: Awareness Of Study Participants About The Complementary Feeding Practices

		Joint Family (n = 282) n (%)	Nuclear Family (n = 318) n (%)	Total (n = 600) n (%)
Awareness of complimentary feed	Yes	282 (100)	318 (100)	600 (100)
	No	0	0	0
Awareness of timing of initiation of complementary feed	Yes	282 (100)	318 (100)	600 (100)
	No	0	0	0
Awareness of continuing Breastfeeding with complimentary feed	Yes	282 (100)	318 (100)	600 (100)
	No	0	0	0
Exclusive Breastfeeding for 6 months	Yes	282 (100)	318 (100)	600 (100)
	No	0	0	0

Table 2 describes the feeding practices of the mothers from the joint and the nuclear families. The Source of information on feeding practices showed that in Joint families, for 66% of the participants it is the nurse, 27.7% it is both nurse and mother, and for 6.4% it is nurse and mother in law. In Nuclear families, for 84.9% it is the nurse and for the rest 15.1%, it is both the nurse and mother. Breastfeeding was initiated at birth by all subjects irrespective of the fact that they lived in a Joint family or a Nuclear family.

In a Joint family, the age of initiation of complementary feeding was highest between 6-7 months (55.3%), followed by between 5-6 months (42.6%). Whereas, in nuclear families, it is between 5-6 months in 50.9% of cases, 6-7 months in 47.2%, and 7-8 months in 1.9% cases. In Joint families, in 85.1% of cases, subjects continued breastfeeding up to 24 months while 14.9% didn't. In nuclear families 96.2% of cases, subjects continued breastfeeding up to 24 months while 3.8% didn't. Homemade food was preferred by 78.7% of subjects in Joint families while 21.3% gave a combination. In the case of Nuclear families, homemade food was preferred by 88.7% of subjects while 11.3% gave a combination (Table 2).

Table 2: Percentage distribution of subjects according to their Comparative assessment of feeding practices among mothers of a joint and nuclear family

		Joint Family (n = 282) n (%)	Nuclear Family (n = 318) n (%)	Total (n = 600) n (%)
Source of information on feeding practices	Mother	0	0	0
	Mother-in-law	0	0	0
	Nurse	186 (66)	270 (84.9)	456 (76)
	Nurse and Mother	78 (27.7)	48 (15.1)	126 (21)
	Nurse and Mother-in-law	18 (6.4)	0	18 (3)
Initiation of breastfeeding	At birth	282 (100)	318 (100)	600 (100)
	At other time	0	0	0
Age of introduction of complementary feed	5-6 months	120 (42.6)	162 (50.9)	282 (47)
	6-7 months	156 (55.3)	150 (47.2)	306 (51)
	7-8 months	6 (2.1)	6 (1.9)	12 (2)
Continuing Breastfeeding	Yes	240 (85.1)	306 (96.2)	546 (91)
	No	42 (14.9)	12 (3.8)	54 (9)
Number of breastfeeding per day	No Breast Feeding	42 (14.9)	12 (3.8)	54 (9)
	2-5	150 (53.2)	210 (66)	360 (60)
	5-8	84 (29.8)	84 (26.4)	168 (28)
	Above 8	6 (2.1)	12 (3.8)	18 (3)
Age of weaning	Less than 1 year	18 (6.4)	12 (3.8)	30 (5)
	More than 1 year	18 (6.4)	0	18 (3)
	No weaning	246 (87.2)	306 (96.2)	552 (92)
Type of food introduced first	Liquid	276 (97.9)	318 (100)	594 (99)
	Solid	0	0	0
	Semi-Solid	6 (2.1)	0	6 (1)
Number of snacks per day	1-3	120 (42.5)	222 (69.8)	342 (57)
	3-5	162 (57.5)	96 (30.2)	258 (43)
Type of food	Homemade	222 (78.7)	282 (88.7)	504 (84)
	Readymade	0	0	0
	Combination	60 (21.3)	36 (11.3)	96 (16)

In Joint and nuclear families suji was the most common cereal given to the children. For pulses it was moong. In Joint families, milk products given to children constituted Milk in 29.8%, curd in 2.1%, a combination in 40.4% cases, while no milk products were introduced in 27.7% cases. In Nuclear families, the distribution constituted milk in 34%, curd in 11.3%, a combination in 45.3% cases, while no milk products were introduced in 9.4% cases (Table 3).

Table 3: Percentage distribution of food groups given to the children according to the Comparative assessment among mothers of the joint and nuclear family.

		Joint Family (n = 282) n (%)	Nuclear Family (n = 318) n(%)	Total (n = 600) n (%)
Cereals given	Rice	36 (12.8)	24 (7.5)	60 (10)
	Roti	0	0	0
	Suji	240 (85.1)	288 (90.6)	528 (88)
	Others	6 (2.1)	0	6 (1)
	No Cereals	0	6 (2.1)	6 (1)
Pulses given	Moong	276 (97.9)	300 (94.3)	576 (96)
	Masoor	6 (2.1)	18 (5.7)	24 (4)
Milk and products	Milk	84 (29.8)	108 (34)	192 (32)
	Paneer	0	0	0
	Curd	6 (2.1)	36 (11.3)	42 (7)
	Cheese	0	0	0
	Combination	114 (40.4)	144 (45.3)	258 (43)
	No Milk Products	78 (27.7)	30 (9.4)	108 (18)
Fruit given	One fruit	60 (21.3)	30 (9.4)	90 (15)
	More than one fruit	222 (78.7)	288 (90.6)	510 (85)
Quantity of food given	Small bowl (100gm)	66 (23.4)	108 (34)	174 (29)
	Medium bowl (150gm)	186 (66)	198 (62.3)	384 (64)
	Big bowl (200gm)	18 (6.4)	12 (3.8)	30 (5)
	No CF Started	12 (4.3)	0	12 (2)

Nutritional status (height for age) of 6 months to 2 years children were analyzed using standard deviation classification by WHO 2006. Children with -2SD and above were categorized under normally nourished, between -2 SD and -3SD were categorized under moderately malnourished (-2 SD to -3 SD) and less than -3SD were categorized under severely malnourished (less than -3 SD). On the criteria of the type of family, 97.9% children of joint family observed normally nourished and 2.1 % children moderately nourished, while children of nuclear family observed 100% normally nourished. Statistical analysis of this data showed that there is a significant difference between the nutritional level of children from joint and nuclear families (*P=0.0)* (Table 4). Similarly, 97.9% of the children from joint family showed normally nourished height for age in comparison to 100% of the children from the nuclear family. The statistical analysis of the data showed a significant difference between the weight for age in children between the joint and the nuclear family (P-value=0.01) (Table 5). The weight for height parameters showed no statistical difference between the nuclear and joint family (P-value=0.099) (Table 6).

Table 4: Comparative assessment of Height for age among infants according to independent variables

	Normal@ (-2 SD and above)	Moderate@ Between -2 SD and -3 SD)	Severe@ (Less than -3 SD)	p-value
Type of family				
Joint	276 (97.9)	6 (2.1)	0	0.01*
Nuclear	318 (100)	0	0	
Total	594 (99)	6 (1)	0	

The test applied: Chi-square test, *indicates a statistically significant difference, @Categories according to WHO 2006

Table 5: Comparative assessment of Weight for age among infants according to independent variables

	Normal@ (-2 SD and above)	Moderate@ Between -2 SD and -3 SD)	Severe@ (Less than -3 SD)	p-value
Type of family				
Joint	276 (97.9)	6 (2.1)	0	0.01*
Nuclear	318 (100)	0	0	
Total	594 (99)	6 (1)	0	

The test applied: Chi-square test, *indicates a statistically significant difference, @Categories according to WHO 2006

Table 6: Comparative assessment of weight for height among infants according to independent variables

	Normal@ (-2 SD and above)	Moderate@ Between -2 SD and -3 SD)	Severe@ (Less than -3 SD)	p-value

Type of family				
Joint	270 (95.7)	12 (4.3)	0	0.099
Nuclear	312 (98.1)	6 (1.9)	0	
Total	582 (97)	18 (3)	0	

The test applied: Chi-square test, [@]Categories according to WHO 2006

DISCUSSION

In the present study mothers from both joint and nuclear families reported to know about complementary feeding and initiated complementary feeding for their children. In 55.3% of subjects from the joint family reported having started complementary feeding after 6 months compared to 47.2% of the mothers from the nuclear families. Irrespective of their family backgrounds all the mothers have started breastfeeding their babies immediately after the birth. In a previous study conducted in Delhi, it was reported that only 16.5% of the mothers started with complementary feeding after the recommended time period. Compared to the present study finding this finding is quite low (Sethi et al., 2003).

In another study conducted by Rao et al in the coastal region of South India reported that almost 77.5% of women started with complementary feeding at six months which is the recommended age to start with complementary feeding (Rao et al., 2011).

Homemade food was preferred by 78.7% of subjects in Joint families while 21.3% gave a combination. In the case of Nuclear families, homemade food was preferred by 88.7% of subjects while 11.3% gave a combination. The food intake was divided into 4 categories such as cereals, pulses, milk and milk products, and fruits. It was observed that both nuclear and joint families suji is the most common cereals given to children. In pulses, the most common one was the moong. In joint families 97.9% cases moong is given compared with the 94.3% in the nuclear family. Interestingly, in nuclear families, babies are provided with fruits more often.

In Joint families, more than one fruit was given to children in 78.7% of cases, while 21.3% gave only one fruit. In Nuclear families, more than one fruit was given to children in 90.6% cases, while 9.4% introduced only one fruit. Vahini and Meenakshi reported that homemade food is preferred in 46% of the study participants. The food mostly comprises of pulses and cereals. The lack of milk and milk-related products that are rich in micronutrients were the least consumed by the children included in their study. Moreover, they also reported less consumption of fruit and fruit juices (Vahini & Meenakshi, 2012).

Interestingly, when analyzed for height and weight for age between the nuclear and joint family children, 97.9% of the children from the joint family background were normally nourished while 100% of the children in the nuclear family showed normal nourishment. The statistical analysis showed a significant difference between the nourishment of the joint family and nuclear family children (*P=0.01)*. However, there was no difference reported between the weight for height among children of the joint and nuclear family (P-value=0.099). This result is in contrast to the finding reported by Jain et al (2020) (Jain et al., 2020). In this study, the authors reported that joint families have better feeding practices compared with nuclear families. Women who are not working and are well educated feed their children in a better way. Moreover, this study also reported that a joint family provides more support to the mothers in feeding their babies (Jain et al., 2020). This finding is quite in contrast with the present study finding. This study reported that babies born in a nuclear family get better nutrition compared with the joint family.

Kumar et al also in a previous study reported that the type of family affects the feeding practices of the mothers in a study conducted in the rural parts of Bihar (Kumar et al., 2020). Katke et al have also reported that in joint families babies are more protected and get proper feeding to compare with nuclear families. They have also pointed out that the misconception about breastfeeding being more than enough for a child was the sole reason behind the late introduction of complementary feeding (Katke et al., 2015).

The present study finding is quite in contrast with the previous study finding. This may be due to the higher education level of the participants and the knowledge level associated with the family members. The present study reported that in maximum cases the mothers gained information about the complementary feeding from a nurse or elder members of the family. Still, this study reported a fraction of cases where complementary feeding was started too early or too late. The changes in policy content and also the analysis of the stakeholder reports can significantly help the feeding habits in infants and babies born in India (Puri et al., 2017).

The major strength of this study is its uniqueness. As per our knowledge, this is the first study conducted in this region that have addressed the difference in the feeding habits in babies from the joint and nuclear family background. There are very few studies available that have addressed this issue in detail. Moreover, the present study was conducted by taking direct interviews of the caregivers, thus decreasing the response bias.

Despite the strengths, this study has few limitations. This study only included the findings based on the type of the family details, because of the time constraints it could not address the issue of other socio-demographic factors associated with the feeding habits. Moreover, as all the participants were selected from the hospital area, the bias in sample selection is another limitation of this study.

CONCLUSION

In conclusion, this study reported that mothers from nuclear families provide better complementary feeding habits in children who are below 2 years of age. However, IYCF practices are not followed rigorously and greater emphasis is required for introducing dietary diversity, improvement in minimal meal frequency, and strengthening the breastfeeding practices in the study region.

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