Reported food restrictions in pregnancy and lactation are associated with ethnicity, education and wealth among pregnant women in Banke district

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Background

Cultural practices and restrictions around diet and food consumption are often considered significant factors affecting nutritional status of women in pregnancy and lactation.[1]

Pregnant and lactating women in various parts of the world abstain from or are forced to abstain from nutritious food as part of their traditional beliefs. Such restrictions of certain food items attributed to incorrect knowledge of benefits or misguided interpretation of their impact could deprive women of essential nutrition during the critical periods of pregnancy and lactation.[2-4]

Objectives and Methods

Objective:
The objective of this paper was to identify food restrictions during pregnancy in Banke district and examine their association with social and demographic characteristics.

Methodology:
This paper uses cross-sectional data from the pre-natal visit of the AflaCohort Study, a longitudinal birth cohort study conducted in 17 VDCs of the Banke district with 1664 mother-infant dyads.

Data collected in the pre-natal visit included maternal health, past pregnancy history, household demographics, maternal nutritional status and diet and types of food restrictions common in pregnancy and lactation.

The term ***food restriction*** in this paper was defined as deliberate avoidance of food items in pregnancy and lactation for reasons other than simple dislike and derived as a dichotomous variable.

A logistic regression model was used to test the association between food restriction as a derived binary variable and socio-demographic variables.[5]

Results

Key Findings

- Approximately 29% of the pregnant mothers reported food restrictions during pregnancy and breastfeeding.
- The commonly restricted foods included chili, papaya, sour food, noodles, rice, spicy foods, eggs, winter melon, pumpkin and lentils.
- Minimum Dietary Diversity for Women (MDDW) was 40%.
- Only 15 % of women who restricted food did so solely due to their own belief.
- Brahmin women were 1.5 times more likely than their Dalit counterparts to restrict food (OR 1.47 [1.07-2.02], p= 0.017).
- Women from the poorest wealth quintile were 2.5 times more likely to restrict food than women from the highest wealth quintile (OR 2.52 [1.73-3.69], p= 0.00).
- Women with a secondary level education were 1.67 times more likely to restrict food than women with no formal or informal education (OR 1.67 [1.21-2.30], p=0.002).
- Women's age, parity, nutrition knowledge, community group participation, and number of antenatal visits were not significantly associated with food restrictions.
- The findings also suggest that restricted foods included nutrient dense foods that are encouraged during pregnancy (*see table 2*)

Results

Table 1: Socio-demographic descriptive and logistic regression output

	Frequency	Percentage	Exp(B)	95% C.I.for EXP(B)	
Age					
15 - 19 (R)	348	20.91			
20 -24	635	38.16	1.38	.98	1.94
25 - 29	475	28.55	1.17	.77	1.77
30 - 34	136	8.17	1.43	.82	2.52
35 and above	70	4.21	1.67	.82	3.39
Caste/Ethnicity					
Dalit (R)	402	24.16			
Brahmin/Chhetri	405	24.34	1.55**	1.12	2.14
Terai/Madhesi other castes	124	7.45	0.90	.55	1.48
Janajati	350	21.03	1.45*	1.04	2.00
Muslim	367	22.06	0.66*	.46	.95
Newar	9	0.54	1.29	.31	5.42
Other, specify	7	0.42	0.43	.05	3.65
Educational level					
Illiterate (R)	615	36.96			
Primary or some primary	321	19.29	1.42*	1.02	1.98
Secondary or some secondary	583	35.04	1.67**	1.21	2.31
Higher secondary and above	145	8.71	1.39	.87	2.21
Wealth quintile					
Poorest	333	20.01	2.52***	1.72	3.69
Poor	333	20.01	2.17***	1.48	3.17
Middle	333	20.01	2.05***	1.41	2.99
Rich	333	20.01	1.73***	1.18	2.52
Richest (R)	332	19.95			
Antenatal visits					
No ANC visits (R)	476	28.61			
1 to 3 visits	1146	68.87	1.24	.96	1.60
4 or more visits	38	2.28	1.99	.97	4.09
Parity					
First pregnancy (R)	559	33.59			
1 to 2	748	44.95	1.23	.91	1.67
3 to 4	261	15.69	1.11	.71	1.74
5 or more	94	5.65	1.35	.72	2.54
Membership in a social group					
Not a member or not sure (R)	884	53.13			
Member of one or more social group	778	46.75	0.97	.77	1.24
Nutrition Knowledge					
No knowledge (R)	1	0.06			
1 to 5 score	142	8.50	338506528.61	.00	
6 to 10 score	1519	91.30	515958034.38	.00	
Total	1664	100.00			

* p<0.05, ** p<0.01, *** p<0.001

Chart 1: Food restrictions by wealth quintile

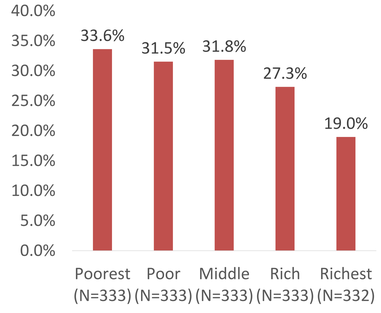
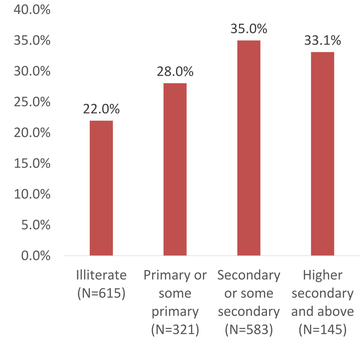


Chart 2: Food restrictions by educational level



Results

Chart 3: Food restrictions by caste

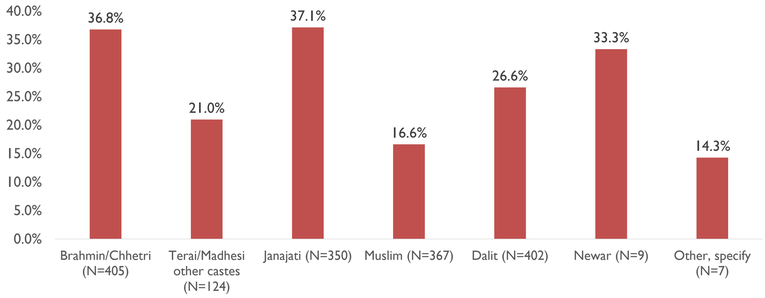


Table 2: Commonly restricted food and reported reasons for restricting the food items

S.N.	Food item	Reported reasons for restricting food
1	Chili	Makes the baby hot, Makes the baby cold, Makes mother hot
2	Papaya	Fear of abortion/miscarriage, discoloration of fetus
3	Sour food	Fear of abortion/miscarriage
4	Noodles	Discoloration of fetus, Baby might catch jaundice
5	Rice	Makes the baby hot, Makes the baby cold, Makes mother cold
6	Spicy foods	Makes the baby hot, Makes the baby cold, Makes mother hot. Fear of difficult labor, Fear of abortion/miscarriage
7	Eggs	Fear of difficult labor, Fear of abortion/miscarriage , discoloration of fetus, fear for babies' health
8	Winter melon	Fear of abortion/miscarriage ,Makes baby cold
9	Pumpkin	Makes baby cold, Makes mother cold
10	Lentils	Makes baby cold, Makes mother cold
11	Honey	Fear of abortion/miscarriage ,Makes baby hot
12	Garden peas	Makes the baby hot, Makes the baby cold
13	Beans	Makes the baby cold, Makes mother cold
14	Bottle gourd	Makes the baby cold, Makes mother cold, Makes mother hot
15	Jackfruit	Fear of abortion/miscarriage

Conclusions

The findings show a third of the women enrolled in the study reported food restrictions in pregnancy and lactation. Restrictions of one or more food during pregnancy/lactation were significantly associated with ethnicity, wealth, and level of education. The foods were restricted due to traditional beliefs held by society, family or the participants themselves. It is also important to note that only 40% of pregnant women achieved minimum dietary diversity. There is a possibility that food restriction practices might have attributed to that. Further analysis needs to be conducted to understand these interactions better.

However the findings indicate that socio cultural factors add another layer to agriculture and nutrition linkages, where factors such as food restrictions can potentially undermine nutrition and agricultural interventions. The fact that social beliefs that underline such practices can differ between communities adds to the complexity. These differences need to be taken into account in planning strategies and interventions to dispel adverse food restrictions in the communities.

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