

Background

- Improving diet quality among young children 6-23 months is a policy priority in many low-income countries.
- Multiple factors influence complementary feeding practices including household food access, caregiver-level factors and cultural practices.
- Biological and epidemiological evidence suggests that maternal dietary patterns may influence child diet.
- Data on food groups consumed by young children are often available in large-scale national surveys (i.e. Demographic and Health Surveys, DHS), but historically these surveys have not collected maternal diet data.
- The 2018 Nigeria DHS measured food group intake in both young children (age 6-23 months) and women (15-49 years).

Objective

To describe the relationship between child and maternal diet diversity in Nigeria and highlight implications for design of infant and young child feeding (IYCF) programs.

Methodology

- Dataset:** Nigeria DHS 2018, n=8975 mother-child pairs
- Outcomes:** Consumption of individual food groups in the previous 24 hours, minimum dietary diversity for children 6-23 months (MDD-C, at least 5 of 8 groups) and for their mothers age 15-49 years (MDD-W, 5 of 10 groups) (WHO-UNICEF 2021 indicator definitions).
- Analysis:** Compare rates of concordance and discordance between mother-child for individual food groups and MDD using McNemar's tests. Hierarchical probit regression used to identify drivers of MDD-C.
- Stratifiers and Covariates:** child age, sex, maternal age, parity, women's decision-making, # household members, sex of household head, urban/rural, region, religion, wealth.

Results

Figure 1: Mothers and children consuming different food groups and meeting MDD cut-offs in past 24 hours

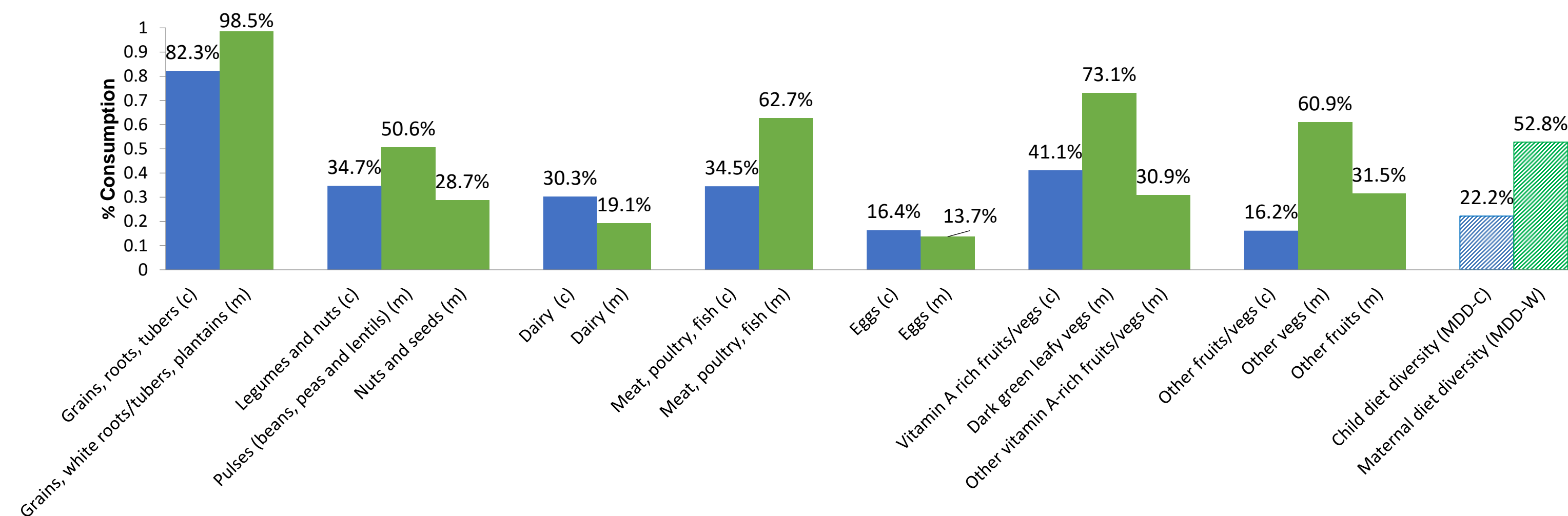
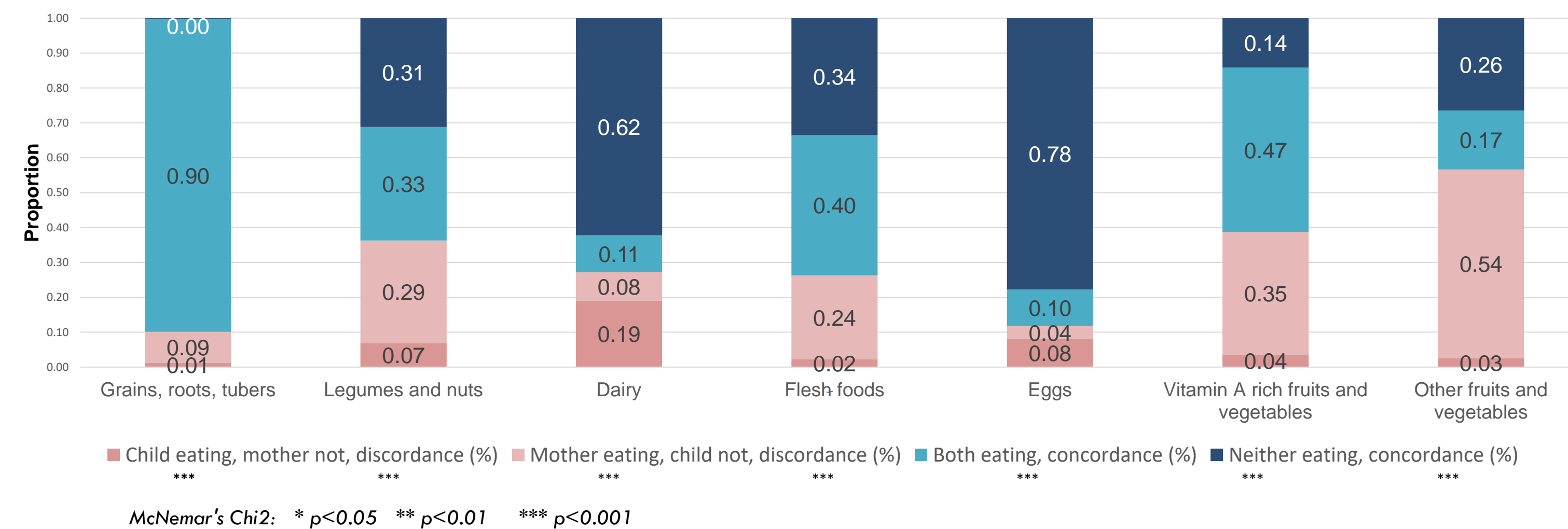


Figure 2: Concordance between maternal and child (12-23 months) consumption of food groups in past 24 hours



- Nationally, 22% of children achieve MDD-C; 51% of mothers achieve MDD-W (**Fig 1**).
- Grains, roots and tubers were most consumed (>80%); dairy and eggs were least consumed (**Fig 2**).
- Maternal-child discordance is highest for legumes and nuts (36%), vitamin A rich fruits/vegetables (39%) and other fruits/vegetables (57%); mothers consume these more frequently. Children are more likely than mothers to consume dairy (19% vs 8%) and eggs (8% vs 4%) (**Fig 2**).
- Maternal-child food group discordance is consistently higher for children 6-11 months than children 12-23 months. Results vary at state level and by maternal age group (data not shown).
- MDD-C probability improves with higher MDD-W (27%, p=0.000), higher maternal education (dose-response, 8%, 16%, p=0.000) and greater household wealth (dose-response, 5%, 10% p<0.05) (**Table 1**).

Table 1: Hierarchical probit regression of determinants of MDD-C

Distal variables	Responses	Bivariate			Multivariable (n= 8,975)		
		Pred Prob	95% CI	p-value	Pred Prob	95% CI	p-value
Wealth (n=8,975)	Poorest	REF			REF		
	Poorer	0.00	(-.03, .02)	0.837	-0.01	(-.04, .02)	0.390
	Middle	0.03	(.00, .06)	0.048	0.00	(-.03, .03)	0.993
	Richer	0.11	(.07, .15)	0.000	0.05	(.01, .09)	0.011
	Richest	0.20	(.16, .24)	0.000	0.10	(.06, .15)	0.000
Maternal education (n= 8,975)	None	REF			REF		
	Primary	0.04	(.01, .07)	0.007	0.03	(-.01, .06)	0.107
	Secondary	0.12	(.09, .14)	0.000	0.08	(.05, .10)	0.000
	Higher	0.25	(.20, .30)	0.000	0.16	(.10, .21)	0.000
Rural residence (n= 8,975)	Urban	REF					
	Rural	-0.10	(-.13, -.08)	0.000	NS		0.162
Number of household members (n= 8,975)	Continuous	-0.01	(-.01, -.00)	0.000	NS		0.560
	Sex of household head (n= 8,975)	Male	REF				
Religion (n=8,894)	Female	0.02	(-.01, .06)	0.245	NS		
	Christian	REF					
Women's decision-making (n= 8,519)	Muslim	-0.07	(-.10, -.05)	0.000	NS		0.935
	Continuous	0.02	(.02, .03)	0.000	NS		0.769
Proximal variables	MDD-W (n=8,975)	No	REF				
	Yes	0.29	(.27, .32)	0.000	0.27	(.25, .29)	0.000
Child age (n=8,975)	Continuous	0.01	(.01, .01)	0.000	0.01	(.01, .01)	0.000
	Child sex (n=8,975)	Male	REF				
Maternal age (n=8,975)	Female	0.00	(-.02, .02)	0.963	NS		
	Continuous	0.00	(.00, .00)	0.002	NS		0.334
Parity (n=8,975)	Continuous	-0.01	(-.01, -.00)	0.002	NS		0.699

Conclusions

- Maternal and child diet diversity are suboptimal in Nigeria, and maternal diet is a primary driver of child diet.
- Legumes and nuts and fruits/vegetables are consumed by women but not consistently fed to children; IYCF programs should focus on promoting these food groups that are available in households.
- The forthcoming DHS-8 core questionnaire includes MDD-W; with these data similar analyses can be carried out across LMIC to inform program design

Acknowledgements

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