



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Food Avoidance Taboos and Maternal Diets in Myanmar

SPEAKERS

Khin Mar Linn

*Research Analyst,
International Food Policy Research Institute*

Dr. Derek Headey

*Senior Research Fellow,
International Food Policy Research Institute*

MODERATOR

Ian Masias

*Deputy Chief of Party,
Myanmar Agrifood Program for Strategy and Analysis,
International Food Policy Research Institute*

December 11, 2024

10:00 AM – 11:00 AM MMT

Photo Credit: Phuong D Nguyen/Shutterstock





BACKGROUND

- Food taboos may be widespread in low- and middle-income countries (LMICs) and significantly affect dietary patterns.
- Some well-known examples:
 - Lacto-vegetarianism among Hindus;
 - Muslim and Jewish people avoiding pork;
 - Religious fasting (Muslims, orthodox Christians);
 - Taboos against children or women eating eggs in Africa.



BACKGROUND

- Less well known is that mothers from a number of Asian cultures avoid certain foods during breastfeeding, and sometimes pregnancy.
- Qualitative studies from Laos, Cambodia, Malaysia, Myanmar:
 - ❑ Mothers should avoid certain foods during pregnancy, postpartum (about 6 weeks after birth) or breastfeeding: vegetables, fruits, spices, fermented foods, fish, meat;
 - ❑ Common beliefs about heat- and cold-inducing foods;
 - ❑ Beliefs likely originally derived from ancient Indo-Aryan culture and the spread of Hinduism and Buddhism, including Ayurvedic medicine and beliefs & traditional Chinese medicine.



BACKGROUND

- Still major knowledge gap exists that make it difficult to assess the extent to which these beliefs constitute a significant public health problem.
- **No studies have quantified the prevalence of food avoidance beliefs in a nationally representative survey.**
- **No studies quantified the impact of food avoidance behaviours on maternal dietary quality with large-scale panel data.**
- Food avoidance beliefs & behaviors are **not measured in**
 - Demographic Health Survey (DHS);
 - Multiple Indicator Cluster Surveys (MICS);
 - Economic surveys (HIES).



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

BACKGROUND

But likely these taboos *are* a significant public health concern:

1. Micronutrient requirements for women rise when breastfeeding as a mother's body needs to provide nutrition for 2 people: the mother herself + her breastfeeding child;
2. Micronutrient deficiencies in lactating women passed on to breastfeeding infants through less micronutrients in breastmilk: B vitamins (except folate), vitamin A, selenium or iodine.





FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

RESEARCH OBJECTIVES

1. To assess national prevalence of beliefs on maternal food avoidance during breastfeeding in Myanmar.
2. To explain healthy food avoidance beliefs during breastfeeding.
3. To assess the impact of food avoidance after birth on minimum dietary diversity (MDD-W) of breastfeeding mothers.





KEY FINDINGS

1. Around 40 percent of adult women in Myanmar believe mothers should avoid at least one healthy food group when breastfeeding.
 - Beliefs are somewhat less common in majority Christian areas.
2. Healthy food avoidance beliefs less prevalent among women with more formal education, more nutritional knowledge & counselling.
3. Share of women with minimum diet diversity falls by a huge 43 percentage points from pregnancy to the first month after birth.
4. Share of women with minimum diet diversity was significantly lower up to the sixth month after birth.



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

METHODS



USAID
FROM THE AMERICAN PEOPLE



MYANMAR

MICHIGAN STATE
UNIVERSITY®



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

DATA FROM TWO DIFFERENT PHONE SURVEYS

Survey 1: MHWS (Myanmar Household Welfare Survey)

- A nationally & subnationally representative panel over 2021-2024;
- We use MHWS Round 5 (March to May 2023) where we add a special nutrition module for both men and women;
- Sample: 12,953 adults with 50% of male & 50% female.





METHODS

Special nutrition module added to 5th round of MHWS

- 5th round included a special nutrition module:
 1. Food avoidance beliefs
 2. Nutrition knowledge
 3. Exposure to nutrition counselling & messaging

Analytical Methods to analyze MHWS

- Step 1: Descriptive statistics on beliefs on food avoidance during breastfeeding for long list of different foods (women & men)
- Step 2: Linear probability model regressions to explain why women believe in avoiding at least 1 healthy food when breastfeeding



METHODS: YANGON PANEL OF MOTHERS

Survey 2: Rural Urban Food Security Survey (RUFSS) of mothers

- RUFSS sample from urban & peri-urban areas of Yangon
- Initial sample of women were all pregnant in January 2020, but at different stages of pregnancy
- We use 6 survey rounds from June 2020 to Dec 2020
- Although RUFSS has at least 1,000 respondents each round, we restrict the sample to women who were pregnant in June 2020 and participated in at least 5 of the 6 rounds



METHODS: YANGON PANEL OF MOTHERS

- An important feature of the RUFSS Yangon panel is that we have exogenous (random) variation in birth timing, so women may begin postnatal food avoidance behaviors at different times
 - i.e. women give birth between different survey rounds
- Since survey implemented during COVID, we use regressions to control for COVID-19 income shocks, assets, education & survey round fixed effects
- But main point is that women giving birth at different times means that food avoidance is not going to be highly correlated with COVID-19 income shocks

Stages of pregnancy and breastfeeding of mothers in the Rural Urban Food Security (RUFSS) panel conducted in 2020 (N=3541)

		Pregnant	Months since birth					
	N		1 st month	2 nd month	3 rd month	4 th month	5 th month	6 th month
1: Jun-Jul	596	100%	0%	0%	0%	0%	0%	0%
2: Jul-Aug	581	67%	29%	1%	0%	0%	0%	0%
3: Aug-Sep	582	33%	30%	29%	4%	0%	0%	0%
4: Sep-Oct	590	9%	23%	27%	30%	8%	0%	0%
5: Oct-Nov	584	2%	9%	22%	28%	32%	6%	0%
6: Nov-Dec	581	1%	2%	10%	22%	28%	31%	6%



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

RESULTS

NATIONAL SURVEY ON FOOD AVOIDANCE BELIEFS AMONG 12,953 MEN & WOMEN (MHWS)



USAID
FROM THE AMERICAN PEOPLE



MYANMAR

MICHIGAN STATE
UNIVERSITY®



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

QUESTION 1

HOW PREVALENT IS THE BELIEF THAT
WOMEN SHOULD AVOID CERTAIN
FOODS WHEN BREASTFEEDING?



USAID
FROM THE AMERICAN PEOPLE



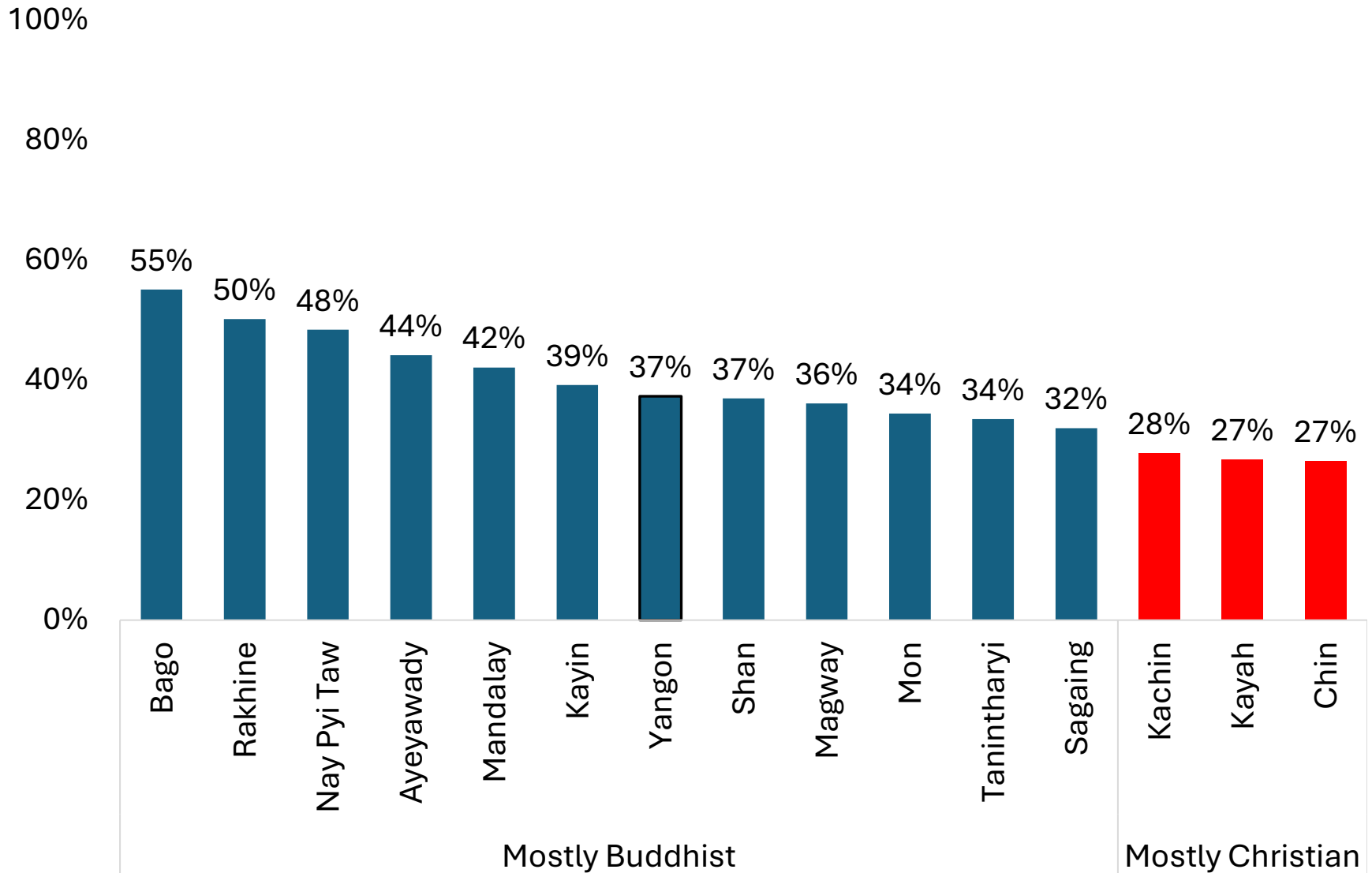
MYANMAR

MICHIGAN STATE
UNIVERSITY®

SHARE OF WOMEN WHO BELIEVE IN AVOIDING HEALTHY FOODS WHEN BREASTFEEDING

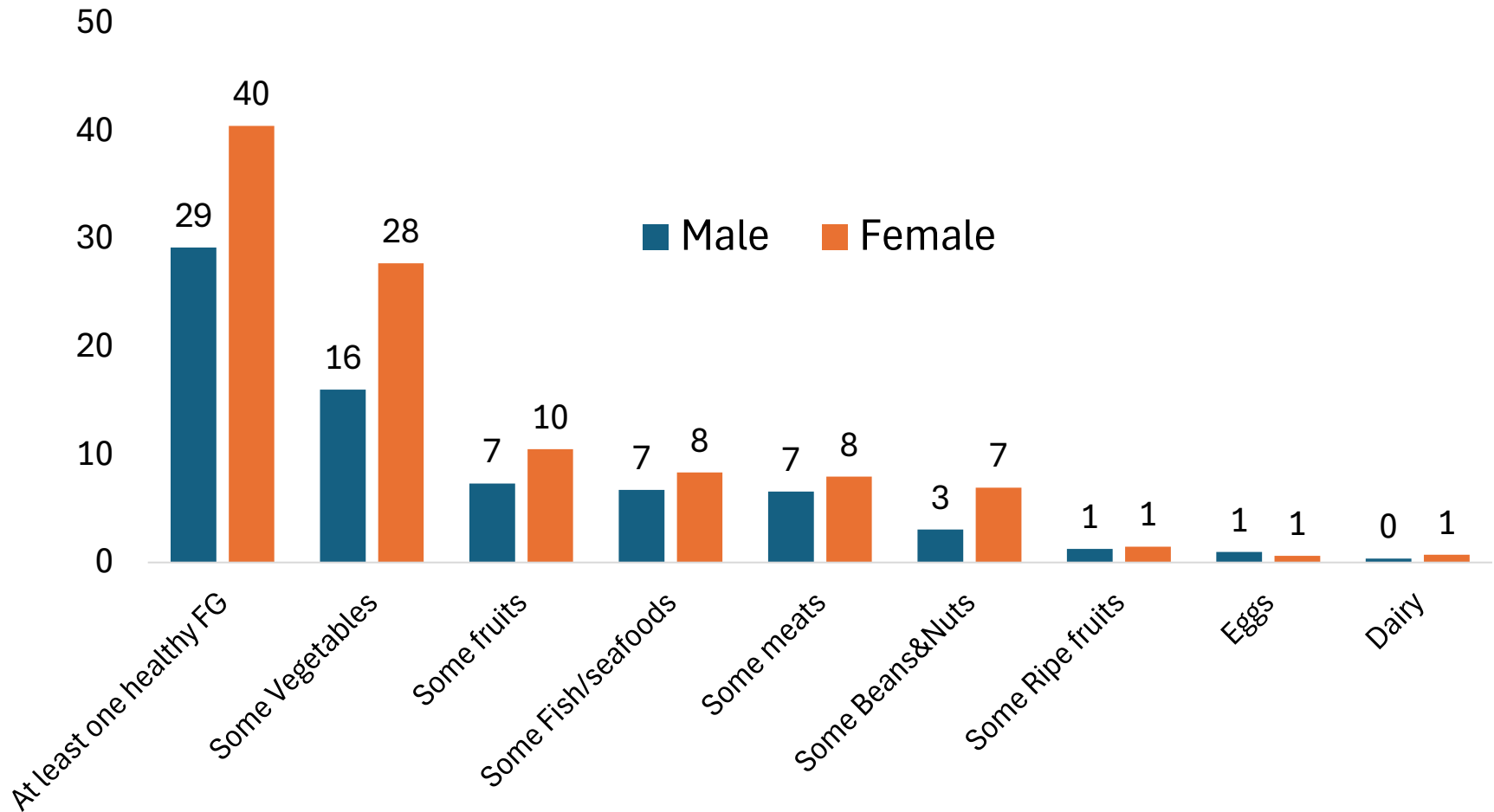
		Nutrition knowledge index			Nutrition counseling?	
	National	Low score	Medium score	High score	No	Yes
Share of total sample	100%	56%	30%	14%	82%	18%
Avoids 1+ healthy foods	40%	44% → 38% → 30%			42% → 34%	
1. Avoid some Vegetables	28%	30%	27%	18%	29%	23%
2. Avoid some fruits	11%	11%	10%	9%	11%	8%
3. Avoid some fish/seafoods	8%	10%	7%	5%	9%	8%
4. Avoid some meats	8%	10%	5%	3%	8%	6%
5. Avoid some Beans & Nuts	7%	8%	6%	5%	7%	6%
6. Avoid ripe fruits	2%	1%	1%	3%	2%	1%
7. Avoid dairy	1%	1%	1%	1%	1%	1%
8. Avoid eggs	1%	1%	0%	0%	1%	1%
Average foods avoided	1.6	1.6	1.5	1.5	1.6	1.6

BELIEFS IN AVOIDING AT LEAST 1 HEALTHY FOOD GROUP BY STATES/REGIONS (% OF WOMEN)





% OF WOMEN & MEN WHO BELIEVE MOTHERS SHOULD AVOID HEALTHY FOODS WHEN





FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

QUESTION 2

WHAT EXPLAINS WHY SOME WOMEN BELIEVE IN AVOIDING HEALTHY FOODS WHEN THEY ARE BREASTFEEDING, WHILE OTHERS DO NOT?



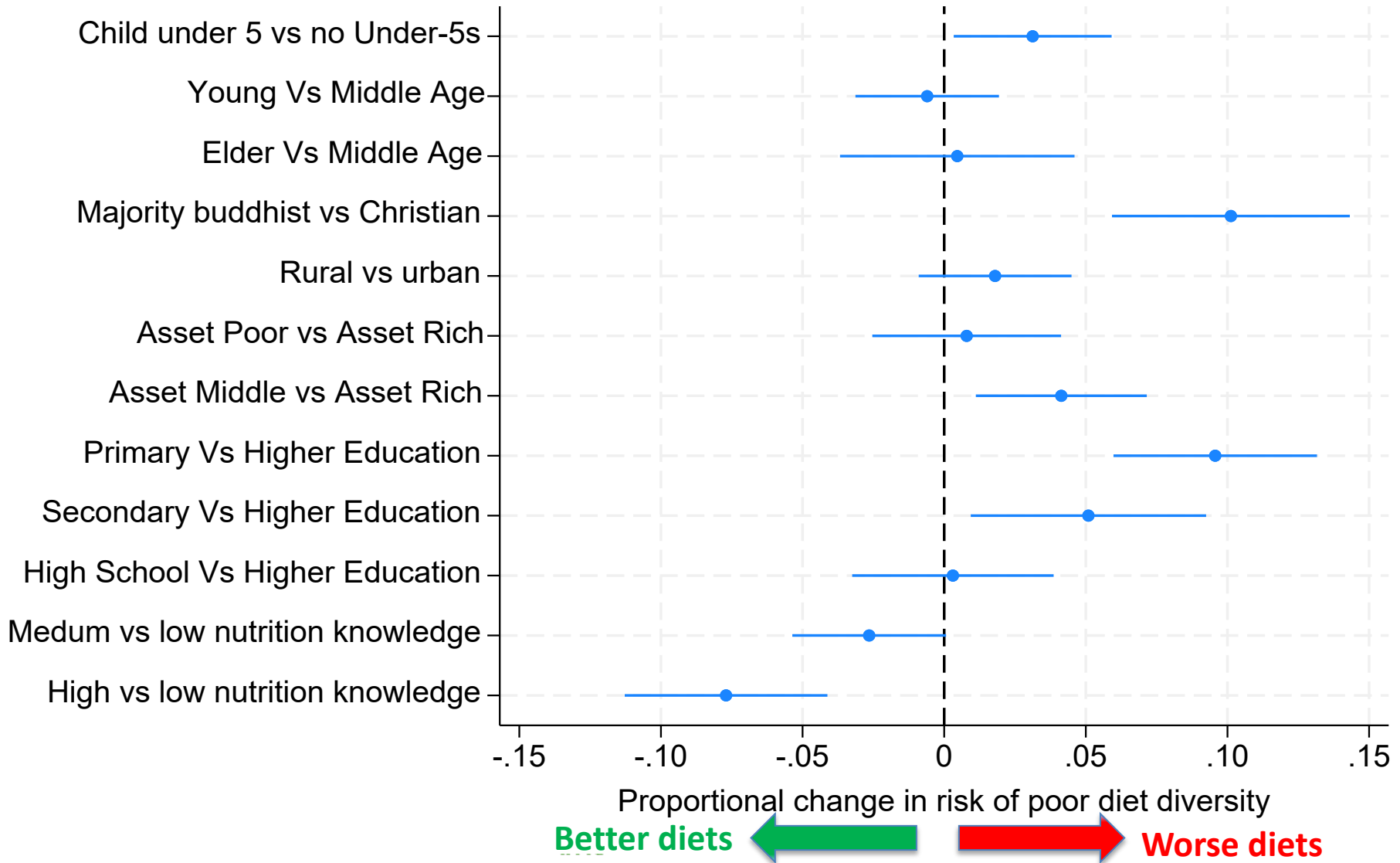
USAID
FROM THE AMERICAN PEOPLE



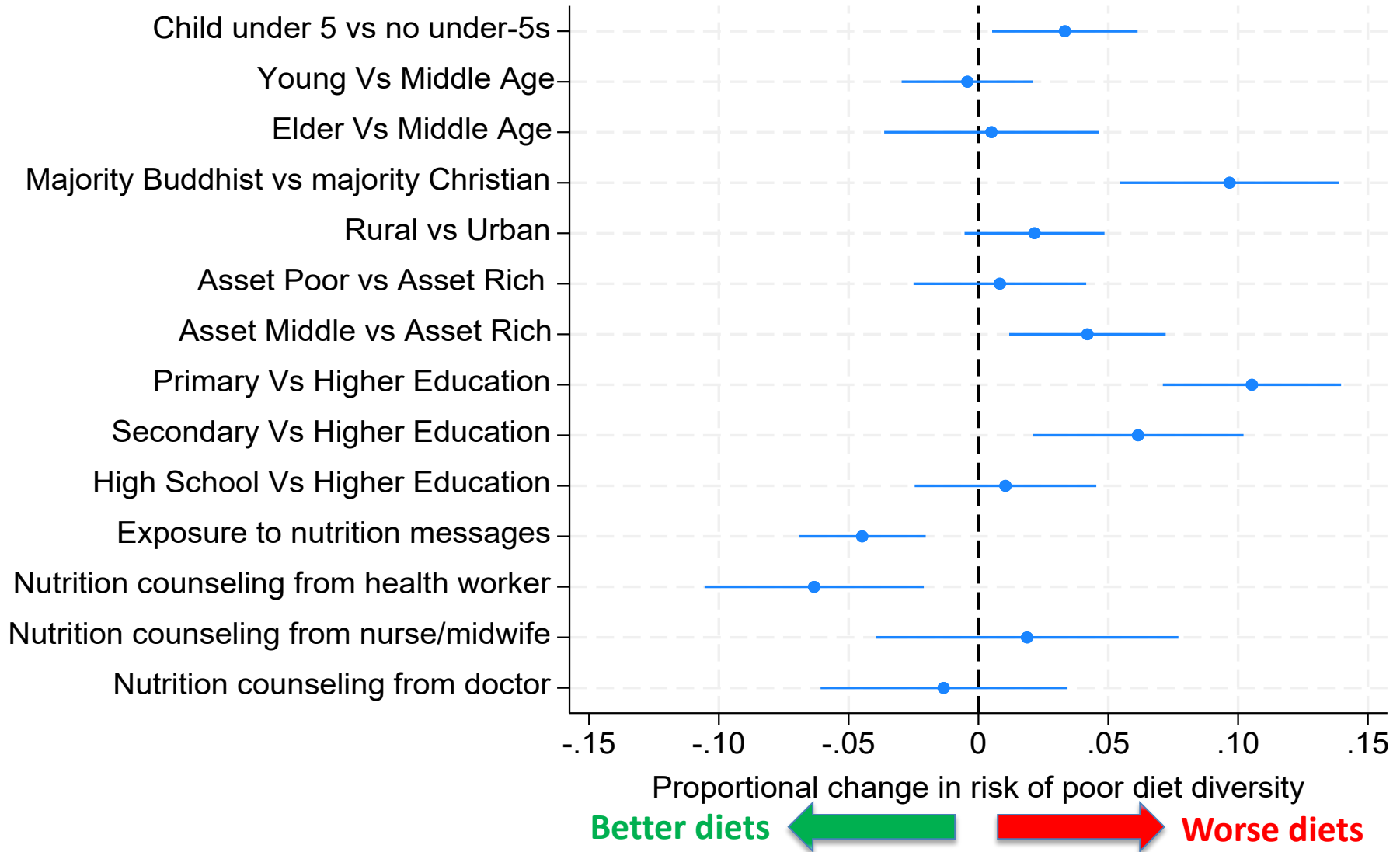
MYANMAR

MICHIGAN STATE
UNIVERSITY®

EXPLAINING WOMEN'S BELIEFS IN HEALTHY FOOD AVOIDANCE DURING BREASTFEEDING: *MODEL 1: INCLUDING NUTRITIONAL KNOWLEDGE*



EXPLAINING WOMEN'S BELIEFS IN HEALTHY FOOD AVOIDANCE DURING BREASTFEEDING: *MODEL 2: INCLUDING NUTRITION COUNSELLING*





FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

RESULTS

6-ROUND YANGON RUFSS PANEL TRACKING MOTHERS FROM PREGNANCY THROUGH BIRTH & POSTNATAL PERIOD



USAID
FROM THE AMERICAN PEOPLE



MYANMAR

MICHIGAN STATE
UNIVERSITY®



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

OBJECTIVE 2

WHAT EXPLAINS WHY SOME WOMEN
BELIEVE IN AVOIDING HEALTHY FOODS
WHEN THEY ARE BREASTFEEDING,
WHILE OTHERS DO NOT?



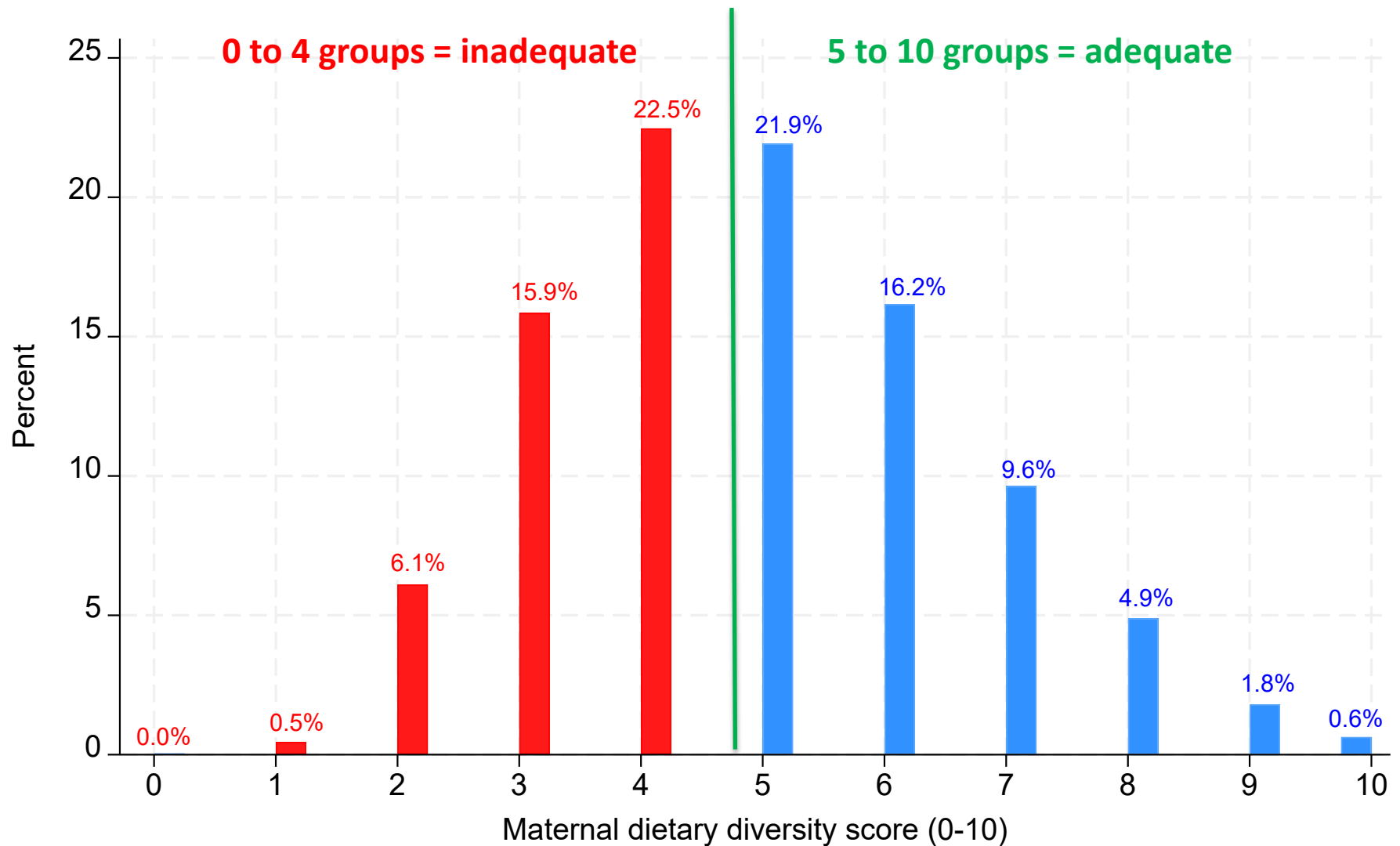
USAID
FROM THE AMERICAN PEOPLE



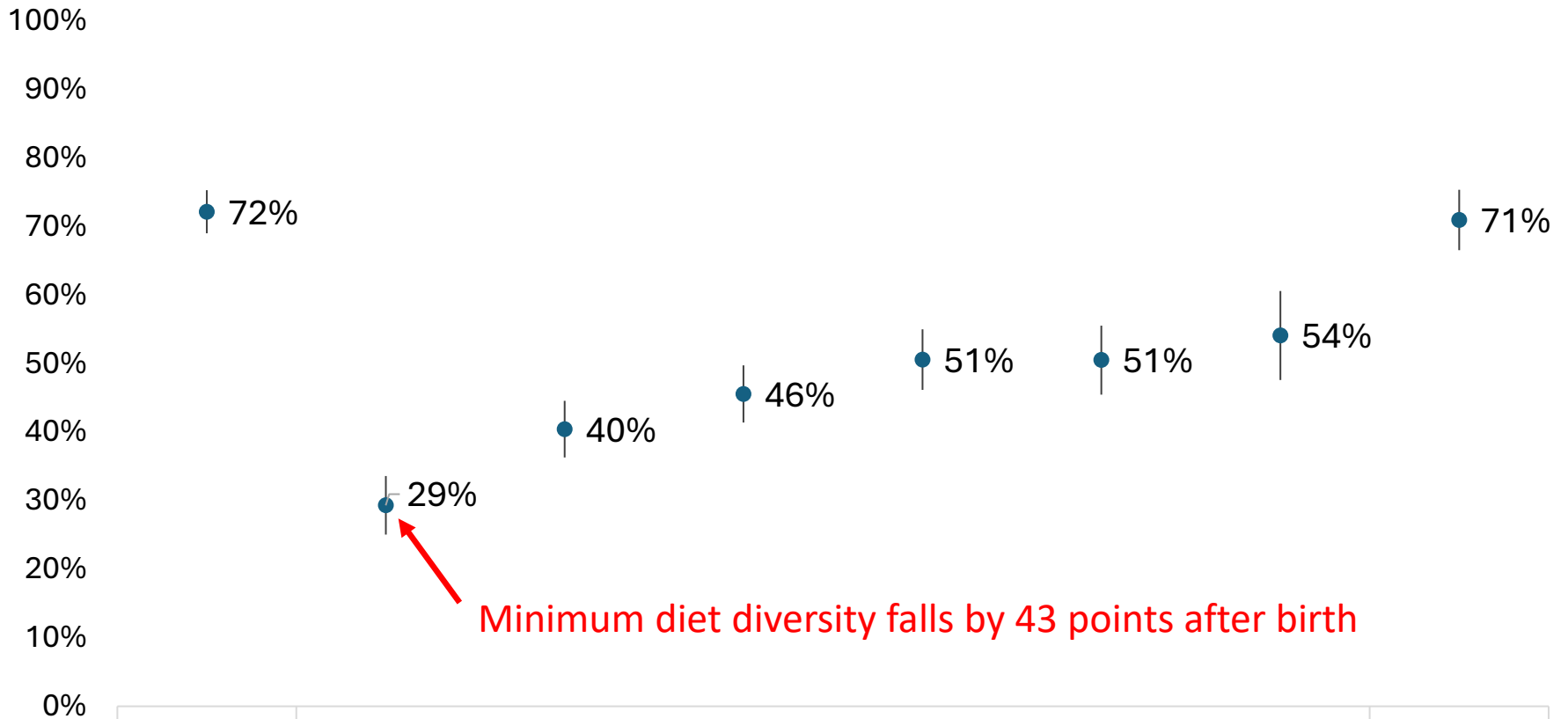
MYANMAR

MICHIGAN STATE
UNIVERSITY®

MATERNAL DIETARY DIVERSITY SCORES (0-10 GROUPS) ACROSS THE FIRST SIX RUFSS ROUNDS IN 2020 (N=3514): *ALL WOMEN PREGNANT IN EARLY 2020 AND GAVE BIRTH DURING 2020*



% OF MOTHERS WITH MINIMUM DIETARY DIVERSITY DURING PREGNANCY & STAGES AFTER BIRTH



Pregnant in 2020	1st month (N=543)	2nd month (N=520)	3rd month (N=492)	4th month (N=397)	5th month (N=215)	6th month (N=36)	Not pregnant Dec 2021
RUFSS (N=1248)	RUFSS: sub-samples of mothers at various stages after giving birth in 2020 (N=2203)						MHWS (N=521)*

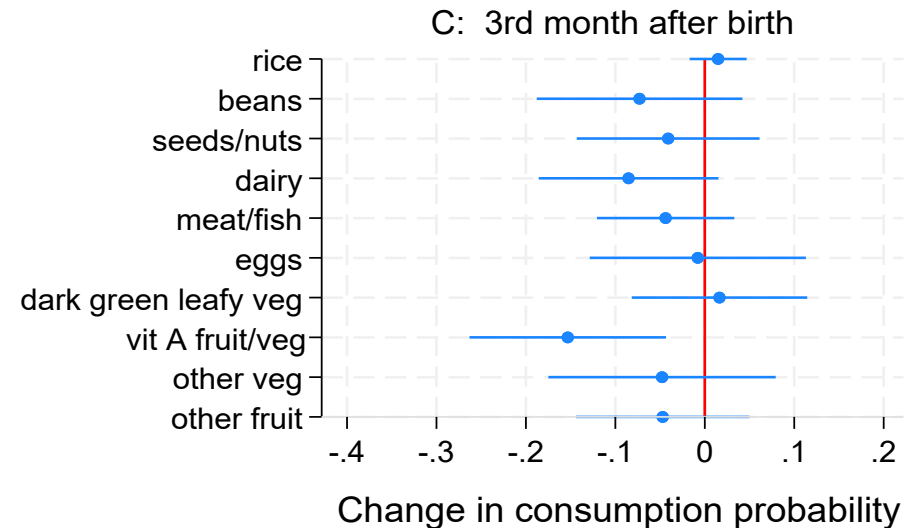
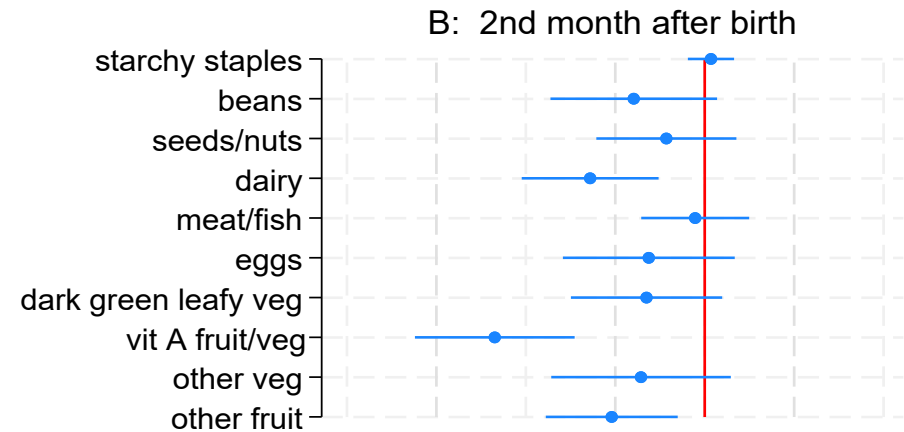
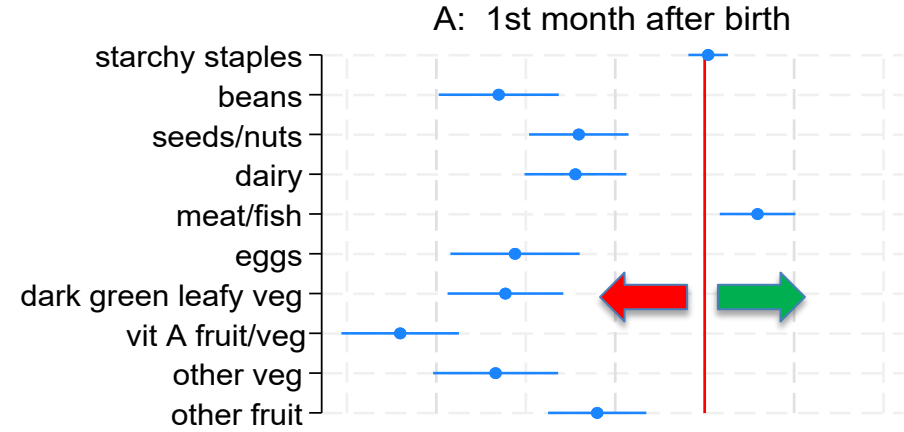


FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

RUFSS RESULTS ON FOOD GROUPS

- In 1st month after birth, we see large declines in maternal consumption of 8 out of 10 food groups – meat/fish rises!
- In 2nd month, there are similar patterns but smaller effects
- By 3rd month, only statistically significant reduction is in Vitamin-A rich fruits/vegetables
- Note 1: Reductions are LARGE: e.g. 33-point fall in vitamin-A rich fruits/veg in 1st month after birth
- Note 2: Reductions in nutrient-rich foods (Vitamin A) likely increases deficiencies in infants





FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

DISCUSSION

- Food avoidance taboos remain an important but under-researched topic in nutrition and other disciplines that study food choice.
- Here we examined this phenomenon with 2 unique surveys:
 - the first study to estimate how prevalent maternal food avoidance beliefs are at a national level in Asia;
 - the second study to use a high-frequency panel to rigorously identify the impacts of food avoidance practices during postpartum and breastfeeding.





DISCUSSION

MHWS

- 40% of all Myanmar women believe that at least one healthy food should be avoided.
- Beliefs prevalent throughout Myanmar's diverse regions and across both genders, but more common in majority Buddhist regions.
- However, these beliefs are less prevalent among women with:
 1. More formal education
 2. More nutritional knowledge
 3. Exposure to nutrition counselling from village health workers



DISCUSSION

RUFSS

- MDD-W fell by 43 percentage points from pregnancy to first month
- Mothers consumed exceptionally monotonous diets post-partum, with lower consumption in 8 of the 10 MDD food groups
- We observed substantially lower probabilities of achieving MDD-W all the way up to the fifth month after birth
- MDD-W is a proxy for dietary quality and strongly correlated with micronutrient intake
- Therefore, highly likely that food avoidance taboos increase micronutrient inadequacy of mothers
- Likely increases micronutrient inadequacy of breastfeeding infants, especially vitamin A deficiency since vA-rich foods were avoided



DISCUSSION

Limitations

1. MHWS module only asked about food avoidance beliefs during breastfeeding, not pregnancy or postpartum specifically
2. We could not afford to ask respondents to identify specific food items to be avoided (e.g. specific vegetables)
3. Our regression analysis of food avoidance predictors in MHWS is observational in nature, rather than causal
4. RUFSS sample is limited to mothers residing in Yangon who attended antenatal clinics – need studies in other areas
5. RUFSS survey measured dietary quality through MDD-W rather than more sophisticated dietary assessments



DISCUSSION (CONT)

Policy implications

- Pilot and ultimately scale up interventions to combat potentially harmful food avoidance taboos
- Social behavioral change communications (SBCC) and other public health interventions will need to more directly combat these taboos
- Train doctors, nurses and midwives to discourage healthy food avoidance behaviors during antenatal care (pregnancy)
- Train local health workers to discourage healthy food avoidance after birth (e.g. postnatal checkups) & integrate into breastfeeding advice
- Mass media, social media to do the same (e.g. Whatsapp, Viber, Facebook)



DISCUSSION (CONT)

Future research

- More measurement & analysis needed on food avoidance practices & impacts on health and nutrition of both mothers and infants.
- Need to conduct specialized surveys to measure nutrient intake and breastmilk quality among postpartum and breastfeeding mothers, as well as micronutrient status of their infants.
- Integrate food avoidance taboos in Demographic Health Surveys and Multiple Indicator Cluster Surveys in Asia.



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

ကျေးဇူးတင်ပါတယ်
Thank you



USAID
FROM THE AMERICAN PEOPLE



MYANMAR

MICHIGAN STATE
UNIVERSITY®



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

www.feedthefuture.gov



USAID
FROM THE AMERICAN PEOPLE



MYANMAR

MICHIGAN STATE
UNIVERSITY®