



GENDER CONSIDERATIONS

for Maternal Nutrition Interventions and Supplementation in Pakistan

*Prepared for the Maternal, Newborn & Child Health and Gender Equality Teams of the
Bill & Melinda Gates Foundation by the Global Center for Gender Equality at Stanford University*

November 2021

BILL & MELINDA
GATES *foundation*



ACKNOWLEDGEMENTS

This report was co-authored by Nadia Diamond-Smith and Sidra Minhas, with research support from Lauren Lamson; all are consultants with the Global Center for Gender Equality at Stanford University (GCfGE). Elizabeth Katz, GCfGE director of Gender Data and Research, provided technical leadership and guidance. The research was conceived by Chris Kirby (Bill & Melinda Gates Foundation), who also offered direction and feedback.

EXECUTIVE SUMMARY

Introduction

Improving maternal nutrition is essential to improve the health of women and infants globally, including in Pakistan. The goal of this brief is to provide gender-related insights to inform the design of interventions in Pakistan aiming to improve maternal, newborn and child health (MNCH), with a focus on maternal nutrition and supplementation.

Methods

To do this, we analyzed Pakistan Demographic and Health Survey data to describe the heterogeneity by geography and socio-economic status in women's decision-making, prenatal care use and food consumption and expenditure patterns. We then describe gender norms and practices in Pakistan related to food and pregnancy, by combining a literature review with insights from a local gender expert. Finally, we conducted a rapid review of previous interventions in South Asia and Pakistan specifically that engaged men to address maternal nutrition or maternal/reproductive health.

Results

The data analysis found heterogeneity among decision-making scores, prenatal care use and consumption patterns, with those poorer, less urban and in Balochistan and the Federally Administered Tribal Areas generally faring worse. Gender in Pakistan is defined by entrenched ideas of masculinity and femininity and shared household decision-making. We argue that intervention approaches could

leverage norms around men as providers to engage them as sources of support rather than gatekeepers. Additionally, interventions should advocate for women's health without contradicting prevailing feminine gender norms (such as associating nutrition with strength), which could generate rejection by gatekeepers. Finally, there are several interventions that have successfully engaged men and other household decision-makers in the areas of maternal/reproductive health and nutrition in South Asia, including Pakistan. While most of these found that engaging men and other household decision-makers was key to the outcomes of interest, a few studies highlighted potential unintended consequences and the need to carefully design and evaluate the approaches.

Conclusions

In summary, gender and women's empowerment are essential to consider in the design of interventions in Pakistan; however, the role and importance of considering gender differs by sub-group (region, socioeconomic status). Key considerations revolve around the need to engage men and other household decision-makers but pay close attention to ensuring that such approaches do not further disempower women or put them at risk by overly challenging existing norms.

GENDER CONSIDERATIONS FOR MATERNAL NUTRITION INTERVENTIONS AND SUPPLEMENTATION IN PAKISTAN

Improving maternal nutrition is essential to improve the health of the mother and infant globally, including in Pakistan. A variety of interventions, including those involving supplementation, target undernourished pregnant and breastfeeding women. A successful intervention strategy must be informed by data and evidence on potential gender barriers to effective demand, and learning from culturally specific gender norms and practices to optimize uptake while avoiding unintended harmful consequences with respect to gender inequality. This brief is intended to inform the design of nutrition interventions, especially those involving supplements, for pregnant and breastfeeding women in Pakistan by: (1) analyzing regional and sociodemographic variations in intrahousehold decision-making, antenatal care, and food expenditures; (2) identifying key gender norms and practices with relevance for nutrition; and (3) synthesizing evidence from previous interventions engaging men and addressing norms to improve MNCH in Pakistan and other South Asian countries.

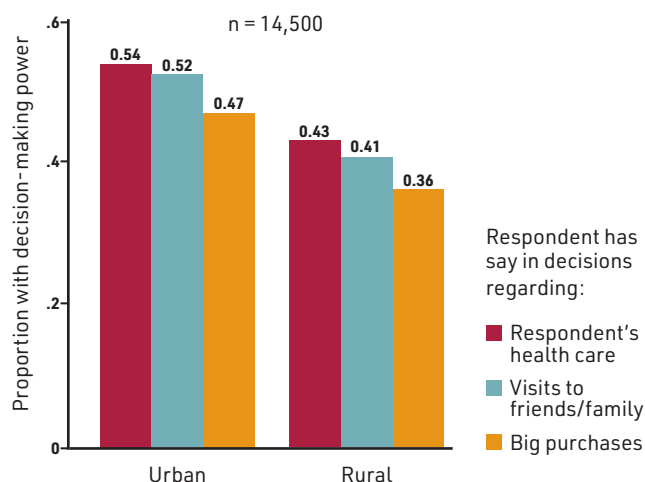
1. UNDERSTANDING GEOGRAPHIC AND SES HETEROGENEITY IN DECISION-MAKING, PRENATAL CARE, AND CONSUMPTION PATTERNS

Gender Gaps in Decision-Making

Data from the 2017-2018 Pakistan Demographic and Health Survey (PDHS) provide insights into regional and socioeconomic variations in household-level decision-making and use of antenatal care. The 2018 Pakistan DHS survey included 14,500 women in the decision-making module. These respondents were asked whether they had sole, joint, or no say in decisions regarding 1) their own health care, 2) visiting friends or family, and 3) major household purchases.

Figure 1 below indicates that women in both urban and rural settings are more likely to have sole or joint control over decision-making regarding their health care (54% in urban settings, 43% in rural settings) and less likely to have control over large household purchases (47% vs. 36%, respectively). Women in urban settings are much more likely to have a say in decisions over all three realms covered in the DHS questionnaire.

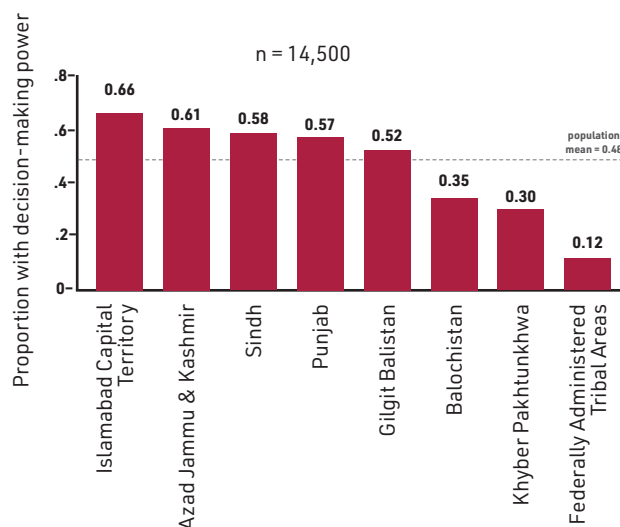
Figure 1. Variations on Decision-Making: Urban vs. Rural



Source: Authors' analysis of 2017-18 PDHS

Breaking health decision-making down further by province, Figure 2 illustrates that women in Islamabad have the most agency over health decision-making (66%), whereas in the Federally Administered Tribal Territories (FATA) just 12% of women report having sole or joint say over their own health decisions. The country-level mean of women who have say over health decisions is 48%. In addition to Islamabad Capital Territory, women in four other provinces have above-average decision-making power: Azad Jammu & Kashmir, Sindh, Punjab, and Gilgit Baltistan. Meanwhile, women in Balochistan, KP, and FATA have below-average decision-making power.

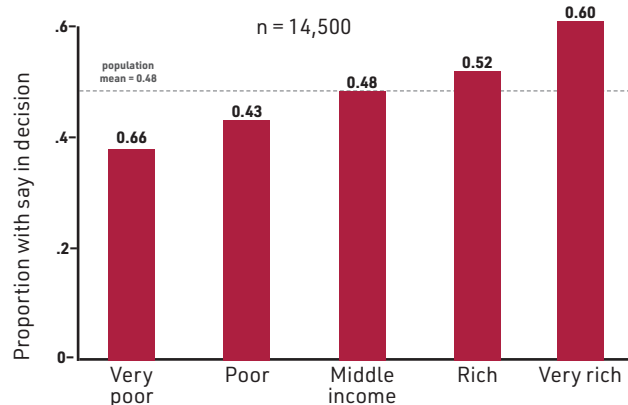
Figure 2. Regional Variation in Health Decision-Making



Source: Authors' analysis of 2017-18 PDHS

Figure 3 shows decision-making power by wealth quintile, and there is a pattern in which women in the 'rich' and 'very rich' category have above-average decision-making, middle-income women have average decision-making, and 'poor' and 'very poor' women have below-average say over health decisions.

Figure 3. Health Decision-Making by Wealth



Source: Authors' analysis of 2017-18 PDHS

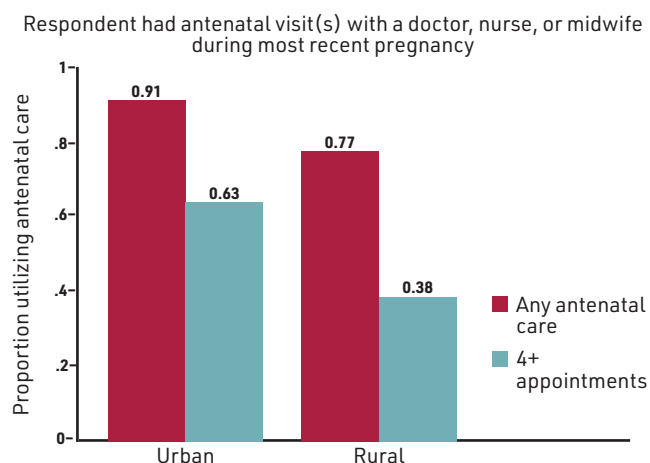
Women's decision-making power is important to consider in designing interventions, especially thinking through who and how to target messaging or supplements. Though women are least likely to control large household-level decisions, more women do exercise control over their own health care, meaning that women may have the ability to make decisions if supplements are marketed as a health product. However, women in rural areas, women in poorer socioeconomic classes, and women in certain regions will have less ability to solely make the decision to purchase or to consume supplements. In these cases, it will be necessary to persuade husbands, and perhaps other family members such as mothers-in-law, that supplement or nutrition will benefit women. Aside from region, rurality, and wealth quintile, our analysis showed that women's age and literacy are also positively associated with decision-making power.

Use of Antenatal Care

The PDHS 2017-2018 data additionally provide information on women's use of antenatal care (ANC). DHS restricts this questionnaire to women who have given birth within the five years preceding the survey and concentrates on the women's most recent pregnancy. Close to 8,300 women were interviewed for this module.

Figures 4-6 demonstrate that most Pakistani women in every region and in all five income quintiles had an ANC check-up with a doctor, nurse, or certified midwife at least once during their most recent pregnancy. Regionally, this varies from 56% in Balochistan to 93% in Islamabad Capital Territory. A 2016 study from Sindh found that while the median timing of the first prenatal visit is at 3 months for wealthier women, it is 7 months for poorer women. Regardless of wealth, however, women who saw a doctor earlier were more likely to have follow-up appointments and to meet the recommended number of ANC check-ups (Agha and Tappis 2016). Women commonly receive information or counseling on pregnancy and nursing-related nutritional and dietary needs during ANC appointments. Because most women throughout all regions and wealth quintiles in Pakistan make use of ANC check-ups, these visits provide a critical avenue for health care professionals to inform women on the benefits of adequate nutrition or supplements for both herself and her child.

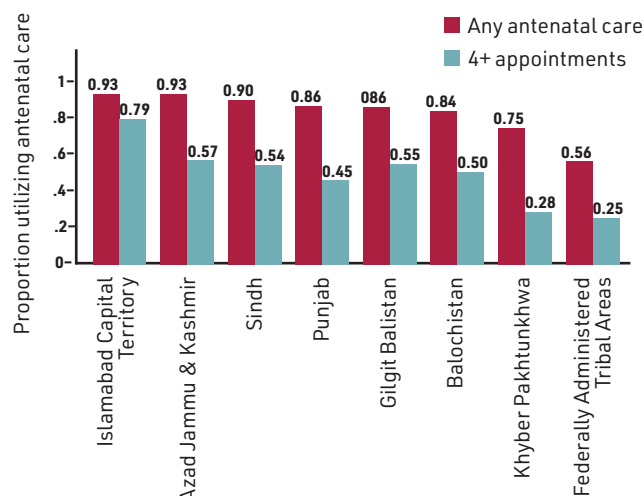
Figure 4. Variation in Antenatal Care: Urban vs. Rural



Source: Authors' analysis of 2017-18 PDHS

Figure 5. Regional Variation in Antenatal Care

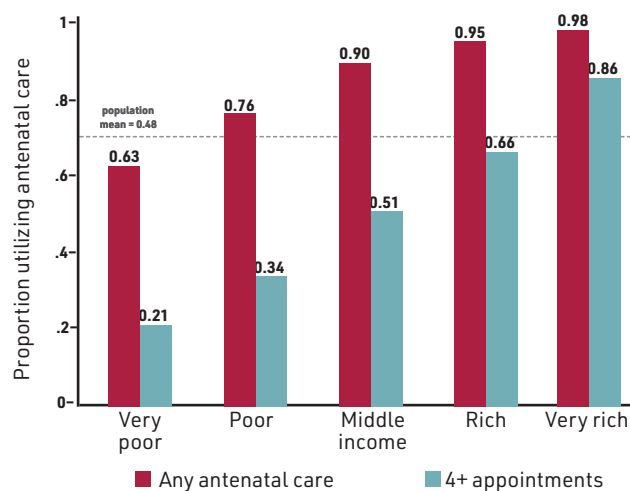
Respondent had antenatal visit(s) with a doctor, nurse, or midwife during most recent pregnancy



Source: Authors' analysis of 2017-18 PDHS

Figure 6. Variation in Antenatal Care by Income Quintile

Respondent had antenatal visit(s) with a doctor, nurse, or midwife during most recent pregnancy



Source: Authors' analysis of 2017-18 PDHS

Expenditure/Consumption Patterns

Interventions related to nutrition should be informed by data on prevalent expenditure and consumption patterns across geographic groups and income quintiles. Urban households dedicate just under 1/3 of their total expenditures to food, while for rural households, the food share represents over 40% of total spending (out of average lower incomes). Milk, fruits and vegetables, and wheat products constitute a substantial proportion of food expenditures across income quintiles.

Table 1. Total monthly household expenditures by urban/rural and income quintile

Average monthly household expenditures (PKR) (2018-19)	Urban	Rural
Quintile 1	23,515	21,430
Quintile 2	29,130	26,587
Quintile 3	32,931	29,389
Quintile 4	38,689	34,491
Quintile 5	64,681	47,236

Source: Pakistan Bureau of Statistics' Household Integrated Economic Survey (HIES) 2018-2019

Table 2. Percent of monthly consumption expenditure by spending category and urban/rural

% of monthly consumption expenditure	Urban	Rural
Food & non-alcoholic beverages	30.64	41.13
Alcoholic beverages & tobacco	0.81	1.13
Clothing and foot wear	6.85	8.14
Housing, water, electricity, gas, and other	28.62	19.20
Furnishings, household equipment and maintenance	3.09	3.00
Health	2.63	3.87
Transport	6.89	6.76
Communication	2.14	1.74
Recreation and Culture	1.06	1.31
Education	5.50	2.56
Restaurants and Hotels	6.56	6.16
Misc.	5.22	5.09

Source: Pakistan Bureau of Statistics' Household Integrated Economic Survey (HIES) 2018-2019

Table 3. Percent monthly food expenditures by food group, urban/rural, and income quintile

Food items	Urban	Rural	Q1	Q2	Q3	Q4	Q5
Wheat and wheat flour	8.98	12.84	18.28	14.98	12.72	10.28	6.77
Rice and rice flour	3.76	3.99	4.33	4.34	4.28	3.94	3.29
Pulses, split and whole	1.79	2.10	2.43	2.26	2.16	2.01	1.54
Bread and other cereals	2.33	2.02	1.88	1.99	2.04	2.11	2.40
Vegetable ghee	3.02	5.75	7.73	6.62	5.52	4.25	2.28
Tea (green and black)	2.53	3.01	3.59	3.30	3.03	2.71	2.25
Milk, fresh and boiled	21.24	23.96	19.56	22.15	23.36	24.52	22.79
Milk (tetra pack)	1.36	0.63	0.67	0.82	0.76	0.79	1.30
Mutton	3.12	1.53	0.53	0.83	1.25	1.77	4.23
Beef	3.52	2.87	1.81	2.66	3.16	3.59	3.53
Chicken	3.68	3.52	3.35	3.45	3.61	3.73	3.61
Fish	0.89	0.54	0.50	0.50	0.16	0.66	0.90
Fruits (fresh and dried)	5.51	4.26	2.45	3.25	3.93	4.90	6.72
Vegetables	7.88	9.24	10.81	10.05	9.34	8.55	6.97
Salt	0.16	0.16	0.19	0.17	0.17	0.16	0.14
Spices	1.99	1.64	1.58	1.72	1.74	1.84	1.89
Sugar (mill/desi)	2.61	3.82	4.97	4.17	3.68	3.16	2.23
Gur & shakar	0.12	0.33	0.36	0.35	0.27	0.21	0.16
Beverages	2.20	1.36	0.89	1.11	1.35	1.69	2.50
Hotel and restaurants	8.95	4.08	3.71	3.91	4.51	5.40	9.45

Source: Pakistan Bureau of Statistics' Household Integrated Economic Survey (HIES) 2018-2019

2. GENDER NORMS AND PRACTICES IN PAKISTAN

A primary driver of shaping the lived experiences of women and men in Pakistan is the overarching and deeply embedded construct of gender. Non-conformity with patriarchal cultural practices may be critically viewed as 'westernization.' (Shaheed 1986). An example of gender norms is a colloquial idiom stating that the value or honor of a man is equivalent to his ownership of "zar (wealth/money), zan (woman), and zamin (land)" (Chauhan 2014). Women's ascribed roles and responsibilities revolve around reproductive and household care work, while men's are centered on productive and remunerated work in the public sphere.

There is significant provincial, ethnic/tribal, and socio-economic diversity of gender norms in Pakistan. For example, in Balochistan and Khyber Pakhtunkhwa (KP), there are stronger and more deeply entrenched gender roles as opposed to Punjab; men in Balochistan feel that asking women in their households to assist them with household finances is dishonorable. In Punjab, however, men are receptive to taking financial aid from women (IRC 2020). Similarly, roles may be widely different for women across socioeconomic groups.

Masculinity and Femininity

Masculinity in Pakistan is largely centered on an affirmative foundation of a man's productive role. Behavioral traits ascribed to masculinity in Pakistan include aggression, family provider, source of shelter and security, decision-maker, bravery, strength, authority, exerting control over family, honor, and independence (Aurat Foundation 2016). The idea of *kafalat* (sustain/maintain) is often used to reaffirm women's secondary position in society. A *kafeel* can be understood as someone who is entrusted with the care of another; they are responsible for their well-being

and providing them with resources and protection. A father is the *kafeel* for the children and wife to provide for and protect them, which implicitly reduces women's agency and reinforces patriarchal notions of women being the property of men. *However, the role of a kafeel can be used as an entry point to improve women's nutrition.* Recent research suggests that norms around men's role as protectors, providers, and head of the household can be shifted away from male *prerogative* and toward male *responsibility*. This suggests the possibility of building on husbands' accountability for their wives' nutritional needs as part of a progressive intervention or supplement marketing campaign (UNFPA 2021).

Femininity norms in Pakistan are characterized by caring, loving, submissive, gentle, tolerant, virtuous, painstaking, flexible, well-tempered, hospitable, soft-spoken, non-argumentative, modest, maternal, and nurturing (UNFPA 2021). Failure to conform with these largely passive and relational traits runs the risk of being judged as a "lesser woman." Particular narratives that are often exclusively applied to women include the fact that having children and building families is a divine gift and needs to be cherished, and that pain and hardship has to be accepted with patience and virtue (Mustafa et al. 2020). Therefore, women are often told to have *sabr* (patience or endurance). This is consistent with the desirable feminine traits of being non-argumentative, resigned to accept one's fate, and tolerant.

There are at least two important implications of these gender norms for nutrition interventions. First, it may be possible to reframe the masculine provider norm to educate men about the importance of maternal nutrition for women's health as well as birth outcomes. Second, to avoid contradiction with prevailing feminine gender norms, interventions will need to find a way to advocate for pregnant and breastfeeding women's need for/right to nutritious food without associating the product with strength or independence, which could generate rejection by gatekeepers.

Household structures and dynamics

As evidenced in the PDHS data analysis above, Pakistani husbands are the primary decision-makers, while wives are largely responsible for household tasks (Ibraz 1993). Some households comprise joint family systems, with co-resident parents and/or siblings from the husband's natal family. Within such households, elders are often given a revered position in terms of care, resources, respect and ability to influence and make decisions. The age hierarchy can be an entry point for women in decision-making, as older women often exercise greater agency than younger women. A woman's marital and maternal status also influences her ability to participate in household decisions, and daughters-in-law can be particularly disenfranchised, especially early in marriage and in the absence of bearing sons (Mahmood 2002). Relationships with mothers-in-law have been found to be associated with better diet quality among young women in Nepal, even more important than relationship quality with husbands (Diamond-Smith et al. 2020).

New research by Mustafa et al. (2020) offers important insights into barriers and opportunities for designing maternal health interventions in a strongly patriarchal and religious social context. Their data from urban and rural women in the lowest three wealth quintiles show the extremely low level of agency in decisions pertaining to their own well-being, particularly regarding their reproductive health. As in other South Asian countries, and clear in the PDHS data above as well, these authors also found that husbands and mothers-in-law are primary decision-makers, including about women's childbirth plans, diet and contraceptive use. Mothers-in-law in particular wield enormous influence, including accompanying daughters-in-law to ANC visits and interacting with health providers on their behalf. The research also confirms the severe mobility constraints faced by pregnant women, where a decision to leave the house could only be made by the husband or the mother-in-law, and women had to be accompanied by their mothers-in-law or other female relatives, or husbands.

Understanding household structures and dynamics is key to designing interventions in this context. For example, visual representations of household life on product labels and promotional materials will need to reflect local practices with respect to who shops and eats together. Likewise, there may be scope to foster household support for otherwise disenfranchised pregnant and breastfeeding women: for example, by emphasizing husbands' care for their wives, and strengthening the relationship between mothers-in-law and daughters-in-law (*saas-bahu*). A recent study in Nepal highlighted the importance of shifting husband's role from provider to caregiver when designing interventions (Morrison et al. 2021).

Gender and food consumption during pregnancy

Food consumption in Pakistani households is a medium through which power can be exercised (Chowbey 2017). Common food-related norms and practices include elders eating first, bigger portions or 'neater' food saved for men, and sons given preference over daughters. Gender-specific beliefs include "women don't need to eat enough," "women need to eat less (or less than men)," and "women don't have any specific dietary needs." Such beliefs can translate into reduced food for women within households (Chatterjee and Lambert 1989, Nazli and Hamid 1999). Given women's limited agency with respect to food purchases and consumption, intervention efforts must appeal to both women and their household in terms of granting her access to that food.

Pregnancy is commonly treated as an inclusive family experience, with female family members and health providers guiding women through the antenatal period, birth, and postpartum stage. A qualitative study on pregnancy care-seeking in Pakistan documents the importance of husbands and mothers-in-law as decision-makers and chaperones with respect to interface with antenatal services (Rehman and Qureshi 2016). This includes strong influence over pregnant and breastfeeding women's diet.

Many pregnant women, their female relatives, and local health providers lack correct information on pregnancy-related issues, including nutrition. For example, it is common to eat coal, chalk, mud/soil and raw rice when nauseous. It is also believed that eating certain things can lead to a miscarriage or change the sex of the baby (Mustafa et al. 2020). Pregnant women are often encouraged to increase consumption of *ghee* (clarified butter) and milk during pregnancy, and other dietary restrictions may be imposed, such as women in rural Punjab being told to eat coconut to produce fair-complexioned babies, or red kidney beans to produce intelligent babies (Qamar 2012). In general terms, foods that are perceived as "natural" (unprocessed) are preferred for women during pregnancy and breastfeeding. These beliefs and practices demonstrate that Pakistani families do recognize distinct nutritional needs during pregnancy, which can serve as a foundation for promoting a safe and affordable nutritional supplement that can aid in the overall health of the mother and child.

Cultural practices as potential entry points for intervention

Panjeeri

Panjeeri is a locally made dish that consists of dried fruits and desi ghee, both of which are expensive. Supplements could be positioned as a more affordable and “modern” sister product to panjeeri, perhaps invoking tradition in a positive light.

Gaudh Bharai

Gaudh bharai is a local practice of gifting women essentials or other items prior to her birth. Supplement marketing could include the suggestion that the product is an appropriate gaudh bharai gift.

Chilla

A commonly practiced tradition across almost all groups of people (rural, urban, various religious or ethnic groups etc.) is the period of *chilla*. Chilla is a post-natal practice, whereby the woman relocates to her parental home for approximately 40 days after giving birth. This practice is usually said to provide women with support and respite from household duties so that she can recover from the birth. If leveraged correctly, supplements could be placed within the context of the chilla in terms of preparing the family home for the new mother (positioning supplements as an item for chilla/recovery of women from birthing). This also highlights the need to engage the woman’s natal home in any intervention.

Islamic pregnancy therapies

One of the most prevalent and widely practiced forms of non-western maternal health treatment in Pakistan is religious or spiritual therapy based on the Islamic faith. Religious therapy involves going to a spiritual practitioner, called a *pir*, who recites Islamic religious verses on water, jaggery (brown sugar) or black pepper, and gives it to the pregnant woman to eat or drink. Often a *taveez* (amulet), containing verses from the Quran, is also given to the pregnant woman to wear until delivery and is then passed on to the newborn. Targeting the faith healers (*babji*) who wield great authority and power and who pregnant women visit almost monthly for the renewal of the *taveez* may be a promising avenue for changing nutrition behavior or supplement uptake.

3. MNCH INTERVENTIONS INVOLVING HUSBANDS IN PAKISTAN AND SOUTH ASIA

It is abundantly clear that any successful maternal health intervention in Pakistan, including nutritional supplementation, must engage the household members who govern the relevant decision-making and access to care. As Mustafa et al. (2020) state, many Pakistani women have a “total lack of control ... over their reproductive and sexual bodies ... Designing to include stakeholders who do have control over a woman’s body is likely to have a direct impact on her reproductive health.” They also recognize that acknowledging and respecting the authority of husbands and mothers-in-law “runs the danger of propagating patriarchal frameworks ... by further enabling the power structures within the homes.”

A number of interventions targeting pregnant women and engaging household members have demonstrated success at improving nutrition, though many have waited until pregnancy to intervene. Here we indicate a sample of such programmatic evidence.

Pakistan specific

Food/nutrition

A systematic review of interventions to improve nutrition coverage in South Asia (of which one was from Pakistan) found that those that engaged family members were among the most effective (Goudet et al. 2018) during pregnancy, and after delivery had far-reaching consequences for maternal health and child survival, growth, and development. In South Asia, the high prevalence of short stature, thinness, and anaemia among women of reproductive age underlie the high prevalence of child undernutrition in the region, whereas overweight and obesity are rising concerns. A systematic review of evidence (2000–2017), which also involved husbands, found that groups that also engaged husbands had more success in increasing iron folic acid intake and women having improved diet in pregnancy, compared to no intervention and intervention with women alone (Midhet and Becker 2010).

Maternal and reproductive health

Super Abbu is a voice-based entertainment to spread a maternal health hotline for dads in Pakistan to give them a resource to ask their questions about maternal and child health. In its first two months operating, it received over 39,000 calls (Axelsen 2019). Although there are not yet data on outcomes, the researchers found that their hotline outperformed conventional advertisement channels including paper flyers, posters, radio, TV, social media and robocalls (Naseem et al. 2020). An analysis of a mobile health intervention to reduce maternal mortality in Pakistan found that household dynamics (specifically husband and mother-in-law) mediated the effects of the intervention (Batool et al. 2017).

Other South Asian studies

Food/nutrition

Factors surrounding decision-making, relationships between household members, and bargaining power were key for women’s nutrition in South Asia in a recent systematic review, highlighting the potential to be gained through engaging partners or family members (Harris-Fry et al. 2017). Household interventions in Nepal involving women, their husbands, and their in-laws have demonstrated improved livelihood for young married women, increased earnings and savings, and reduced food insecurity. Two recent interventions in Nepal engaged pregnant women, their husbands, and their mothers-in-law. One was an educational intervention leveraged by interpersonal peer communication to successfully promote improved household responses to maternal emergencies and increased knowledge of nutritious foods (McPherson et al. 2010). Another was a formative study that identified a lack of household awareness of nutrient-rich foods and of management for iron folic acid supplement side effects, as well as husbands’ mistrust in health care, as important barriers to address (Morrison et al. 2021).

Maternal and reproductive health

Evidence generated by a 10-year intervention in India addressing comparable risks of early marriage, rapid pregnancy, and inequitable gender norms affirmed that engaging both husbands and wives results in improved contraceptive uptake and use (Subramanian et al. 2018). A systematic review of men's engagement in antenatal care results in increased skilled birth attendance, institutional delivery and postnatal care uptake (8/17 studies were from Southeast Asia but none from Pakistan) (Suandi et al. 2020). Other studies have used household-focused education for both husbands and wives and found this to be important for improving pregnancy-related health behaviors (Simkhada et al. 2006; Simkhada et al. 2010). An RCT in Bangladesh that had an arm with group education

for husbands about nutrition in pregnancy led to increased knowledge and awareness among husbands and this contributed to improved maternal diet and supplement consumption (Nguyen et al. 2018). In India, there was an effort to integrate male community health workers alongside female community health workers to improve maternal and reproductive health (Fotso et al. 2015). The CHARM study in India provided contraceptive counseling to couples and found that men in the intervention group had more equitable norms (no results yet on contraceptive use) (Fleming et al. 2018). As always, critical exploration of husband involvement is key, because there may be unintended consequences, as was found in one study in Nepal (Mullany et al. 2007). A new project in India, RANI, is focused on changing norms around anemia and iron consumption and involves targeting men (Yilma et al. 2020).

References

- Agha, S., Tappis, H. The timing of antenatal care initiation and the content of care in Sindh, Pakistan. *BMC Pregnancy Childbirth* 16, 190 (2016). <https://doi.org/10.1186/s12884-016-0979-8>
- Asian Development Bank (2000). Women in Pakistan Country Briefing Paper.
- Aurat Foundation (2016). Comparative Analysis of Masculinity and Femininity in Pakistan.
- Axelsen, A. (2019, March). In Pakistan, dads taking part in maternal care could save lives. *APolitical*. <https://apolitical.co/solution-articles/en/in-pakistan-dads-taking-part-in-maternal-care-could-save-lives>
- Aziz Ali S., Feroz A., Abbasi Z., Aziz Ali S., Allana A., Hambidge KM., et al. (2021). Perceptions of women, their husbands and healthcare providers about anemia in rural Pakistan: Findings from a qualitative exploratory study. *PLoS ONE* 16(4): e0249360
- Batool, A., Razaq, S., Javaid, M., Fatima, B., & Toyama, K. (2017). Maternal Complications: Nuances in Mobile Interventions for Maternal Health in Urban Pakistan. In *Proceedings of the Ninth International Conference on Information and Communication Technologies and Development* (pp. 1–12). New York, NY, USA: Association for Computing Machinery. <https://doi.org/10.1145/3136560.3136573>
- Chatterjee M., Lambert J. Women and Nutrition: Reflections from India and Pakistan. *Food and Nutrition Bulletin*. 1989;11(4):1–16. doi:10.1177/156482658901100421
- Chauhan, K. (2014). Patriarchal Pakistan: Women's Representation, Access to Resources, and Institutional Practices. In K. Chauhan (Ed.), *Gender Inequality in the Public Sector in Pakistan: Representation and Distribution of Resources* (pp. 57–87). New York: Palgrave Macmillan US. https://doi.org/10.1057/9781137426475_4
- Chowbey, Punita. (2017). What is Food Without Love? The Micro-politics of Food Practices Among South Asians in Britain, India, and Pakistan. <https://doi.org/360780417726958>
- Connell, R. W. (1998). Masculinities and Globalization. *Men and Masculinities*, 1(1), 3–23. <https://doi.org/10.1177/1097184X98001001001>
- Diamond-Smith, N., Shieh, J., Puri, M., & Weiser, S. (2020). Food insecurity and low access to high-quality food for preconception women in Nepal: The importance of household relationships. *Public Health Nutrition*, 23(15), 2737–2745. doi:10.1017/S1368980020000579
- Fatmi, Z., Gulzar, A., & Kazi, A. (2005). Maternal and newborn care: Practices and beliefs of traditional birth attendants in Sindh, Pakistan. *Eastern Mediterranean Health Journal*, 11(2018-01-02), 226–234.
- Fleming, P. J., Silverman, J., Ghule, M., Ritter, J., Battala, M., Velhal, G., et al. (2018). Can a Gender Equity and Family Planning Intervention for Men Change Their Gender Ideology? Results from the CHARM Intervention in Rural India. *Studies in Family Planning*, 49(1), 41–56. <https://doi.org/10.1111/sifp.12047>
- Fotso, J. C., Higgins-Steele, A., & Mohanty, S. (2015). Male engagement as a strategy to improve utilization and community-based delivery of maternal, newborn and child health services: evidence from an intervention in Odisha, India. *BMC Health Services Research*, 15(1), S5. <https://doi.org/10.1186/1472-6963-15-S1-S5>
- Goudet, S., Murira, Z., Torlesse, H., Hatchard, J., & Busch-Hallen, J. (2018). Effectiveness of programme approaches to improve the coverage of maternal nutrition interventions in South Asia. *Maternal & Child Nutrition*, 14(S4), e12699. <https://doi.org/10.1111/mcn.12699>
- Harris-Fry, H., Shrestha, N., Costello, A., & Saville, N. M. (2017). Determinants of intra-household food allocation between adults in South Asia – a systematic review. *International Journal for Equity in Health*, 16. <https://doi.org/10.1186/s12939-017-0603-1>
- Ibrahim, T. (1993). The Cultural Context of Women's Productive Invisibility: A Case Study of a Pakistani Village. *The Pakistan Development Review*, 32(1), 101–125.
- IRC (2020). Comprehensive Gender Analysis of Pakistan Programme.
- Mahmood, N. (2002). Women's Role in Domestic Decision-making in Pakistan: Implications for Reproductive Behaviour. *The Pakistan Development Review*, 41(2), 121–148
- McPherson, R. A., Tamang, J., Hodgins, S., Pathak, L. R., Silwal, R. C., Baqui, A. H., & Winch, P. J. (2010). Process evaluation of a community-based intervention promoting multiple maternal and neonatal care practices in rural Nepal, 15.
- Midhet, F., & Becker, S. (2010). Impact of community-based interventions on maternal and neonatal health indicators: Results from a community randomized trial in rural Balochistan, Pakistan. *Reproductive Health*, 7(1), 30. <https://doi.org/10.1186/1742-4755-7-30>
- Morrison, J., Giri, R., Arjyal, A., Kharel, C., Harris-Fry, H., James, P., et al. (2021). Addressing anaemia in pregnancy in rural plains Nepal: A qualitative, formative study. *Maternal & Child Nutrition*, 17(S1), e13170. <https://doi.org/10.1111/mcn.13170>
- Mullany, B. C., Becker, S., & Hindin, M. J. (2007). The impact of including husbands in antenatal health education services on maternal health practices in urban Nepal: results from a randomized controlled trial. *Health Education Research*, 22(2), 166–176. <https://doi.org/10.1093/her/cyl060>
- Mumtaz, Z. and Salway, S. (2009). Understanding gendered influences on women's reproductive health in Pakistan: Moving beyond the autonomy paradigm. *Social Science and Medicine*, 68(7), 1349–1356.
- Mustafa, M., Batool, A., Fatima, B., Nawaz, F., Toyama, K., & Raza, A. A. (2020). Patriarchy, Maternal Health and Spiritual Healing: Designing Maternal Health Interventions in Pakistan. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1–13). New York, NY, USA: Association for Computing Machinery. <https://doi.org/10.1145/3313831.3376294> Accessed 12 August 2021
- Naseem, M., Saleem, B., St-Onge Ahmad, S., Chen, J., & Raza, A. A. (2020). An Empirical Comparison of Technologically Mediated Advertising in Under-connected Populations. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1–13). New York, NY, USA: Association for Computing Machinery. <https://doi.org/10.1145/3313831.3376683> Accessed 12 August 2021
- National Institute of Population Studies (NIPS) [Pakistan] and ICF. 2019. 2017–18 Pakistan Demographic and Health Survey. Islamabad, Pakistan, and Rockville, Maryland, USA: NIPS and ICF.
- Nazli, H., Hamid, S. 1999. Concerns of Food Security, Role of Gender, and Intrahousehold Dynamics in Pakistan, *PIDE-Working Papers* 1999:175, Pakistan Institute of Development Economics.

-
- Nguyen, P. H., Frongillo, E. A., Sanghvi, T., Wable, G., Mahmud, Z., Tran, L. M., et al. (2018). Engagement of Husbands in a Maternal Nutrition Program Substantially Contributed to Greater Intake of Micronutrient Supplements and Dietary Diversity during Pregnancy: Results of a Cluster-Randomized Program Evaluation in Bangladesh. *The Journal of Nutrition*, 148(8), 1352–1363. <https://doi.org/10.1093/jn/nxy090>
- Pakistan Bureau of Statistics, Government of Pakistan (2020). Household Integrated Economic Survey (HIES) 2018-19
- Qamar, A. H. (2012). Pregnancy Myths and Early Childcare: Research Reflections from the Rural Punjab, Pakistan. *International Journal of Humanities and Social Sciences*, 6(4), 677–682.
- Rehman S., Qureshi A. *Int. J. Community Med. Public Health (Gujarat)* 2016; 3(11): 3252-3255.
- Shaheed, F. (1986). The Cultural Articulation of Patriarchy: Legal Systems, Islam and Women. *Comparative Studies of South Asia, Africa and the Middle East*, 6(1), 38–44. <https://doi.org/10.1215/07323867-6-1-38>
- Simkhada, B., van Teijlingen, E. R., Porter, M., & Simkhada, P. (2006). Major problems and key issues in Maternal Health in Nepal. *Kathmandu University medical journal (KUMJ)*, 4(2), 258–263.
- Simkhada, B., Porter, M. A., & van Teijlingen, E. R. (2010). The role of mothers-in-law in antenatal care decision-making in Nepal: a qualitative study. *BMC pregnancy and childbirth*, 10, 34. <https://doi.org/10.1186/1471-2393-10-34>
- Suandi, D., Williams, P., & Bhattacharya, S. (2020). Does involving male partners in antenatal care improve healthcare utilisation? Systematic review and meta-analysis of the published literature from low- and middle-income countries. *International Health*, 12(5), 484–498. <https://doi.org/10.1093/inthealth/ihz073>
- Subramanian, L., Simon, C., & Daniel, E. E. (2018). Increasing Contraceptive Use Among Young Married Couples in Bihar, India: Evidence From a Decade of Implementation of the PRACHAR Project. *Global Health: Science and Practice*, 6(2), 330–344. <https://doi.org/10.9745/GHSP-D-17-00440>
- UNFPA (2021). Gender and Diversity Analysis of Sehat Mand Khandan
- Yilma, H., Sedlander, E., Rimal, R. N., Pant, I., Munjral, A., & Mohanty, S. (2020). The reduction in anemia through normative innovations (RANI) project: study protocol for a cluster randomized controlled trial in Odisha, India. *BMC Public Health*, 20(1), 203. <https://doi.org/10.1186/s12889-020-8271-2>
-

BILL & MELINDA
GATES *foundation*