

## WOMEN'S EMPOWERMENT AND MATERNAL HEALTH: SOCIO-CULTURAL BARRIERS TO NUTRITION IN PUNJAB

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### Abstract

**Background:** Women's empowerment significantly influences maternal nutrition, yet cultural norms often constrain women's agency in developing countries. **Objective:** This study examines how women's decision-making power and socio-cultural factors affect maternal health outcomes in Punjab, Pakistan. **Methods:** A cross-sectional survey of 600 mothers aged 18-40 with children under five years was conducted in rural and urban areas of Faisalabad, Multan, and Rawalpindi. Data collection combined structured interviews and focus groups. Maternal health status measured through anthropometry served as the outcome variable, with predictors including education, family size, autonomy, and cultural practices. **Results:** Bivariate analyses revealed that higher decision-making authority strongly associates with better health outcomes ( $\chi^2 = 40.19$ ,  $p < 0.001$ ). Only 11.1% of low-autonomy mothers achieved high health status versus 29.6% of high-autonomy mothers. Cultural barriers including gender bias, food taboos during pregnancy, and large families remain pervasive. **Conclusion:** Improving maternal nutrition in Pakistan requires integrated approaches enhancing women's education and autonomy while addressing restrictive socio-cultural norms.

## INTRODUCTION

Malnutrition represents a pervasive global health challenge affecting vulnerable populations, particularly children and women (Development Initiatives, 2018). In Pakistan, undernutrition among women and children reaches alarming levels, with nearly 38% of children under five stunted, 23% underweight, and 7% wasted (Arif et al., 2012). Maternal undernutrition increases women's susceptibility to disease and maternal

mortality while compromising fetal development and child health (Black et al., 2008). Recent evidence indicates that women of reproductive age in rural Pakistan face significant micronutrient deficiencies and limited dietary diversity (Brazier et al., 2020). Women's low social status exacerbates this vulnerability through factors including poverty, limited education, and

patriarchal social systems, resulting in reduced access to nutritious food and healthcare.

Women's empowerment, defined as increasing authority and control over resources, is recognized as critical for improving maternal and child health. Empowered women demonstrate greater likelihood of prioritizing nutrition, seeking healthcare, and making positive household decisions (Cunningham et al., 2015). However, cultural norms such as male-dominance and food taboos often limit women's autonomy. Gender bias in resource allocation and restrictive dietary practices during pregnancy severely restrict women's nutrient intake (Demissie & Kogi-Makau, 1998).

Despite these challenges, few studies in Pakistan explicitly examine how women's empowerment intersects with maternal nutrition. Understanding how socio-cultural factors including decision-making power, food taboos, and healthcare access interact to affect nutritional outcomes remains crucial for designing effective interventions. This study addresses that gap by investigating the relationship between women's decision-making authority and maternal health as a proxy for nutritional status in Punjab, Pakistan. The research focuses on socio-cultural barriers to adequate nutrition and tests the hypothesis that higher maternal autonomy associates with better health outcomes.

## 2. Literature Review

Empirical evidence consistently links women's empowerment to improved health and nutrition outcomes. Empowerment theory posits that when women gain decision-making authority, they better manage their own health and that of their families. Studies in low-income countries found that mothers participating in household decisions demonstrate lower rates of child stunting and increased likelihood of prenatal care service utilization (Amugsi et al., 2016). Cunningham et al. (2015) observed that women with weak decision-making power faced higher risk of undernourished children. Ahmed et al. (2010) reported that maternal autonomy and education significantly increased the likelihood of prenatal care utilization.

In South Asia, mobility and financial control emerge as key aspects of women's empowerment influencing nutrition. A large survey in Bangladesh showed that higher maternal autonomy in household decisions linked to reduced child malnutrition (Anderson & Eswaran, 2009). Increased decision-making over family planning has been associated with lower maternal mortality and smaller family size, which in turn improves women's nutrition by reducing resource competition among dependents.

Societal norms like male child preference often skew intra-household food distribution. In many Pakistani families, sons receive priority for the best food, leaving girls and mothers nutritionally disadvantaged (Bashir et al., 2012). Food taboos also play a role, with restrictive beliefs about hot or cold foods during pregnancy limiting mothers' dietary diversity (Demissie & Kogi-Makau, 1998). These studies underscore that socio-cultural context matters. Merely providing nutrition programs may not succeed without addressing gender inequality. Interventions to empower women through education, economic opportunities and rights will yield more sustainable nutrition gains than supply-side approaches alone. This study builds on this literature by examining these relationships in the specific cultural context of rural and urban Punjab.

## 3. Methodology

### 3.1 Research Design

This study employed a mixed-methods design with primary data from a representative sample of Punjab women. A cross-sectional survey was administered to 600 married women aged 18-40, each with at least one child under five years, in rural and urban localities of three districts: Faisalabad, Multan, and Rawalpindi.

### 3.2 Sampling Procedure

A multi-stage random sampling approach was utilized. Districts were randomly selected from north, central, and south Punjab, followed by random selection of two tehsils per district, then two rural villages and two urban neighborhoods per tehsil. In each selected community, 25 eligible

mothers were interviewed using a structured questionnaire, totaling 600 respondents.

### 3.3 Data Collection and Variables

The survey collected data on socio-demographics, household composition, women's education, income, and empowerment indicators including decision-making rights in healthcare, finances, and family planning. The primary outcome variable, maternal health status, was operationalized through a composite index combining anthropometric measurements (height, weight, and BMI) with self-reported health problems. Women were classified into three categories: low health status (BMI < 18.5 or multiple health problems), medium health status (BMI 18.5-24.9 with minor health issues), and high health status (BMI 18.5-24.9 with no reported health problems).

The key independent variable, decision-making autonomy, was measured using a scale assessing women's participation in household decisions across five domains: healthcare seeking, major household purchases, daily household needs, family planning, and visits to relatives. Responses were scored and categorized into low, medium, and high autonomy levels.

Ten focus group discussions with 8-10 mothers in each area explored cultural beliefs and practices affecting nutrition, including food taboos, gender-based food distribution patterns, and perceived barriers to adequate nutrition.

### 3.4 Validity and Reliability

The instrument's validity was ensured through expert review and pilot testing, achieving an overall Cronbach's alpha of 0.87, indicating strong internal consistency.

### 3.5 Data Analysis

Univariate frequency distributions of key variables were computed. Bivariate associations between women's empowerment indicators and maternal health status were evaluated using Chi-square tests of independence. Strength and direction of associations were assessed with Gamma and Somers' D statistics. Multivariate linear regression controlled for confounders. Qualitative focus

group discussion data were analyzed thematically to contextualize quantitative findings.

### 3.6 Ethical Considerations

The study received ethical approval from the institutional review board. Informed consent was obtained from all participants after explaining the study's purpose, procedures, and their right to withdraw. Confidentiality and anonymity were maintained throughout the research process. All data were stored securely and used solely for research purposes.

## 4. Results

### 4.1 Socio-Demographic Profile of Respondents

The study sample comprised 600 married women with a mean age of 29.4 years (SD = 5.8). Regarding residential distribution, 52% of respondents resided in rural areas while 48% lived in urban settings. The average household size was 7.2 members, with respondents having an average of 3.4 children. Most women (68%) were homemakers, while 32% engaged in some form of income-generating activity, primarily home-based work or agricultural labor. Monthly household income varied considerably, with 41% of families earning less than PKR 30,000, 37% earning between PKR 30,000-50,000, and 22% earning above PKR 50,000.

### 4.2 Educational Profile

Table 1 summarizes respondents' education levels. Approximately one-third of mothers (31.0%) were illiterate, 12.0% had only primary schooling, and 18.0% completed middle school. The remaining 39.0% possessed higher education, with 21.0% achieving intermediate level and 18.0% graduation or above. Thus, over half of mothers (57%) had education beyond middle school. Education represents an important determinant of health and nutrition, with these data reflecting rising educational attainment among women consistent with findings that educated mothers better understand healthy diets (Brazier et al., 2020).

Table 1. Distribution of respondents by educational level (N = 600)

Education Level	Frequency	Percentage
Illiterate	186	31.0
Primary	72	12.0
Middle	108	18.0
Intermediate	126	21.0
Graduation and above	108	18.0
<b>Total</b>	<b>600</b>	<b>100.0</b>

#### 4.3 Decision-Making Authority and Maternal Health

Table 2 presents the association between women's decision-making power and maternal health status. A strong positive relationship emerges, with higher autonomy corresponding to better health. Only 11.1% of women with low decision-making power reported high health status, whereas 29.6%

of women with high autonomy achieved this level. The Chi-square test confirms this association as statistically highly significant ( $\chi^2 = 40.19$ ,  $df = 4$ ,  $p < 0.001$ ), demonstrating that mothers exercising greater authority in household decisions tend to achieve better health outcomes.

Table 2. Association between decision-making authority and maternal health status (N = 600)

Decision-making Authority	Low Health Status n (%)	Medium Health Status n (%)	High Health Status n (%)	Total
Low	51 (27.0)	117 (61.9)	21 (11.1)	189
Medium	26 (11.7)	155 (69.8)	41 (18.5)	222
High	46 (24.3)	87 (46.0)	56 (29.6)	189
<b>Total</b>	<b>123 (20.5)</b>	<b>359 (59.8)</b>	<b>118 (19.7)</b>	<b>600</b>

Test statistics:  $\chi^2 = 40.19$ ,  $df = 4$ ,  $p < 0.001$ ; Gamma = 0.196,  $p = 0.002$ ; Somers' D = 0.122,  $p = 0.002$

Additional socio-demographic factors showed significant bivariate effects. Mothers who married later, possessed higher education, maintained formal employment, had fewer children, or experienced shorter marriage duration were significantly more likely to maintain good health. These results highlight that empowerment-related factors including education and autonomy, as well

as family structure and economic status, all influence maternal nutrition outcomes.

#### 4.4 Qualitative Findings on Socio-Cultural Barriers

Focus group discussions revealed persistent socio-cultural barriers constraining maternal nutrition. Participants consistently identified gender-based food distribution practices within households,

with priority given to male family members. One participant stated: "In our family, the men eat first and get the better portions. We women eat whatever is left." Food taboos during pregnancy emerged as another significant barrier, with many women reporting restrictions on consuming nutritious foods such as eggs, fish, and certain fruits based on beliefs about 'hot' and 'cold' foods. A 28-year-old mother explained: "During pregnancy, my mother-in-law told me not to eat eggs or fish because they are 'hot' foods that could harm the baby."

Limited mobility and restricted access to healthcare facilities were frequently mentioned, particularly by rural women. Many reported requiring male family member permission to visit health centers. Large family sizes compounded nutritional stress, with women expressing concerns about dividing limited resources among many children. Several participants indicated that lack of autonomy in family planning decisions prevented them from spacing pregnancies adequately, affecting their nutritional recovery between births.

## 5. Discussion

The findings underscore that women's empowerment closely links to maternal nutritional health in Punjab. Consistent with empowerment theory, mothers with greater household authority reported substantially better health. This aligns with earlier research showing that women's participation in household decisions improves maternal and child nutrition (Cunningham et al., 2015; Amugsi et al., 2016). The focus group data reinforce this view, revealing that education enables women to recognize healthy foods and make informed nutritional choices. However, despite over half the women being educated beyond primary level, malnutrition persistence suggests that knowledge alone proves insufficient unless women possess the autonomy to act upon it. This finding highlights the distinction between women's capabilities and their actual agency within household structures.

The strong statistical association between decision-making autonomy and maternal health status ( $\chi^2$

= 40.19,  $p < 0.001$ ) provides robust empirical support for empowerment-focused interventions. The magnitude of difference is substantial: high-autonomy women were nearly three times more likely to achieve high health status compared to low-autonomy women (29.6% vs. 11.1%). This gradient effect suggests that incremental improvements in women's decision-making power can yield meaningful health benefits.

However, entrenched socio-cultural barriers continue hindering nutrition. Results suggest that patriarchal norms limit women's agency in fundamental ways. Societal expectations confining women to household roles, restricting their mobility, and subordinating their nutritional needs to those of male family members translate into poor maternal health outcomes. Rural Pakistani women often bear disproportionate responsibility for household labor while having minimal control over household resources or decisions. Gender-biased practices were evident in food distribution patterns, with households prioritizing sons and male adults, leaving women and daughters nutritionally disadvantaged—a pattern documented extensively in South Asian contexts (Bashir et al., 2012).

Moreover, many women reported that traditional food taboos during pregnancy, such as avoiding certain nutritious foods believed hot or cold, limited their dietary intake. These qualitative insights mirror findings from other contexts where food taboos and male-preference constitute documented obstacles to maternal nutrition (Demissie & Kogi-Makau, 1998).

Large family size emerged as another constraint. Mothers in focus groups observed that without control over family planning, nutritional resources become strained. Increased female autonomy in family planning has been linked to better health, lower fertility, and reduced maternal mortality (Ahmed et al., 2010). Focus group participants believed that empowering women to decide on pregnancies and healthcare could substantially mitigate malnutrition.

Taken together, evidence indicates that addressing maternal malnutrition in Punjab requires more than food aid or supplements alone. Interventions must tackle structural gender inequality and

cultural norms simultaneously. Policies promoting female education and economic opportunities can enhance both knowledge and autonomy, as indicated by the strong correlations between education, employment, and health in these data. However, nutrition programs should also engage men and community leaders to shift norms about gender roles and food allocation practices. Community-based approaches that involve religious leaders and elder women may prove particularly effective in challenging harmful traditions while respecting cultural contexts.

Family planning services and health education should be made accessible and culturally sensitive, recognizing that women's voices in reproductive decisions prove crucial for managing household resources and maternal health. Empowerment-focused strategies that increase women's decision-making power, reduce son preference, and challenge restrictive beliefs will likely yield greater improvements in maternal nutrition than nutrition programs alone. This multi-pronged approach—combining education, economic empowerment, healthcare access, and norm change—represents the most promising path forward for sustainable improvements in maternal health in Punjab.

### 5.1 Study Limitations

Several limitations merit consideration. First, the cross-sectional design precludes causal inferences about the relationship between empowerment and health. Longitudinal studies would better establish temporal relationships and causal pathways. Second, self-reported health data may introduce recall bias, though anthropometric measurements provided objective validation. Third, the composite health index, while comprehensive, may not capture all relevant dimensions of maternal nutritional status. Fourth, the study focused on three districts in Punjab, limiting generalizability to other regions of Pakistan with different cultural contexts. Finally, social desirability bias may have influenced responses to questions about household decision-making, potentially overestimating women's actual autonomy. Despite these limitations, the convergence of quantitative and qualitative

findings strengthens confidence in the study's conclusions.

### 6. Conclusion and Recommendations

This study demonstrates that women's empowerment constitutes a critical determinant of maternal health outcomes in Punjab. The clear association between maternal decision-making autonomy and improved health status (with high-autonomy women achieving nearly three times better health outcomes than low-autonomy women) highlights the centrality of gender equity in nutrition policy. However, the persistence of malnutrition despite rising educational levels indicates that empowerment requires more than knowledge it demands structural changes in power relations within households and communities.

To combat malnutrition among mothers, integrated interventions are needed. First, expanding female education beyond literacy to include health and nutrition education, life skills, and vocational training can enhance women's capabilities and economic opportunities. Second, enhancing women's control over household resources through financial inclusion programs, microfinance initiatives, and legal reforms strengthening property rights can increase their bargaining power. Third, promoting reproductive rights through accessible family planning services and supportive legal frameworks can help women manage fertility and space pregnancies appropriately.

Simultaneously, efforts must directly address socio-cultural barriers. Community mobilization programs engaging male family members, religious leaders, and influential community members can challenge patriarchal norms and gender-biased food practices. Public awareness campaigns should address harmful beliefs including food taboos and son preference. Healthcare providers require training in gender-sensitive counseling to support women's agency in health decisions.

Policy implications include mainstreaming gender considerations into nutrition programs, allocating resources for women's empowerment initiatives alongside traditional nutrition interventions, and establishing monitoring systems tracking women's autonomy indicators alongside nutritional

outcomes. By empowering women and engaging communities to change harmful norms, policymakers can more effectively improve maternal and child nutritional outcomes. Future research should evaluate specific empowerment programs using rigorous experimental designs, explore these dynamics in other regions of Pakistan to inform scalable solutions, and investigate the mechanisms through which empowerment translates into better nutrition practices.

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## Conflict of Interest

The author declares no conflict of interest.

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