## **IMPACT OF GENDER NORMS ON CHILDREN'S DIETS**

## FINDINGS FROM A SCOPING REVIEW



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### SUMMARY

Children's diets and nutrition are influenced by gender norms and behaviours. Women are primarily responsible for meal provision in most cultures and thus typically play a central role in how and what children eat. Additionally, gender norms can influence how food is allocated within a family, as well as the diet choices older girls and boys make. Lastly, men are commonly viewed as 'breadwinners' who often control household income and thus food purchases. To better understand how these and related norms impact children's diets, this scoping review examines literature on gender issues related to child feeding in low- and middle-income countries. Despite substantial variation in study contexts, the review identified three common thematic pathways linking gender norms and children's dietary outcomes: gendered food allocation practices, degree of maternal autonomy, and the role of men in children's diets. All three pathways are operative within the space that defines how families eat, beginning with household-level food security and ending with individual intake. For example, the construct of 'breadwinner masculinity' may reinforce gendered food allocation practices that favour men's diet quality over children's, while increased maternal autonomy over financial resources may disrupt that paradigm. From a programming perspective, findings suggest the need to systematically identify how these pathways are operating within a target population and to assess whether programme objectives are sensitive to that reality. Leveraging these pathways is critical for programmes working to improve children's diets and nutrition, with important practical implications for nutrition-relevant programming more broadly. Further, where feasible from a political and programme perspective, transformative programming that supports government and other stakeholders to promote a shift away from restrictive gender norms may help swing the pendulum closer to equity.

## **KEY MESSAGES**

- Three broad pathways between gender norms and children's dietary outcomes emerged: Gendered food allocation practices; degree of maternal autonomy; and the role of men in children's diets.
- Income, food availability and access, education (maternal and paternal), ethnic affiliation, social class, and employment status (maternal and paternal) are key moderators of how these pathways are expressed.
- Formative research is critical to identifying how pathways function in a given context. It should be deployed at a project's inception to map gendered areas of responsibility related to childcare and feeding and to inform subsequent engagement strategies tailored to mothers, fathers, and other actors.
- In contexts where there is sufficient political will and project scope permits, a transformational approach that supports equity-promoting activities designed to shift restrictive gender norms should be considered.

## **BACKGROUND AND OBJECTIVE**

Children's nutrition is a gendered issue. Women are commonly viewed as primarily responsible for cooking household meals and are thus considered central to how and what children eat (1–3). Additionally, gender norms can influence how food is allocated within a family unit (4–6)and the food preferences of girls and boys as they get older (7). Lastly, men are commonly viewed as responsible for providing income for household food purchases and sometimes for procuring food itself (6).

GAIN's programmatic work aims to increase the consumption of nutritious, safe food for all people, especially the most vulnerable. Efforts to improve children's diets in low- and middle-income countries (LMICs) include programming to make foods for children safer, more nutritious, and more affordable. Areas of action include behaviour change and demand creation activities aimed at improving child diets, supporting small and medium-sized enterprises that manufacture high-quality, healthy food items that are appropriate for children, and working with government and other partners towards a common agenda to improve children's diets.

To better understand the primary pathways through which gender norms impact children's diets, this scoping review examines recent literature on gender issues related to child feeding in LMICs. It seeks to identify trends that occur within specific populations and cross-culturally. The findings will support increased gender sensitivity across GAIN programmes.

## **METHODOLOGY**

This scoping exercise was not conducted as a comprehensive review of the entire body of research related to gender and children's diets in LMICs. Rather, the aim was to: rapidly assemble a sampling of research articles; review that research to identify patterns of behaviour documented within specific populations and cross-culturally; and map out the most common thematic pathways between gender norms and children's dietary outcomes, based on those patterns.

Articles and reports were identified in March-June 2021, using a variety of keyword combinations<sup>1</sup>. Two online databases, PubMed and Google Scholar, as well as databases of relevant international organisations<sup>2</sup> were used. Studies published between 2000 and 2020 were considered eligible for inclusion. Although articles focusing on LMICs were prioritised, four studies undertaken in high-income countries were included as they provided insights that could reasonably be extrapolated to LMIC settings. In total, the review considered findings from 43 articles. Of the 39 based in LMICs, 5 (13%) focused on LMICs in general or looked at multiple regions; 24 (62%) focused on countries in Sub-Saharan Africa (SSA); and 10 (26%) focused on countries in Asia. Of the included publications, 36 (84%) were published in the past 10 years. Thirty-five (81%) were peer-reviewed journal articles, and three (7%) were from universities or research institutes. In addition, there was one World Bank research paper, two papers from other organisations, one conference report, and one small, non-peer reviewed qualitative study that was included due to the granularity of its findings, including multiple relevant quotes from informant interviews.

<sup>&</sup>lt;sup>1</sup> Complete list of search terms: Child OR children; AND Nutrition OR diets OR "food security" OR food OR feeding OR "infant and young child feeding"/ IYCF OR "complementary feeding" OR "behaviour change communication"; AND Gender, "gender relations", "gender norms", men/masculinities; AND LMIC OR Africa OR Asia OR Latin America

<sup>&</sup>lt;sup>2</sup> International Labour Organization, World Food Programme, Food and Agriculture Organization of the United Nations, UN Women, International Food Policy Research Institute, and Women's Empowerment in Agribusiness Index

## **REVIEW FINDINGS: VIEWING CHILDREN'S DIETS THROUGH A GENDER LENS**

Despite substantial variation in study contexts and regions, a number of links between gender norms and children's dietary outcomes emerged as consistent across review articles. These patterns were organised into three broad thematic pathways: 1) gendered food allocation practices, 2) degree of maternal autonomy, and 3) role of men in children's diets.

Each pathway is a manifestation of broader gender norms and is operative within the space that defines how families eat, beginning with household-level food access and ending with individual intake. This space is often referred to as a 'black box' in terms of nutrition analysis (5), as the difficulty of researching social customs that influence family food decisions has been acknowledged for decades (8). However, these practices may make the difference between a child's dietary intake being adequate or insufficient. Furthermore, it is important to remember that family food decisions and activities comprise the individual food decisions and activities of each family member (and for young children, the decisions of their caregivers), which are themselves influenced by knowledge, beliefs, personal preferences, and social norms.

The discussion below uses review findings to unpack the gender norms that play an important role in the social customs that govern this critical space between household-level food security and child dietary intake. Each thematic pathway is discussed in turn, with findings from individual articles cited throughout.

## **GENDERED FOOD ALLOCATION PRACTICES**

Although the academic literature on intrahousehold food allocation patterns suggests variation between and within geographic regions (9,10), there are a few norms that appear across a wide range of contexts. One of the most frequently cited is the custom of **prioritising men's intake above all other family members,** with subsequent negative impacts for children and women. A second, related practice is the deprioritisation of women's intake, in favour of men, children, or both (see Box 1 for example).

Articles identified in the scoping review cited one or both of these norms in communities from Kenya (11), Ethiopia (12), Nepal (13,14), South Sudan (15), Ghana (16), India (17), and South Africa (18,19). In all circumstances, income poverty and food insecurity increased the severity of allocation inequities,

## BOX 1. MOTHERS DEPRIORITISE THEIR OWN INTAKE TO MAXIMISE THAT OF THEIR CHILDREN IN CAPE TOWN, SOUTH AFRICA

A series of in-depth interviews was conducted with low-income mothers and grandmothers from a small, resource-constrained community in Cape Town. All participants identified income poverty and food insecurity as major drivers of diet decisions within their households, with interviewees curtailing their own intake as necessary to ensure children were fed adequately, as illustrated by these quotations:

'Yes, I dish the food and also say they can have a little first and if they finish it and want more, they can have so that we do not waste. I eat whatever there is left or just a lot of white bread and coffee.' (p. 12)

'The children eat at school in the morning at the feeding scheme. I just eat what I get, or eat a packet of cheap biscuits with tea, as long as the children eat a meal.' (p. 10)

'Sometimes if there is not enough, we will go without as long as the children eat something and not go to bed hungry.' (p. 10)

Source: (19)

with women acting as a 'buffer' (5) for the household in conditions under which food was unaffordable or otherwise difficult to access.

Another widely cited norm is **prioritisation of boys' intake over girls', or vice-versa,** with substantial empirical evidence indicating that boys are more likely to be favoured in South Asian contexts (20–22) and some, though less consistent, evidence that girls are favoured in SSA (23–26). In South Asia, promale bias in diet and nutrition outcomes is widely recognised, with multiple studies citing food allocation and/or growth outcome disparities between girls and boys (5,16). The evidence applies to babies who are still breastfeeding as well as to older children. For example, a study in India found that girls are breastfed for shorter periods than boys and consume less milk (27). Notably, this study used nationally representative data, implying that this norm is widespread across one of the largest, most malnourished, and most heavily populated countries in the world.

In SSA, the evidence is less clear. This is because the data are less consistent and because many of the review studies that reported differences between boys and girls use stunting<sup>3</sup> as their primary means for assessing nutritional adequacy. Because stunting is the result of other factors, such as illness, as well as inadequate dietary intake, analyses that report gender differences based only on this indicator must be interpreted with caution. Tesfaye (23) (Ethiopia), Saaka (26) (Ghana), and Mussa (25)(Malawi) make this point, cautioning that differences in height-for-age Z-scores (HAZ) between girls and boys in SSA should probably not be attributed solely (if at all) to gender bias in terms of food allocation. Instead, they hypothesise that boys may expend more energy and be more 'adventurous', and hence could be more exposed to pathogens and infectious diseases than girls. Similarly, a meta-analysis of

<sup>&</sup>lt;sup>3</sup> As opposed to IYCF indicators, as in many of the South Asian studies.

studies from 10 SSA countries, which found stunting to be consistently higher among boys, hypothesised that boys are more biologically pre-disposed to infection than girls (24). Not surprisingly, all the SSA studies also found that gender disparities were the most pronounced in lower-income, rural households, implying that some combination of income poverty, food insecurity, high exposure to infectious disease agents, and low access to WASH infrastructure are part of the problem.

Regardless of region, there appears to be enormous variation in gendered household food allocation norms within countries and regions depending on income, social status, livelihood, and ethnic or tribal affiliation. Per a 2013 analysis of Dinka communities in South Sudan by Paul et al. (15), this diversity applies not just to food allocation between girls and boys, but also to adults:

While the specific pattern of prioritising children and deprioritising adult women is supported by other work with Dinka communities, its contrast to patterns in other regions is consistent with claims that intrahousehold food allocation is highly context-specific, varying not only across regions, but across income and social class as well...Incorporating assessments of intrahousehold food allocation patterns into needs assessment for food assistance programming, as well as in voucher and cash transfer programs that may occur in food insecure settings, could be an important step in the design of more effective, context-specific program approaches (15, p.9)

As children grow older, desire to conform to conventional constructs of masculinity and femininity may increase. While this review found no direct evidence linking household food allocation practices to food preferences among older children in LMICs, it is inarguable that – around the world - constructs of masculinity and femininity introduced during childhood shape individuals' identities – including their food choices – for years thereafter. Examples include girls' induction to cooking from an early age and encouragement to both genders by family members and society in general to eat foods associated with gendered outcomes (e.g., beauty-promoting foods for girls, strength-promoting foods for boys). In high-income countries, these practices are routinely leveraged to inform marketing campaigns for ultra-processed foods that specifically target girls or boys (28).

## **DEGREE OF MATERNAL AUTONOMY**

Women within a household are more likely than men to influence the nutrition outcomes of their family members due to their typical roles as primary caretakers and mothers. In many LMIC contexts, however, limited maternal autonomy can impact child nutrition by reducing women's capacity to access health services, community-based advice and emotional support, and healthy food.

**Restrictions on physical mobility**, such as *purdah* (practiced in some Muslin and Hindu communities and requiring the physical seclusion of women from public spaces), are perhaps the most fundamental limitations, as these norms prevent women from leaving the house, either entirely or only with a male escort. In countries or regions where these norms are active (e.g., Pakistan, Bangladesh, Northern Nigeria, Afghanistan, India) women are reliant on men for all purchases (29), including food, and may need to negotiate with male members of the household if they would like their children to be eating certain items. As there is substantial empirical evidence that women's expenditures skew more towards healthy foods than men's (30–32), in households where budgets are tight and men have full

## BOX 2. 'PERMISSION TO GO TO THE MARKET' AND 'FINANCIAL AUTONOMY' ARE SIGNIFICANTLY AND INVERSELY ASSOCIATED WITH CHILD STUNTING IN ANDHRA PRADESH

This cross-sectional study used National Family Health Survey data collected in Andhra Pradesh (n=821) to test various hypotheses for why women having permission to go to market was inversely associated with child stunting. These included increased access to information on infant and young-child feeding (IYCF), increased access to advice on healthy foods for older children, and physical access to those foods. Unsurprisingly, in addition to permission to go to market, financial autonomy (defined as a woman's ability to hold money for personal discretionary purchases) was also inversely associated with child stunting. It is likely that restrictive gender norms are less enforced and that women have more say over what their children eat in households where women both have financial autonomy and can go to the market without permission.

Source: (58)

control over what foods are purchased, female caretakers may be at a disadvantage when advocating for the purchase of healthy, high-value foods for their children. (See Box 2 for example).

With respect to infant feeding, restrictions on new mothers' physical mobility may constrain their capacity to access informal support and information exchange with other women. These peer-to-peer interactions can make the difference between a baby being properly breastfed or not and are widely acknowledged as a valuable input in promotion of recommended breastfeeding practices (33).

**Restrictions on maternal access to financial and material resources** are well recognised as constraints on women's capacity to provide a healthy diet for their children and are a key consideration for empirical analyses of the association between women's empowerment and nutrition outcomes (4). In brief, women who are denied access to financial and material resources due to political and social inequities are not in a strong position to advocate for the purchase or production of particular foods. These constraints typically reinforce the food allocation inequities discussed above: In many poor LMIC households, the man earns the money, pays for the food, and is entitled to eat the most highquality diet. When women gain access to income streams, they have greater bargaining power in the household, both in terms of what foods are purchased and who eats what.

Multiple articles from the scoping review considered this paradigm, including studies from Ethiopia (34), China (35), South Africa (19,36), Kenya (37), and Malawi, as well as a cross-sectional study of Demographic and Healthy Survey data from 10 SSA<sup>4</sup> countries that found that, 'in general, likelihood of meeting recommended IYCF criteria was positively associated with the economic dimension of women's empowerment'(38). Two additional studies from SSA – Gilligan et al. (39) (Uganda) and Bezner Kerr et al. (40) (Malawi)– addressed women's bargaining power within an agricultural context, noting that increases in female autonomy with respect to smallholders' crop production decisions is associated with improved dietary diversity for children.

<sup>&</sup>lt;sup>4</sup> Benin, Burkina Faso, Ethiopia, Mali, Niger, Nigeria, Rwanda, Sierra Leone, Uganda, and Zimbabwe

It is important to note that findings on the association between maternal financial autonomy and children's diets were moderated by broader challenges of income poverty and food insecurity. For example, a study of Xhosa caregivers in South Africa (36) cited a complicated mix of traditional beliefs, food insecurity, poverty, and the need to maintain husbands or partners for survival as the main drivers of sub-optimal breastfeeding and complementary feeding practices (see Box 3 for example).

Women who are able to earn an income may also face barriers to providing healthy diets to their children because of competing time demands. This trade-off between increasing women's financial autonomy and subsequently reducing the time they have available for childcare and food preparation is a function of women being traditionally assigned the role of primary (or exclusive) caretaker and meal provider for children. This challenge is well documented in both LMICs and high-income countries and was the focus of review articles from Singapore (41), Vietnam (42), South Africa (19), and Kenya (37). Each of these studies reported that mothers bearing multiple burdens of guilt from being away from their children, exhaustion, and tight budgets routinely defaulted to feeding their children processed foods that were cheap and quick to prepare or procure. For instance, in Hanoi and Singapore (42) the multiple burdens led time-constrained mothers working outside the home to align their food choices with the tastes and preferences of their children. The desire to make their children happy and make the feeding process easier (avoid children's opposition) overrode these women's concerns regarding nutrition. Women reported ignoring the risk of their children becoming overweight so as to cater to their children's tastes.

Women who do not work outside the home often still bear heavy unpaid work burdens because gender norms dictate that they are responsible for the vast majority of household tasks as well as being the primary childcare provider. In particular, in rural agricultural areas household tasks are often time-consuming and may include walking for miles to fetch water and fuel, as well as tending crops and livestock. These burdens are highly relevant when considering optimal complementary feeding

## BOX 3. LOW FINANCIAL AUTONOMY AND CULTURAL TABOOS LEAD TO SUBOPTIMAL IYCF PRACTICES AMONG XHOSA MOTHERS

These quotes from a series of focus groups conducted with new Xhosa mothers demonstrate the difficulties faced by a population of young South African women in terms of current socioeconomic circumstances and traditional beliefs:

'In IsiXhosa culture, soon after delivery, a mother should not be with the husband for up to three months so that she concentrates on feeding the baby as the father may make the milk impure\*. This helps the child feed well, be healthy and will have a beautiful skin. But because of what is happening in the world, the [financial] pressures, I had the fear of losing my husband to other women. Therefore, most young mothers now prefer not to breastfeed their children and [choose instead to] satisfy the needs of their husbands to keep them around (p.10).'

'Because money is not always available and we do not work, we all eat what is available in the house. Chips (niknaks) are cheap to buy, and children love them, so we give them if they do not want to eat other food (p.10).'

'All types of vegetables and fruits are good [for children to eat], but we do not have the money to buy always (p.10).'

\*Traditionally, new Xhosa mothers have been expected to practice abstinence while breastfeeding, as intercourse is believed to make breastmilk impure and dangerous to the baby. Premature weaning thus occurs in an effort to avoid this taboo while simultaneously maintaining the attention of husbands/partners, who provide much-needed income.

Source: (36)

practices, which require multiple small meals being made available at frequent intervals over the course of the day (6).

In addition to the moderating roles of income and food (in)security, most review articles cited education (for both women and men) as a positive correlate to women's bargaining power, and hence to child nutrition outcomes. Equally important, many studies also found that nutrition and health knowledge were critical steps in the pathway between maternal autonomy and positive nutrition outcomes for children (6).

## **ROLE OF MEN IN CHILDREN'S DIETS**

Throughout the world, men are frequently considered responsible for income generation for their families (6). In many contexts, they are also held responsible for the procurement of some or all of a household's food (43,44). These constructs of 'breadwinner masculinity' (44) may indirectly reduce a child's ability to access a healthy diet. This is because, compared to women, men have been shown to invest less in food security and nutrition relative to other household expenditures (45–47). As a result, men's control over income and involvement in food purchases can actually decrease children's access

to healthy foods. This pathway was cited in articles from Kenya (37,44), Ethiopia (48), Ghana (2), South Africa (19,49), Pakistan (29), Uganda (50), Afghanistan (6), Mauritania (6), and Sierra Leone (6).

Implicit in their roles as breadwinners, many cultures exempt men from bearing much – if any – of the burdens commonly associated with housekeeping and childcare. Such exemptions were a common finding of the articles listed above. From a psychosocial perspective, this disconnect may lead to fathers feeling less urgency and accountability regarding whether a child is adequately nourished and thus be less inclined to prioritise children's consumption over other household expenditures (43). There may also be men who would like to take a more active role in their young child's life, including bonding through IYCF, but feel prohibited from doing so due to gender norms. A Kenyan study of barriers and facilitators to reproductive, maternal newborn and child health attributed low levels of male engagement to men's assigned role as primary household earner, as well as related concerns regarding stigmatisation should they participate in child health activities perceived as a 'feminised' sphere of activity (51).

The practice of distancing men from caregiving also has implications for exclusive breastfeeding (EBF), as new mothers may require substantial assistance to breastfeed properly, including help with housework and emotional support. Review findings regarding father's roles within this space were mixed. Some studies focused on the pressure experienced by low-income mothers to wean early so as to return to work because the father was absent, and the mother was the sole income earner (19,37). Other articles focused on the potential of public health messaging, counselling, and other types of behaviour change communication (BCC) to counteract harmful taboos and encourage paternal participation and assistance (1,3,52,53). With respect to BCC in particular, the most comprehensive review article on this topic (54) reported mixed results and emphasised the need to conduct formative research prior to using male engagement strategies, as local gender factors may make such an approach insensitive and ineffective (see Box 4).

As with review findings on the other thematic pathways, food insecurity and income poverty were commonly cited moderators of how breadwinner masculinity is expressed in LMICs. In addition to undermining personal self-worth, the effects of high unemployment, pervasive poverty, and related socio-economic factors on men were repeatedly noted as destabilising to entire family units, as fathers were either completely absent because they could not fulfil their breadwinner roles or were only intermittently present (44). With respect to using male engagement strategies to positively impact children's diets, a recognition of the complex interaction between male norms and men's inability to fulfil those norms reinforces the need for context-specific approaches that are sensitive to men as well as to women and children (see Box 5 for example).

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# BOX 4. MULTI-COUNTRY STUDY OF STRATEGIES FOR ENGAGING MEN IN BREASTFEEDING PROMOTION AND SUPPORT SHOWS MIXED RESULTS

Yourkevitch et al. conducted a mixed-methods desk review of standardised survey\* data (baseline and endline) from 28 United States Agency for International Development (USAID) child nutrition projects in 20 LMICs. Their objective was to assess whether strategies to engage men in the promotion of EBF increased prevalence of EBF by a given project's close.

Selected findings:

- Seventy-five percent of projects reported statistically significant increases in EBF prevalence by project close
- High intensity\*\* male engagement strategies were reported by 20 projects, with 16 reporting an increase in EBF prevalence by project close
- However, no clear pattern emerged regarding an association between increased EBF prevalence and male engagement strategies; not every project area experienced an increase in EBF prevalence
- Most projects that reported male engagement also reported engaging women (mothers and grandmothers), making it difficult to disentangle the approaches and attribution
- Less than one-quarter of these projects reported using formative research to inform their strategies

The authors conclude by stating:

Engaging men in EBF promotion and support has had mixed results and appears to be highly dependent on context. Thus, it cannot be assumed to be appropriate or effective everywhere... Local gender factors related to decision-making, power, autonomy, and what is considered 'women's space' should be understood before 'engaging men' is adopted as a general approach (p.5).

## Source: (54)

\*All data and reports from USAID's Child Survival and Health Grants. \*\* Strategies that engaged men directly during home or health visits, through the formation of men's groups and by working with male community leaders

## DISCUSSION

The thematic pathways described above – gendered food allocation practices, degree of maternal autonomy, and men's role in children's diets – assisted in organising this scoping review's findings for analysis. In the previous section, each pathway was unpacked into several smaller pathways, as summarised in Table 1.

## BOX 5. IMPACT OF POVERTY ON MASCULINITY AMONG POOR LUO MEN

The text below is excerpted from an intensive three-year ethnographic study of ethnically Luo men living in Korogocho, the third largest slum in Nairobi. In addition to extensive participant observation, the study comprised 50 individual interviews and 16 focus group discussions. Findings provide a detailed picture of the coping mechanisms of men struggling to maintain their masculinity and self-worth in the face of extreme hardship, with implications for programme and project design.

As in many parts of the globe, breadwinnerhood is the hegemonic version of masculinity in the slums of Nairobi and it is tenaciously pursued even in the face of its unfeasibility. Being a breadwinner ... is sought by any means necessary by poor men in the slums of Nairobi (p.53)... Poverty is not an excuse not to try. Men are born to provide. In fact, poverty makes us work harder (p.46)... Breadwinnerhood is pursued through a variety of strategies, including violence and compensatory masculine acts. ...[with] the bulk of men's violent actions aiming to generate, sustain, and or defend livelihoods (p.43).

Within this setting, community development was seen as positive only if it reconfirmed/reasserted male authority in society and facilitated men's role as breadwinners. Community development activities that reduced men's influence, power, and authority were not viewed favorably.

Interventions with poor men must pay mind to the diverse ways poverty and a sense of masculine deficit can motivate their performance of themselves as men.... Making men allies in the global struggle for gender equality and an inclusive social system must start with supporting them to enjoy improved livelihoods and comprehend the beliefs and social forces that motivate their everyday behaviors (p.54-55).

Source: (44)

Each of these pathways is expressed at the household level but manifests very differently in terms of *how* and *how much* it influences behaviours, depending on a wide range of socio-economic circumstances. Based on the reviewed articles, income, food availability and access, maternal education, paternal education, ethnic affiliation, social class, and maternal and paternal employment status are especially critical. Additionally, these pathways are best conceived as mutually interacting. For example, the construct of 'breadwinner masculinity' may reinforce gendered food allocation practices that favour men's diet quality over children's, while increased maternal autonomy over financial resources may disrupt that paradigm. Furthermore, as older children increasingly make food choices themselves, their choices will reflect their own gender socialisation.

#### Table 1 Thematic pathways unpacked

Pathways	Sub-pathways	
	Prioritisation of men's intake	
Gendered food	Deprioritisation of women's intake, in favour of men, children or both	
allocation practices	Prioritisation of boys over girls, or vice-versa	
	Restrictions on physical mobility	
Degree of maternal	Restrictions on maternal access to financial and material resources	
autonomy	Trade-offs between increased autonomy and time for childcare	
Role of men in	Breadwinner masculinity	
children's diets	Distancing (implicit or explicit) male participation in childcare	

From a programming perspective, successful application of a gender lens is contingent on identifying *how* these pathways are operating, in terms of scope, modality, and interactions, and then assessing whether programme objectives are sensitive to that reality. For example, a male engagement strategy that is part of a broader behaviour change campaign to promote proper IYCF may miss the mark if implemented in a context that discourages paternal participation in childcare. Similarly, educating women on recommended feeding practices may not be sufficient to change behaviours if they must choose between earning an income and preparing meals.

Formative research is critical to unpacking these considerations not only in terms of identifying how pathways are operating but also by assisting implementers in deciding whether norms should be navigated or actively leveraged. An exercise mapping gendered areas of responsibility related to childcare and feeding will, in some cases, reveal norms that could pose roadblocks; in others, it will identify entry points for engaging men and other influencers in ways that build on, rather than conflict with, existing gender norms (55). For example, in a study to support the design of an IYCF intervention in Kenya, formative research led to a project design that capitalised on the traditional roles of fathers—encouraging them to purchase nutritious food items, in line with their 'breadwinner' role— and of grandmothers to promote complementary foods in alignment with recommendations (56).

In addition to informing a project's basic theory of change, formative research results should be used to finetune project logistics to ensure that gender norms are either navigated with adequate sensitivity or leveraged to the fullest extent possible. This could include identifying effective, genderspecific engagement strategies, such as meeting with groups of men separately from women and using gender-specific educational materials.

## **STUDY LIMITATIONS**

Before concluding, the limitations of this study should be acknowledged. First, the literature review process was not systematic and as a result there are surely some relevant articles that were not captured by the search criteria. Second, the exercise sought to summarise complex and context-specific gendered socio-cultural norms and behaviours, which is implicitly reductive. Finally, the three pathways identified do not provide an exhaustive, explicit description of all the mechanisms through which gender impacts children's diets.

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## CONCLUSION

The three thematic pathways discussed in this paper – gendered food allocation practices, degree of maternal autonomy, and the role of men in children's diets – represent an attempt, based on a scoping review of the literature, to organise the vast array of human behaviours related to gender norms and child feeding practices in LMICs. All three pathways are operative within the space that defines how families eat, beginning with household-level food security and ending with individual intake, and are best conceived as mutually interacting. Each can be unpacked into several smaller pathways, including but not limited to prioritisation of men's intake over women and children, restrictions on maternal access to financial and material resources, and breadwinner masculinity. The three pathways are also moderated in a given context by income, food availability and access, education, ethnic affiliation, social class, and employment status.

From a programming perspective, the findings of this review suggest the need to systematically identify how the abovementioned pathways are operating within a target population and to assess whether programme objectives are sensitive to that reality. When practical, programmes should attempt to leverage, as opposed to simply navigate, gender norms to improve child nutrition. For instance, nutritious food products and recipes promoted to women should consider and minimise time and labour burdens that would inhibit their application. In addition, the review highlights the importance of engaging men in child nutrition and feeding and suggests that leveraging existing masculine ideals in messaging can be a powerful approach.

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#### ANNEX 1. ANNOTATED LITERATURE MATRIX

	Title	Author(s)	Publication Info	Synopsis/Main findings ( <i>text in italics</i> = direct quote from article)	Pathways (See table below for definitions) Food allocation norms and outcomes Gender norms for women Role of men in children's diets
1	Family belief systems and practices that influence exclusive breastfeeding in Sagu, Ghana	Agani Afaya, Karim Jabuni Fuseini, Judith A. Anaman-Torgbor, Solomon Mohammed Salia, Peter Adatara, Richard Adongo Afaya	NUMID HORIZON: An International Journal of Nursing and Midwifery. Volume 1 No. 2, December 2017	Within this study population (n=27) drawn from a rural community in the Upper West Region of Ghana, fathers, paternal grandmothers, and grandfathers were found to have a negative impact on EBF. Most breastfeeding mothers were prepared to practice EBF, but family beliefs and practices interfered. Fathers and grandmothers reported that EBF was unhealthy, and as women from this study population need permission from their husbands/ family heads to breastfeed, these beliefs reduce good practices. Fathers and grandmothers play a pivotal role in supporting mothers to initiate and maintain breastfeeding.	Food allocation norms and outcomes Gender norms for women Role of men in children's diets
2	Expressions of Masculinity and Femininity in Husbands' Care of Wives with Cancer in Accra	Deborah Atobrah and Akosua Adomako Ampofo	ASR Forum on Women and Gender in Africa: Part 2, 2016	Small ethnographic study of 5 Accra couples (drawn from a larger sample) found that husbands were unable to provide adequate care (in terms of physical and emotional support) to their wives, all of whom were struggling with cancer. The authors attribute the husbands' responses to traditional gender social norms.	Role of men in children's diets
3	Assessment of Factors Influencing Child-Feeding Practices Among First-Time Mothers in Wekhomo	Alice C. Awinja	MPH Thesis School Of Public Health and Community Development, Maseno University, 2016	Study of 1 <sup>st</sup> time mothers (n=422) in Kenya's Western Province receiving information on child feeding practices from a clinic was positively associated with good breastfeeding practices. Although findings on the roles played by grandmothers and fathers were mixed, "social support of first-time mothers through engaging grandmothers and fathers in public health programs is of growing interest to enhance the health and development of young children."	Food allocation norms and outcomes Gender norms for women Role of men in children's diets

	Location, Luanda Sub-County, Kenya				
4	Men, Masculinity, and HIV/AIDS: Strategies for Action	Myra Betron, Gary Barker, Juan Manuel Contreras & Dean Peacock	International Center for Research on Women, 2012	Global Report providing practical guidance strategies to engage men and address harmful male norms in relation to HIV/AIDS interventions.	Role of men in children's diets
5	Repairing rifts or reproducing inequalities? Agroecology, food sovereignty, and gender justice in Malawi	Rachel Bezner Kerr, Catherine Hickey, Esther Lupafya & Laifolo Dakishoni	The Journal of Peasant Studies, 2019	Northern Malawi, relatively large-scale project (n=10,000 farmers) promoting agro-ecological methods. Results include improved HHFS and food sovereignty (including less reliance on estate work/ ganyu), improved diet and nutrition outcomes for children, improved gender relations (see Case Studies 2&3).	Gender norms for women
6	Primary caregivers perceptions of Role of fathers in the provision of nutritional care in a resource constrained environment in Cape Town, South Africa	Melissa Judith Brown & Nicolette Roman	Research Square, 2019 (not peer reviewed according to PDF)	Small (n=10) study of grandmothers and mothers in a poor community in Western South Africa. All participants described very low involvement by fathers in terms of meal provision and prep, and indeed in terms of parenting at all (most fathers were not living with interviewees). Authors stated that the findings <i>align with what is already known about the</i> <i>gendered division of family food work in Western societies while mothers</i> <i>and female primary caregivers largely structure these practices, fathers</i> <i>nonetheless help shape what families eat by providing financially and by the</i> <i>meals they prefer to eat.</i>	Role of men in children's diets
7	Social circumstances and cultural beliefs influence maternal nutrition, breastfeeding and child feeding practices in South Africa	Gamuchirai Chakona	Nutrition Journal, 2020	Mixed methods study of caregivers from IsiXhosa communities in South Africa exploring beliefs and practices regarding breastfeeding and diets for children (n=84 [caregiver/child pairs]). Wide variety of findings which include many details on culture-specific practices as well as unpacking the clash between current social circumstances and traditional beliefs.	Food allocation norms and outcomes Gender norms for women Role of men in children's diets
8	Intrahousehold Bargaining and	Cheryl Doss	World Bank Research Observer, 2013	A review of analytical frameworks for and empirical evidence on women's bargaining power.	Gender norms for women

	Resource Allocation				
	in Developing				
	Countries				
9	Gender and	Getahun Ersinol,	PLoS ONE, 2018	Cross-sectional study of mother-child pairs (n=630) from 3 communities in	Gender norms for women
	household	Gordon A. Zello,		Ethiopia (SNNPR and Oromiya regions) to assess prevalence and causes of	
	structure factors	Carol J. Henry, Nigatu		maternal and child undernutrition.	
	associated with	Regassa			
	maternal and child				
	undernutrition in				
	rural communities				
	in Ethiopia				
10	Family influences	Cheikh Mbacké Faye,	Child Care Health Dev,	Qualitative analysis to explore the influence of fathers and grandmothers on	Food allocation norms and
	on child nutritional	Sharon Fonn,	2019	child feeding in two Nairobi informal settlements. 30 in-depth interviews: 12	outcomes
	outcomes in	Elizabeth Kimani-		with mothers of stunted children, eight with mothers of non-stunted	Gender norms for women
	Nairobi's informal	Murage		children, 6 with grandmothers, and 4 with fathers.	Role of men in children's diets
	settlements				
11	Do Girls Have a	Jasmine	PLoS ONE, 2014	To test whether Indian girls are disadvantaged in WHO/ UNICEF	Food allocation norms and
	Nutritional	Fledderjohann,		recommended feeding practices, this evaluation analysed individual and	outcomes
	Disadvantage	Sutapa Agrawal,		household data covering breastfeeding, nutrition, and child health for	
	Compared with	Sukumar Vellakkal,		20,395 siblings ages 0–59 months from the latest available round of India's	
	Boys? Statistical	Sanjay Basu, Oona		NFHS.	
	Models of	Campbell, Pat Doyle,			
	Breastfeeding and	Shah Ebrahim &			
	Food Consumption	David Stuckler			
	Inequalities among				
	Indian Siblings				
12	Bargaining Power	Daniel O. Gilligan,	IFPRI 2014	Gender study using IE data (84 farmer groups from three districts: Kamuli,	Gender norms for women
	and Biofortification	Neha Kumar, Scott		Bukedea, and Mukono) from the HP Reaching end Users Project (REU).	Role of men in children's diets
	Role of Gender in	McNiven, J. V.			
	Adoption of Orange	Meenakshi & Agnes			
	Sweet Potato in	Quisumbing			
	Uganda	Quisumbing			
	oganua				

13	Father Involvement in Feeding Interactions with Their Young Children	Alma D. Guerrero, Lynna Chu, Todd Franke & Alice A. Kuo	Am J Health Behavior, 2016	Quantitative analysis using data from the Early Childhood Longitudinal Study Birth cohort (ECLS-B). US-based sample included 2441 children, used pooled data from the 24-month and 48-month waves of data collection. Provides empirical evidence on how fathers may influence their children's food habits.	Role of men in children's diets
14	Father Engagement in Improving Infant and Young Child Feeding (IYCF) Practices: Evidence from a Clustered Randomized Controlled Trial in Ethiopia	Yae Eun Han, Seollee Park, Ji Eun Kim, Hyuncheol Kim & John Hoddinott	Maternal, Perinatal and Pediatric Nutrition, 2019	Community-based, clustered RCT conducted in Ejere, Ethiopia. 63 garees (villages) were randomly assigned within selected kebeles into treatment and control groups: T1, maternal BCC; T2, maternal BCC <i>and</i> paternal BCC; C, control. <i>"Father's IYCF knowledge</i> <i>increased by 0.31SD when BCC was provided to mothers and by 0.62SD when</i> <i>provided to both mothers and fathers."</i>	Role of men in children's diets
15	'We are the real men': Masculinity, poverty, health, and community development in the slums of Nairobi, Kenya	Chimaraoke O. Izugbara	Department of Social Work, University of Gothenburg, 2015	Three-year ethnographic study comprising individual interviews of Luo men (n=50), extensive participant observation, and 16 FGDs (n=112). Findings on constructs of masculinity (breadwinner masculinity). Community development was seen as positive only if it reconfirms/reasserts male authority in society and facilitates men's role as breadwinners.	Role of men in children's diets
16	"His mind will work better with both of us": A qualitative study on fathers' roles and coparenting of young children in rural Pakistan	Joshua Jeong, Saima Siyal, Günther Fink, Dana Charles McCoy & Aisha K. Yousafzai	BMC Public Health, 2018	Qualitative study of couples with under-5s, in Sindh Province Pakistan. In- depth interviews with fathers (n=33) and their partners (n = 32); FDGs with fathers (n=7) and mothers (n=7). Most common paternal activities were earning and providing for the child and family, taking the child on outings, and playing with the child. Common maternal activities related to basic childcare activities, meal prep and feeding, and house chores.) Parents highlighted how mothers were restricted in mobility and were expected to remain at home with the child all day.	Role of men in children's diets
17	Gender of Children, Bargaining Power, and Intrahousehold Resource Allocation in China	Lixing Li Xiaoyu Wu	The Journal of Human Resources, 2014	Pooled cross-sectional study using data from multiple waves of the China Health and Nutrition Survey. If 1 <sup>st</sup> born child is a son, mother's calorie and protein intakes improve (by 1.8 percent and 2.1 percentage points), and her chances of being underweight decrease (by 2.6 percentage points).	Food allocation norms and outcomes Gender norms for women
18	Intrahousehold and Interhousehold	Richard Mussa	Economics Department, Chancellor College,	Quantitative analysis of 2006 MICs data comparing intra versus interhousehold associations with stunting and wasting. In both rural and	Food allocation norms and outcomes

	Child Nutrition		University of Melawi	urban areas introduced bald in accupities accounted for ECO/ - OCO/ of low	
			University of Malawi,	urban areas, intrahousehold inequalities accounted for 56% - 86% of low	
	Inequality in		2014	HAZ and WAZ. Intrahousehold inequalities were wider in rural areas than	
	Malawi			urban ones. The magnitude of intrahousehold inequalities was larger for	
				HAZ<2 than for WAZ<2, implying that nutrition inequalities are more	
				pronounced in the short term than the long term.	
19	Association	Muzi Na, Larissa	Public Health Nutrition,	Cross-sectional study using DHS data from 10 SSA countries. The analysis	Food allocation norms and
	between women's	Jennings, Sameera	2017	assessed associations between MDD, MMF, MAD and 3 dimensions –	outcomes
	empowerment and	Talegawkar &		economic, socio-familial, and legal of – of empowerment. Although the	Gender norms for women
	infant and child	Saifuddin Ahmed		"likelihood of meeting recommended IYCF criteria was positively associated	Role of men in children's diets
	feeding practices in			with the economic dimension of women's empowerment", other findings	
	sub-Saharan Africa:			varied substantially, with a number of countries showing counter-intuitive	
	an analysis of			results across the other 2 dimensions.	
	Demographic and				
	Health Survey				
20	Preventing	Amy Paul, Shannon	PLOS Currents Disasters,	A mixed-methods (16 meal observations/8 FGDs/80 structured HH	Food allocation norms and
	Malnutrition in	Doocy, Hannah	2014	questionnaires) study of 4 Dinka communities in South Sudan to understand	outcomes
	Post-Conflict, Food	Tappis, Sonya Funna		HH context of participants in a food assistance program. Food for children is	Gender norms for women
	Insecure Settings: A	Evelyn		allocated according to the age-mate system, where children of similar age	Role of men in children's diets
	Case Study from			eat together, sharing from the same dish. Food is allocated to young children	
	South Sudan			first, then older children, then adult men, and lastly adult women.	
21	Women's decision-	Mahama Saaka	Journal of Nutritional	Ghanaian cross-sectional study (n=422 mother/child pairs) assessed the	Gender norms for women
	making autonomy		Science, 2020	relationship between HAZ, WAZ and IYCF across four dimensions of	
	and its relationship			empowerment: health care autonomy, general maternal household	
	with child feeding			decision-making autonomy, movement autonomy and financial autonomy,	
	practices and			as well as a composite variable. It also disaggregated the data by child age.	
	postnatal growth				
	postilutui Browtin				
22	Lessons learned	Erin Stern, Laura	Culture, Health and	Structured surveys with 164 self-reported heterosexual men aged 18 – 54	Role of men in children's diets
	from engaging men	Pascoe, Tim Shandb	Sexuality, 2015	years were used to assess knowledge and attitudes towards sexual and	
	in sexual and	& Samantha		reproductive health.	
	reproductive health	Richmond			
	as clients, partners				
	and advocates of				
	change in the				
	Hoima district of				
	Uganda				

23	Shocks in food	Gebremeskel	Agricultural and Food	This study purports to use LSMS data to investigate intra-HH food allocation	Food allocation norms and
25	availability and	Berhane Tesfay,	Economics, 2019	practices in an attempt to unpack the discrepancy in Ethiopia between	outcomes
			Economics, 2019		outcomes
	intra-household	Babatunde Abidoye		anthropometric trends (girls are less stunted) and per capita resource	
	resources			allocation trends (more is spent on boys).	
	allocation: evidence				
	on children				
	nutrition outcomes				
	in Ethiopia				
24	Engaging Fathers	Thuita FM, Martin SL,	African Journal of Food,	Four phase study of a community-based infant feeding social support	Role of men in children's diets
	and Grandmothers	Ndegwa K , Bingham	Agriculture, Nutrition and	program that targeted fathers and grandmothers as "social influencers" in	
	to Improve	A & Mukuria AG	Development, 2014	Kenya's Western Province. Main interventions were dialogue groups and	
	Maternal and Child			related community activities. "Fathers are not directly involved in infant and	
	Dietary Practices:			young child feeding, [however] they play a critical supportive role, providing	
	Planning A			food for the child and mother, and key financial and logistical resources for	
	Community-Based			health care." Use of formative research critical to inform intervention design	
	Study in Western			and delivery.	
	Kenya				
25	Role of Women in	May Wang, Nashene	Ecol Food Nutr, 2014	Case study of working women in Singapore to explore how work-life balance	Food allocation norms and
	Food Provision and	Naidoo, Steve		(or lack thereof) affected the meal decisions they made for their families.	outcomes
	Food Choice	Ferzacca, Geetha		Eighteen focus group sessions (n=130), 90 minutes each, were conducted by	Gender norms for women
	Decision-Making in	Reddy & Rob M. Van		hired moderators fluent in English and the ethnic language of their assigned	
	Singapore: A Case	Dam		group participants, providing a total of 27 hours of discussion. Children's	
	Study			preferences exerted a major influence over mothers' meal decisions. In	
				some cases, these preferences were moderated by nutrition education	
				received in school (applies to older kids presumably.	
26	A cross-disciplinary	sigrid C.O.	Appetite, 2019	Mixed-methods study of two low-income urban districts in Hanoi to	Food allocation norms and
	mixed-method	-		investigate how increased prevalence of supermarkets/ decreased	outcomes
	approach to	Wertheim-		prevalence of wet markets is affecting HH and women's diet quality.	
	understand how	Heck, Jessica		Relevant findings are similar to Wang et al. (32): Mothers are making diet	
	food retail	Raneri		decisions based on children's preferences, which skew unhealthy.	
	environment				
	transformations				
	influence food				
	choice and intake				
	among the urban				
		1			

	poor: Experiences				
	from Vietnam				
27	Engaging men to	Jennifer M.	Journal of Health,	Mixed methods desk review of standardized survey data (baseline and	Role of men in children's diets
	promote and	Yourkavitch, Jeniece	Population and Nutrition,	endline) and report findings from 28 Child Survival and Health Grants	
	support exclusive	L. Alvey, Debra M.	2017	Programs (USAID.) Covers 15 projects in SSA, eight in South /Central Asia,	
	breastfeeding: a	Prosnitz & James C.		four in LAC, one in Southeast Asia. "Engaging men" is not always going to	
	descriptive review	Thomas		work, and formative research is critical to deciding if and how a specific	
	of 28 projects in 20			programme or project should deploy it.	
	low- and middle-				
	income countries				
	from2003 to 2013				
28	'To be a woman is	Wanga Zembe-	BMJ, 2018	Qualitative study of the impact of South Africa's Child Support Grant (CSG)	Food allocation norms and
	to make a plan': a	Mkabile, Rebecca		on diets of under-5s in two sites (one urban, one rural). 40 interviews with	outcomes
	qualitative study	Surender, David		mothers or primary caregivers plus 5 FGDs with approximately 8 participants	
	exploring mothers'	Sanders, Rina Swart,		per group. For female CSG participants, the cash transfer increased	
	experiences of the	Vundli Ramokolo,		purchasing power and thus attempts to mitigate food insecurity.	
	Child Support Grant	Gemma Wright &			
	in supporting	Tanya Doherty			
	children's diets and				
	nutrition in South				
	Africa				
29	Intrahousehold	Berti, P.R.	Food and Nutrition	Review of 28 studies of intra-HH food allocation. The key indicator for	Food allocation norms and
	distribution of food:		Bulletin, 2012	analysis was adequacy of energy intakes of members of the family other	outcomes
	A review of the			than adult males compared with the energy adequacy of adult males	
	literature and			(RDEAR). Final conclusion: Intrahousehold distribution of food in most	
	discussion of the			countries is relatively equitable, within a 20% margin. The review itself cited	
	implications for			a high risk of measurement error.	
	food				
	fortification				
	programs				
30	Exploring the	Katherine L Dickin,	Current Developments in	Review of the impact of social norms (including but not limited to gender) on	Food allocation norms and
	Influence of Social	Kate Litvin, Juliet K	Nutrition, 2021	complementary feeding practices in LMICs. In many settings, women are	outcomes
	Norms on	McCann, and Fiona M		responsible for food preparation and feeding, but men are seen as	Gender norms for women
	Complementary	Coleman		responsible for provisioning food and making household decisions.	Role of men in children's diets
	Feeding: A Scoping				
	Review of				
	Observational,				
	Intervention, and				

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	Effectiveness				
	Studies				
31	Gender differences	Sudo N, Sekiyama M,	Eur J Clin Nutrition, 2006	Used FFQs and weighted food records to assess food intake in adults from	Food allocation norms and
	in dietary intake	Maharjan M, Ohtsuka		94 rural Nepalese HHds (n male = 122; n female = 219). Key findings included	outcomes
	among adults of	R		discrepancies in total food consumption and iron-rich foods, with women	
	Hindu communities			consuming less than recommended amounts in both categories.	
				consuming less than recommended amounts in both categories.	
	in lowland Nepal:				
	assessment of				
	portion sizes and				
	food consumption				
	frequencies				
32	Determinants of	Helen Harris-Fry, Niva	International Journal for	Systematic review which found evidence of discriminatory food allocation	Food allocation norms and
	intra-household	Shrestha, Anthony	Equity in Health, 2017	practices in Bangladesh, India and Nepal.	outcomes
	food allocation	Costello and Naomi			
	between adults in	M. Saville			
	South Asia – a				
	systematic review				
	systematic review				
33	Family, Gender, and	Madjdian DS, Bras	Econ History Developing	Comparison of household distribution patterns among women of	Food allocation norms and
	Women's	HAJ.	Regions, 2016	reproductive age from a Hindu and a Tibetan Buddhist community in Nepal.	outcomes
	Nutritional Status:			In total 30 married women were interviewed (n=30), with an age range of 18	
	A Comparison			to 48 years.	
	Between Two			Relevant finding: Among Hindu families, women experienced widespread	
	Himalayan			discrimination in food allocation. Among Buddhist families, food allocation	
	,				
	Communities in			was egalitarian.	
	Nepal.				
34	Why are animal	Haileselassie M,	]. PLoS One 2020	Community-based qualitative study comprising 8 FGDs and 28 informant	Food allocation norms and
	source foods rarely	Redae G, Berhe G,		interviews conducted with BF-ing mothers, fathers, health extension	outcomes
	consumed by 6–23	Henry CJ, Nickerson		workers, nutrition, and agriculture experts.	
	months old children	, ,			
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	in rural communities of northern Ethiopia? A qualitative study	MT, Tyler B, Mulugeta A		Relevant finding: Women deprioritize their own intake and that of their children on a routine basis.	
35	Socio-cultural practices and beliefs influencing infant and young child feeding in Lubao sub-location Kakamega County	Karigi LN, Mutuli LA, Bukhala PB.	J Nutr Heal Food Eng, 2016	Small (n=166) cross-sectional study conducted January to March 2016 in Lubao sub-location, Kakamega County, of primary care givers of children under 2. Structured questionnaires were used to collect data on socio- cultural beliefs influencing the feeding practices. Relevant finding: <i>Customs</i> <i>regarding gender and food distribution in the households affected child</i> <i>feeding as care givers reported that men were served the large and better</i> <i>portions of food first before children and women.</i>	Food allocation norms and outcomes
36	Only Children of the Head of Household Benefit from Increased Household Food Diversity in Northern Ghana	Jef L. Leroy, Abizari Abdul Razak and Jean-Pierre Habicht	Journal of Nutrition, 2008	Quantitative study (n=464 children between 9 & 36 months) assessing whether being the child of a head of household or first wife in a polygynous family was associated with greater child stature in Northern Ghana and how this association varied with differences in household food availability.	Food allocation norms and outcomes
37	Boys are more stunted than girls in Sub-Saharan Africa: a meta-analysis of 16 demographic and health surveys	Henry Wamani*1,2, Anne Nordrehaug Åstrøm1, Stefan Peterson3, James K Tumwine4 and Thorkild Tylleskär1	BMC Pediatrics, 2007	Data from the most recent 16 DHS in 10 SSA countries were analysed to assess whether there are systematic sex differences in stunting rates in children under-five years of age, and how the sex differences in stunting rates vary with household socio-economic status. Key findings: The prevalence and the mean z-scores of stunting were consistently lower amongst females than amongst males in all studies, with differences statistically significant in 11 and 12, respectively, out of the 16 studies.	Food allocation norms and outcomes
38	BRAC initiative towards promoting gender and social equity in health: a longitudinal study of child growth in Matlab, Bangladesh	Khatun M, Stenlund H, Hornell	Public Health Nutrition, 2003	Quantitative assessment of the association between participation in a BRAC gender and social equity project and stunting (n=576 children between 5 & 72 months). Relevant finding: <i>In all groups, a significantly larger proportion of girls was stunted compared with boys in the first round [of data collection]</i>	Food allocation norms and outcomes

39	Maternal autonomy is inversely related to child stunting in Andhra Pradesh, India	Shroff M, Griffiths P, Adair L, et al.	Matern Child Nutr, 2009	Cross-sectional analysis of the relationship between "maternal autonomy" (assessed across 4 dimensions) and child stunting in Andhra Pradesh, using National Family Health Survey data (n= 821 mother/child dyads). Key Findings: Women with higher autonomy {indicated by access to money [odds ratio (OR) = 0.731;95% confidence interval (CI) 0.546, 0.981] and freedom to choose to go to the market [OR = 0.593; 95% CI 0.376, 0.933]} were significantly less likely to have a stunted child, after controlling for household socio-economic status and mother's education.	Gender norms for women Role of men in children's diets
40	Gendered perceptions on infant feeding in eastern Uganda: continued need for exclusive breastfeeding support	Engebretsen I, Moland KM, Nankunda J et al.	Int Breastfeed J, 2010	Reports results from series of FGDs conducted as part of a larger formative research project in Eastern Uganda, which was in turn conducted in support of a multi-country clinical trial promoting EBF through peer counselling (PROMISE EBF). Relevant findings: <i>In general, both men and women</i> <i>regarded EBF as 'not enough' or even 'harmful.'</i>	Gender norms for women Role of men in children's diets
41	Dining with dad: Fathers' influences on family food practices	Priya Fielding-Singh	Appetite, 2017	Qualitative study of the role played by fathers in children's dietary intake. In- depth interviews conducted with middle and upper-middle class US households (n=109). Relevant findings: Fathers not only do little foodwork, they are also viewed as less concerned about their own and other family members' dietary health. When tasked with feeding, many fathers often turn to quick, unhealthy options explicitly avoided by mothers. Fathers' dietary approaches reflect and reinforce traditional gender norms and expectations within families.	Role of men in children's diets
42	Preschooler obesity and parenting styles of mothers and fathers: Australian national population study	Wake M, Nicholson JM, Hardy P, Smith K.	Pediatrics. 2007	Cross-sectional analysis of wave 1 data from the Longitudinal Study of Australian Children. Objective was to assess the association between BMI and mothers' and fathers' parenting behaviours (reported using 3 multi-item continuous scales and categorized as <i>authoritative, authoritarian,</i> <i>permissive, or disengaged.</i> Relevant finding: Fathers' but not mothers' parenting behaviours and styles were associated with increased risks of preschooler overweight and obesity.	Role of men in children's diets

43	Determinants of	Alex Mcintosh, Karen	Journal of Nutrition	Cross -sectional analysis of data obtained using random-digit dialling to	
	Children's Use of	S. Kubena, Glen	Education and Behavior	assess drivers of fast food and full-service restaurant use in the US (n= 312	
	and Time Spent in	Tolle, Wesley Dean,	Volume 43, Issue 3, May-	parent dyads with children aged 9-11 or 13-15). Relevant finding: Factors	
	Fast-food and Full-	Mi-Jeong Kim, Jie-	June 2011, Pages 142-149	related to use of fast-food restaurants included fathers' (but not mothers')	
	service Restaurants	Sheng Jan, Jenna		use of such restaurants.	
		Anding			

Theme	Description
Food allocation norms and outcomes	In many cultures, gender norms influence intrahousehold food allocation practices and children's access to healthy foods, for better or for worse.
Gender norms for women	In many cultures, restrictions on women's physical mobility and access to resources impact child nutrition by limiting women's capacity to access healthy foods.
Role of men in children's diets	In many cultures, men are the default HH heads, primary income earners, and the primary food purchasers, with the concept of "breadwinner masculinity" playing a central role in gender norms for men. As such, fathers may play an important role in a child's ability to access a healthy diet. Masculine norms may also discourage men from promoting healthy eating habits, for both themselves and their children.