

Nutrition Outcomes, Social Capacities and Self Help Groups



Self Help Groups: Evidence Brief #2

May 2019

Executive Summary

Malnutrition continues to be a persistent and pervasive issue; despite significant levels of funding, 240 million children under the age of five were malnourished in 2017. Nutrition programming requires a holistic set of measures that address both the direct causes of malnutrition, as well as more distal and systemic contributors such as food insecurity and poor water availability. Nutrition programming also requires a focus on both the supply of nutrition services, as well as demand for those services.

This review specifically investigates that role that social capacities play in driving demand to stimulate positive nutrition outcomes, particularly when they are promoted through women's Self Help Groups (SHGs). A Self Help Group (SHG) is a type of women's empowerment group that is designed to holistically strengthen the economic, social, political and psychological resources of its members. SHGs consist of 15-25 members who meet weekly for an indefinite amount of time to save, start small businesses and create change in their communities. By increasing social capacities such as social capital, collective action and women's empowerment, and by empowering members financially by increasing household income and assets, SHGs are uniquely placed to address food security and nutrition outcomes such as dietary diversity, stunting, and infant and young child feeding (IYCF) practices.

The evidence presented indicates that women's empowerment, agency, self-efficacy, social networks, decision-making power, participation in groups and psychosocial health have all been shown to play a key role and have positive effects on maternal and child nutrition. It further points to a clear relationship between Self Help Groups and positive nutrition outcomes, while also offering valuable evidence on the potential impact pathways that merit further research and investigation.

Introduction

In 2017, 240 million children under the age of five were malnourished. About 22% of children under five were categorized as stunted, 7.5% as wasted¹ and 3% were experiencing severe wasting.² Severely wasted children between six months and five years are 9 to 12 times more likely to die than their healthy counterparts; when they are also stunted death is 12.3 times more likely.³ 45% of deaths among children under five have malnutrition as an underlying cause.⁴

The persistent high rates of malnutrition are concerning, especially considering the nearly US\$984 million in humanitarian spending invested in nutrition globally in 2018.⁵ The impact of any health intervention, including nutrition prevention and treatment, requires that both the supply and the demand side are addressed. A lack of resources is clearly a strong driver in a lack of demand for nutrition services. However, demand is not driven by resource availability alone – studies have shown that people often make choices that do not coincide with standard economic reasoning, choosing not to invest in something even when the return is high.⁶ Demand-side barriers also include a range of psycho-social and cultural barriers, such as poor mental health, low levels of aspirations and self-efficacy, community and cultural practices, stigma and a lack of collective action/peer support.⁷ A growing literature suggests that social capacities – empowerment, self-efficacy, aspiration, agency and well-being – can play a key role in the degree to which people access and utilize nutrition services that are available to them.

This review presents the evidence to date on the role social capacities can play in addressing malnutrition, particularly when they are promoted through women’s empowerment groups, also known as Self Help Groups (SHGs). Women’s groups more broadly have been found to have significant impacts on a range of health outcomes, such as maternal and neonatal mortality.⁸ However, SHGs have a more explicit focus on social/psychological empowerment

¹ UNICEF, WHO, World Bank Group (2018). “Levels and Trends in Child Malnutrition.” <https://data.unicef.org/wp-content/uploads/2018/05/JME-2018-brochure-web.pdf>

² Emergency Nutrition Network (2018). “The Current State of Evidence and Thinking on Wasting Prevention.” MQSUN+ Report

³ Emergency Nutrition Network (2018)

⁴ WFP Nutrition homepage. <https://www1.wfp.org/nutrition>

⁵ FTS, Global Overview Nutrition Spending, 2018. <https://fts.unocha.org/global-funding/countries/2018?f%5B0%5D=destinationGlobalClusterIdName%3A%229%3ANutrition%22>

⁶ Bernard, Tanguy, Stefan Dercon and Alemayehu Seyoum Taffesse (2011). “Beyond Fatalism – An Empirical Exploration of Self-Efficacy and Aspirations Failure in Ethiopia.” Centre for the Study of African Economies WPS/2011-03

⁷ Jacobs, Bart, Por Ir, Maryam Bigdeli, Peter Leslie Annear, and Wim Van Damme (2012). “Addressing Access Barriers to Health Services: an analytical framework for selecting appropriate interventions in low-income Asian countries.” *Health Policy and Planning* 27: 388-300.

⁸ Prost, Audrey, Tim Colbourn, Nadine Seward, Kishwar Azad, Arri Coomarasamy, Andrew Copas, Tanja A J Houweling, Edward Fottrell, Abdul Kuddus, Sonia Lewycka, Christine MacArthur, Dharma Manandhar, Joanna Morrison, Charles Mwansambo, Nirmala Nair, Bejoy Nambiar, David Osrin, Christina Pagel, Tambosi Phiri, Anni-Maria Pulkki-Brännström, Mikey Rosato, Jolene Skordis-Worrall, Naomi Saville, Neena Shah More, Bhim Shrestha, Prasanta Tripathy, Amie Wilson, Anthony Costello (2013).

and collective action and may be uniquely positioned to promote social capacities and thus improve nutrition outcomes. The following narrative explores the evidence related to these impact pathways, beginning with a brief overview of the drivers of malnutrition.

Drivers of Malnutrition

Malnutrition is generally broken down into four categories: wasting, stunting, underweight and overweight (see Box 1).⁹ The consequences of inadequate nutrition early in life can reverberate significantly throughout a child’s lifetime. The most crucial time to meet a child’s nutritional requirements is in the first 1,000 days, starting from early pregnancy until the child’s second birthday. UNICEF’s conceptual framework for the drivers of malnutrition states that optimal nutritional status results when “children have access to affordable, diverse, nutrient-rich food; appropriate maternal and child-care practices; adequate health services; and a healthy environment including safe water, sanitation and good hygiene practices.”¹⁰

Box 1: Four Categories of Malnutrition

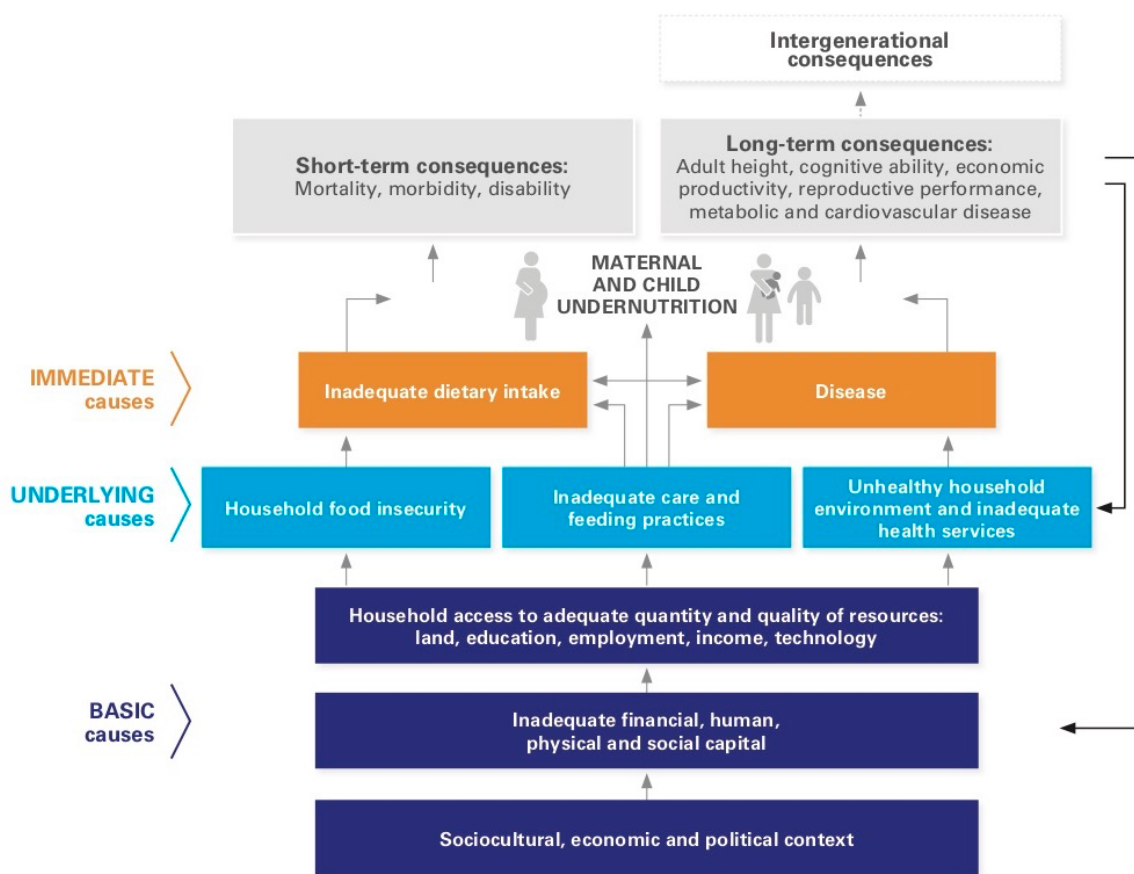
<p>Wasting is the percentage of children aged 0-59 months whose weight-for-height (WHZ) is below -2 standard deviations (SD) and -3 SD from the WHO Child Growth standards. Severe wasting refers to WHZ below -3 SD.</p>	<p>Being underweight combines elements of stunting and wasting and encompasses the percentage of children 0-59 months whose weight-for-age (WAZ) is below -2 and -3 SD.</p>
<p>Stunting is chronic undernutrition and is defined as the percentage of children 0-59 months whose height-for-age (HAZ) is below -2 SD and -3 SD.</p>	<p>Overweight refers to the percentage of children aged 0-59 months whose weight-for-height (WHZ) is above 2 SD or 3 SD.</p>

“Women’s groups practising participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis.” *Lancet* 381: 1736-46

⁹ UNICEF (2013). “Improving Child Nutrition: The Achievable Imperative for Global Progress.”

¹⁰ UNICEF (2013), p.3

FIGURE 1 Conceptual framework of the determinants of child undernutrition



The black arrows show that the consequences of undernutrition can feed back to the underlying and basic causes of undernutrition, perpetuating the cycle of undernutrition, poverty and inequities.

Source: Adapted from UNICEF, 1990.

Source: UNICEF (2013). "Improving Child Nutrition: The Achievable Imperative for Global Progress," p.4

In a global overview for The Lancet, Black et al. (2013)¹¹ highlighted the importance of distal determinants such as maternal education for reducing child stunting, and the benefits of appropriate complementary feeding practices. They also discussed diarrhea as the most important infectious disease determinant that stunted linear growth and the increased risk posed by unsanitary settings. A report prepared by the Emergency Nutrition Network¹² for the UK's Department for International Development (DFID) examined the current evidence surrounding wasting and outlined a number of possible drivers. It listed, among other causes, low food availability, lack of diverse foods, lack of access to food, poor breastfeeding practices, childhood illnesses such as diarrhea and malaria, acute infections, chronic infections such as

¹¹ Black et al. (2013)

¹² Emergency Nutrition Network (2018)

HIV, lack of information, low maternal education, low levels of maternal empowerment, absence of deworming, incomplete immunization, lack of family planning, insufficient antenatal visits, delivery outside of a hospital, access to community health, poor maternal psychosocial health and poor WASH practices.

Nutrition and Social Capacities: Overview of the Evidence

As highlighted in the previous section, nutrition is a complex issue with myriad possible impact pathways. Intangible determinants like maternal mental health and empowerment that drive demand for nutrition interventions are gaining increasing attention as an overlooked but important piece of the puzzle. The evidence base suggests that bolstering people’s social capacities can improve nutrition outcomes. These capacities are varied but generally include: social capital, psychosocial health, gender equality, women’s education and characteristics of women’s empowerment such as increased control over decisions, income and assets.

The 2018 report on wasting prevention by the Emergency Nutrition Network¹³ discussed the positive impacts women’s empowerment and mental health could have on infant feeding and wasting. The meta-analysis examined the findings of 235 studies and organized them by intervention type. Among descriptions of complementary foods and micronutrient supplementation were findings from studies addressing maternal depression and its associations with child malnutrition. Improved mental health may prevent wasting by improving caregiving and health seeking behavior. Mothers with higher financial autonomy and higher levels of participation in decision making are more likely to breastfeed and their infants are less underweight and experience less wasting.

One of the studies mentioned in this report was Nabwera et al. (2018)’s longitudinal case-control study in Gambia¹⁴ looking at determinants of inappropriate infant feeding practices. Inappropriate practices were associated with severe wasting of infants in Gambia, and adverse psychosocial circumstances were found to impede mother’s abilities to practice recommended child care practices. Maternal factors that inhibited appropriate feeding practices were a lack of social support networks, infant feeding difficulties due to a heavy burden of domestic chores and maternal psychosocial stressors such as death in the family, recurrent ill health of family members or lack of autonomy in child spacing. The support of peers, maternal grandmothers and husbands were key for infant feeding— the importance of intra-household support has

¹³ Emergency Nutrition Network (2018)

¹⁴ Nabwera, Helen M, Sophie E. Moore, Martha K. Mwangome, Sassy C. Molyneux, Momodou K. Darboe, Nyima Camara-Trawally, Bakary Sonko, Alhagie Darboe, Seedy Singhateh, Anthony J. Fulford and Andrew M. Prentice (2018). “The influence of maternal psychosocial circumstances and physical environment on the risk of severe wasting in rural Gambian infants: a mixed methods approach.” *BMC Public Health* 18.109

been documented elsewhere as well.^{15 16 17} This study did not find a link between maternal depressive symptoms and severe wasting in infants.

In Kenya however, Haithar et al. (2018)¹⁸ found severe acute malnutrition for children under the age of five to be significantly associated with both maternal depression and family income. In a matched case-control study at the Kenyatta National Hospital in 2014, 78 mother-child pairs were compared. The sample did not include children who had been in the hospital more than seven days, and the controls were age and sex- matched children with normal weight admitted in the same wards with acute ailments. From this group, the study found the prevalence of moderate to severe depression among mothers of malnourished children to be high (64.1%) compared to mothers whose children were a normal weight (5.1%). The study could not determine whether maternal depression caused malnutrition or vice versa but could posit considerable reciprocity between the two. It is possible that depression can adversely affect the mother's ability to perform caregiving activities. Ashaba et al. (2015)¹⁹ also did a case-control study in a hospital in Mbarara, Uganda and found that the prevalence of depression among 86 mothers of malnourished children was 42% compared to 12% among 86 mothers of children with normal nutritional status who suffered from other chronic conditions.

In addition to maternal psychosocial and mental health, women's empowerment and gender equality play a key role in addressing malnutrition. In a meta-analysis of 116 countries, Smith and Haddad (2015)²⁰ looked at child stunting and listed, in order of impact, percent of dietary energy from non-staples, access to sanitation, women's education, access to safe water, gender equality and national food availabilities as the most significant underlying determinants for reduction of child stunting. It is notable that gender equality and women's education are both on that list. The study highlights the important link between gender equality and women's empowerment: gender equality is measured as the female-to-male life expectancy at birth ratio, and direct empowerment measures such as women's educational attainment relative to men's and women's political participation are positively correlated with that life expectancy ratio. Therefore, increasing women's ability and freedom to make strategic life choices can also be listed as an important part of the impact pathway to reduce stunting rates.

¹⁵ Mukuria, Altrena, Stephanie L Martin, Thaddeus Egondi, Allison Bingham and Faith M Thuita (2016). "Role of Social Support in Improving Infant Feeding Practices in Western Kenya: A Quasi-Experimental Study." *Global Health: Science and Practice* 4.1

¹⁶ Thuita, FM, Martin SL, Ndegwa K, Bingham A and Mukuria AG (2015). "Engaging Fathers and Grandmothers to Improve Maternal and Child Dietary Practices: Planning a Community-Based Study in Western Kenya." *African Journal of Food, Agriculture, Nutrition and Development* 15.5

¹⁷ Aubel, Judi (2011). "The role and influence of grandmothers on child nutrition: culturally designated advisors and caregivers." *Maternal and Child Nutrition* 8: 19-35

¹⁸ Haithar, S, M.W. Kuria, A. Sheikh, M. Kumar and A. Vander Stoep (2018). "Maternal depression and child severe acute malnutrition: a case-control study from Kenya." *BMC Pediatrics* 18: 289

¹⁹ Ashaba, Scholastic, Godfrey Zari Rukundo, Florence Beinempaka, Moses Ntaro and John C. LeBland (2015). "Maternal depression and malnutrition in southwest Uganda: a case control study." *BMC Public Health* 15: 1303

²⁰ Smith, Lisa C and Lawrence Haddad (2015). "Reducing Child Undernutrition: Past Drivers and Priorities for the Post-MDG Era." *World Development* 68, p.180-204

Bhagowalia et al. (2012)²¹ looked at the relationship between women's status and nutrition in Bangladesh using indicators of empowerment such as mobility, decision-making power, and attitudes toward verbal and physical abuse. By examining data from the 2007 Bangladesh Demographic and Health Survey, they found that women's empowerment was associated with better long-term nutritional status for children. Attitudes around domestic violence impacted child stunting and mobility; acceptance of domestic violence was associated with a lower height-for-age (HAZ) score for children. Women's participation in domestic decisions influenced children's dietary diversity. Maternal height and schooling decreased the probability of stunting; maternal schooling was additionally positively associated with dietary diversity and with better long-term nutritional status for children.

Women's empowerment has been found to affect dietary diversity and nutrition outcomes differentially based on age and gender. In another study from Bangladesh, Sraboni and Quisumbing (2018)²² sampled 2,896 farming households using the 2012 Bangladesh Integrated Household Survey to determine that women's empowerment in agriculture is positively and significantly associated with dietary diversity and nutrient intakes for older children, adolescents and adults. Women's empowerment is defined here as increased control over physical and social capital, a definition that summarizes the five domains of empowerment within the Women's Empowerment in Agriculture Index (WEAI).²³ The study found a weak association between women's empowerment and dietary diversity for children under five years; here maternal education and household socio-economic status played a more important role. Women's groups are particularly called out for their role in positively impacting the dietary quality of women and girls.

Ross et al. (2015)²⁴ also linked women's empowerment in agriculture and group membership to a healthier Body Mass Index (BMI) and dietary diversity score for 2,405 women in northern Ghana. When women's empowerment is assessed as a whole and encompasses all five WEAI domains, the findings are not significant. Household income had the largest impact on women's health status. However, when the WEAI domains are broken down and analyzed individually, five indicators come to the forefront for their significant impact on women's BMI and dietary diversity: group membership, ownership of assets, autonomy in production, leisure time, access to and decisions on credit. The importance of increasing women's decision-making power over

²¹ Bhagowalia, Priya, Purnima Menon, Agnes R. Quisumbing, Vidhya Soundararajan (2012). "What Dimensions of Women's Empowerment Matter Most for Child Nutrition?" *IFPRI Discussion Paper 01192*

²² Sraboni, Esha and Agnes Quisumbing (2018). "Women's empowerment in agriculture and dietary quality across the life course: Evidence from Bangladesh." *Food Policy* 81: 21-36

²³ The five WEAI domains are: production (input in productive decisions and autonomy in production), resources (ownership of assets, purchase/sale/transfer of assets, access to and decision on credit), income (control over use of income), leadership (group member, speaking in public) and time (workload and satisfaction with leisure time).

²⁴ Ross, Kara L, Yacob A. Zereyesus, Aleksan Shanoyan, and Vincent Amanor-Boadu (2015). "The Health Effects of Women Empowerment: Recent Evidence from Northern Ghana." *International Food and Agribusiness Management Review* 18.1

credit was associated in Malapit et al. (2019)²⁵ with improved nutritional status (HAZ) for girls in Bangladesh. Using the same data as Sraboni and Quisumbing (2018) with a sample size of 3,156 households, the study found significant differences between outcomes for boys and girls depending on the empowerment measures used: women's satisfaction with her decision-making power and her participation in groups were linked with improved weight-for-height (WHZ) and weight-for-age (WAZ) for boys. Increasing women's asset-related decisions also favored only boy's nutritional outcomes. Both Malapit et al. (2019) and Sraboni and Quisumbing (2018) describe this unintended consequence to women's empowerment in Bangladesh: when women are more empowered, boys seem to benefit more than girls since women may use their newfound bargaining power to advocate more for the former.

In northern Benin, Alaofé et al. (2017)²⁶ also found differential outcomes for women's empowerment: from a sample of 767 households, they found a woman's composite empowerment score²⁷ to be significantly associated with her increased dietary diversity and BMI. However, it was only weakly associated with children's nutritional status, affecting girls and boys differently. They suggest promoting initiatives that increase women's decision-making power and self-confidence for improving nutrition.

Women's self-confidence, efficacy and agency can also contribute to improved nutrition outcomes. In a 2016 analysis²⁸ of adolescent Syrian refugees in Turkey, Perera and Brinkmann (2016)²⁹ found that perceived self-efficacy was one of the key determinants for positive behavior that could lead to improved nutrition outcomes. They sampled 371 mothers aged 14 to 21 in Istanbul, Gaziantep and Antakya and looked at three behaviors: exclusive breastfeeding of infants (0-6 months), feeding children (6-23 months) iron-rich foods at least three times per week, and consuming an additional meal daily during pregnancy. Self-efficacy was a key determinant for all three behaviors. Self-efficacy was also found to be the most important indicator of higher fruit and vegetable intake among poor individuals in Belo Horizonte, Brazil.³⁰

Begum and Sen (2009) explored the linkages between mother and child nutrition in Bangladesh and found maternal nutrition to be a strong predictor of child's nutritional status. Malnourished mothers give birth to underweight children, but women's agency was found to be a potentially

²⁵ Malapit, Hazel Jean L, Esha Sraboni, Agnes R. Quisumbing and Akhter U. Ahmed (2019). "Intrahousehold empowerment gaps in agriculture and children's well-being in Bangladesh." *Development Policy Review* 37: 176-203

²⁶ Alaofé, Halimatou, Min Zhu, Jennifer Burney, Rosamond Naylor and Taren Douglas (2017). "Association Between Women's Empowerment and Maternal and Child Nutrition in Kalalé District of Northern Benin." *Food and Nutrition Bulletin* 38.3: 302-318

²⁷ Composite score is inclusive of all domains examined: leadership (the extent to which women's opinions are respected, self-confidence levels), decision making, mobility, economic security, male involvement in housework.

²⁸ A barrier analysis determines preferred practices for a particular outcome and samples "doers" and "non-doers" to identify the reasons for continued poor practices to facilitate solutions to these barriers.

²⁹ Perera, Shiromi and Suzanne Brinkmann (2016). "Barrier Analysis of Infant and Young Child Feeding and Maternal Nutrition Behaviors Among Adolescent Syrian Refugees in Urban Turkey." *International Medical Corps*

³⁰ Menezes et al. (2018)

differentiating source of influence on the impact of maternal nutrition on better health care access and practices. Women's agency can impact children's nutrition through direct and indirect channels, such as women's education beyond the primary level. Women's agency alone however does not replace anti-poverty policies; they need to be implemented together. The study concluded by tentatively mentioning the potential significance of attitude and aspiration for women's agency and health outcomes; their data reported high maternal and child malnutrition for non-poor households, leading them to believe that the prevalent culture of patriarchy was reducing women's power and thus impacting nutrition outcomes.³¹

Larger social networks are associated with better child nutrition in Moestue et al. (2007)'s study of 300 mothers in Andhra Pradesh, India.³² Their 2004 cross-sectional study found that the size and literacy of a mother's social network impacted levels of child stunting (HAZ), hypothesizing that this was due to the important within-network sharing of information, support and resources that occurred.

Also in India, Vikram (2018)³³ used multilevel analysis to determine the role of a household's social capital on children's nutritional status. Based on a sample size of 6,770 children through data from the Indian Human Development Survey (IHDS) the study found that households connected with development-oriented bridging³⁴ organizations were less likely to have underweight and wasted children. They hypothesized this was because those types of organizations "transcend traditional boundaries of interaction, spreading information and norms across diverse groups and increasing social cohesion"³⁵ which allows households to access and benefit from new knowledge and resources. Households with ties to bonding social capital organizations, which tended to be religious or caste-based, are more likely to have underweight and wasted children. This was possibly because these more insular groups strengthened Indian patriarchal norms, which inhibited maternal autonomy, and membership was usually associated with higher fertility and lower contraceptive use—all factors that contribute to malnutrition.

In a meta-analysis conducted in Peru, Ethiopia, Vietnam and India, De Silva and Harpham (2007)³⁶ explored the association between maternal social capital and child nutritional status using 2002 data from the Young Lives study. By examining their final sample size of 7,242

³¹ Begum, Sharifa and Binayak Sen (2009). "Maternal Health, Child Well-Being and Chronic Poverty: Does Women's Agency Matter?" *The Bangladesh Development Studies* 32.4

³² Moestue, Helen, Sharon Huttly, Lydia Sarella and Sheik Galab (2007). "The bigger the better' – mothers' social networks and child nutrition in Andhra Pradesh." *Public Health Nutrition* 10.11: 1274-1282

³³ Vikram, Kriti (2018). "Social capital and child nutrition in India: The moderating role of development." *Health & Place* 50: 42-51

³⁴ Bridging social capital refers to the connections fostered outside one's immediate network or community.

³⁵ Vikram (2018), p.48

³⁶ De Silva, Mary J. and Trudy Harpham (2007). "Maternal social capital and child nutritional status in four developing countries." *Health & Place* 13: 341-355

children aged 6-18 months, they found few associations between structural measures of social capital (objective measures of what people do such as group membership) but found that support from individuals and levels of cognitive social capital (social measures of how people feel such as trust, social harmony, reciprocity) were positively associated with child nutritional status. In Vietnam, they found that support from individuals was more beneficial for children's weight-for-age (WAZ) among those of higher economic standing. This may be because the wealthier are more likely to receive support from people similar to them; they therefore have more resources to draw from their bonding social capital networks. The potential inequality inherent here was mentioned throughout the literature, since socioeconomic status affects resources available for combating malnutrition.³⁷

The evidence base around social capacities and nutrition outcomes is growing, leading to shifts in nutrition programming. It is notable that many of the studies, particularly those involving agriculture, mentioned group membership as a key determinant of nutritional outcomes. This is particularly due to the Women's Empowerment in Agriculture Index (WEAI) including group membership as a factor in improved leadership, one of their five empowerment categories. Though WEAI's definition of group membership is broad, encompassing any active member of an economic or social group, some studies particularly recommend women's groups for their ability to enhance valuable social capacities. Haithar et al. (2018) explicitly recommend the formation of Self Help Groups in Kenya to offer social support, counseling, strategies to address food insecurity and economic empowerment skills for mothers. The next section further explores the linkages between Self Help Groups, social capacities and nutrition.

Self Help Groups and Nutrition

Self Help Groups (SHG) are increasingly used globally to offer a more holistic programming choice that combines economic strengthening with a fundamental focus on building social capacities. SHGs are voluntary groups, typically comprised of 15-25 women who meet every week to save, start small business activities, and grant loans to one another. As well as engaging in economic activities and developing business skills, SHGs have been highlighted for their capacity to generate social change, through the beneficial interaction between individual capacity and mutual social support.

While SHGs share many similarities with Savings Groups (SGs), SHGs are longer term interventions that critically focus on the ability of women, working together, to create change through empowerment and collective action. Their primary focus is building up social capacities, and they use savings and loans as one tool to achieve this. The groups provide a

³⁷ Story, William T. and Richard M. Carpiano (2017). "Household social capital and socioeconomic inequalities in child undernutrition in rural India." *Social Science & Medicine* 181: 112-121

platform for collective action to address issues such as women’s economic, political and social empowerment³⁸, psychosocial wellbeing³⁹, self-efficacy and confidence.⁴⁰ SHGs have been found to increase women’s political participation⁴¹ and challenge restrictive gender norms.⁴² SHGs focus primarily on the demand-side of programming, instilling in members the confidence and means to build the futures they want for themselves and their communities. As mentioned earlier, focusing on this demand is critical for the sustainability of nutrition interventions. The rest of this section looks at the relationship between SHGs and nutrition outcomes. The evidence around SHGs is concentrated in India, where the approach has been institutionalized by the government.

Kumar et al. (2018)⁴³ conducted a literature review informed by a systematic search process and found 36 peer-reviewed and gray literature related to women’s groups and nutrition outcomes in South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka) from 1980 to 2017. The findings were mixed and it was difficult to infer much due to the complexity of the programs evaluated, though “findings on IYCF are promising and indicate that microfinance and livelihoods SHG-based programs may be able to deliver nutritional impacts by adding behavior change or other nutritional support components.”⁴⁴ 60% of 40 outcomes across 19 studies looking at IYCF and women’s groups were positive and significant. Group-based programs have rich potential for addressing the multiple pathways that lead to increased nutrition, and including explicit nutrition goals and actions into group programming could help make them more successful at improving nutrition outcomes.

In a follow up article for the International Food Policy Research Institute (IFPRI), Kumar and Quisumbing, co-authors of the report, state that “women’s groups help improve health and nutrition outcomes through one or more of four distinct pathways: increased savings and greater purchasing power; engagement in agriculture; behavior change communication to generate knowledge sharing around health and nutrition; and improved community

³⁸ Brody, Carinne, Thomas de Hoop, Martina Vojtkova, Ruby Warnock, Megan Dunbar, Padmini Murthy, and Shari L. Dworkin (2015) “Economic Self-Help group Programs for Improving Women’s Empowerment: A Systematic Review”. *Campbell Systematic Reviews*, 19

³⁹ Cromie, Sam, Hannah Quinn-Gates, Paul Fagan and Mengistie Rebsso (2017). “Psycho-social outcomes and mechanisms of self-help groups in Ethiopia.” *Trinity College Dublin*

⁴⁰ Newransky, Chrisann, Karen Kayser and Margaret Lombe (2014). “The Development of Self-Efficacy Beliefs of Widowed and Abandoned Women Through Microcredit Self-Help Groups: The Case of Rural South India.” *Journal of Social Service Research* 40.2

⁴¹ Kumar, Neha, Kalyani Raghunathan, Alejandra Arrieta, Amir Jilani, Suman Chakrabati, Purnima Menon and Agnes R. Quisumbing (2019). “Social networks, mobility and political participation: The potential for women’s self-help groups to improve access and use of public entitlement schemes in India.” *World Development* 114: 28-41

⁴² Sanyal, Paromita, Vijayendra Rao and Shruti Majumdar (2015). “Recasting Culture to Undo Gender: A Sociological Analysis of *Jeevika* in Rural Bihar, India.” *World Bank Group Policy Research Working Paper* 7411

⁴³ Kumar, Neha, Samuel Scott, Purnima Menon, Samyuktha Kannan, Kenda Cunningham, Parul Tyagi, Gargi Wable, Kalyani Raghunathan, and Agnes Quisumbing (2018). “Pathways from women’s group-based programs to nutrition change in South Asia: A conceptual framework and literature review.” *Global Food Security* 17

⁴⁴ Kumar et al. (2018), p.183

engagement, resulting in social accountability and community demand for government programs focused on nutrition. Common to all these pathways are three elements: building social capital, acting collectively and empowering women themselves.”⁴⁵ Kumar, Quisumbing and Raghunathan are currently involved in a multi-year impact evaluation looking into SHGs and nutrition outcomes in India.⁴⁶

Another multi-year study in India⁴⁷, funded by the Gates Foundation, is currently underway by the Population Council looking at SHGs and nutrition. The team is conducting a series of quasi-experimental studies from 2012 until 2020 in Uttar Pradesh and Bihar, evaluating the effects of integrating nutrition and health messaging into SHGs. Preliminary results hint at a significant increase in healthy maternal and child behaviors when the interventions are channeled through SHGs. In two years of integrating health programs into SHGs, there has been an improvement in maternal health and newborn care practices.

Saha et al. (2013)⁴⁸ analyzed the entire dataset from the third national District Level Household Survey from 601 districts in India to assess the impact of the presence of SHGs on maternal health service uptake – a key component of the impact pathway for nutrition outcomes. Logistic regression of the dataset shows respondents from villages with an SHG present were 19% more likely to have delivered in an institution, with mother’s education, wealth, having heard or seen health messages, presence of a health and sanitation committee in the village and accessibility to community health workers acting as mediating factors. The presence of an SHG in the village is also correlated with an 8% higher odds of feeding colostrum to newborns.

In 1970 in Maharashtra state, India, the Comprehensive Rural Health Project (CRHP) trained women SHG members as health workers, initiated literacy programs and provided funds for household health emergencies. In the two decades that followed there was a reduction in infant mortality from 176 to 19 per 1,000, a birth-rate decline from 40 to 20 per 1,000, nearly universal access to antenatal care, safe delivery, and immunization, and a decline in rates of malnutrition from 40% to less than 5%.^{49 50}

⁴⁵ Kumar, Neha and Agnes Quisumbing. “International Women’s Day: In the fight against malnutrition, empower women’s groups first.” *IFPRI Blog*, March 6th, 2018 <http://www.ifpri.org/blog/international-womens-day-fight-against-malnutrition-empower-womens-groups-first>

⁴⁶ Kumar, Neha, Kalyani Raghunathan and Agnes Quisumbing. “International Women’s Day: Self-help groups aid communication, empowerment in India.” *IFPRI Blog*, March 7th 2018 <http://www.ifpri.org/blog/international-womens-day-self-help-groups-aid-communication-empowerment-india>

⁴⁷ Population Council. “Evaluating the Integration of Health and Nutrition Messages Into Self-Help Groups in India.” <https://www.popcouncil.org/research/evaluating-the-integration-of-health-and-nutrition-messages-into-self-help>

⁴⁸ Saha, Somen, Peter Leslie Anear and Swati Pathak (2013). “The effect of Self-Help Groups on access to maternal health services: evidence from rural India.” *International Journal for Equity in Health* 12:36

⁴⁹ Rosato, Mickey, Glenn Laverack, Lisa Howard Grabman, Prasanta Tripathy, Nimala Nair, Charles Mwansambo, Kishwar Azad, Joanna Morrison, Zulfiqar Bhutta, Henry Perry, Susan Rifkin and Anthony Costello (2008). “Community participation: lessons for maternal, newborn, and child health.” *Lancet* 372: 962–971

⁵⁰ Arole, Mabelle and Raj Arole. “Jamkhed, India: The Evolution of a World Training Center.” *Just and lasting change: when communities own their futures*. Baltimore: The Johns Hopkins University Press, 2002: 150–160

A cluster-randomized trial⁵¹ was conducted in Jharkhand and Odisha, India to assess the impact of a community mobilization program through participatory women's groups among the indigenous communities of those states. The trial found that newborn babies born to mothers associated with a women's group were more likely to survive the first six weeks of their lives, compared to babies born to analogous households in control communities. The neonatal mortality rate was 32% lower in intervention groups during the 3-year trial and was 45% lower in years 2 and 3, most likely due to improved hygiene and care practices. The availability of safe delivery kits increased in both control and intervention areas, but women's group membership seemed to generate more demand in the intervention groups, increasing community awareness and social support for such delivery practices.

A two-year longitudinal RCT⁵² in Chitwan, Nawalparasi, and Nuwakot, Nepal found that Heifer International's SHG intervention improved height-for-age (HAZ) and weight-for-age (WAZ) scores in children under age 5. Longer participation in the intervention was associated with better child growth. The SHGs met biweekly with a trained facilitator and the groups were provided specific interactive instructions and trainings over the course of the first year, encouraging community building, resource sharing, sustainable agriculture and gender awareness among other modules. At the end of one year, every family received 2 goats. 2,994 individuals were monitored every 6 months, with the intervention group starting the SHGs at baseline and the control group starting after 1 year. The study also found that SHGs improved socioeconomic status and household income.

Miller et al. (2017)⁵³ monitored the same regions in Nepal in another longitudinal RCT to determine how education levels impacted how different households responded to Heifer's SHG intervention over the course of 4 years. They found that child dietary diversity, child linear growth, wealth, water/toilet availability and household hygiene practices were all related to adult education. Women's education particularly was found to determine child height-for-age (HAZ), dietary diversity, soap use and household wealth. Men's education was linked to increased child dietary diversity and wealth. Overall the percentage of stunted, underweight and wasted children decreased over 4 years, by 11%, 12% and 16% respectively. It is possible that better educated women were better able to take advantage of programming; promoting

⁵¹ Tripathy, Prasanta, Nirmala Nair, Sarah Barnett, Rajendra Mahapatra, Josephine Borghi, Shibnand Rath, Suchitra Rath, Rajkumar Gope, Dipnath Mahto, Rajesh Sinha, Rashmi Lakshminarayana, Vikram Patel, Christina Pagel, Audrey Prost, Anthony Costello (2010). "Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial." *Lancet* 375: 1182–1192

⁵² Miller, Laurie C., Neena Joshi, Mahendra Lohani, Beatrice Rogers, Meghan Loraditch, Robert Houser, Padma Singh, and Shubh Mahato (2014). "Community development and livestock promotion in rural Nepal: Effects on child growth and health." *Food and Nutrition Bulletin* 35.3

⁵³ Miller, Laurie C., Neena Joshi, Mahendra Lohani, Beatrice Rogers, Shubh Mahato, Shibani Ghosh and Patrick Webb (2017). "Women's education level amplifies the effects of a livelihoods-based intervention on household wealth, child diet, and child growth in rural Nepal." *International Journal for Equity in Health* 16:183

women's education may enhance the ability of households to maximize nutrition interventions and put trainings into practice.

Deininger and Liu (2012)⁵⁴ used two rounds of surveys (early 2004 and late 2006) and double differences and propensity score matching to examine the impact of SHGs on 2,517 households in Andhra Pradesh, India. These SHGs were part of the state government's District Poverty Initiatives Project (DPIP) – the project's goal was to expand SHG coverage within Andhra Pradesh by forming new groups and enhancing the capacity of existing groups by forming SHG federated structures. The study's sample included both treated and control households, and they found that longer exposure to DPIP had a positive impact on nutritional intake, consumption and asset accumulation. Per capita intake of calories and protein increased by 8% and 10% respectively. These benefits were more pronounced for the poorest participants and accrued more significantly after more than one year in the program. Though self-sufficient groups were the ultimate goal, program support of more mature groups through federation and access to credit can produce important economic benefits in the long run. Due perhaps to this important program support, it was noted that program SHGs performed better with respect to nutritional gains than non-program SHGs that had organically replicated.

Deininger and Liu (2013)⁵⁵ looked at both the DPIP program and its subsequent second phase, the Rural Poverty Reduction Project (RPRP) in early 2004, following a major drought. They found that the SHGs generated positive social externalities, increasing nutritional indicators, social capital and economic empowerment for both participants and non-participants. The program was deemed to have increased protein intake by 13% and calorie intake by 5%. They hypothesize this was because SHGs helped households diversify their diets and access higher quality food more regularly either through interventions like the rice-credit line⁵⁶ aiming to directly improve nutrition or by allowing households to consume products from livestock acquired through project funds made available to the SHGs. Access to savings and credit may have also provided better options for consumption smoothing.

Barman and Vadrevu (2016)⁵⁷ used a cross-sectional survey method which sampled 1,200 households to further understand malnutrition in children between 6 months and 6 years of age in the Indian Sundarbans in West Bengal. The data was collected during 2012 and the analysis found that a minimum acceptable diet (which includes minimum dietary diversity and

⁵⁴ Deininger, Klaus and Yanyan Liu (2012). "Evaluating Program Impacts on Mature Self-help Groups in India." *The World Bank Economic Review* 27.2: 272-296

⁵⁵ Deininger, Klaus and Yanyan Liu (2013). "Economic and Social Impacts of an Innovative Self-Help Group Model in India." *World Development* 43: 149-163

⁵⁶ The SHG federations buy rice in bulk and then make it available to SHG members as an in-kind credit; this more reliable distribution system helped members gain access to lower priced rice due to the bulk purchase.

⁵⁷ Barman, Debjani and Lalitha Vadrevu (2016). "How is perceived community cohesion and membership in community groups associated with children's dietary adequacy in disadvantaged communities? A case of the Indian Sundarbans." *BMC Health Services Research* 16

minimum meal frequency) is associated with the household's perceived community cohesion score⁵⁸, mother's education status and household's perceived food security. Membership in a community group, the sex of the child and utilization of services at the government's early child development centers were not statistically significant. The study theorized that group membership was not significant because SHGs in this region were primarily used for credit services during emergencies and members did not receive any explicit health messaging (85% of women in a community group were members of an SHG). The groups therefore seeming to function more like SGs than traditional SHGs. It is notable that more educated mothers were less likely to have malnourished children.

In an analysis on women's empowerment in agriculture in Nepal, Malapit et al. (2015)⁵⁹ found that membership in any kind of economic or social group⁶⁰ and overall empowerment are positively associated with better maternal dietary diversity and BMI, along with control over income and reduced workload. The study, which looked at household data for 3,332 rural households with children under five, also found that indicators that predicted women's nutrition did not always align with those that improved children's nutrition. Control over income and the greater equality between women and men within a household significantly correlate with children's dietary diversity and HAZ.

Sraboni et al. (2014)⁶¹ explores the relationship between women's empowerment in agriculture as defined in the WEAI and per capita calorie availability, dietary diversity and adult BMI in Bangladesh. A nationally representative survey uncovers a positive and significant correlation between women's group membership in any kind of economic or social group and calorie availability and dietary diversity for women. Interestingly, this relationship is flipped for adult male BMI, perhaps due to higher demands for male labor—the details behind these intrahousehold tradeoffs were not explored further in this study. Women's increased control over credit decisions and female ownership and control over major household assets may improve food security outcomes. The education of the household head was found to be important for both calorie availability and dietary diversity.

⁵⁸ A score evaluating how much people felt their community was cohesive, and engaged in various social activities and collective decision making.

⁵⁹ Malapit, Hazel Jean L., Suneetha Kadiyala, Agnes R. Quisumbing, Kenda Cunningham & Parul Tyagi (2015). "Women's Empowerment Mitigates the Negative Effects of Low Production Diversity on Maternal and Child Nutrition in Nepal." *The Journal of Development Studies* 51.8

⁶⁰ Both Malapit et al. (2015) and Sraboni et al. (2014) are using the WEAI definition of group membership: "whether respondent is an active member in at least one economic or social group (e.g. agricultural marketing, credit, water users' groups)".

⁶¹ Sraboni, Esha, Hazel J. Malapit, Agnes R. Quisumbing and Akhter U. Ahmed (2014). "Women's Empowerment in Agriculture: What Role for Food Security in Bangladesh?" *World Development* 61: 11-52

Though food security is distinct from nutrition, food availability and access are a critical part of the impact pathway for fighting malnutrition. Entz et al. (2016)⁶² reviewed both academic and grey literature to determine that SHGs and Savings Groups have a net positive impact on food security. Out of 18 reports reviewed, 17 showed some improvement in household food consumption, reduction in lean months, increase in meals per day, increased diversity in diet, reduction in “suffering” due to food insecurity or increases in food security indices. Groups varied greatly by context, but positive increases were generally attributed to profits from IGAs, income smoothing from group participation and enhanced resilience due to increased assets such as livestock. There were positive impacts on the sustainability, productivity, equitability and resilience of the foodscapes in SHG/SG project areas.

Conclusion

Malnutrition is a complex issue which requires holistic and innovative programming to address thoroughly. Importantly, complementary interventions on both the supply and demand side are critical to realizing positive nutrition outcomes. Further, frameworks for understanding the key components for addressing malnutrition highlight that both monetary and non-monetary interventions are required. The role of social capacities is clear: women’s empowerment, agency, self-efficacy, social networks, decision-making power, participation in groups and psychosocial health have been shown to have positive effects on maternal and child nutrition. Self Help Groups have been proven to increase social capacities and the evidence available points to a clear relationship between Self Help Groups and positive nutrition outcomes.

⁶² Entz, Meghan, Janet Karsgaard and Michael Salomons (2016). “An Overview of Savings and Self-Help Groups, Their Contributions to Improved Food Security, and How to Improve their Function.”