

The effect of women's empowerment strategies on adolescent girls' nutritional status: a systematic review

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TITLE OF THE REVIEW

The effect of women's empowerment strategies on adolescent girls' nutritional status: a systematic review

BACKGROUND

Malnutrition and poor diets are among the foremost drivers of the global burden of disease. Despite some progress in reducing global rates of stunting and wasting in children under five, the world continues to lag on key indicators (IFPRI, 2016). Most countries are off track to meet the global nutrition targets set by the World Health Assembly (IFPRI, 2016). Women and girls often suffer the greatest burden of malnutrition due to their relatively lower levels of status and power compared to men and boys (Black et al., 2013; Ndiku, Jaceldo-Siegl, Singh, & Sabate, 2011). Malnourished women are more likely to have complications during pregnancy, give birth to preterm or low-weight infants, or die during childbirth (Bhutta et al., 2013). Gender-biased cultural practices that lead to early and repeated pregnancies place adolescent girls at a particular disadvantage as conception at a young age also negatively affects adolescent growth and development (Haldre, Rahu, Karro, & Rahu, 2007; Paranjothy, Broughton, Adappa, & Fone, 2009; Vir, 2016; WHO, 2007).

Women's empowerment is associated with improved nutritional status for themselves and their children (Bhutta et al., 2013; Ruel, Alderman, & Maternal Child Nutr Study, 2013; Smith, Ramakrishnan, Ndiaye, Haddad, & Martorell, 2003; van den Bold, Quisumbing, & Gillespie, 2013). There are varying definitions of empowerment, reflecting the complexity of the construct (Alsop, Bertelsen, & Holland, 2006; Kabeer, 1999; Sen, 1985). However, Kabeer's definition captures many of the common definition elements: "[Empowerment is] [t]he expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them" (Kabeer, 1999). Most definitions recognize two predominant **components** to empowerment: (1) improving individual agency to make effective choices, and (2) creating an opportunity structure that allows the individual to achieve their desired outcomes (Alsop et al., 2006; Malhotra, Schuler, & Boender, 2002). The process of empowerment can occur in varying **dimensions** of women's and girls' lives, be it political, socio-cultural, familial/interpersonal, economic, legal, or psychological (Malhotra et al., 2002). It can also occur to varying degrees depending on an individual's ability to act and ultimately achieve desired outcomes based on their strategic choices (Alsop et al., 2006). Despite evidence that empowerment is associated with improved nutrition outcomes, specific aspects of empowerment that serve as pathways to improved nutrition, particularly among adolescent girls, remains unknown (Ruel et al., 2013). This review seeks to illuminate how these different aspects of empowerment affect the effectiveness of nutrition interventions targeting adolescent girls.

OBJECTIVES

The primary objective is:

1. To systematically review and assess the impact of integrating empowerment strategies in nutrition interventions targeting adolescent girls.

Secondary objectives are:

1. To identify the underlying program theories and to understand which factors in the context and implementation are associated with the success or failure of interventions;
2. To assess the impact of empowerment strategies on girls' empowerment outcomes in nutrition interventions;
3. To identify potential adverse effects of integrating empowerment strategies into nutrition interventions for adolescent girls.

EXISTING REVIEWS

We identified one other systematic review related to nutrition and empowerment interventions. Brandstetter and colleagues conducted a systematic review to capture the different ways empowerment is operationalized in healthy nutrition interventions for health promotion in a general population (Brandstetter, Rueter, Curbach, & Loss, 2015). Our review differs from their work by target population, setting, intervention type, and outcome measures in that: (1) it is focused on adolescent girls in LMICs; (2) it includes nutrition interventions beyond health promotion; (3) it adopts a more flexible definition of empowerment by not requiring investigators to explicitly state empowerment as the goal of an intervention; and (4) it seeks to evaluate the impact of empowerment on nutrition outcomes.

Van den Bold and colleagues conducted a (non-systematic) review of evidence regarding the impact of nutrition-sensitive interventions (agricultural, microfinance, and cash transfer programs) on nutrition and empowerment outcomes (van den Bold et al., 2013). Our review will differ in that it is focused on nutrition-specific nutrition interventions in a specific population (adolescent girls in LMICs).

A recent series of reviews of adolescent health interventions in the *Journal of Adolescent Health* included a systematic review and meta-analysis of nutrition interventions targeting adolescents by Salam et al. but it did not examine any aspects related to empowerment (Salam et al., 2016).

Other reviews have been conducted related to women or youth empowerment interventions, but we are not aware of any that are specific to the nutrition sector (Kar, Pascual, & Chickering, 1999; Vaessen et al., 2014).

INTERVENTION

We will include nutrition-specific interventions that incorporate empowerment-related activities targeting adolescent girls in home-, community-, work- or school-based settings in low- and middle-income countries (LMICs).

We define nutrition-specific interventions as interventions that target the immediate causes of malnutrition, namely, inadequate dietary intake and ill-health. Examples of interventions include:

- Micronutrient supplementation
- School feeding
- Nutrition education in schools and communities, including obesity prevention
- Nutrition support for pregnant and post-natal adolescents
- Nutrition support for adolescents living with HIV/AIDS
- Fortification of aid commodities targeted at adolescents

We will exclude interventions that address the underlying causes of malnutrition, such as agriculture or cash transfer programmes, unless they serve as a delivery platform for a nutrition-specific intervention.

Included nutrition interventions must include empowerment-related activities that seek to improve adolescent girls' individual agency, i.e., girls' ability to formulate strategic choices and to control resources and decisions that either directly or indirectly affect their nutritional status. Example activities include (but are not limited to): education and/or skills building to build self-esteem or self-efficacy; youth action groups; mentorship programs; youth leadership activities; and youth engagement in nutrition program design or decision-making.

Nutrition interventions must also include activities to improve the opportunity structure for girls' empowerment, i.e. activities intended to alter the presence and operation of the formal and informal laws, regulations, norms and customs that determine whether adolescent girls have access to assets for improved nutrition and whether they can use the assets to achieve desired outcomes. Example interventions include (but are not limited to): Sensitization activities for families and community leaders to adolescent girls' nutritional needs; and activities to change community perceptions, practices, and norms regarding girls' freedom of movement, access to and control over resources, access to education, freedom from discrimination, prevention of early marriage, or prevention of adolescent pregnancy.

Investigators need not explicitly state an intention to study empowerment.

An intervention will be considered to target adolescent girls if it includes at least one of the following:

- Adolescent girls (aged 10-24 years or a subset therein) are the primary study population or are an explicit study population subset.
- There is an explicit intention to address the nutritional challenges faced by adolescent girls.
- There is a separate analysis of adolescent girls' nutrition outcomes.

Attention will be given to collecting data on the following intervention characteristics:

1. Empowerment components (i.e., individual agency and opportunity structure) intervened on and measured, and how they are operationalized;
2. Empowerment dimensions (i.e., political, socio-cultural, familial/interpersonal, economic, legal, or psychological) intervened on and measured, and how they are operationalized.

POPULATION

The target population is adolescent girls (aged 10-24 years) and their children, regardless of health status, living in low- and middle-income countries, as defined by the World Bank categorization of countries based on GDP at the time data were collected.

Studies undertaken in high-income countries will be excluded.

Studies in which boys participate are eligible if data are disaggregated by sex.

OUTCOMES

Primary outcomes are:

1. Nutritional status
2. Dietary intake
3. Health or disease status

Secondary outcomes are:

3. Degree of empowerment conferred by dimension (i.e., economic, socio-cultural, psychological, and interpersonal)
4. Adverse effects of integrating empowerment strategies into nutrition interventions for adolescent girls

STUDY DESIGNS

Study designs to be included are:

- Randomized Controlled Trials (RCTs)
- Cluster-RCTs
- Controlled Before and After Studies
- Interrupted Time Series (with 3 time points before and after the intervention)
- Other Quasi-Experimental Designs with at least one comparison group

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ROLES AND RESPONSIBILITIES

Please give a brief description of content and methodological expertise within the review team. It is recommended to have at least one person on the review team who has content expertise, at least one person who has methodological expertise and at least one person who has statistical expertise. It is also recommended to have one person with information retrieval expertise. Please note that this is the *recommended optimal* review team composition.

- Content:

Content expertise will be provided by Dr. Zulfiqar A. Bhutta, Dr. Carol Vlassoff, Dr. Elizabeth Kristjansson, Abigail K. Ramage, and Alison Riddle.

- Systematic review methods:

Systematic review methods expertise will be provided by Dr. George A. Wells, Dr. Vivian Welch, Dr. Elizabeth Kristjansson, and Dr. Cynthia M. Kroeger.

- Statistical analysis:

Statistical analysis expertise will be provided by Dr. George A. Wells and Dr. Monica Taljaard.

- Information retrieval:

A librarian scientist has yet to be identified for the project, but may be sourced from the University of Ottawa or University of Ottawa Heart Institute.

FUNDING

Alison Riddle received funding from the World Health Organization to attend the WHO/Cochrane/Cornell Summer Institute for Systematic Reviews in Nutrition for Global Policy-Making (July-August 2016). The review will be completed as part of her PhD research.

POTENTIAL CONFLICTS OF INTEREST

None known.

PRELIMINARY TIMEFRAME

- Date you plan to submit a draft protocol: mid-Jan 2017
- Date you plan to submit a draft review: April 2018

AUTHOR DECLARATION

Authors' responsibilities

By completing this form, you accept responsibility for preparing, maintaining, and updating the review in accordance with Campbell Collaboration policy. The Coordinating Group will provide as much support as possible to assist with the preparation of the review.

A draft protocol must be submitted to the Coordinating Group within one year of title acceptance. If drafts are not submitted before the agreed deadlines, or if we are unable to contact you for an extended period, the Coordinating Group has the right to de-register the title or transfer the title to alternative authors. The Coordinating Group also has the right to de-register or transfer the title if it does not meet the standards of the Coordinating Group and/or the Campbell Collaboration.

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