

Associations between women's empowerment and maternal depressive symptoms

A cross-sectional analysis from Balaka and Ntcheu districts in Malawi

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1. Background

Enhanced women's empowerment has been linked to improvements in various areas of women's lives, such as increased access to resources, decision-making power, and a manageable workload (Malapit et al., 2019). It can also have positive effects on child health outcomes, including nutritional status and early childhood development (Carlson et al., 2015; Cunningham et al., 2015; Heckert et al., 2019; Jones et al., 2019; Pratley, 2016; Santoso et al., 2019). However, there can also



be trade-offs for women, such as their own nutritional outcomes (Quisumbing et al., 2021). While the relationship between women's empowerment and child health outcomes has been extensively studied, there is limited research on the relationship between women's empowerment and their own mental health, particularly in low- and middle-income countries (LMIC). One aspect of mental health, maternal

depressive symptoms is prevalent in these countries and can have a negative impact on both the mothers and their children (Gelaye et al., 2016) (Prado et al., 2021). In Malawi, Stewart et al. (2010) find that 30 percent of mothers of young children, attending a child health clinic grapple with depressive episodes. In this study, we explore the relationship between women's empowerment, as measured by the pro-WEAI, and maternal depressive symptoms, as measured by the 20 symptom Self-Reported Questionnaire (SRQ-20). The Pro-WEAI is particularly useful because it allows us to explore the relationship of various components of women's empowerment with maternal depressive symptoms.

2. Methods

We analyzed baseline data from the Maziko Impact Evaluation, a three-year cluster-randomized controlled trial (cRCT), conducted in Ntcheu and Balaka districts of Malawi. The pro-WEAI encompasses three dimensions of women's empowerment, including resources, agency, and achievements, across 12 domains (Malapit et al., 2019). The pro-WEAI identifies women's adequacy in each of twelve domains, weighted equally. If a person shows adequacy in nine out of the twelve domains, they are considered empowered. Maternal depressive symptoms were measured using the SRQ-20, which measures symptoms of psychological stress, anxiety, and depression and is often read as a measure of maternal stress (Mobarak et al., 2000; Olney et al., 2019; Ziaei et al., 2016). It consists of 20 questions that score 0 or 1 depending on women having experienced a depressive symptom in the last four weeks. In previous studies in Malawi, this SRQ-20 cut-off of eight or higher has been validated against clinical diagnosis (Stewart et al., 2013). Using the data from the SRQ-20 we created a binary variable to indicate whether women reported experiencing eight or more symptoms. We also considered a range of individual and household characteristics that may be related to women's empowerment and maternal depressive symptoms. Associations between women's empowerment and maternal depressive symptoms were first explored using multiple regression models including both a continuous and a binary SRQ-20 variable, against the aggregate empowerment score and the binary indicating whether the woman is empowered. We then examined associations on the twelve continuous pro-WEAI domain scores, and lastly, the twelve binary pro-WEAI domain variables.

3. Results

Thirty-one percent of women in our sample were considered empowered as per pro-WEAI. The majority of women in our sample (90 percent) showed adequacy in 'input in productive decisions', and 'ownership of land and other assets'. The SRQ-20 indicated that 25 percent of women have symptoms consistent with minor/major depression. We observed a significant negative association between the empowerment score and both SRQ-20 score and the binary variable indicating presence of depressive symptoms. The results suggest that one standard deviation increase in the empowerment score is associated with experiencing a decline in maternal depressive symptoms by 0.11 percentage points and that a decrease in the probability of experiencing minor/major depression symptoms of 3 percentage points. Further, regression models results found that domains of women's empowerment of 'self-efficacy', 'respect among household members', 'ownership of land and other assets', or 'access to and decisions on credit', were associated with fewer maternal depressive symptoms. On the other hand, domains such as 'input in productive decisions', 'visiting important locations' and 'membership in influential groups', were associated with more depressive symptoms. The largest relative magnitude of associations was found in the pro-WEAI domains of 'respect among household members' (negative association), and 'visiting important locations' (positive association). Those were also the only coefficients that held robust to correction for multiple hypothesis testing.

4. Discussion

In this study, we found significant associations between higher levels of women's empowerment and lower levels of maternal depressive symptoms. Women with a higher empowerment score had, on average, fewer maternal depressive symptoms. However, further analysis of the associations between the domains of women's empowerment and maternal depressive symptoms highlighted a complex set of mechanisms involved. The empowerment domains of 'self-efficacy', 'respect among household members', 'ownership of land and other assets', and 'access to and decisions on credit', were associated with lower levels of depressive symptoms. These findings suggest that women's belief in their capacity to achieve goals and their intra-household relationships and decision-making is associated with their experience of maternal depressive symptoms. This is consistent with literature suggesting similar relationships (Abebe et al., 2019; Adewuya et al., 2007; Atuhaire et al., 2021; Chen & Chien, 2020).

Several domains of empowerment were associated with higher levels of depressive symptoms. Adequacy in input in productive decisions may involve a burden of responsibility women perceive when making livelihood decisions, especially when experiencing maternal depressive symptoms. Adequacy in visiting important locations may require activities that are stressful and exhausting, particularly with an infant. Membership in influential groups was also associated with higher levels of depressive symptoms. This may be due to the increased stress and responsibilities that come with being part of multiple influential groups. Those potential negative associations are consistent with the findings of Quisumbing et al. (2021), on trade-offs between dimensions of empowerment and well-being outcomes. These suggest that these trade-offs may be particularly relevant for new mothers. Due to the cross-sectional, observational study design involved, the associations we report cannot be interpreted causally, but rather we interpret these associations as indications of possible pathways, or modifiable factors, through which future interventions may operate. As such, these findings highlight an important relationship between women's empowerment and maternal mental health in rural Malawi. Further research is needed to understand the mechanisms involved.

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