### An Exploration of the Prevalence of Depression amongst Obese Pregnant Women and the Relationship between Depression and Potential Demographic Risk Factors

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**Background:** Antenatal depression is a condition from which 8-29% of women suffers worldwide, and may be more prevalent in obese women and women of low socioeconomic status. Counties Manukau is a region of New Zealand that has a high prevalence of obesity and socioeconomic deprivation amongst its population. There are limited data concerning the issue of depression in pregnant women in this population. Additionally, the relationship between demographic characteristics and rates of depression in this population is unexplored.

**Methods:** Depression was assessed amongst obese pregnant women at recruitment to the Healthy Mums and Babies (HUMBA) trial (between 12-18 weeks of pregnancy) using the Edinburgh Postnatal Depression Scale (EPDS). These scores were analyzed to determine the prevalence of depression in the study cohort, defined as EPDS score > 13. Additionally, socioeconomic status was evaluated using New Zealand's Deprivation Index. Demographic factors were self-reported by study participants using questionnaires administered by HUMBA research midwives. Statistical analysis was done using logistic regression and chi square tests. At present, 65% of the study cohort has been recruited.

**Findings:** One hundred and thirty seven women were included in the current analysis of whom 19 (13.9%) met the criteria for depression. Deprivation index was not associated with depression. Women who did not complete secondary school were more likely to be depressed than women who had a secondary school qualification or completed some form of tertiary education (OR: 4.81, CI: 1.63-14.19). BMI grouping did not have a significant overall effect on EPDS score. Comparisons between categorical groups showed that the BMI group of 30-35 was associated with a higher rate of depression compared to the other BMI groups (OR: 3.90, CI: 1.02-14.89). When level of education was adjusted for in a multivariate model, BMI group of 30-35 no longer had a significant relationship with depression.

**Interpretation:** The rate of depression in this obese cohort of pregnant women is similar to rates reported in other settings. Women with lower levels of education appeared to be more likely to be depressed than their more educated counterparts. If this finding is confirmed in results from the full cohort, women with lower educational attainment should be considered for EPDS screening during pregnancy.

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### Transformed Women, Transformed Communities: Impact of Mental Health Support Groups for North Indian Women

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Background: Although major depression is one of the leading causes of premature death and disability in India, there is little infrastructure to provide mental health services in the highly populated North Indian state of Uttarakhand. The worldwide burden of depression is 50% higher in women than men, however Indian women experience the double burden of gender disadvantage and poverty which restricts their autonomy and access to social support, and increases their risk for common mental disorders (CMDs). In this low resource setting, community mental health (CMH) models of care may offer the best approach to supporting women with CMDs. This study partnered with a local NGO in Uttarakhand to examine barriers for women participating in mental health support groups (MHSGs), and the groups' impact on the women and their communities.

**Methods:** Focused ethnographic research was conducted over three months in 2016, involving ten focus group discussions with MHSGs, and eight key informant interviews with community health workers and mental health professionals. Data was translated and transcribed from Hindi to English.

**Findings:** The principal barrier to MHSG participation was gender inequality, specifically, women not being granted permission to leave the home to participate. In terms of impact, the women explained how learning and talking about their own depression and anxiety increased their knowledge and improved their mental health. MHSGs created safe social spaces for women to talk, which increased women's confidence to speak freely in their community. Communities were impacted by the MHSGs as women shared their MH knowledge widely, and referred and accompanied community members to MH services.

**Interpretation:** These findings are significant because women in MHSGs were able to work together to improve their MH in the context of high gender inequality and mental health stigma. Greater ability to speak out and act collectively may empower women to contribute to household and community decisions, and participate economically, advancing their health and social interests.

This research demonstrates how MHSGs can benefit not only the women involved but their community and its mental health. It highlights the importance of understanding models for CMH services that build on local resources and can serve as a model for other underserved communities.

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## A Randomized-controlled Trial of a Livestock Asset Transfer Intervention to Improve Economic and Health Outcomes and Reduce Intimate Partner Violence in a Post-Conflict Setting

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**Background:** In addition to the economic benefits of asset transfer programs evidence suggests that it is an effective vehicle for improving health; however, evidence is mixed on the impact of economic programs on gender equity outcomes, as measured here by male violence against their intimate female partner.

**Methods:** The team evaluated the effectiveness of a livestock asset transfer intervention—Pigs for Peace (PFP)—on economic, health and intimate partner violence (IPV) outcomes with participants in households in 10 villages in Eastern Democratic Republic of Congo (DRC). Residual change analysis was used to examine the amount of change from baseline to 18 months between intervention and delayed control groups, controlling for baseline scores.

**Findings:** The majority of the 833 household participants were women (84%), 25 years of age or older, married, had on average three children, and had never attended school. At 18 months post-baseline, participants in the PFP households were significantly less likely to have outstanding credit/loans compared to households in the control group ( $p=\cdot028$ ), and reported significantly improved general health ( $p=\cdot026$ ), reduced symptoms of anxiety ( $p=\cdot020$ ), and post-traumatic stress disorder ( $p<\cdot01$ ). Further, the intervention group had a significantly greater decline in the frequency of IPV ( $p=\cdot028$ ).

**Interpretation:** The findings support evidence about the importance of livestock as productive assets to households but expand on previous research by demonstrating improved general and mental health and reduction of IPV among participants living in a conflict-affected setting.

**Source of Funding:** NIH/National Institute of Minority Health and Health Disparities (NIMHD).

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# Communities Care: Evaluation of a community led intervention to change social norms that sustain violence against women and girls in Somalia

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**Background:** The goal of Communities Care is to create safer communities for women and girls by transforming harmful social norms that contribute to gender based violence (GBV) into social norms that uphold equality, safety and dignity. The prevention intervention provides information, resources and materials to achieve the local community engagement and action for prevention and response for social norms change in humanitarian settings.

**Methods:** Our evaluation of Communities Care compared changes in community behavior and social norms between the intervention and matched control sites in Mogadishu, Somalia. To evaluated change in behavior and norms, 200 men and women were randomly sampled from each of the intervention and control sites and followed by skilled research assistants from baseline to 24 months.

**Findings:** Participants in the intervention site had significantly greater improvement than the control site in response to GBV (p<.001, e.g. less blaming woman/girl for rape), protecting women safety over family dignity/honor (p<.001), and husbands not using violence against their wives (p<.001). There was also a positive shift in social norms (e.g. what a person thinks influential others expect them to do) with the intervention sites displaying more positive norms than the control sites in response to GBV (p=.007, for example, less likely to agree with blaming survivor), protecting family dignity/honor (p<.001, less likely to agree with protecting family dignity over safety), gender equality (p=.023, more likely to agree with girls and boys going to school), and husbands' use of violence against his wife (p<.001, less likely to agree with use of violence against wife.

**Interpretation:** Evidence suggests that UNICEF's Communities Care intervention is a successful model for community engagement in a complex humanitarian setting (Somalia). In Somalia, social norms support a husband's right to use violence to discipline wife, prioritizing the dignity/honor of the family over the safety of the woman/girl, and men's control of women's behaviors. The intervention initiates a process of positive change in existing social norms that leads to improvement in community's behavior.

**Source of Funding:** UNICEF.

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### Characterization of Emergency Care-seeking Patterns for Nontraumatic Conditions in Pregnant Women in the East African Setting, a Pilot Study

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**Background:** Many of the conditions contributing to maternal morbidity and mortality present as emergency conditions during and directly after pregnancy. The emergency care seeking patterns of pregnant women in low-resource settings, such as Uganda, are not well-characterized but could provide insight into opportunities to reduce maternal morbidity and mortality. We aimed to identify the most common emergency conditions among pregnant and postpartum women who present at the Obstetrics and Gynaecology Ward at Mulago National Referral Hospital (MNRH) in Kampala, Uganda.

**Methods:** We conducted a retrospective chart review at MNRH, which is the main referral hospital for Uganda and also serves the Kampala metropolitan area. Records were eligible if the patient was a pregnant or postpartum women, 18 years or older, who presented with an emergency condition between January and June of 2016. We used descriptive statistics to compare common health conditions that required emergency medical care during pregnancy.

**Findings:** A total of 1,172 women sought emergency care within the 6-month time period (7.4% of all Obstetrics and Gynecology-related visits). A preliminary analysis of data abstracted from the first 100 records suggests that the leading medically-attended emergency