

## Letter to the Editors on the paper by Ferdos & Rahman

Carta a las Editoras sobre el artículo de  
Ferdos & Rahman

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Ferdos & Rahman

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Dear Editors,

Ferdos & Rahman published an article on women who are victims of intimate partner violence, based on the *2007 Bangladesh Demographic Health Survey* (DHS)<sup>1</sup>. Nevertheless, some results are not consistent with the current literature, such as malnutrition as a risk factor for all forms of violence. Interestingly, the authors themselves, acknowledged alternative explanations in their *Discussion* section: Ferdos & Rahman appropriately stated that the food restriction faced by Bangladeshi women was generated by economic, emotional, and psychological abuse, which may result in insufficient or inappropriate food intake among women and leading to malnutrition (measured as high or low body mass index – BMI). In that context, women deal with the incapacity to make decisions by themselves, such as choosing adequate food amount and types. However, the statistical analyses performed by the authors report findings on an opposite causal pathway: altered BMI is the risk factor for physical and/or sexual violence (see Table 3 in the article<sup>1</sup>).

Nevertheless, these results may be biased due to lack of adjustments for unobserved confounders, i.e. other forms of violence. Violence is a latent variable, expressed by different observed behavior types, such as economic, physical, sexual, or psychological violence<sup>2,3,4</sup>. Economic violence against women occurs when a male partner controls the family finances, deciding how money is spent or saved, forcing the woman into economic dependence<sup>4,5</sup>. Thus, there is a link between economic violence and the availability of resources that women have access to, including food<sup>4,5</sup>.

Economic concerns could lead to family conflicts, which may end in physical/sexual violence against women<sup>4,6</sup>. This type of relationship was shown by an experiment in Ecuador that assessed three interventions for poor households: cash transfers, transfers of food and food coupons. The results showed that, in addition to reducing the household food insecurity and poverty, the interventions reduced the violent behaviors of male partners<sup>7</sup>. Apparently, rising economic incomes in a household reduces violence, by reduction of stress and domestic conflicts regarding poverty difficulties. It is unlikely that the women's BMI have changed in the context of the Ecuadorian study, since no intervention was oriented towards that outcome<sup>7</sup>. Other studies have shown that increases in household income lead to decreasing couples' conflicts<sup>8</sup>.

Furthermore, other studies (including the Ecuadorian one) have shown that economic interventions for reducing household poverty also significantly increased the quantity and quality of food

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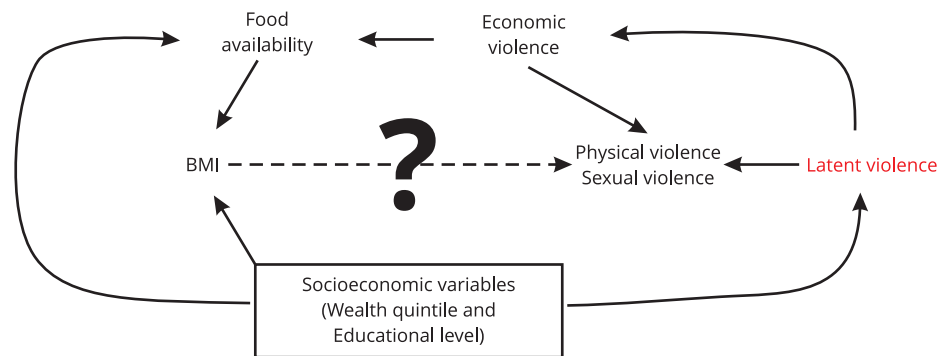
consumed by the families, improving their nutritional status <sup>7,9,10</sup>. Thus, a woman's food availability is determined by her socioeconomic status and her economic independence, which also determine her nutritional status and anthropometrics <sup>7,11,12,13</sup>.

The causal relationships explained above are summarized in the directed acyclic graph <sup>14,15</sup>, shown in Figure 1. In their analysis, Ferdos & Rahman adjusted for different socioeconomic variables (e.g. educational level and wealth quintile) blocking a backdoor pathway between BMI and physical/sexual violence; i.e. controlling a spurious statistical association due to those confounders <sup>14,15</sup>. Nevertheless, the authors did not adjust for other confounders, as shown in Figure 1, leaving another backdoor pathway still open: a causal pathway passing through latent violence, economic violence, and food availability. The last causal pathway may be the real explanation of the statistical association reported by Ferdos & Rahman (see Table 3 in their article <sup>1</sup>).

Finally, it is noteworthy that the 2007 Bangladesh DHS <sup>16</sup> did not include specific questions for measuring economic violence against women, which could have been used in analyses adjusted for the whole set of confounders showed in Figure 1. In contrast, the Peruvian and Colombian DHS questionnaires included specific questions on domestic economic violence, such as: Has your money been monitored? Have you been threatened denying the economic support you receive? Have you been banned from working or studying? <sup>17,18</sup>. The only way to assess the economic violence against women is to measure it directly with objective questions in order to implement appropriate interventions for supporting the victimized women. Thus, questions on economic violence must be included in the DHS questionnaires of Asian countries.

**Figure 1**

Directed acyclic graph (DAG) on the causal relationships between body mass index (BMI) and physical/sexual domestic violence against women.



## Contributors

L. M. Sandoval-Moreno, A. Fandiño-Losada, and M. I. Gutiérrez-Martínez contributed to the study conception and design, data interpretation, writing, and critical review. S. G. Pacichana-Quinayaz contributed to the writing and critical review. All authors approved the version to be published.

## Additional informations

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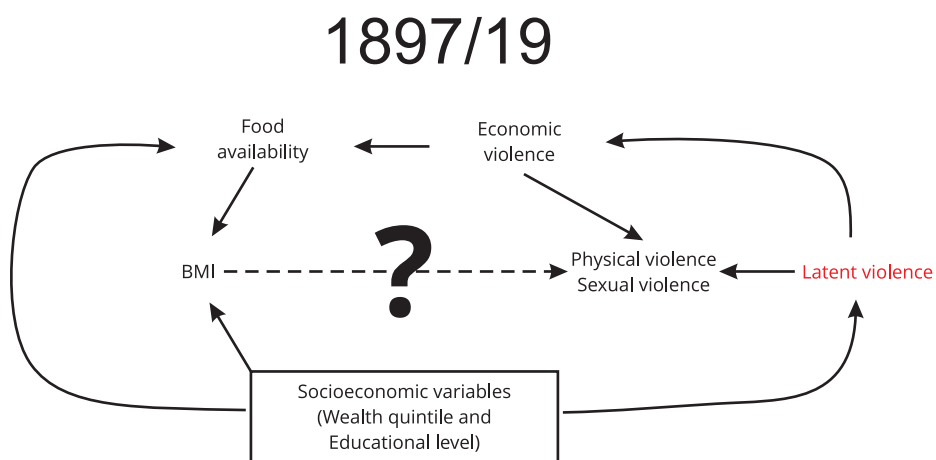
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Where it reads:

**Figure 1**

Directed acyclic graph (DAG) on the causal relationships between body mass index (BMI) and physical/sexual domestic violence against women.



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