

Supplementary File 1

Intersectional community correlates of married women's experiences of male intimate partner physical violence in Bangladesh: a cross-sectional study

Supplementary Materials:

Supplementary Tables, Figure and Appendices

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Supplementary Table S1 Currently married women's (CMW's) community-level locations, and hypothesized relationships between these locations and their experiencing male intimate partner physical violence (MIPPV) in Bangladesh.

Panel 1: CMW's different community-level social locations	
1. Communities where higher proportions of women are	
A. Younger age (<30 years), i.e., younger women living communities	
B. Older age (>30 years), i.e., older women living communities	
2. Communities where higher proportions of women have	
C. Lower education (<5th grade), i.e., lower educated communities	
D. Higher education (>5th grade), i.e., higher educated communities	
3. Communities where higher proportions of women	
E. Earn an income, i.e., higher earning participation communities	
F. Do not earn an income, i.e., lower earning participation communities	
4. Communities where higher proportions of women are	
G. Poor, i.e., poor communities	
H. Nonpoor, i.e., nonpoor communities	
Panel 2: Hypothesized relationships, comparing CMW's experiencing MIPPV between different community-level social locations	
Comparisons	Hypothesized direction of relationships
1. Comparison between women living in younger vs. older age living communities	1.1. $A > B$
2. Comparison between women living in lower vs. higher educated communities	1.2. $C > D$
3. Comparison between women living in higher vs. lower earning participation communities	1.3. $E > F$
4. Comparison between women living in poor vs. nonpoor communities	1.4. $G > H$
Notes.	
1. Because women's income earning has been an MIPPV risk factor for married women in Bangladesh, higher earning participation communities has been assumed to be a disadvantaged community location.	
2. Hypotheses 1.1 to 1.4 were tested with a main effect model that entered women's four individual-level social locations simultaneously (Table 2; Model 6).	

Supplementary Table S2 Currently married women's (CMW's) dual community-level intersectional locations, and hypothesized relationships between these locations and their experiencing male intimate partner physical violence (MIPPV) in Bangladesh.

Panel 1: CMW's 24 dual community-level intersectional locations	
1. Age, education	4. Education, income earning
A. Younger, lower educated communities	A. Lower education, higher earning participation communities
B. Younger, higher educated communities	B. Lower education, lower earning participation communities
C. Older, lower educated communities	C. Higher education, higher earning participation communities
D. Older, higher educated communities	D. Higher education, lower earning participation communities
2. Age, income earning	5. Education, poverty
A. Younger, higher earning participation communities	A. Lower education, poor communities
B. Younger, lower earning participation communities	B. Lower education, nonpoor communities
C. Older, higher earning participation communities	C. Higher education, poor communities
D. Older, lower earning participation communities	D. Higher education, nonpoor communities
3. Age, poverty	6. Income earning, poverty
A. Younger, poor communities	A. Higher earning participation, poor communities
B. Younger, nonpoor communities	B. Higher earning participation, nonpoor communities
C. Older, poor communities	C. Lower earning participation, poor communities
D. Older, nonpoor communities	D. Lower earning participation, nonpoor communities
Panel 2: Hypothesized relationships, comparing CMW experiencing MIPPV between different Panel 1 locations	
Comparisons	Hypothesized direction of relationships
Two disadvantaged vs. one disadvantaged location: A vs. B and A vs. C	2.1. A > B 2.2. A > C
Two disadvantaged vs. two advantaged locations: A vs. D	2.3. A > D
One disadvantaged vs. one disadvantaged location: B vs. C	2.4. B = C
One disadvantaged vs. two advantaged locations: B vs. D and C vs. D	2.5. B > D 2.6. C > D

Notes.

1. Six dual intersections of women's four disadvantaged community-level locations are shown under Arabic numerals: 1 to 6 in Panel 1.
2. Because women's income earning has been an MIPPV risk factor for married women in Bangladesh, higher earning participation communities has been assumed to be a disadvantaged community location.
3. English letters A to D in Panel 1 indicate the six corresponding intersectional locations indicated under Arabic numerals: 1 to 6.
4. Thus, there are a total of 24 (6 x 4) intersectional locations in six dual intersections of women's four disadvantaged community-level locations.
5. Location A is in the intersection of two disadvantaged locations.
6. Location D is in the intersection of two advantaged locations.
7. Locations B and C are in the intersection of a disadvantaged and an advantaged location.
8. While there are 24 dual intersectional locations, as shown in Panel 1, only locations related to a significant cross-product term (Table 3, Model 13), for the fourth interaction between *education and earning* indicated in bold-faced fonts in Panel 1, were compared.
9. Thus, comparing the six hypothesized relationships between these four locations—4. A, 4.B, 4.C, and 4.D— allowed us testing the hypotheses 2.1 to 2.6, as shown in Panel 2.
10. Post hoc, Bonferroni adjusted, pair-wise comparisons were conducted to test hypotheses 2.1 to 2.6.
11. Out of six post-hoc, Bonferroni adjusted, pairwise comparisons, we found evidence in support of only the bold-faced relationships shown in 2.4 and 2.6.
12. As expected, we failed to reject the null hypothesis shown in hypothesis number 2.4; and also failed to reject the alternative hypothesis, shown in hypothesis number 2.6 at $p < .05$.

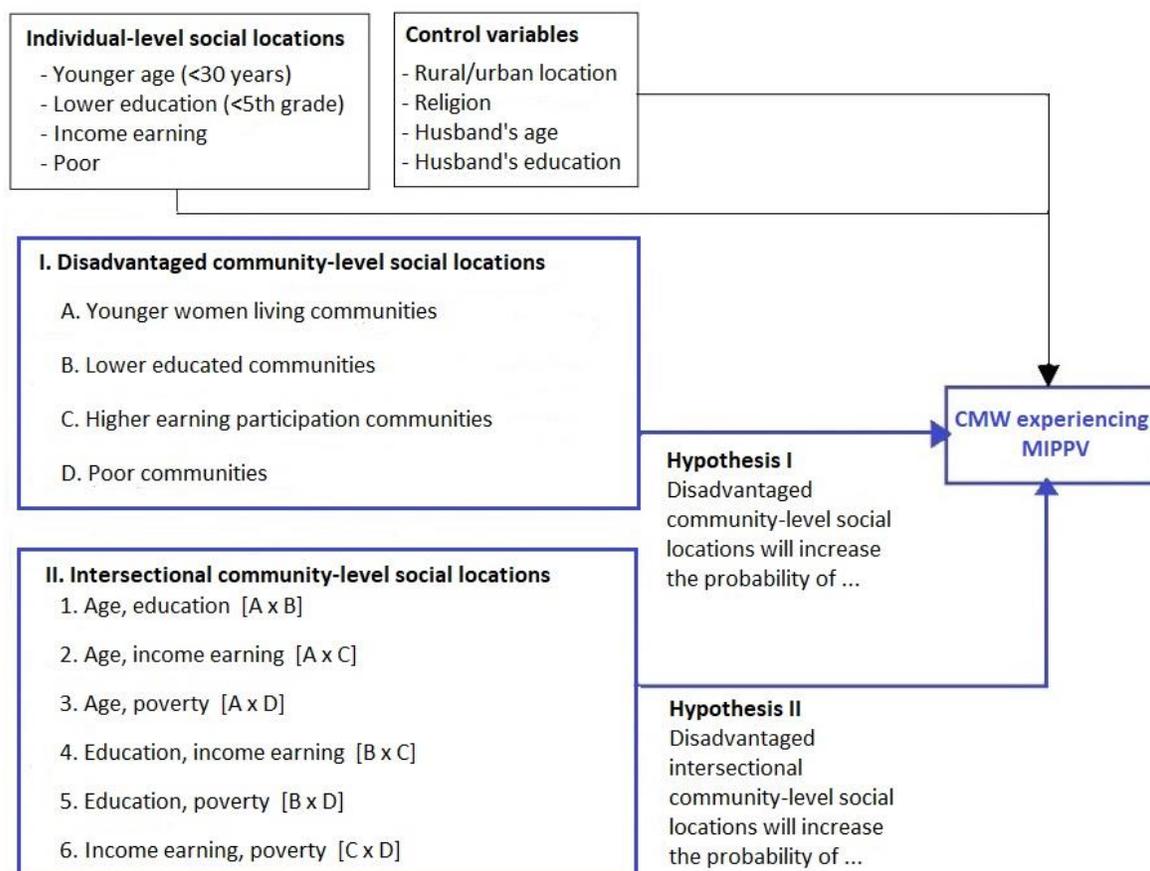


Figure S1 Conceptual framework showing that, after accounting for individual-level social locations and control variables, currently married women's (CMW's) disadvantaged (i) community-level social locations and (ii) intersectional community-level social locations will increase their probability of experiencing male intimate partner physical violence (MIPPV) in Bangladesh.

Note: In disadvantaged communities, higher proportions of ever married women have: (1) younger age (<30 years), (2) lower-level of education (<5th grade), (3) earned an income, and (4) lived in poverty (lowest wealth quintile).

Appendix S1 List of acts that were considered to create the outcome variable male male intimate partner physical violence (MIPPV).

In the Bangladesh Violence Against Women Survey 2015 (BVAWS2015), women respondents were asked if, in the past 12 months, their husband did any of the following:

- (1) slapped, punched or threw something at them causing injury;
- (2) pushed, shoved or pulled their hair;
- (3) burned them with hot things;
- (4) threw acid intentionally;
- (5) threw hot water/oil/ milk/peas intentionally;
- (6) kicked, dragged or beat them up;
- (7) intentionally suffocated or choked them by hand;
- (8) intentionally burned them;
- (9) threatened them with or used a gun, knife or any other weapon; and
- (10) hit them with a stick or any other heavy things.

Items 3, 4, 5, and 10 were added as country specific items. The BVAWS2015 used the Revised Conflict Tactics Scale 2 (CTS2) to measure physical violent acts against women. See *Bangladesh: Violence Against Women Survey 2015*– for more information.

Appendix S2 Generation of the community-level binary exposure variables

We constructed four community-level, binary exposure variables to measure women's community-level social locations. These variables included residential communities in which higher proportions of ever married women had:

1. Younger age (<30 years), i.e., younger women living communities
2. Lower-level of education (<5th grade), i.e., lower educated communities
3. Earned an income), i.e., higher earning participation communities
4. Lived in poverty (lowest wealth quintile), i.e., poor communities

These variables were created in three steps.

First, we generated women's individual-level social location variables: younger age, lower-level of education, participation in earning an income and poverty. *Younger age* was constructed by coding women who were 15-29 years old as 1, and 0 if otherwise. Similarly, *lower-level of education*, *earning an income*, and *poverty* were constructed by coding women who reported none or below primary education levels as 1 and if otherwise, 0; women reporting earning an income in the past year as 1 and if otherwise, 0; and women who had a wealth quintile value of 1 (i.e., the poorest quintile) as 1 and if otherwise, 0.

Second, we calculated means and standard deviations (SDs) of the percentages of women who had each of the four characteristics in the 911 communities.

Third, we created binary community-level exposure variables, mean plus one SD cut-off points coding a community with a specific characteristic as 1 and if otherwise, 0. For example, the *younger female community* variable was generated by coding communities where percentages of women younger than 30 years of age was greater than 43.33 as 1, and if otherwise, 0. Other community-level variables included *lower female educated community*, *higher female earning participatory community*, and *poorer community*, each with a value of 1 for cut-off percentages of 71.46, 39.38, and 41.87, respectively.