Factors associated with women’s approval on intimate partner violence in Bangladesh: A cross-sectional analysis of latest demographic and health survey 2017–18

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ABSTRACT

Background: In Bangladesh, intimate partner violence (IPV) is high among women faced by their husband. Regrettably, IPV is often justified by the women themselves, resulting in poor social and health outcomes among them. In this paper, we explored the factors that influence the approval of IPV among the women by their husband in Bangladesh.

Method: The present used the data from the most recent Bangladesh Demographic and Health Survey (BDHS) 2017–18. The BDHS 2017–18 followed a two-stage stratified random sampling techniques and the present analysis was carried out among a weighted sample of 20,127 women. Multivariate logistic regression was used to identify the demographic and socio-economic factors associated with the approval of IPV among the women.

Results: Overall, one in five women (20.5%) approved at least one form of violence by their husband. In adjusted analysis, women who completed secondary education were 57% less likely [AOR = 0.43, 95% CI: 0.34–0.54] to approve IPV compared to those who had no formal education. Similarly, women who belonged to Hinduism and other religious group were 42% less likely [AOR = 0.58, 95% CI: 0.45–0.74] to approve IPV compared to those who practiced Islam. Moreover, women who were exposed to television, participated in the decision on household purchase and moving outside home had 14%, 19%, and 21% less chance for approving IPV by the husband for at least one reason (p < 0.05).

Conclusion: This study highlighted that many women in Bangladesh approve violence by their husband which could be a major obstacle to the reduction of violence from society. Behavior change intervention should be implemented, particularly targeting the less-educated Muslim women to increase the awareness on IPV in Bangladesh.

1. Introduction

Intimate partner violence (IPV) is defined as any behavior within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship [1]. Globally, 30% women, in a relationship, have been experiencing both physical and sexual violence by their intimate partners, particularly in South-East Asian region [2].

The prevalence of IPV is also high in Bangladesh, and it varied from region to region, ranging from 42% to 76% [3]. According to the Bangladesh Bureau of Statistics (BBS), about 72.6% of ever-married women endured one or more forms of violence by their husbands at least once in their lifetime [4]. The impact of IPV on health outcomes, especially on physical, reproductive and mental health of women, are well-documented [5, 6, 7]. Victims of IPV face higher rates of chronic pain, respiratory conditions, gynecological symptoms, sexually transmitted infections, and HIV [8]. IPV often results in induced abortion, unwanted pregnancy [5, 6] and mental health conditions including depression, post-traumatic stress disorder, anxiety, and suicide [7].

Bangladesh is a patriarchal society [9]. For both financial support and social security, women generally depend on their husbands; therefore,
the former tolerate some levels of violence from the latter [10]. It is a common presumption that empowered women face less IPV as they have economic independence and autonomy that give them the power to make important decisions in the family and society [11]. But an opposite picture was reported in a study aimed to explore the association between women's empowerment and IPV in Bangladesh. This research reported that women's empowerment trigger new forms of violence in response to the general social reaction against their violation of traditional patriarchal social norms, control of assets and earnings, their protest of unfair exploitation and discrimination [12].

One of the most dreadful features of IPV is that it is often socially justified [13]. Social acceptance of IPV is most common in Africa and South Asia, and least common in Central and Eastern Europe and Latin America and the Caribbean [14]. Women are more likely to suffer from IPV, particularly in rural areas with low or no formal education and low gender equity [12, 15]. Several studies documented some culturally approved forms of IPV, especially by the victims [13, 16, 17, 18]. Alarmingly, an extremely high proportion of men and women in Bangladesh view IPV as acceptable under various circumstances [13, 18].

A study on Bangladeshi women in five selected disadvantaged areas of Dhaka city found that about 46.5% of women experienced IPV, but most of them believed that it was okay for a husband to beat his wife [18]. Several studies pointed the importance of having a non-supportive attitude towards IPV in reducing the overall episodes of IPV [10, 19]. Evidence suggest that, among the Bangladeshi women who had a higher level of non-supportive attitude towards violence had 39% less chance to report an experience of IPV in their lifetime [10].

Being a high prevalent country for IPV, national-level recent data on women's attitude towards the approval of IPV are lacking in Bangladesh. It is of utmost importance to identify the characteristics of the women who approve IPV to protect themselves from the future risk of violence by their partner. To address this knowledge gap, this study was aimed: (1) to explore the Bangladeshi women's attitude towards IPV, and (2) to find out the factors associated with women's approval of IPV by their husband, using the most recent Bangladesh Demographic and Health Survey (2017–18) data.

2. Method

2.1. Data source

We extracted the data from the most recent Bangladesh Demographic and Health Survey (BDHS) 2017–18 [20], which was the 8th nationwide cross-sectional survey, primarily aimed to report on the demographic and health status of women and children. The 2017–18 BDHS was conducted by the National Institute of Population Research and Training (NIPORT) in collaboration with Health Education and Family Welfare Division of the Ministry of Health and Family Welfare. Mitra and Associates implemented the survey with technical support from the International Center for Diarrhoeal Disease Research, Bangladesh (icddr,b) and ICF International [20]. The survey was conducted between October 2017 and March 2018.

2.2. Sampling design and sample size

This nationally representative survey followed a two-stage stratified random sampling technique. The survey used a list of enumeration areas (EAs) from the 2011 Population and Housing Census of the People's Republic of Bangladesh, provided by the Bangladesh Bureau of Statistics (BBS), as a sampling frame [21]. The primary sampling unit (PSU) of the survey was an EA having an average of about 120 households. In the first stage, 675 EAs (250 in urban areas and 425 in rural areas) were selected with probability proportional to EA size. In the second stage, a systematic sample of an average of 30 households per EA was selected. Based on this design, 20,250 residential households were selected. Completed interviews were expected from about 20,100 ever-married women aged 15–49 years. Total weighted sample size for this study was 20,127. Details of the sampling process, data collection procedure, and questionnaire are available in the final report of 2017–18 BDHS [20].

2.3. Outcome measure

The primary outcome of this study was women's approval of IPV. To capture the women's attitude towards IPV, a five-item scale was used. Respondents were asked whether a husband/partner is justified in beating his wife if she: (i) goes out without telling husband; (ii) neglects the children; (iii) argues with husband; (iv) refuses to have sex with husband; and (v) burns the food. The responses were dichotomized (Yes/No). A Cronbach's α of 0.74 indicate a fair internal consistencies of the tool among the participants [22]. For each response, a score of 1/0 (Yes = 1 and No = 0) were generated, with a total score ranged 0–5. We generated a new binary variable based on the total score of a respondent, referred as 'At least one reason' and categorized as No = 0, Yes = 1–5.

2.4. Independent variables

The independent variables considered in this study were: (i) age (categorized as 15–24, 25–34 and 35–49 years); (ii) educational status (categorized as no education, primary, secondary and higher); (iii) currently working (no/yes); (iv) husband's educational status (categorized as no education, primary, secondary and higher); (v) total children (categorized as 0, 1, 2 and 3+); (vi) religion (categorized as Islam, Hinduism and others); (vii) place of residence (urban/rural); (viii) wealth index (categorized as poorest, poorer, middle, richer and richest); (ix) Division (categorized as Barishal, Chattogram, Dhaka, Khulna, Mymensingh, Rajshahi, Rangpur and Sylhet); (x) exposure to television (no/yes); (xi) participation in the decision on contraceptive use (no/yes); (xii) participation in the decision on movement outside home (no/yes). (xiii) participation in the decision on contraceptive use (no/yes); and (xiii) participation in the decision on movement outside home (no/yes).

2.5. Statistical analysis

Data were analyzed following the DHS guidelines [23]. Descriptive statistics were performed using sampling weight to calculate the number and frequencies. Pearson chi-square tests were performed to compare the prevalence of dependent variables across respondent's demographic and socioeconomic characteristics. Binary logistic regression was performed to identify the factors associated with the approval of IPV. Variables found significant in the bivariate analysis were considered for regression analysis. Univariate and Multivariate logistic regression models were used to estimate the crude odds ratio (COR) and adjusted odds ratio (AOR) at 95% confidence intervals, respectively. Variance Inflation Factor (VIF) was used to check the multicollinearity (Supplement 1). All statistical tests were two sided and considered significant at 5% level of significance. Data were analyzed using Stata v14.2 (StataCorp, College Station, TX, USA).

2.6. Ethical approval

As our present study is based on a secondary data set of 2017-18 BDHS, we did not require any ethical approval. However, formal ethical approval for BDHS surveys have been obtained from ICF international and participants gave their consent before data collection. The data files are freely available at (https://www.dhsprogram.com/).

3. Result

Table 1 presents the demographic and socio-economic Status (SES) of the study participants. Of the 20,127 weighted participants, majority were aged 35–49 years (37.1%), completed their secondary education (39.6%), and were not working outside home (52.3%). About 91% of the respondents were Muslim and 71.5% were residing in rural areas.
Table 1. Demography and SES of the study participants.

| Characteristics               | Number | Percent |
|-------------------------------|--------|---------|
| **Age**                      |        |         |
| 15–24                         | 5618   | 27.9    |
| 25–34                         | 7049   | 35.0    |
| 35–49                         | 7460   | 37.1    |
| **Educational status**        |        |         |
| No education                  | 3333   | 16.6    |
| Primary                       | 6290   | 31.2    |
| Secondary                     | 7974   | 39.6    |
| Higher                        | 2530   | 12.6    |
| **Currently working**         |        |         |
| No                            | 10522  | 52.3    |
| Yes                           | 9605   | 47.7    |
| **Husband’s educational status** |    |         |
| No education                  | 4130   | 21.8    |
| Primary                       | 6081   | 32.0    |
| Secondary                     | 5675   | 29.9    |
| Higher                        | 3097   | 16.3    |
| **Total children**            |        |         |
| 0                             | 2139   | 10.6    |
| 1                             | 4573   | 22.7    |
| 2                             | 6205   | 30.8    |
| 3+                            | 7210   | 35.8    |
| **Religion**                  |        |         |
| Islam                         | 18250  | 90.7    |
| Hinduism and others           | 1877   | 9.3     |
| **Place of residence**        |        |         |
| Urban                         | 5729   | 28.5    |
| Rural                         | 14398  | 71.5    |
| **Wealth index**              |        |         |
| Poorest                       | 3743   | 18.6    |
| Poorer                        | 3957   | 19.7    |
| Middle                        | 4059   | 20.2    |
| Richer                        | 4184   | 20.8    |
| Richest                       | 4184   | 20.8    |
| **Division**                  |        |         |
| Barisal                       | 1125   | 5.6     |
| Chattogram                    | 3622   | 18.0    |
| Dhaka                         | 5124   | 25.5    |
| Khulna                        | 2336   | 11.6    |
| Mymensingh                    | 1546   | 7.7     |
| Rajshahi                      | 2802   | 13.9    |
| Rangpur                       | 2380   | 11.8    |
| Sylhet                        | 1192   | 5.9     |
| **Exposure to television**    |        |         |
| No                            | 7224   | 35.9    |
| Yes                           | 12903  | 64.1    |
| **Participation in the decision on household purchase** | | |
| No                            | 5358   | 28.2    |
| Yes                           | 13625  | 71.8    |
| **Participation in the decision on contraceptive use** | | |
| No                            | 811    | 6.9     |
| Yes                           | 10931  | 93.1    |
| **Participation in the decision on movement outside home** | | |
| No                            | 4840   | 25.5    |
| Yes                           | 14143  | 74.5    |

1 variables have missing cases.
| Variables                          | Beating by husband is justified if |          |          |          |          |
|-----------------------------------|-----------------------------------|----------|----------|----------|----------|
|                                   | Goes out without telling him      | Neglects children | Argues with him | Refuse to have sex | Burns the food | At least one reason |
| Age                               |                                   |          |          |          |          |
| 15–24                             | 6.7 ***                           | 9.4 **   | 12.4 *** | 2.7 ***  | 0.8 **   | 18.5 *** |
| 25–34                             | 7.2                               | 9.1      | 12.9     | 2.4      | 1.0      | 20.0     |
| 35–49                             | 9.0                               | 10.7     | 15.6     | 3.5      | 1.6      | 22.3     |
| **Effect size (Cremer's V)**      | 0.027                             | 0.021    | 0.029    | 0.026    | 0.025    | 0.038    |
| Educational status                |                                   |          |          |          |          |
| No education                      | 10.9 ***                          | 12.9 *** | 18.5 *** | 5.0 ***  | 2.8 ***  | 26.2 *** |
| Primary                           | 9.4                               | 11.3     | 16.7     | 3.7      | 1.2      | 24.0     |
| Secondary                         | 6.7                               | 9.3      | 12.1     | 2.1      | 0.7      | 18.8     |
| Higher                            | 2.8                               | 3.6      | 5.4      | 0.6      | 0.3      | 8.9      |
| **Effect size (Cremer's V)**      | 0.068                             | 0.065    | 0.084    | 0.059    | 0.053    | 0.130    |
| Currently working                 |                                   |          |          |          |          |
| No                                | 7.5                               | 9.4 **   | 12.9 **  | 2.9      | 1.3 **   | 20.0     |
| Yes                               | 8.0                               | 10.2     | 14.7     | 2.9      | 1.0      | 20.8     |
| **Effect size (Cremer's V)**      | 0.017                             | 0.031    | 0.036    | 0.023    | 0.028    | 0.010    |
| Husband's educational status      |                                   |          |          |          |          |
| No education                      | 10.3 ***                          | 13.2 *** | 18.5 *** | 4.5 ***  | 2.0 ***  | 26.3 *** |
| Primary                           | 9.3                               | 11.5     | 15.5     | 3.1      | 1.2      | 23.6     |
| Secondary                         | 6.5                               | 8.3      | 12.2     | 2.5      | 0.8      | 18.1     |
| Higher                            | 3.5                               | 5.1      | 6.9      | 0.9      | 0.3      | 11.4     |
| **Effect size (Cremer's V)**      | 0.064                             | 0.066    | 0.078    | 0.049    | 0.039    | 0.125    |
| Total children                    |                                   |          |          |          |          |
| 0                                 | 6.6 ***                           | 8.4 ***  | 10.8 *** | 2.1 ***  | 0.8 ***  | 17.4 *** |
| 1                                 | 6.1                               | 9.0      | 11.9     | 2.5      | 0.6      | 18.4     |
| 2                                 | 7.5                               | 9.1      | 12.9     | 2.5      | 1.2      | 19.4     |
| 3+                                | 9.4                               | 11.3     | 16.5     | 3.7      | 1.6      | 23.4     |
| **Effect size (Cremer's V)**      | 0.044                             | 0.049    | 0.047    | 0.036    | 0.038    | 0.058    |
| Religion                          |                                   |          |          |          |          |
| Islam                             | 8.1 ***                           | 10.1 **  | 14.2 *** | 3.0 *    | 1.2      | 21.1 *** |
| Hinduism and others               | 3.9                               | 6.6      | 9.5      | 1.6      | 0.7      | 13.7     |
| **Effect size (Cremer's V)**      | 0.046                             | 0.037    | 0.041    | 0.025    | 0.017    | 0.054    |
| Place of residence                |                                   |          |          |          |          |
| Urban                             | 5.6 ***                           | 8.5      | 10.7 *** | 1.8 ***  | 0.9      | 17.0 **  |
| Rural                             | 8.6                               | 10.3     | 15.0     | 3.3      | 1.3      | 21.8     |
| **Effect size (Cremer's V)**      | 0.050                             | 0.028    | 0.058    | 0.039    | 0.018    | 0.053    |
| Wealth index                      |                                   |          |          |          |          |
| Poorest                           | 10.7 ***                          | 12.7 *** | 17.7 *** | 3.9 ***  | 1.6 *    | 24.8 *** |
| Poorer                            | 9.4                               | 11.1     | 15.1     | 3.4      | 1.7      | 22.6     |
| Middle                            | 8.1                               | 9.8      | 14.3     | 2.9      | 1.0      | 21.1     |
| Richer                            | 6.3                               | 9.4      | 13.0     | 2.7      | 1.1      | 19.5     |
| Richest                           | 4.5                               | 6.3      | 9.0      | 1.6      | 0.6      | 14.7     |
| **Effect size (Cremer's V)**      | 0.059                             | 0.052    | 0.059    | 0.036    | 0.028    | 0.085    |
| Division                          |                                   |          |          |          |          |
| Barisal                           | 14.2 ***                          | 13.7     | 20.3 **  | 4.0      | 2.3      | 26.8     |
| Chattogram                        | 6.5                               | 8.7      | 14.0     | 3.1      | 1.4      | 20.2     |
| Dhaka                             | 6.6                               | 9.2      | 11.4     | 2.4      | 0.9      | 19.1     |
| Khulna                            | 8.7                               | 8.9      | 16.0     | 2.8      | 1.2      | 21.3     |
| Mymensingh                        | 8.0                               | 10.8     | 12.2     | 3.0      | 1.2      | 18.8     |
| Rajshahi                          | 8.5                               | 9.7      | 15.6     | 2.9      | 0.9      | 22.0     |
| Rangpur                           | 7.2                               | 10.8     | 12.3     | 3.0      | 1.0      | 19.9     |
| Sylhet                            | 7.1                               | 10.3     | 12.9     | 3.1      | 1.4      | 18.5     |
| **Effect size (Cremer's V)**      | 0.049                             | 0.030    | 0.050    | 0.023    | 0.027    | 0.047    |
| Exposure to television            |                                   |          |          |          |          |
| No                                | 9.9 ***                           | 12.3 *** | 17.0 *** | 3.8 ***  | 1.6 ***  | 24.2 *** |
| Yes                               | 6.5                               | 8.4      | 11.9     | 2.4      | 0.9      | 18.3     |
| **Effect size (Cremer's V)**      | 0.062                             | 0.064    | 0.072    | 0.042    | 0.031    | 0.070    |

Participation in the decision on household purchase (continued on next page)
violence by their husband [29]. Another study conducted in India reported association of IPV with miscarriage, stillbirth, labor complications and other pregnancy/delivery complications [30]. As women's supportive attitude toward IPV increased likelihood of exposure to IPV, our study finding may indicate that about one in every five Bangladeshi women are at risk of different reproductive health problems.

The present study also revealed that, educational attainment of the women and their husbands, religion, exposure to television, decision making power on household purchase and movement outside home were independently associated with the approval of at least one form of IPV against wives influence on their approval on IPV. We found a negative association between women's educational grades and approval of IPV. Women's spontaneous approval of IPV significantly decreased with higher level of education. Previous studies in different countries including Malawi, Ghana, Benin and Sub-Saharan Africa reported similar findings [17, 24, 31, 32]. Education not only promotes freedom and social empowerment among women but also educate women to challenge harmful gender stereotypes set by the society [33, 34]. It is also likely that less educated women are less informed about the law and justice for IPV, which makes them more vulnerable to experience IPV. Moreover, educated women remain more aware of the human rights and enjoy greater social mobility which helps them to consider IPV as a negative phenomenon [11, 12]. A qualitative study revealed that IPV significantly declined in rural Bangladesh where women’s economic roles expanded [11]. Empowering women not only economically but also through increasing comprehensive social support could be an effective approach to reduce partner-based violence from the society.

We acknowledge several limitations of our study. Firstly, this study is limited by the cross-sectional nature of the data and failed to establish a causal relationship. Secondly, data were based on self-reported measures which could be affected by social and/or cultural biases. Thirdly, in BDHS, women's attitude on IPV was measured through a five items questionnaire and failed to include many other possible questions to capture a better picture on their approval on IPV. BDHS 2017–18 only collected demographic and socioeconomic data and did not consider critical issues related to IPV, such as duration of marriage, number of marriage and so on. Despite those limitations, this study used national representative data with large sample size, thus, the findings can be generalized at national level, which is the major strength of our study.

5. Conclusion

The present study found that one in every five Bangladeshi married women approved Violence by their husband. Factors such as educational status of the women and their husbands, religious status, exposure to television, and women's participation in the decision making were associated with Bangladeshi women’s attitude towards approving IPV. Behavioral change intervention should be implemented, particularly targeting less educated Muslim couples to increase their level of awareness on the detrimental effect of IPV and their right against this. As the mobility of the Muslim women particularly who are residing in rural areas, are limited in many countries including Bangladesh, awareness raising interventions such as door-to-door awareness raising initiative, courtyard meeting can be of value in creating awareness on IPV among them.

The findings of the study are also useful to the policymakers, development partners, grassroot level women empowerment programs and
researchers to tailor evidence-based interventions addressing the social and cultural aspects to create more awareness on IPV among the Bangladeshi women who has the tendency to approve the IPV.

**Declarations**

**Author contribution statement**

Mansura Islam, Md. Sabbir Ahmed: Conceived and designed the experiments; Analyzed and interpreted the data; Wrote the paper.

Sabuj Kanti Mistry: Analyzed and interpreted the data; Wrote the paper.

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**Data availability statement**

Data associated with this study has been deposited at https://dhsprogram.com/data/Using-Datasets-for-Analysis.cfm.

**Declaration of interests statement**

The authors declare no conflict of interest.

### Table 3. Factors associated with approval of IPV for at least one reason.

| Variables                        | Unadjusted Model | Adjusted Model |
|----------------------------------|------------------|----------------|
|                                  | COR  | 95% CI  | p value | AOR   | 95% CI  | p value |
| **Age**                          |      |         |         |       |         |         |
| 15–24                            | Ref  |         |         | Ref   |         |         |
| 25–34                            | 1.10 | 0.99–1.21 | 0.062   | 1.13  | 0.99–1.28 | 0.063   |
| 35–49                            | 1.26 | 1.14–1.39 | <0.001* | 1.15  | 0.98–1.34 | 0.068   |
| **Educational status**           |      |         |         |       |         |         |
| No education                     | Ref  |         |         | Ref   |         |         |
| Primary                          | 0.88 | 0.79–0.99 | 0.040   | 0.93  | 0.83–1.06 | 0.306   |
| Secondary                        | 0.65 | 0.57–0.73 | <0.001* | 0.77  | 0.67–0.89 | <0.001* |
| Higher                           | 0.27 | 0.22–0.33 | <0.001* | 0.43  | 0.34–0.54 | <0.001* |
| **Husband’s educational status** |      |         |         |       |         |         |
| No education                     | Ref  |         |         | Ref   |         |         |
| Primary                          | 0.86 | 0.77–0.96 | 0.011*  | 0.95  | 0.85–1.06 | 0.429   |
| Secondary                        | 0.61 | 0.54–0.69 | <0.001* | 0.77  | 0.68–0.87 | <0.001* |
| Higher                           | 0.36 | 0.30–0.42 | <0.001* | 0.62  | 0.51–0.75 | <0.001* |
| **Total children**               |      |         |         |       |         |         |
| 0                                | Ref  |         |         | Ref   |         |         |
| 1                                | 1.06 | 0.91–1.24 | 0.408   | 1.08  | 0.92–1.26 | 0.330   |
| 2                                | 1.14 | 0.98–1.32 | 0.070   | 1.00  | 0.84–1.19 | 0.935   |
| 3+                              | 1.45 | 1.24–1.68 | <0.001* | 1.01  | 0.81–1.24 | 0.875   |
| **Religion**                     |      |         |         |       |         |         |
| Islam                            | Ref  |         |         | Ref   |         |         |
| Hinduism and others              | 0.59 | 0.46–0.74 | <0.001* | 0.58  | 0.45–0.74 | <0.001* |
| **Place of residence**           |      |         |         |       |         |         |
| Urban                            | Ref  |         |         | Ref   |         |         |
| Rural                            | 1.35 | 1.13–1.61 | 0.001*  | 1.19  | 0.97–1.44 | 0.080   |
| **Wealth index**                 |      |         |         |       |         |         |
| Poorest                          | Ref  |         |         | Ref   |         |         |
| Middle                           | 0.88 | 0.77–1.01 | 0.086   | 0.95  | 0.83–1.09 | 0.515   |
| Middle                           | 0.81 | 0.69–0.95 | 0.012*  | 0.95  | 0.80–1.13 | 0.634   |
| Richer                           | 0.73 | 0.61–0.87 | <0.001* | 1.00  | 0.83–1.20 | 0.966   |
| Richest                          | 0.52 | 0.42–0.63 | <0.001* | 0.93  | 0.75–1.17 | 0.566   |
| **Exposure to television**       |      |         |         |       |         |         |
| No                               | Ref  |         |         | Ref   |         |         |
| Yes                              | 0.70 | 0.62–0.78 | <0.001* | 0.86  | 0.77–0.96 | 0.012*  |
| **Participation in the decision on household purchase** |      |         |         |       |         |         |
| No                               | Ref  |         |         | Ref   |         |         |
| Yes                              | 0.76 | 0.69–0.83 | <0.001* | 0.81  | 0.72–0.91 | <0.001* |
| **Participation in the decision on movement outside home** |      |         |         |       |         |         |
| No                               | Ref  |         |         | Ref   |         |         |
| Yes                              | 0.72 | 0.65–0.79 | <0.001* | 0.79  | 0.70–0.88 | <0.001* |

COR = Crude Odds Ratio, AOR = Adjusted Odds Ratio.

* Significant p value (p < 0.05); Ref = Reference group.

| Adjusted with all the variables in the table. |
Additional information

Supplementary content related to this article has been published online at https://doi.org/10.1016/j.heliyon.2021.e08582.

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