

Pre-analysis plan:

Early Marriage and Perceived Risk of IPV

Abstract

In Bangladesh, half of the girls aged 20-24 got married before the age of 18, according to the most recent national survey ([Bangladesh Bureau of Statistics \(BBS\) and UNICEF Bangladesh, 2019](#)). Parents face strong social and economic pressures to marry their daughters early. One aspect that has received limited attention is the girl's safety. While the security provided by a groom can be an important motivation for marriage, most people seem unaware that early marriage substantially increases the risk of intimate partner violence - that is, violence perpetrated by the future husband. We conduct a combined experiment in rural Bangladesh to assess two possible approaches to mitigate this risk, with possible implications for the timing of the marriage: one supplies information about this risk, the other provides agency to the girl. The information intervention is implemented through a survey experiment in which fathers, mothers and daughters are informed about the increased risk. The agency intervention is implemented orthogonally and is designed to enhance girls' empowerment through after-school clubs. We test the relative impacts of these interventions, and assess their impact on beliefs and parents' and girls' preferences to delay marriage.

1. Introduction

Child marriage remains prevalent in many countries, despite its negative effect on school attainment ([Field and Ambrus, 2008](#)). While security provided by the groom is an important driver of early marriage, there is growing evidence that age at marriage influences the risk of IPV, with women marrying at a younger age facing a higher risk ([Roychowdhury and Dhamija, 2021](#)).

We posit that most parents and adolescent girls underestimate the risk of intimate partner violence, i.e., violence committed by the future husband, and how it is influenced by age at marriage. If this is the case, making them aware might increase their preference to delay their daughter's marriage, either because they want to take more time to find a good groom, or they want to marry at an older age. At the same time, girls' empowerment might have a direct influence on early marriage as well as their ability to resist violence. We test both approaches with the help of an experiment in rural Bangladesh. The main research questions

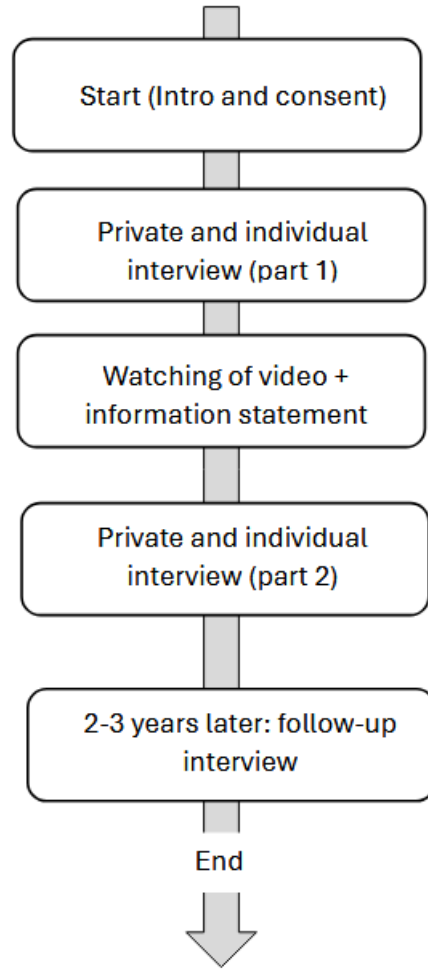
we will examine are:

1. Can beliefs about the risk of IPV and how it increases with early marriage be changed with the provision of information, and if so will this increase the willingness to delay marriage among parents and daughters and eventually decrease IPV?
2. Are there any differences between fathers, mothers and daughters in terms of their perceived risk of IPV, and how it is influenced by information provided about this risk?
3. Does empowerment increase girls' ability to resist IPV and preference to delay marriage?

2. Experimental design

Adolescent girls and their parents will participate in an interview that follows the steps laid out in Figure 1. For the questionnaires see Appendices A and B. The task starts with a private and individual interview, followed by an information treatment (only for households assigned to this treatment). In a second part of the interview, we will elicit the respondents' preferences in terms of the ideal age at marriage, and their beliefs about the likelihood of IPV. A few years later, we will interview adolescent girls again to collect information on the actual date of the marriage, and their well-being, including their spousal relationship, mental health, and economic activities.

Figure 1: Experimental procedures



2.1. Treatments

We will run this experiment on different samples. First, around half of the households in our study were randomly assigned to BRAC’s Social Empowerment and Legal Protection (SELP) programme, which supports girls’ empowerment through after-school clubs. BRAC’s SELP program aims to establish Shopno Sarothi (Girls’ brigade) group, which consists of adolescent girls aged 13-17, to reduce child marriage and promote gender-equitable norms. Each group consists of 20-25 girls, who participate in sessions (one in each month for two years) conducted by the BRAC-SELP program officer and work together to build life skills, enhance problem-solving abilities, and raise awareness about the harmful effects of child marriage. The SELP programme conducts 24 sessions over two years covering eight broad themes: human rights and gender equity (including violence against women, VAW); self-esteem and emotional regulation; empathy and resilience; interpersonal effectiveness, leadership, and

conflict communication; handling disputes (with a focus on VAW) and relationship management; goal setting and decision-making; problem-solving and creative thinking; and digital literacy and critical thinking. Assuming that SELP changes the girls’ aspirations, increases their awareness of the risks of child marriage and changes gender norms, we expect a difference in treatment effects, compared to the sample of households that were not exposed to this intervention.

Second, households will be randomly assigned to the information intervention or a control. In each household assigned to the information intervention, we will randomly select the father or the mother for the survey experiment (and always the daughter). This allows us to compare treatment effects between fathers and mothers. Parents assigned to the information treatment will be asked to watch a one-minute video that shows a husband physically abusing his wife in front of their children.¹ The video will only be shown to the parents and not to the children of the households assigned to this treatment. The video is followed by the following information:

“A recent survey showed that in Bangladesh, about one in two women experience physical abuse by their husband. Girls who marry at a younger age are much more likely to experience abuse from their husband compared to girls who marry at an older age.”

We will randomly assign treatments at the village level. Table 1 presents the number of villages assigned to each cell.

Table 1: Sample (villages)

		SELP		
		No	Yes	Total
Information	No	55	70	125
	Yes	55	70	125

From each village, 15 adolescents were interviewed at baseline between September and October 2023. The additional information intervention will be implemented with adolescents who are unmarried at the endline survey, drawn from the SELP-only and control arms. We expect 20% attrition and we also expect that up to 40% of non-attrited households recruited for the original RCT study will be married. This means that we expect to interview (slightly more than) 7 adolescents (and their parents) per village. This leads to the sample sizes presented in Table 2.

¹The video is available here https://www.youtube.com/watch?v=pGvY3e6t-vE&t=1s&ab_channel=wecancampaign.

Table 2: Sample (interviews)

		SELP		
		No	Yes	Total
Information: no	Mother	200	250	450
	Father	200	250	450
	Daughter	400	500	900
Information: yes	Mother	200	250	450
	Father	200	250	450
	Daughter	400	500	900

2.2. Hypotheses

While the information intervention provides information on the supply of violence (and how it depends on age), the SELP intervention provides empowerment to the adolescent girl (demand/receiving side). By randomly assigning both treatments, we can test whether these affect i) beliefs on the supply of violence and ii) beliefs on the receiving (demand) side of violence.

Specifically, information on the influence of age at marriage on the risk of IPV may influence beliefs on the risk of IPV, while greater empowerment among girls may reduce their vulnerability to intimate partner violence. To the extent that beliefs about the risk of IPV vary with age at marriage, they might in turn influence preferences about the timing of the marriage. Using a survey at the time of the information treatment and another follow-up survey a few years later, we will distinguish short-term and medium-term impacts.

1. Short-term impacts
 - (a) beliefs about the risk of IPV
 - (b) stated preferences about the timing of the marriage
2. Medium-term impacts using a later follow-up survey
 - (a) beliefs about the risk of IPV
 - (b) revealed preferences about the timing of the marriage

3. Implementation

Data collection starts on 4 January 2026 and will be completed by 31 January 2026. BIGD has an in-house Data and Field Management (DFM) team that designs the survey instrument

in SurveyCTO and leads all activities related to data collection. The team consults with the researchers or the analytical team if enumerators face any difficulties related to the content of the survey instrument. Once data collection is completed, a DFM team member will download the final version of the data from the server, clean the data (all corrections from the field are stored in a file for High Frequency Checks), and share it with the analytical team.

4. Analyses

4.1. Balancing tests

We will test whether individual characteristics are balanced between the treatment and control groups, using a t-test on each characteristic.

4.2. Treatment comparisons

To test for treatment effects, we run the following individual-level regression:

$$Y_i = \beta_0 + \beta_1 T_i + \beta_2 \mathbf{X}_i + \mu_e + \sigma_d + \epsilon_i \quad (1)$$

where for each respondent i , Y_i is a variable capturing a preference for the timing of the adolescent girls' marriage. T_i is a vector of treatment indicator variables, covering all combinations of the information and empowerment interventions. To increase the efficiency of the estimates, we include a vector of control variables $\mathbf{X}_i$, fixed effects for the specific enumerator who conducts the interview (μ_e for enumerator e) and district fixed effects (σ_d for district d). ϵ_i is the error term. We will cluster the standard error at the village level.

We will estimate this regression with the samples of fathers, mothers and girls. We can also pool these samples to compare the treatment effects between them. As the daughter will always participate in the experiment (and only one – randomly selected – parent), we can also use the parent-child difference in preferences as outcome indicator, and compare treatment effects between father-daughter and mother-daughter pairs.

4.3. Heterogeneity analyses

Characteristics along which we expect to find heterogeneity in treatment effects are: daughter's age, parents' age, beliefs about the risk of IPV, relationship between parents, daughter's academic performance in the last year and daughter's involvement in any income-generating activities.

Appendix

A. Questionnaire – adolescent girls

Before Information Intervention

1. Do your parents argue? (*Condition: respondent has both parents*)
 - 1 = Yes 2 = No 3 = Sometimes
2. Do your parents often argue about issues related to you? (*Condition: respondent has both parents*)
 - 1 = Yes 2 = No 3 = Sometimes
3. Do you often see your parents arguing or complaining about each other? (*Condition: respondent has both parents*)
 - 1 = Yes 2 = No 3 = Sometimes
4. For any decision your mother makes, does she involve your father? (*Condition: respondent has both parents*)
 - 1 = Yes 2 = No 3 = Sometimes
5. For any decision your father makes, does he involve your mother? (*Condition: respondent has both parents*)
 - 1 = Yes 2 = No 3 = Sometimes
6. Do you think that girls who get married at a younger age are more or less likely to experience abuse by their husbands compared to girls who get married at an older age?
 - 1 = Much more likely
 - 2 = Somewhat more likely
 - 3 = No difference
 - 4 = Somewhat less likely
 - 5 = Much less likely
7. What is the appropriate age of a husband? (*Answer in years*)
8. What is the appropriate level of education for a husband? (*Education code from existing variable s_a3*)

Information Treatment

The enumerator read the following statement aloud:

“A recent survey showed that in Bangladesh, about one in two women experience physical abuse by their husband. Girls who marry at a younger age are much more likely to experience abuse from their husband compared to girls who marry at an older age.”

After Information Intervention

9. How many months from now would you like to get married? (*Convert time into months*)
10. How many months from now do you think your father would like you to get married? (*Condition: respondent has father*)
11. How many months from now do you think your mother would like you to get married? (*Condition: respondent has mother*)
12. Imagine a man with the profile of the appropriate husband as you described above (age, education). You do not know anything else about him. How likely is it that he is inclined to abuse his wife?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Unlikely
 - 4 = Very unlikely
13. Imagine a man with the profile of the appropriate husband as you described above (age, education). What is the likelihood that he would abuse his wife violently?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Not very likely
 - 4 = Not likely at all
14. Imagine a man with the profile of the appropriate husband as you described above (age [ua7], education [ua8]). If a girl the same age as the respondent married this man, how likely is it that she would be able to prevent or stop abuse by her husband?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Unlikely

- 4 = Very unlikely
15. Imagine a man with the profile of the appropriate husband as you described above (age [ua7], education [ua8]). If a girl three years older than the respondent married this man, how likely is it that she would be able to prevent or stop abuse by her husband?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Unlikely
 - 4 = Very unlikely
 16. At what age do you want to get married? (*Answer in years*)
 17. At what age do you think your father wants you to get married? (*Condition: respondent has father*)
 18. At what age do you think your mother wants you to get married? (*Condition: respondent has mother*)
 19. What career do you want to pursue in the future? (*Open-ended*)
 20. If your parents do not agree with your choice, would you consider eloping? (*Yes / No*)
 21. What do you think are the main reasons families in this community marry off their daughters early? (*Open-ended*)

B. Questionnaire Parent/Guardian

The enumerator interviewed the adolescent's father or mother, depending on availability.

Interview Availability

1. Is the [father/mother] available for interview?
 - 1 = Yes 2 = No
2. If not available, why?
 - 1 = Out of village
 - 2 = Out of country
 - 3 = Sick
 - 4 = Deceased
 - 5 = Does not have time
 - 6 = Respondent does not want to talk to a stranger
 - Other = Specify
3. If not available, is any other guardian available for the interview?
 - 1 = Yes 0 = No
4. If another guardian is interviewed, what is your relationship with [adolescent's name]?
 - 1 = Mother
 - 2 = Father
 - Other = Specify

Before Information Intervention

5. Expected education of groom (*Open-ended*)
6. Expected occupation of groom (*Open-ended*)
7. Expected land ownership of groom's father (*Open-ended*)
8. If a husband has all the characteristics you would look for for your daughter, how likely do you think he would be inclined to commit violence against his wife?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Not very likely
 - 4 = Not likely at all

9. How likely is it that your daughter will be abused by her future husband if she gets married **now**?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Not very likely
 - 4 = Not likely at all
10. How likely is it that your daughter will be abused by her future husband if she gets married in **two years**?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Not very likely
 - 4 = Not likely at all
11. How likely is it that your daughter will be abused by her future husband if she gets married in **four years**?
 - 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Not very likely
 - 4 = Not likely at all
12. Who makes the household's major decisions (e.g., food expenditure, consumption, land purchase, house repair)? *(Select all that apply)*
 - 1 = Self
 - 2 = Spouse
 - 3 = Daughters
 - 4 = Sons
 - 5 = Other household members
13. Who makes decisions regarding children's education? *(Select all that apply)*
 - 1 = Self
 - 2 = Spouse
 - 3 = Daughters
 - 4 = Sons
 - 5 = Other household members

14. Who makes decisions regarding children's marriage? (*Select all that apply*)
 - 1 = Self
 - 2 = Spouse
 - 3 = Daughters
 - 4 = Sons
 - 5 = Other household members
15. What is the appropriate age of a husband for [adolescent's name]? (*Answer in years*)
16. What is the appropriate level of education for a husband for [adolescent's name]?
17. Do you think that girls who get married at a younger age are more or less likely to experience abuse by their husbands compared to girls who get married at an older age?
 - 1 = Much more likely
 - 2 = Somewhat more likely
 - 3 = No difference
 - 4 = Somewhat less likely
 - 5 = Much less likely

Information Treatment

The enumerator showed an IPV video, followed by reading the following statement aloud:

“A recent survey showed that in Bangladesh, about one in two women experience physical abuse by their husband. Girls who marry at a younger age are much more likely to experience abuse from their husband compared to girls who marry at an older age.”

After Information Intervention

18. How many months from now would you like [adolescent's name] to get married? (*Convert time into months*)
19. How many months from now do you think [adolescent's name] would like to get married? (*Convert time into months*)
20. How many months from now do you think your spouse would like [adolescent's name] to get married? (*Condition: if no spouse, record -666*)
21. If **tomorrow** you found the perfect groom for [adolescent's name], would you consider starting preparations for her marriage?

- 1 = Definitely not
 - 2 = Perhaps / not sure
 - 3 = Probably
 - 4 = Definitely yes
22. If **next year** you found the perfect groom for [adolescent's name], would you consider starting preparations for her marriage?
- 1 = Definitely not
 - 2 = Perhaps / not sure
 - 3 = Probably
 - 4 = Definitely yes
23. If in **two years** you found the perfect groom for [adolescent's name], would you consider starting preparations for her marriage?
- 1 = Definitely not
 - 2 = Perhaps / not sure
 - 3 = Probably
 - 4 = Definitely yes
24. If in **four years** you found the perfect groom for [adolescent's name], would you consider starting preparations for her marriage?
- 1 = Definitely not
 - 2 = Perhaps / not sure
 - 3 = Probably
 - 4 = Definitely yes
25. Imagine a man with the profile of the appropriate husband for [adolescent's name] (age, education). How likely is it that he is inclined to abuse his wife?
- 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Unlikely
 - 4 = Very unlikely
26. What is the likelihood that this man would abuse his wife violently?
- 1 = Very likely
 - 2 = Somewhat likely

- 3 = Unlikely
 - 4 = Very unlikely
27. If a girl the same age as [adolescent's name] married this man, how likely is it that she would be able to prevent or stop abuse by her husband?
- 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Unlikely
 - 4 = Very unlikely
28. If a girl three years older than [adolescent's name] married this man, how likely is it that she would be able to prevent or stop abuse by her husband?
- 1 = Very likely
 - 2 = Somewhat likely
 - 3 = Unlikely
 - 4 = Very unlikely
29. What factors do you take into account when deciding when to start looking for a groom for [adolescent's name]? (*Mark all mentioned; do not read options*)
- 1 = Daughter's current age
 - 2 = Daughter's current education
 - 3 = Daughter's preferred age of marriage
 - 4 = Daughter's preferred level of education
 - 5 = Spouse's preferred age of marriage
 - 6 = Spouse's preferred level of education
 - 7 = Financial means
 - 8 = Risk of elopement
 - 9 = Non-violent groom
 - 10 = Dowry demands
 - 11 = Other (specify)
30. To what extent will you take into account when [adolescent's name] wants to marry?
- 1 = She decides entirely on her own
 - 2 = Decide together, she has final say
 - 3 = Decide together

- 4 = Decide with her input, parents have final say
 - 5 = Decide without her opinion
31. To what extent will you take into account whom [adolescent's name] wants to marry or the characteristics of the person she prefers?
- 1 = She decides entirely on her own
 - 2 = Decide together, she has final say
 - 3 = Decide together
 - 4 = Decide with her input, parents have final say
 - 5 = Decide without her opinion
32. With whom would you discuss whom [adolescent's name] should marry? (*Select all that apply*)
- 1 = Adolescent's mother/father
 - 2 = Adolescent herself
 - 3 = Brothers
 - 4 = Sisters
 - 5 = Grandfather
 - 6 = Grandmother
 - 7 = Uncle/Aunt
 - 8 = Other family members
33. At what age do you want [adolescent's name] to get married? (*Years*)
34. At what age do you think [adolescent's name] wants to get married? (*Years*)
35. At what age do you think your spouse wants [adolescent's name] to get married? (*Condition: if no spouse, record -666*)

References

- Bangladesh Bureau of Statistics (BBS), and UNICEF Bangladesh.** 2019. “Progotir Pathay: Bangladesh Multiple Indicator Cluster Survey 2019, Survey Findings Report.”
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