Reshaping Gender Norms and Building Trust: Evidence from a Community-Based Couple Counseling RCT*

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Abstract

Traditional gender equity interventions, such as financial inclusion programs, vocational training, and cash transfers, often fail to address the root causes of gender disparities, particularly the disproportionate burden of unpaid domestic labor on women. This study evaluates a novel couple and community based intervention designed to reshape intra-household labor allocation, gender stereotypes, and decision-making. Using a randomized controlled trial in Uttar Pradesh, India, we compare two approaches: (1) private couple counseling and (2) private counseling combined with community-based intervention that leverages public accountability and cooperative decision-making. Our findings show that both interventions significantly improve intra-household cooperation, with the community-based gender sensitive intervention (Treatment 2) yielding stronger and more persistent effects. Women in Treatment 2 experienced a 40–45 minute reduction in daily unpaid domestic labor, while men increased their caregiving contributions by over 30 minutes per day. Participants in both interventions reported significant reductions in domestic violence and shifts in gender stereotypes. Follow-up data collected one year later confirm the persistence of these effects, particularly in reducing unpaid domestic labor and enhancing men's caregiving roles. Field experiment at endline shows willingness to trust and reciprocate among both men and women. Results affirm the potential of engaging men and the community in interventions to achieve improvements in gender equity.

Keywords: Couple counseling, Labor reallocation, Community based activities, Gender equity, Time use, Randomized controlled trial

JEL classification: I3, J16, J24, O15, C93

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1 Introduction

Gender inequality remains a major barrier to economic development, particularly where entrenched social norms restrict women's agency, economic participation, and decision-making power. Despite interventions such as financial inclusion, vocational training, and legal reforms, progress has been slow and inconsistent. A key limitation of these approaches is their narrow focus on women as isolated economic agents, overlooking broader household dynamics that shape gender division of labor and bargaining power (Anderson and Ray, 2010; Duflo, 2012; Bertrand, Kamenica, and Pan, 2015; Bandiera et al., 2017; Ashraf et al., 2019; Jayachandran, 2021). Expanding women's economic access does not automatically translate into greater autonomy; without changes in intra-household power structures and social norms, these gains may be contested or reversed (Hidrobo, Peterman, and Heise, 2016; Agarwal, 2010; Falb et al., 2014; Doyle et al., 2018; Bobonis, González-Brenes, and Castro, 2013).

A frequently overlooked dimension of gender inequality is the unequal distribution of unpaid labor, which constrains women's ability to participate in paid employment, accumulate human capital, and engage in decision-making (Folbre, 2014; Goldin, 2021; Jayachandran, 2015, 2021; Gurley-Calvez, Biehl, and Harper, 2009; Sinha et al., 2024). While cash transfers and vocational training alleviate financial constraints, they often fail to address time-use restrictions rooted in social norms. Evidence suggests that interventions actively involving both men and women in reshaping intra-household cooperation, labor division, and social accountability are more effective in shifting gender norms (Akerlof and Kranton, 2000; Bruze, Svarer, and Weiss, 2015; Bandiera et al., 2020), though rigorous causal evidence remains scarce.

This study evaluates whether structured couple-based interventions can reshape gendered time use, intra-household labor allocation, and decision-making power. Using a random-

ized controlled trial (RCT) in Kanpur Nagar district, Uttar Pradesh, India, we assess two complementary interventions. The first, private couple counseling ("learning by learning," Treatment 1), fosters cooperative decision-making through structured sessions. The second, a hybrid intervention incorporating community-based activities ("learning by doing," Treatment 2), reinforces behavioral change via social accountability and public engagement. Conducted across 90 clusters, the study involved 1,800 participants sampled from rural and peri-urban areas. To mitigate treatment spillovers, we conducted randomization at the cluster level, assigning 30 clusters to each treatment arms.

While both interventions promote intra-household cooperation, their mechanisms differ. Treatment 1 remains within the private sphere, whereas Treatment 2 integrates private with public engagement, increasing the social cost of reverting to traditional norms. This fosters greater male participation in household responsibilities, cooperative financial decision-making, and relational trust between spouses, explaining why Treatment 2 generates more persistent improvements in women's mobility, financial autonomy, and reductions in intimate partner violence.

Time use is central to economic agency, bargaining power, and well-being (Goldin, 2021; Gurley-Calvez, Biehl, and Harper, 2009; Cortés and Pan, 2019). Interventions such as microfinance and vocational training often assume that financial resources alone will enhance women's agency. However, without parallel shifts in intra-household labor allocation, such programs may reinforce rather than disrupt existing gender roles (Anderson and Ray, 2010). This highlights the need for interventions that explicitly address intra-household labor distribution and caregiving norms.

Our theoretical framework draws from behavioral economics, intra-household bargaining models, and social norm theory. Traditional models emphasize material determinants of decision-making power, such as income and human capital (Lundberg and Pollak, 1996;

Becker, 1981), but often neglect the role of social norms and relational preferences in shaping cooperation and labor division (Bertrand, Kamenica, and Pan, 2015; Ashraf, 2009). We hypothesize that public engagement in gender-equitable behaviors acts as a commitment device, raising the cost of reverting to traditional norms and reinforcing behavioral change (Akerlof and Kranton, 2000; Bruze, Svarer, and Weiss, 2015). Collective household models (Chiappori, 1992; Agarwal, 2010) emphasize joint decision-making and resource allocation, which is critical for sustainable shifts in intra-household bargaining and labor division.

Our findings provide causal evidence that couple-based interventions significantly improve intra-household gender equity, with stronger and comparatively more persistent effects for Treatment 2. Women in the hybrid intervention reduced unpaid labor by 45 minutes daily, while male partners increased caregiving contributions by 27 minutes. A similar pattern was observed for home production activities. Treatment effects on major outcomes remained statistically significant one year post-intervention. Beyond time use, Treatment 2 yielded broader improvements in gender equity. Women's mobility increased by 14.1 percentage points and independent cash access by 20 percentage points. Gender norms shifted, evidenced by a 12.7 percentage point decline in the practice of veil among women. These results are robust to social desirability bias. However, we acknowledge the potential influence of experimenter demand bias, and the Hawthorne effect, wherein participants may alter behavior due to awareness of being observed (McCarney et al., 2007).

For women, Treatment 2 improved physical health improved by 0.31 SD, mental health by 0.35 SD, and life satisfaction by 0.36 SD. Relationship quality strengthened, with partner relations improving by 0.34 SD and the ability to handle family problems by 0.32 SD. Perceptions of gender inequality declined (0.37 SD among women, 0.45 SD among men), alongside significant reductions in intimate partner violence (0.42 SD among women, 0.45 SD among men). Strengthened relational bonds led to increased trust, understanding, and emotional connection.

Economic outcomes also improved. Women in Treatment 2 experienced a 4.1 percentage point rise in self-employment, reflecting enhanced financial control and bargaining power. Greater mobility and a reduction in financial dependence reinforced these gains. Declining male adherence to gender stereotypes and improved spousal communication suggest that social accountability mechanisms play a critical role in norm diffusion. The persistence of these effects one year post-intervention highlights the lasting impact of gender-equitable behaviors. By integrating private counseling with community-based activities, the intervention facilitated a broader transformation in household and community gender norms, demonstrating that sustained change requires both individual learning and collective reinforcement.

This study addresses three key research questions. First, can private couple counseling promote gender-equitable labor divisions, shift social norms, and enhance spousal cooperation? Second, does integrating community-based, publicly visible activities amplify these effects through social accountability? Third, how do these interventions influence trust, and gendered time use in the short and long term?

Our findings highlight the need to integrate behavioral interventions with broader policy frameworks to foster gender-equitable norms and ensure sustained transformations in labor division and economic agency. Gender equality interventions must move beyond financial empowerment strategies to actively reshape household dynamics and social accountability structures, driving meaningful and lasting change.

2 Related Literature

A growing body of research has examined the effects of traditional interventions—such as cash transfers, financial inclusion, vocational training, and educational programs—on women's empowerment and household decision-making, yet these approaches have yielded

mixed results. For instance, studies on cash transfer programs (Hidrobo et al., 2014; Bastagli et al., 2016) suggest that while they improve household welfare, they often fail to shift gender norms or significantly increase women's decision-making power, particularly in settings where social norms constrain female agency. Similarly, financial inclusion interventions, such as savings accounts or microcredit programs (Field et al., 2021; Ashraf, Karlan, and Yin, 2010), have led to increased financial control for women in some cases but have also triggered intra-household conflicts in others, demonstrating the limits of economic empowerment without concurrent shifts in social norms.

Vocational training programs, such as those studied by Bandiera et al. (2020), have successfully raised female employment but often do not address persistent gendered time-use burdens. In contrast, our couple-based intervention extend beyond financial or employment gains to structural changes in intra-household cooperation. Additionally, while traditional educational programs (Duflo, 2012) have improved labor market outcomes for women, they often do not directly target intra-household bargaining dynamics. Our study demonstrates that interventions incorporating public engagement and social accountability mechanisms can reshape gender norms and sustain behavioral changes. Our findings suggest that addressing gender inequities requires not just economic interventions but also strategies that actively engage men and the broader community in norm transformation.

The literature on time use and gender roles highlights how the distribution of time across paid work, domestic tasks, and leisure shapes economic participation and outcomes (Blau and Kahn, 2013; Bertrand, Goldin, and Katz, 2010). While studies such as Aguiar et al. (2021) and Sevilla-Sanz, Gimenez-Nadal, and Fernández (2010) explore implications for well-being and gender equity, questions remain on how policy can shift these patterns. By evaluating targeted interventions, our study advances understanding of how redistributing time can reduce gender disparities and promote inclusion. We also address gaps on the long-term effects of gender-sensitive interventions on women's autonomy and intra-household

dynamics. Using Kabeer (2016)'s agency-capability framework and extending Gitter and Barham (2008), we provide longitudinal evidence on how couple-based interventions reshape entrenched norms.

A key innovation is our integration of public couple-based games in community settings. While prior work has emphasized private counseling and empowerment (Duflo, 2012; Bandiera et al., 2017; Dhar, Jain, and Jayachandran, 2022), we introduce a social accountability mechanism grounded in community-based, visible activities. This approach builds on theories of learning by doing (Agarwal, 2010) and social visibility (Verma et al., 2006) in a novel setting to induce norm change. These public, cooperative tasks foster shared decision-making and norm contestation within a communal framework, reinforcing behavioral shifts through accountability.

Our findings expand the literature on household bargaining and gender equality by showing how public participation can sustain behavioral change (Ashraf, 2009; Doyle et al., 2018). Finally, we contribute to research on gender disparities by linking unconscious bias, economic inequality, and household inefficiencies. The observed decline in women's household labor post-intervention supports findings on employment and promotability gaps (Cortés and Pan, 2019; Gurley-Calvez, Biehl, and Harper, 2009; Babcock et al., 2017), demonstrating how intra-household role shifts can reduce persistent economic inequities.

3 Theoretical Framework

This section presents a theoretical model examining the impact of couple counseling interventions on intra-household bargaining, time use, and labor force participation (LFP). We extend standard intra-household decision-making models to include two sequential interventions: Treatment 1, private couple counseling, and Treatment 2, which adds community-based activities to Treatment 1. The model builds on household bargaining theory and

recent insights into intra-household cooperation and gender norms (Jayachandran, 2021; Bandiera et al., 2020). The interventions aim to shift this dynamic, promoting more equitable decisions and increasing women's labor force participation.

3.1 Household Bargaining with Private and Public Reinforcement

Consider a household consisting of two individuals, $i = 1$ (husband) and $i = 2$ (wife). Each individual derives utility from consumption C_i, leisure L_i, household production G, and the quality of the marital relationship Q. The utility function for individual i is:

$$U_i = \ln(C_i) + \phi_i \ln(L_i) + \gamma_i \ln(G) + \alpha_i Q - \lambda_i N, \tag{1}$$

where: - N represents adherence to traditional gender norms, - λ_i captures the disutility of deviating from these norms, - Q represents marital relationship quality, incorporating trust, cooperation, and the absence of violence. Marital relationship quality Q is modeled as a function of trust (T), cooperation (C_o), and the absence of violence (V):

$$Q = \psi(C_o, T, V) = \psi_1 C_o + \psi_2 T - \psi_3 V \tag{2}$$

This approach highlights how relational dynamics are central to understanding the effects of interventions on household decision-making (Luke and Munshi, 2011; Anderson and Ray, 2010). The model encapsulates trade-offs between market labor, household production, and leisure, while incorporating the influence of gender norms and relational dynamics on household decisions. The household maximizes the Nash product subject to time and budget constraints with threat point utility, dependent on external opportunities and intervention effects. Bargaining power shifts in response to changes in external options, relational quality,

and social norms.[1]

We solve the first-order conditions (FOCs) derived from the household's utility maximization problem with respect to consumption C_i, leisure L_i, household production time t_i^h, and market labor time t_i^m. These conditions yield the optimal allocations for each variable. We present the detailed model derivatives in Appendix A5.

3.1.1 Treatment 1: Private Couple Counseling (Learning by Learning)

Treatment 1 consists of structured, private couple counseling designed to improve communication and cooperative decision-making without external reinforcement. The primary mechanism through which it influences intra-household bargaining is persuasion and guided reflection. Post-intervention bargaining power for the wife (θ_2) in Treatment 1 is given by:

$$\theta_2^{T1} = \theta_2 + \tau_1(C), \tag{4}$$

where $\tau_1(C)$ represents the effect of private counseling on cooperative decision-making.

3.1.2 Treatment 1 + Community-Based Counseling (Learning by Doing)

This intervention increases the cost of reverting to traditional norms, leading to larger and more persistent shifts in bargaining power. Post-intervention bargaining power in Treatment 2 is given by:

$$\theta_2^{T2} = \theta_2^{T1} + \sigma S, \tag{5}$$

[1]Household bargaining is modeled using a generalized Nash bargaining framework, where each individual's bargaining power, θ_i, is endogenously influenced by the intervention $\mathcal{T}$:

$$\max_{C_i, L_i, th_i, tm_i} \mathcal{L} = \left(U_1 - \bar{U}_1\right)^{\theta_1(\mathcal{T})} \left(U_2 - \bar{U}_2\right)^{\theta_2(\mathcal{T})}. \tag{3}$$

where σS captures the social reinforcement effect of public engagement. The external accountability mechanism increases the cost of non-cooperation, modifying the disutility of norm deviation:

$$\lambda_{T2} = \lambda_0 + \sigma S. \tag{6}$$

Community reinforcements strengthen behavioral change, leading to greater redistribution of household labor and higher LFP and bargaining power for women. Because Treatment 1 lacks a public accountability component, the elasticity of substitution between male and female time $\rho_{T1} < \rho_{T2}$ in household production remains limited.

3.1.3 Predictions

(i) Both treatments increase women's bargaining power (θ_2), improving time use, relationship quality, and reducing domestic violence, with stronger effects under Treatment 2 due to social accountability and learning by doing. (ii) Both treatments promote a more equitable division of household production time, increasing cooperation (C_o) and relationship quality (Q). (iii) Both treatments raise women's labor time, though the magnitude may be limited by persistent social norms (Kabeer, 2016; Jayachandran, 2015). Treatment 1 operates through private persuasion, while Treatment 2 relies additionally on social visibility and community accountability—an important distinction for interpreting treatment effects. The model also highlights how community reinforcement mechanisms shape intra-household bargaining, social norms, and gender dynamics.

4 Intervention and Research Design

We examine the intervention's impact on time use, gender norms and marital dynamics in Kanpur Nagar district in the state of Uttar Pradesh, India. We focus on both rural and urban areas of Kanpur Nagar, such that the sample is representative of the diverse socio-

economic conditions of Uttar Pradesh, which, with a population of 241 million in 2021 , accounts for 17% of India's demographic (Figure A3 details the trial locations).

4.1 Study Setting and Population

Our study location - Kanpur faces significant gender disparities, particularly in literacy, education, and health outcomes (Bhargava, 2003; Narasimhan and Weaver, 2024). Uttar Pradesh is one of the BIMARU states and has lower women's status captured in terms of mobility and decision making within the household (Vyas, Gupta, and Khalid, 2021). We selected Kanpur as the study site for both logistical reasons as well as for the presence of widespread stringent patriarchal norms in the region. Kanpur is one of the major metropolitan cities in India and has often ranked high within the nation and state for both crime against women (Uttar Pradesh Police, 2015; National Crime Records Bureau, 2022), and pronounced gender inequality in unpaid care, home production, and labor force participation (Sinha et al., 2024).

We focus on married couples living in rural and peri-urban areas. The experiment involved random assignment of couples to three groups: Treatment 1, Treatment 2, and a control group without intervention. Randomized treatment assignment occurred at the couple level within each village, ensuring balanced treatment allocation across environments. The study enrolled 300 couples in each of the treatment and control groups. Attrition was negligible, with over 90% participation in all treatment modules, and only one couple from the control group dropping out due to a death in the family. A pre-specified follow-up survey was conducted one year after the intervention to assess the persistence of treatment effects. This survey replicated a 2-digit time use module in the baseline and endline surveys, focusing on changes in paid work, unpaid domestic chores, caregiving, and leisure activities. Through continuous monitoring and regular check-in via online messaging with all couples involved in the RCT, we were able to minimize attrition at endline and the follow-up survey.

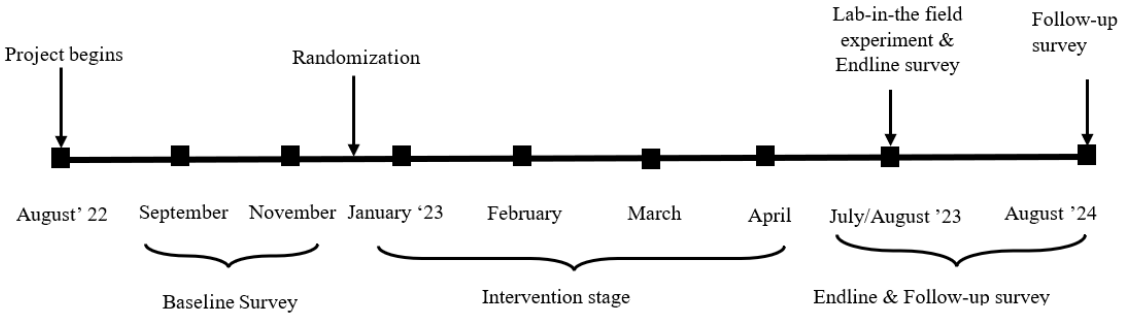


Figure 1: Timeline of the RCT, August, 2022—August, 2024.

4.1.1 Sample Selection and Randomization

The study sample consisted of 1,800 individuals (900 couples). Eligibility criteria for participation included married couples aged 18+ (both men and women), women being below 60 years of age, residents for 12+ months in the same household in the sample regions of Kanpur during the study period, and willing to participate in the study. Randomized sampling was conducted at the cluster level to ensure balanced representation across treatment and control groups. A total of 90 clusters (across the two regions) were identified, with couples being randomly assigned to one of three groups. The sample is representative of Uttar Pradesh, and India, in terms of women's and men's age, education, employment, household's below poverty line status, religion and likelihood of being in a joint family as shown in Table A11. However, the sample turned out to be relatively more rural, and belonging to forward caste groups.

Participants were selected through a rigorous three-stage randomization process to ensure representativeness and baseline balance across groups (see Appendix A6 for detailed sample selection methodology). Specifically, 90 clusters were randomly chosen, and 10 eligible couples from each cluster were then randomly assigned to treatment and control arms, with randomization conducted at the cluster level. This approach facilitated balance in baseline characteristics across the treatment and control groups.

The randomization process was stratified based on key demographic variables such as age, education level, and socio-economic status to ensure comparability across groups. Treatment 1 was assigned to 300 randomly selected couples, while Treatment 2 was provided to another 300 couples. The remaining 300 couples formed the control group. The project was initiated in August 2022, with the baseline survey conducted between September 2022 to November, 2022. The intervention sessions were conducted over four months from January 2023 to May 2023 by trained women counselors.[2] The third phase involved an endline survey conducted between June and August 2023. Figure 1 shows the timeline of the study. Initially, at baseline, we collected data on a range of variables, including time use,[3] social norms, economic activities, and well-being indicators, using a structured questionnaire administered through face-to-face interviews. Following the intervention, an endline survey replicated all the modules of the baseline questionnaire to enable a comparative analysis of changes over time. The follow-up survey focused replicating the time-use module of the baseline questionnaire. The detailed consent form, eligibility criteria, and any deviations from the pre-analysis plan are documented in Table A1 of the Online Appendix (Appendix Section A4).

4.2 Participation and Engagement

Our intervention was designed to ensure consistent participation across sessions and activities. As shown in Appendix A5, Table A2, over 90% of participants in both Treatment 1 and Treatment 2 attended all four counseling sessions. In cases of missed sessions, counselors reviewed prior sessions with participants before proceeding to new ones, promoting continuity and engagement. For Treatment 2, high attendance was also observed in community-based

[2]The sessions are designed according to guidelines from the World Health Organization and the Ministry of Health and Family Welfare, Government of India.

[3]Time use data was collected following the India Time Use Survey (ITUS)-2019, at the 2-digit level, focusing on the minutes spent on the said activity on a typical day. We acknowledge the potential for measurement error and recall bias in the time diary data. However, as these limitations are likely to affect both treatment and control groups equally, we do not expect them to systematically bias the estimated treatment effects.

activities, with nearly 95% of the couples attending all games held on two separate days (see Appendix A5 Table A3 for details). While small tokens were distributed to all study participants to support survey completion and participation in T2 community games, no incentives were provided for attending the counseling sessions. Attendance was sustained through active coordination with local leaders (village heads, ASHA workers) and advance phone scheduling when couples were not available during village visits.

We employed both in-person and phone surveys to maximize follow-up coverage while minimizing attrition. Out of the original 900 couples surveyed at baseline, in-person surveys were completed for 861 couples at endline, and follow-up surveys were conducted in-person for 844 couples, with remaining participants reached over the phone when in-person attempts were unsuccessful (see Appendix A5 for full survey logistics). In-person participation was encouraged through the distribution of small gifts, and results remain robust when restricted to couples who completed all surveys in-person.

This study uses an Intent-to-Treat (ITT) framework, analyzing outcomes based on initial treatment assignments regardless of attendance or adherence. This approach preserves random assignment validity and ensures policy relevance by reflecting real-world implementation conditions. *To complement the intention-to-treat estimates, we also estimate Local Average Treatment Effects using treatment assignment as an instrument. We define compliers as those couples who attended all counseling sessions in Treatment 1 and all counseling and activity sessions in Treatment 2. This approach allows us to recover the causal effect of the intervention on those who fully received it, under the standard assumptions of monotonicity and exclusion.*

The couple-based activities in a community setting were publicly visible to other community members, including non-treated households. This visibility may have contributed to indirect spillover effects by fostering discussions, altering perceptions of gender roles, and

encouraging broader community engagement in equitable household practices.

4.3 Intervention

Our experimental design leverages a novel approach by integrating 'learning by learning' (Treatment 1) and 'learning by doing' (Treatment 2) strategies through couple counseling and couple-based activities in a community setting. This dual-faceted intervention is expected to offer new perspectives on shifting gender norms and economic empowerment in patriarchal contexts.

Figure 2 shows the pictorial representation of the couple counseling and couple-based community activities intervention. Treatment 1, referred to as traditional couple counseling, comprises a series of four informative and interactive sessions conducted over four months, each session lasting approximately 45-50 minutes. Session 1 entailed discussions on the prevalent issue of gender inequality, its societal implications and impact on individual lives and children's well-being.[4] Through a combination of discussions and video presentations, participants were encouraged to reflect on their experiences and perceptions of gender equality. Session 2 focused on gender stereotypes, employing verbal activities and videos to challenge and deconstruct common gender stereotypes that influence daily life. Session 3 addressed gender discrimination, exploring its causes, consequences, and potential actions to combat it. This session included case studies and videos to facilitate a deeper understanding of the topic. Session 4 centered on trust and cooperation within relationships, emphasizing their importance for a harmonious marital life (for details about the educative counseling intervention, see appendix A1). A poster was displayed in treated homes to reinforce the educative counseling, as shown in Figure A1. It emphasized basic human rights, equal

[4]Both the traditional counseling sessions and the couple-based activity sessions were conducted by trained women para-counselors who underwent extensive training to enhance their facilitation skills, cultural sensitivity, and understanding of the intervention's objectives. The training included practical exercises and ethical guidelines to ensure consistent and respectful delivery. Regular supervision and feedback sessions were implemented to monitor the sessions and address any deviations, ensuring that both interventions were delivered effectively and aligned with the study's goals.

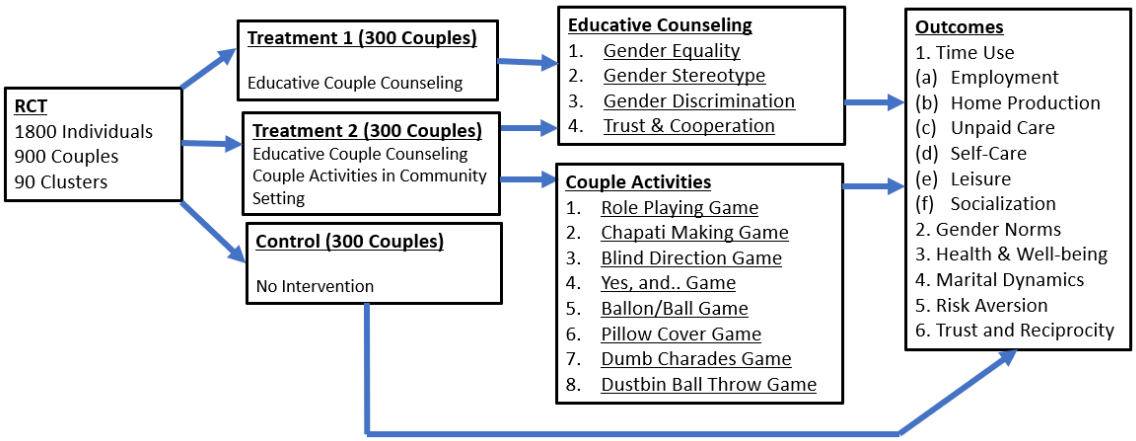


Figure 2: Experimental Design

Note: RCT structure with 1,800 participants, 900 couples across 90 clusters, comparing couple counseling (Treatment 1), community engaged couple activities (Treatment 2), and no intervention (Control). Outcomes include time use, gender norms, health, and marital dynamics. Community-based couple activities were centered around the four themes of the couple counseling modules. For detailed methodology, see Sections A1 and A2.

opportunities, women's financial independence, and shared household responsibilities.[5]

Treatment 2 extended the foundational elements of Treatment 1 by incorporating two additional activity sessions, each featuring four distinct games/activities designed to reinforce concepts discussed in the educative counseling sessions. Session 1 included: (i) Chapati-making competition, (ii) Role-playing, (iii) Blind direction games, and (iv) "Yes, and..." exercises. Session 2 featured: (i) Pillow game, (ii) Dumb Charades, (iii) Balloon ball game, and (iv) Dustbin Ball throw (detailed descriptions available in Appendix A2). These sessions engaged couples in community-based games that emphasized equality and teamwork. For instance, the role-playing exercise of being a 'Sarpanch' (village head) highlighted gender based equality and discrimination in village level policies, and the importance of inclusive decision-making. Domestic task-based activities focused on challenging gender stereotypes

[5]While the poster in Figure A1 contained broad terms that may have seemed abstract, the structured counseling sessions, discussions, video materials, and community activities ensured that participants received concrete explanations and engaged with these concepts in practical and relatable ways.

and promoting cooperation in household chores, while other interactive exercises fostered teamwork and mutual respect. Competitive elements with prizes were incorporated to incentivize participation.

Treatment 2 initiated a social mechanism by engaging couples in collaborative activities within communal settings. The treatment leveraged public interaction, thereby facilitating the reevaluation of entrenched gender norms. The social visibility of interactions served to challenge existing stereotypes and establish a platform for social accountability and normative change. We posit that this "learning by doing" approach in community contexts can significantly transform prevailing gender attitudes and behaviors. It offers ground for redefining relational dynamics, promoting a more balanced division of labor both domestically and within the broader community. This shift is particularly notable among male participants who, through their visible engagement in these activities, demonstrate a departure from traditional gender roles, thereby enhancing their contribution to household and community duties. Such transformations align with the theoretical propositions put forth by Akerlof and Kranton (2000) and Ashraf (2009), who argue that identity and social norms profoundly influence economic behavior.

Treatment 2 actively leveraged public interaction by integrating structured couple-based activities in a community setting, ensuring that gender-equitable behaviors were publicly observed and reinforced. These activities, including collaborative household tasks, role-playing as decision-makers, and trust-building exercises, were conducted in the presence of other participating couples and informal community observers. This design created social accountability, increasing the cost of reverting to traditional norms, as men's participation in caregiving and household responsibilities became publicly visible. The intervention fostered peer learning and norm diffusion by making gender-equitable behaviors part of a shared experience rather than a private arrangement. Additionally, the community setting facilitated indirect engagement from non-participating individuals, further embedding these behavioral

changes within the broader social fabric. By ensuring that shifts in household dynamics were enacted in public, Treatment 2 reinforced the long-term sustainability of gender-equitable practices.

One possible explanation for the greater effectiveness of Treatment 2 is that it facilitated social network formation among participating couples. While we do not have direct measures of peer interactions, we find that the structured nature of the intervention itself played a critical role in sustaining behavioral changes. The lab-in-the-field trust game results show increased cooperation and trust among women in Treatment 2, suggesting that behavioral shifts were internalized rather than merely a byproduct of external social interactions. Additionally, the persistence of treatment effects in the follow-up survey, particularly in reductions in unpaid caregiving, suggests that these changes were not short-term peer effects but rather a result of the intervention's emphasis on public accountability. The visibility of men engaging in caregiving and household responsibilities in a community setting likely increased the social costs of reverting to traditional norms, reinforcing behavioral change beyond the intervention period.

4.4 Empirical Design and Estimation Strategy

The main estimating equation for our analysis is as follows:

$$Y_{ij} = \alpha + \beta_1 T_{i1j} + \beta_2 T_{i2j} + \gamma X_{ij} + \lambda_b + \epsilon_{ij}$$

where: Y_{ij} is the outcome variable for individual i residing in cluster j. T_{i1j} is a binary indicator for assignment to Treatment 1 (couple counseling). T_{i2j} is a binary indicator for assignment to Treatment 2 (counseling plus couple-based activities). X_{ij} is a vector of baseline covariates, including demographic and socio-economic characteristics of the individual and household. λ_b captures blocks (ward) fixed effects (blocks nest multiple clusters

within them), and ϵ_{ij} is the error term. The coefficients of interest, β_1 and β_2, represent the treatment effects of Treatment 1 and Treatment 2, respectively, on the outcome variables. Standard errors are clustered at the cluster level to account for intra-cluster correlation.

To ensure the validity of our findings[6], we conduct additional analyses, including (i) balance checks, verifying that the randomization process resulted in comparable treatment and control groups with respect to observed baseline covariates, and (ii) multiple hypothesis testing corrections, adjusting for the potential inflation of Type I error rates due to the examination of multiple outcome measures. Additionally, we explore heterogeneous treatment effects, assessing whether the intervention's impact varies across subgroups defined by key characteristics such as caste, rural/urban residence, and below poverty line status.

4.5 Corrections for Multiple Hypotheses Testing

In the treatment effects analysis, we applied Randomization Inference (RI) to compute p-values, as outlined by Young (2019). This non-parametric approach does not rely on the assumptions of random sampling or normal distribution, making it suited for experiments with small sample sizes. By performing 1,000 replications, RI estimated the distribution of the test statistic under the null hypothesis of no treatment effect, allowing for a robust statistical inference without assuming a specific data distribution (Young, 2019). Furthermore, to address the issue of multiple testing across various outcomes, we utilized the Westfall and Young (1993) step-down procedure, which controls the Family-Wise Error Rate (FWER). This method adjusts p-values to reflect the maximum of the t-statistics across correlated outcomes, and reduces the likelihood of Type I errors associated with multiple comparisons.

[6] Attrition is not an issue in our analysis, hence we do not conduct an analysis for attrition (see Appendix section A5).

4.6 Lab in the Field Experiment

Lab-in-the-field experiments were designed to complement the main interventions by assessing couples' behavioral responses to economic decision-making tasks. Conducted alongside the endline survey, this experiment involved a random subset of 299 couples selected from the original sample (100 couples in control group, 100 couples in Treatment 2, and 99 couples in Treatment 1).

Participants engaged in a series of games and tasks that measured various economic preferences, such as risk aversion, time discounting, trust, reciprocity, and altruism. For instance, in the risk preference task, individuals made choices between different lottery options to gauge their risk tolerance (Holt and Laury, 2002). In the trust game, participants decided how much money to send to their partner, knowing that the amount would be tripled and their partner could choose how much to return (Berg, Dickhaut, and McCabe, 1995). These tasks were designed to mimic real-life situations and elicit genuine preferences and behaviors (Camerer, 2003; Eckel and Grossman, 2008) (details about the lab-in-the-field experiment are shown in Appendix Section A3).

In the investment game, each player had an endowment of Rs.100 and an option to invest in an opportunity (individual could keep any amount he/she chose not to invest): 0.5 probability of tripling the amount and 0.5 probability no return (invested amount lost). Since each subject played multiple games, the order in which the games were played was varied randomly to control for order effects. Only one game was randomly chosen for payment purposes, through a lottery conducted after all participants had taken part in all games. The data collected from these games provided valuable insights into revealed preferences regarding couples' cooperation, communication, and decision-making dynamics (Fehr and Gächter, 2002).

5 Results

5.1 Descriptive Statistics

Table 1 presents baseline summary statistics, indicating no significant differences between treatment and control groups across most key variables, suggesting balanced randomization. The p-values from OLS regressions reinforce the comparability of groups at baseline, mitigating concerns of systematic differences prior to intervention. Table A4 presents the baseline characteristics of the study sample, focusing on key demographic and socioeconomic variables. Women respondents have a mean age of 35 years. Male respondents are slightly older, with a mean age of 39 years. On average, men and women respondents have similar (7 years) of education. A substantial portion of the sample (25%) belongs to below poverty line (BPL) households. The majority of the sample is Hindu (79%), and a significant portion live in joint families (18%). The average household size is 5.20 members. Gender disaggregated summary statistics at endline are shown in Table A5 and the descriptive statistics across treatment groups at endline are shown in Table A6. Figure A4 presents raw means at baseline, endline, and follow-up, illustrating the evolution of treatment effects over time on LFP and unpaid care in panel (a) and (b), respectively. It highlights a differential fading of impacts across variables: while some treatment effects diminish, others remain significant. Figure A5 shows the raw means for home production and self-care.

The descriptive statistics at endline support the theoretical model's prediction that Treatment 2 would enhance gender equity by reallocating women's time from domestic chores to paid work and social activities, increasing decision-making autonomy. Additionally, the data align with the hypothesis that both treatments, especially Treatment 2, promote cooperation and shared household responsibilities among men.

5.2 Sample Balance Tests

Table A7 presents sample balancedness test statistics, showing means of characteristics such as age, education, and household income across treatment and control groups. The p-values from t-tests indicate no statistically significant differences between groups ($p \geq 0.05$), suggesting successful randomization and supporting the study's internal validity. Table A8 provides balance test results for game selection, comparing characteristics between participants selected for games and those not selected. The results shows means of similar characteristics, with p-values from t-tests indicating no statistically significant differences between groups ($p \geq 0.05$), ensuring that game selection was random and game-related outcome differences can be attributed to the games themselves.

5.3 Treatment Effects on Time Use

Figure 3 presents the impact of the interventions on time allocation for men and women, relative to the control group. Corresponding treatment effects on time-use outcomes are shown in Table 2. For both men and women, neither Treatment 1 nor Treatment 2 significantly impacts LFP, consistent with previous studies that report structural barriers beyond the household–limited job opportunities for women or societal resistance to increased female labor force participation (Jayachandran, 2021; Klasen and Pieters, 2015).

While the impact of Treatment 2 on LFP time for women shows a positive but statistically insignificant increase of 44 minutes, Table A10 reveals a notable effect of this treatment on the extensive margin. Treatment 2 significantly increases the likelihood of women entering self-employment by 4.1 percentage points (changed occupation).[7] These findings demonstrate that counseling, both in private (educative) and public spaces (experiential) can promote entrepreneurial engagement of women, critical for women's autonomy in pa-

[7]This self-employment effect is based on a small subsample of only 16 observations; therefore, it should be interpreted with caution and not overstated.

triarchal settings (Field et al., 2021; Ashraf et al., 2019; Bandiera et al., 2020).

As shown in Panel A (column 3 and 4) of Table 2, Treatment 2 leads to a significant decrease in home production time for women by approximately 40 minutes. While for men, there is a notable increase of 32 minutes. This outcomes can be attributed to the unique features of Treatment 2, which includes activities like *chapati* making competition and role reversal exercise. These activities directly relate to home production tasks and foster collaboration between partners. *Chapati* making competition and role reversal exercise, in particular, place men's involvement in domestic tasks in the public eye, normalizing sharing of domestic chores with the spouse, and challenging traditional gender norms. By participating in these activities and receiving positive reinforcement in a community setting, men may feel encouraged to assist with household chores at home, leading to the observed reduction in women's home production time and the significant increase for men, as predicted by the theoretical model for Treatment 2. Additionally, the "Blind Trust," "Dustbin Ball," and "Yes, and..." games promote cooperative decision-making, fostering trust and cooperation among couples, which is crucial for redistributing time in household labor and production (Green et al., 2015; Agarwal, 2010; Verma et al., 2006).

Treatment 2 led to a significant reduction in unpaid caregiving time for women by 45 minutes, compared to a significant 24 minute reduction under Treatment 1 (both treatments are significant at conventional levels). The statistically significant difference between Treatment 1 and 2 suggests that the addition of couple coordination activities enhances the effect on reducing caregiving time, potentially altering intra-household dynamics and redistributing caregiving tasks. For men, the influence of Treatment 2 is particularly notable as it significantly increases men's unpaid caregiving time by 27 minutes. This result indicates a potential shift in gender roles within the household, with men taking on more caregiving responsibilities. The social dynamics introduced by the couple coordination activities, which involve public collaboration and challenge traditional norms, are likely contributing

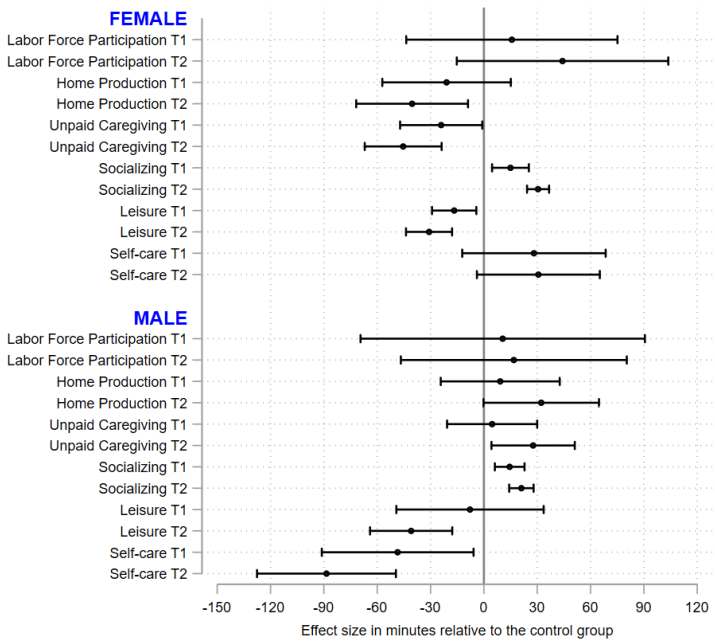


Figure 3: Treatment effects on time-use by gender

Note: The figure presents treatment effects for various activities categorized by gender across two treatment groups compared to a control group mean. Error bars signify standard errors. The vertical ticks on the error lines represent significance at 5%.

factors to this shift.

In Panel B, we observe that Treatment 2 significantly increases socializing time for women by 30 minutes, compared to a 15-minute increase in Treatment 1. This highlights the effectiveness of couple-based interventions in enhancing women's social capital, a critical component of their autonomy (Bandiera et al., 2017). Additionally, Treatment 2 results in a significant 30 minute reduction in women's leisure activities, but an increase in time spent on socializing (31 minute) and self-care (31 minute).[8] Treatment 2's reduction in women's leisure time and increase in socializing and self-care can be attributed to several

[8]We distinguish between "Socializing and communication, community participation and religious practice" (major activity code 7), and "Culture, leisure, mass-media and sports practices" (major activity code 8) following the International Classification of Activities for Time-Use Statistics (ICATUS) 2016 (United Nations Statistics Division (2016)). While the former captures outward-facing activities such as community events and religious participation, the latter includes personal or family-level recreation and rest.

factors. The intervention promoted community-based activities, enhancing social support and well-being, which often takes precedence over solitary leisure (Green et al., 2015). Additionally, increased awareness of self-care could lead to more time spent on health and wellness activities (Bandiera et al., 2017). Equitable gender norms might also shift time from leisure to shared or relational activities (Kabeer, 2016; Duflo, 2012), fostering relationship building and reducing solitary activities (Fleming, Lee, and Dworkin, 2014).

For men, Treatment 2 increases socializing by 21 minutes and reduces leisure activities by 40 minutes, suggesting a stronger impact on men's leisure activities. Treatment 2 decreases men's self-care time by 88 minutes, redistributing it to caregiving, home production, and socialization. Overall, these changes in time allocation reflect a shift towards more gender-equal social dynamics. Despite using standardized time-use modules, some degree of measurement error may persist due to recall bias or social desirability in self-reporting.

To probe the robustness of the time-use effects, we first restrict the analysis to couples who fully complied with the intervention protocols. Specifically, we estimate treatment effects among couples who attended all four counseling sessions in Treatment 1, and all four counseling sessions plus both activity sessions in Treatment 2. These restricted-sample estimates are presented in Tables A12 and A13 for endline and follow-up, respectively. The patterns largely mirror those in the ITT sample, with stronger magnitudes on female socializing and reductions in unpaid care work.

To account for potential selection into compliance and strengthen causal interpretation, we also estimate Local Average Treatment Effects (LATE), using randomized treatment assignment as an instrument for full attendance. Tables A14 and A15 present the LATE estimates for endline and follow-up surveys. In both panels, compliers are defined as couples who attended all sessions. The LATE results reinforce the ITT findings, suggesting that the observed shifts in time use are not merely artifacts of selective compliance but reflect the

effect of full exposure to the interventions. Our results remain robust after controlling for social desirability bias (detailed in the robustness section), with the main treatment effects on women's unpaid domestic labor and men's caregiving contributions largely unchanged. The effect of Treatment 2 on men's home production is slightly attenuated, likely due to social expectations influencing self-reported responses. Notably, adjusting for this bias reveals a marginally significant increase in women's labor force participation (72 minutes), suggesting that initial under-reporting may have masked the full extent of behavioral shifts. That being said, the significance is only at 10%, and the results are based on the variability of a limited sample of employed women.

Lastly, while a portion of the observed treatment effects could stem from generic counseling-related factors such as simply spending time together, the stronger and more persistent effects of Treatment 2 suggest that the content and structure of the intervention played a meaningful role. Moreover, the average age of women in our sample is 35 and of men is 39, with an average marriage duration of roughly 15 years (based on a 2025 follow-up survey indicating mean and median age at marriage of 20 for women). Given this, it is less likely that mere shared time during sessions, absent substantive content, would meaningfully shift long-standing relationship dynamics.

5.4 Follow-up Survey Results on Time Use

In a longitudinal assessment conducted one year post the endline survey, we find enduring effects of the interventions on time use. Table 3 illustrates that Treatment 2 continued to yield more substantial outcomes than Treatment 1, particularly in redistributing unpaid care duties—decreasing women's involvement by 40 minutes while augmenting men's engagement in home production and unpaid care by 27 and 21 minutes, respectively. Additionally, Treatment 2 significantly increased socializing time by 19 minutes for women and 17 minutes for men, indicating that comprehensive interventions may foster better commu-

nity integration and enhanced social networks. Conversely, we noted a consistent decrease in leisure time for women across both treatments and a reduction in both leisure and self-care time for men under Treatment 2. Similar to the endline results, shifts in domestic roles did not translate into significant changes in labor force participation.

5.5 Counseling, Gender Equality and Household Dynamics

We examine gender inequality and women's empowerment through multiple indicators including women's mobility, freedom of conduct (dressing) and economic autonomy. Figure A6 shows the effectiveness of counseling interventions in promoting gender equality and reshaping intra-household dynamics (corresponding results shown in Table 4). The interventions exhibit a notable positive impact on women's mobility. Specifically, Treatment 1 and Treatment 2 increased the likelihood of women being permitted to leave the house unaccompanied by 13% and 14%, respectively, relative to the control group mean. This enhancement in mobility is indicative of a broader shift towards greater autonomy for women (Ashraf et al., 2019).

A significant outcome of Treatment 2 is the marked reduction in the practice of veil (burkah/ghunghat) among women, with a decrease of 13% compared to the control group. This reduction is substantially greater than the insignificant effects observed in Treatment 1, underscoring the added value of integrating community-based activities into the counseling framework. The decline in this traditional practice signals a progressive shift in societal attitudes towards women's visibility and autonomy (Jayachandran, 2015).

Both interventions positively influenced women's access to cash. In comparison, Treatment 2 exhibited a higher effect, enhancing access by 20%, compared to the 14% increase with Treatment 1, relative to the control mean. These findings align with the literature suggesting that interventions targeting gender dynamics can yield significant economic freedom for women (Duflo, 2012; Kabeer, 2016; Sedai, Vasudevan, and Pena, 2021).

Treatment 1 and 2 had a significant effect (2.2 and 2.8 percentage points, respectively) on occupational mobility for women (mainly the switch from housework to self-employment), however, both interventions had insignificant effects on household income compared to the control group mean. In conclusion, our findings highlight the effectiveness of both the treatments in promoting gender equality and improving household dynamics.

5.6 Counseling, Physical and Mental Health

Figure A7 shows the impact of the couple counseling interventions on health, well-being and relationship dynamics (corresponding results are shown in Table A16).

Both Treatment 1 and Treatment 2 have a positive effect on physical health for women, with Treatment 2 (0.31 SD) and Treatment 1 (0.26 SD). We do not observe any effects of the interventions on the physical health of men. The improvement in women's physical health is indicative of the holistic benefits of the interventions, extending beyond the realms of gender attitudes and norms. Similarly, in terms of mental health, both interventions demonstrate significant improvements for women, Treatment 2 (0.34 SD) and Treatment 1 (0.30 SD). Treatment 2 also had a positive impact on life satisfaction of both men (0.32 SD) and women (0.36 SD).

When it comes to handling family problems, Treatment 2 led to improvements for women (0.32 SD), but Treatment 1 had insignificant effects for women, while both the treatments did not significantly affect men's ability to handle family problems. In terms of partner relations, both interventions led to improvements, mostly for women. For men, we observed a significant positive effect of 0.33 SD for Treatment 2 only.

In summary, the results from Table A16 demonstrate the positive impact of couple counseling interventions on physical, social and mental dimensions of well-being. The findings suggest that these interventions can lead to significant improvements in physical health,

mental health, life satisfaction, and the ability to handle family problems and maintain positive partner relations.

The follow-up results, described in Table A17, show sustained effects of Treatment 2 in several key domains. Physical health for females shows a significant improvement (0.17 SD), alongside mental health (0.21 SD) and life satisfaction (0.30 SD), signaling the persistent efficacy of this intervention in enhancing overall well-being. Additionally, partner relations for females also remain significantly better (0.27 SD), highlighting the long-lasting positive impact on interpersonal relationships within the household. Conversely, certain initial gains did not sustain over time. Notably, the ability to handle family problems did not maintain statistical significance, suggesting a reduction in the intervention's impact on managing interpersonal conflicts as the immediate effects of the intervention faded. This fading underscores the need for continuous or repeated interventions to maintain improvements in complex familial dynamics.

5.7 Counseling, gender stereotypes and domestic violence

Table 5 provides an analysis of the impact of interventions on gender stereotypes, perceptions about gender inequality, domestic violence, and relationship dynamics between couples in terms of connection.

Results show that Treatment 2 significantly reduce adherence to traditional gender stereotypes among men (0.42 SD) and women (0.31 SD) while Treatment 1 had an insignificant effect. In terms of professional stereotypes, Treatment 2 led to a significant reduction of 0.25 SD for women and 0.31 SD for men, while Treatment 1 had no effects. These results suggests that the interventions not only address general gender stereotypes but also extend their influence to perceptions related to professional roles and capabilities.

Both interventions significantly reduce perceptions of gender inequality for women (feelings

about gender inequality), with Treatment 2 (0.37 SD) having a more substantial impact than Treatment 1 (0.22 SD). This reduction in perceived inequality is indicative of a shift towards more egalitarian views within the household. Treatment 2 also had a significant effect in reducing perception of inequality for men (0.45 SD). Furthermore, both Treatment 1 and Treatment 2 led to a significant decrease in the incidence of domestic violence, with Treatment 2 (0.42 SD) showing a larger (but statistically indifferent) effect than Treatment 1 (0.27 SD) for women, and for men, Treatment 1 and 2 reduced the incidence of domestic violence by 0.29 SD and 0.45 SD, respectively. These finding highlights the potential of community engaged counseling interventions to address and mitigate violence within intimate relationships.

The interventions also have a positive impact on couple's connection score (a measure of how much the partners know each other). Here again, we observed a significantly higher effects of Treatment 2 compared to Treatment 1. These improvements in connection is essential for fostering healthier and more supportive relationship dynamics.

Overall, results from Table 5 demonstrate the positive impact of counseling interventions in reducing gender stereotypes and inequality, decreasing domestic violence, and improving couple connection.

5.7.1 Comparison with Traditional Interventions

Evidence on cash transfers shows limited and mixed effects on intra-household power dynamics. Haushofer and Shapiro (2016) found that while transfers in Kenya increased household consumption, they had no effect on IPV. Hidrobo et al. (2016) observed a modest reduction in IPV in Ecuador from transfers, but with no difference across modalities, suggesting that cash alone is not uniquely effective. Bobonis, Castro, and Morales (2013) found that Mexico's Oportunidades reduced physical violence but increased emotional abuse, pointing to potential backlash when social norms remain unaddressed. Other studies (Bastagli et al.,

2016; McIntosh and Zeitlin, 2022) show that cash may improve women's economic activity but does little to disrupt traditional gender roles or time use. Goetz and Gupta (1996) emphasize that the extent of women's empowerment through financial interventions depends critically on their control over resources; without structural shifts in gender norms, such control remains elusive.

In contrast, our couple-based community intervention (Treatment 2) in Kanpur reduced women's unpaid labor by 40–45 minutes and increased men's caregiving by over 30 minutes per day, alongside a 0.42 SD reduction in IPV. Unlike cash transfer programs, our intervention engaged men and leveraged both private and public accountability mechanisms to shift gender attitudes, focusing exclusively on behavioral and normative change rather than income enhancement. This design mitigated backlash and generated more durable changes in power dynamics. The findings highlight that financial interventions targeting women in isolation may fall short, whereas direct male engagement and community-embedded behavioral change can yield more substantial and sustained reductions in IPV.

5.8 Counseling and relationship quality

Our analysis reveals significant improvement in relationship quality attributed to the interventions, detailed in Table 6. Notably, Treatment 2 was instrumental in improving understanding between partners—a critical facet of relationship satisfaction. The effects were differentiated by gender, with women experiencing a 0.19 SD increase and men a more pronounced 0.29 SD uplift in understanding. This holistic method appears particularly adept at nurturing mutual understanding, an essential element for enduring relationship satisfaction.

Both the interventions increased trust among participants, elevating trust levels by over 0.20 SD for both genders in both the interventions. Statistical analyses revealed no significant differences in trust enhancement between the two treatments. In terms of couples'

cooperation, an essential component of functional relationships, notable improvements were observed. For women, both treatments resulted in increases exceeding 0.30 SD, whereas for men, these gains were only noted under Treatment 2, with an increase of 0.30 SD.

Furthermore, connectedness, which gauges emotional closeness and bonding, saw significant improvements under both interventions for both sexes. This aligns with existing literature that underscores the critical role of male involvement in interventions designed to foster emotional connectedness, thereby enhancing the sustainability of intimate relationships (Gottman and Levenson, 2000). In the realm of emotional intimacy, particularly the sharing of feelings, both treatments positively impacted men. For women, however, this aspect was only significantly improved with Treatment 2, by 0.23 SD, suggesting that the specific activities included in Treatment 2 might have been especially critical to promoting emotional openness among women.

Lastly, respect between partners, a cornerstone of healthy relational dynamics, was bolstered by both interventions for women, with Treatment 2 demonstrating a more substantial effect of 0.34 SD compared to 0.25 SD in Treatment 1. Among men, the influence of Treatment 2 on respect was notable at 0.32 SD, whereas Treatment 1 did not yield a significant effect. These patterns underscore the differential impact of the treatments on relational respect across genders, highlighting the ways in which intervention components may resonate differently with men and women.

In the follow up analysis, as shown in Table A18, Treatment 2 demonstrated long-term effectiveness in enhancing "Time together," "Understanding," and "Sharing feelings,". Conversely, "Trust," "Cooperation," "Connectedness," and "Respect" did not maintain significant effects, indicating the challenges in achieving sustainable changes in these complex relationship dimensions. These findings underscore the necessity for interventions that not only initiate positive shifts but also incorporate strategies to maintain and solidify these

gains over time.

5.9 Lab in the field experiment

Figure A8 and Table 7 summarize behavioral and attitudinal shifts induced by the interventions, as measured through lab-in-the-field experiments and preference surveys.

In the risk preference game, Treatment 2 significantly reduces risk-taking, by 11% for men and 13% for women, relative to control means, while Treatment 1 shows no effect. This suggests that structured couple-based activities may promote more cautious, coordinated household decision-making (Bernheim, Ray, and Yeltekin, 2015). Time preference outcomes reveal a decline in present bias under both treatments, with larger effects under Treatment 2 (16% for men, 13% for women), consistent with enhanced future orientation (Andreoni and Sprenger, 2012; Laibson, 1997).

The trust game shows increased spousal transfers under both treatments, with larger gains under Treatment 2 (32% for men, 14% for women), signaling improved trust and reciprocity (Fehr and Schmidt, 2006). Business investment rises only for men (Rs. 15–17), with no effect for women.

Preference survey data corroborate these results. Treatment 2 reduces risk preferences (8% for men, 10% for women), with weaker or null effects under Treatment 1. Present bias also declines under Treatment 2 (5% for men, 8% for women). The trust index shows no overall effect, though Treatment 2 increases trust among women by 10%. Reciprocity rises under Treatment 2 for both men (7.5%) and women (10%), likely due to repeated interactions and conditional cooperation norms (Fehr and Schmidt, 2006; Bolton, Katok, and Ockenfels, 2005). These behavioral shifts align with theories linking preference convergence to reduced relational instability (Serra-Garcia, 2022). Finally, both treatments increase altruistic preferences, with Treatment 2 yielding 10% and 8% gains for women and men,

respectively. These effects are consistent with warm-glow and prosocial utility models (Andreoni and Miller, 2002). Overall, couple-based interventions, especially those combining counseling and joint activities—shift preferences toward lower risk and present bias, greater reciprocity and altruism, and enhanced household cooperation, laying the groundwork for improved long-term household outcomes.

6 Heterogeneity and Robustness

Tables A19–A21 explore treatment heterogeneity across caste, location, and educational attainment. Table A19 disaggregates time-use outcomes by caste and gender for non-marginalized groups. Both Treatments 1 and 2 significantly shift time in home production, unpaid care, and social and leisure activities, with stronger effects under Treatment 2. Socializing increases and leisure declines, especially among general caste men, suggesting caste-gender norms mediate responsiveness. Interaction patterns align with aggregate estimates in Table 2, indicating caste did not substantively alter treatment effects.

Table A20 examines rural-urban heterogeneity. Treatment 2 raises men's home production and reduces women's unpaid caregiving. Among rural men, time in paid work is lower, while time in home production, socializing, and leisure is higher, patterns not observed for rural women. Despite contextual variation, treatment effects remain statistically similar across rural and urban participants.

Table A21 assesses heterogeneity by high school completion. Treatment 2 reallocates domestic work from women to men among the educated. Men with high school education also increase time in home production and socializing; no clear pattern emerges for similarly educated women. Treatment–education interactions are insignificant, indicating educational attainment does not substantively moderate treatment impacts.

Using a follow-up survey conducted in February–March 2025 with 878 couples, we further

examine heterogeneity by marriage type. Only 71 couples (8.1%) reported having a love marriage. As shown in Table A22, treatment effects do not differ systematically by marital type. Given imprecise estimates, results should be interpreted cautiously, suggesting similar effects across arranged and love marriages.

To test for spurious treatment effects, we conducted a follow-up phone survey in February–March 2025 with 878 couples, collecting retrospective and immutable variables that lie outside the intervention's causal scope. Placebo outcomes include: (i) marriage type (arranged vs. love; 8.1% love marriages), (ii) gender of first-born child, (iii) whether the first-born was full-term, (iv) history of miscarriage, (v) eyeglass use by wife and husband, and (vi) twin sibling indicators for each spouse. As expected, none of these outcomes differ significantly across treatment arms. The null effects, reported in Table A23, support the internal validity of our findings and suggest that observed treatment impacts are not artifacts of unobserved baseline differences or general participation.

We address concerns about social desirability bias potentially inflating women's reported outcomes. Table 8, following Dhar, Jain, and Jayachandran (2022), uses agreement with a normative statement to proxy susceptibility to such bias. Controlling for this, most results remain qualitatively intact. However, the effect of Treatment 2 on women's labor force participation becomes only marginally significant, and Treatment 2's effect on men's home production becomes insignificant, suggesting modest attenuation.

Robustness checks confirm the findings. Results hold with randomization inference and multiple hypothesis corrections (List, Shaikh, and Xu, 2019), binary employment definitions (Table A10), and minimal attrition (one couple lost due to death). Follow-up data a year later shows persistent, though attenuated, treatment effects, with Treatment 2 continuing to reduce gender disparities in labor and household production.

Finally, restricting the sample to high-compliance couples, those attending all sessions

(Treatment 1) or completing all activities (Treatment 2), yields consistent results (Appendix A5 Tables A2 and A3). Results are also robust to restricting to respondents completing all in-person surveys, further mitigating concerns over selective participation.

7 Scalability and Cost Effectiveness

Tables A24 and A25 show the breakdown of costs in the implementation intensity across treatment arms. T1, focused on private counseling, cost $9,348 in total, or $31.16 per couple, reflecting its reliance on structured but low-cost informational delivery. T2, at $17,068 or $56.89 per couple, integrated public, participatory activities requiring additional personnel, logistics, and materials. This higher cost aligns with the intervention's design: embedding social accountability to induce durable behavioral change.[9] *Notably, Treatment 2 yields significantly larger effects across key outcomes, such as men's home production, women's unpaid care, social engagement, and subjective well-being, with several effects persisting through the follow-up, as confirmed by the p-value of the Wald tests of T2–T1 differences. Also, our lab-in-the field experiments show statistically significant differences between T2 and T1 in risk preferences for women, time preferences for women and transfer to spouse is significantly different for men between T2-T1.*

Our interventions, T1 and T2, offer scalable alternatives to traditional gender equity interventions like financial inclusion and vocational training. T1, although focused on couples, can facilitate improved communication and cooperation between partners, and also influence broader social norms through spillover effects as improved relationship dynamics within households potentially inspire similar behaviors in broader social networks. T2 enhances scalability more directly by integrating behavioral changes within a community setting, mak-

[9] These interventions could be scaled more cost-effectively by integrating them into existing community infrastructure. Training ASHA workers or other trusted local para-counselors to deliver both counseling and community-based modules would reduce fixed and variable costs by leveraging existing personnel and administrative coordination.

ing these changes publicly observable and socially reinforced. This method not only solidifies the new behaviors among direct participants but also promotes community-wide normative shifts. Both interventions, by extending beyond economic empowerment to include relational dynamics and community engagement, present innovative, comprehensive approaches that address the structural aspects of gender disparities, offering potential for broader and more sustainable impacts compared to traditional methods.

8 Conclusion

Utilizing a dual-approach counseling trial, our study examines the efficacy of couple counseling interventions in addressing gender inequality and marital dynamics. The RCT, which includes two treatment arms, Treatment 1 (couple counseling) and Treatment 2 (counseling combined with couple-based coordination activities in a community setting), provides a novel framework for evaluating key outcomes such as time allocation, gender stereotypes, and adherence to cultural norms.

Our results reveal that both treatments significantly advance gender equality, with the additive Treatment 2 showing more pronounced effects. The additive treatment led to meaningful reductions in home production and unpaid caregiving time for women, alongside increased men's involvement in these activities. Integrating couple-based interactive activities within a community setting into counseling programs can effectively challenge entrenched gender norms, with a caution that these effects fade with time. The attenuation of traditional patriarchal practices under Treatment 2 underscore the importance of addressing both interpersonal and cultural dimensions of gender inequality. Our analysis demonstrates both short-term and long-term sustainability of these changes. Results from the follow-up survey highlighted that the interventions led to persistent shifts in gendered time use, particularly in reducing unpaid domestic work and enhancing men's involvement

in household responsibilities.

The lab-in-the-field experiment shows that Treatment 2 reduced risk-taking behavior, and present bias, among both men and women, and increased trust and reciprocity between partners. The experiment also shows that Treatment 2 is more effective in fostering reciprocal behaviors, highlighting the importance of repeated social interactions in strengthening cooperative dynamics within households.

This study underscores the effectiveness of holistic, couple-based interventions in promoting gender equality. Policymakers and practitioners should consider incorporating such interventions into broader development and social welfare strategies, particularly in contexts where gender inequalities are deeply rooted. Our study provides a strong case for the integration of gender-sensitive couple counseling into a wide range of policy frameworks aimed at fostering equitable social and economic development.

9 Tables

Table 1: Summary statistics of variables across treatment types: Baseline

Variables	Control	Treatment 1	Treatment 2	p-value	
				Treatment 1	Treatment 2
Female characteristics					
Employment related activities	164.45	160.06	154.48	0.89	0.75
Unpaid domestic chores	298.92	303.51	310.12	0.86	0.66
Unpaid domestic care services	245.84	241.97	242.77	0.89	0.92
Socializing & community participation	33.71	27.31	37.85	0.52	0.70
Leisure	72.78	74.22	74.99	0.88	0.84
Self-care	519.89	524.88	526.32	0.93	0.90
Physical Health	3.87	3.81	3.85	0.41	0.76
Mental Health	3.95	3.98	3.96	0.70	0.88
Life satisfaction	6.04	6.09	6.05	0.92	0.98
Time spent together (in hours)	10.13	10.08	10.06	0.97	0.96
Male characteristics					
Employment related activities	342.27	332.68	336.39	0.82	0.88
Unpaid domestic chores	137.29	138.51	144.60	0.95	0.68
Unpaid domestic care services	157.88	154.05	159.98	0.80	0.89
Socializing & community participation	44.37	44.62	45.00	0.96	0.90
Leisure	118.29	106.27	112.33	0.59	0.79
Self-care	582.39	589.03	566.43	0.78	0.50
Physical Health	3.94	3.94	3.96	0.96	0.90
Mental Health	4.01	4.01	4.00	1.00	0.94
Life satisfaction	6.13	6.18	6.06	0.92	0.90
Time spent together (in hours)	8.16	8.10	8.13	0.95	0.98

Notes: Table 1 presents baseline summary statistics for key outcome variables, disaggregated by treatment status (Control, Treatment 1, and Treatment 2) for female and male characteristics. The first three columns report mean values for each outcome across the three groups, while columns 4 and 5 display p-values derived from ordinary least squares (OLS) regressions of each outcome on indicators for Treatment 1 and Treatment 2, respectively. The p-values indicate whether the difference in means between each treatment group and the control group is statistically significant. All regressions cluster standard errors at the cluster (ward) level to account for intra-location correlations. This table provides an assessment of balance across treatment arms at baseline, confirming the comparability of groups prior to intervention.

Table 2: Impact of Couple counseling (Treatment 1) and Couple counseling and Couple Coordination Activities (Treatment 2) on Time Use for Men and Women at Endline Survey

	(1)	(2)	(3)	(4)	(5)	(6)
	Labor Force		Home Production		Unpaid Care	
Panel A	Female	Male	Female	Male	Female	Male
Treat 1	15.739	10.594	-20.994	9.205	-24.016**	4.647
	(30.348)	(41.087)	(18.427)	(17.143)	(11.744)	(12.801)
Treat 2	44.247	16.832	-40.375**	32.272*	-45.394***	27.696**
	(30.261)	(32.496)	(16.015)	(16.583)	(11.016)	(11.946)
Control Mean	156.55	326.45	307.95	140.43	252.68	164.67
p-value (T2-T1)	0.25	0.86	0.20	0.05	0.04	0.09
WY FWER p-values (T1)	0.92	0.92	0.79	0.79	0.12	0.92
WY FWER p-values (T2)	0.26	0.92	0.03	0.14	0.00	0.04
RI p-values (T1)	0.67	0.79	0.48	0.48	0.09	0.68
RI p-values (T2)	0.16	0.78	0.03	0.11	0.00	0.03
R-squared	0.130	0.149	0.128	0.127	0.091	0.139
	Socializing		Leisure		Self-care	
Panel B	Female	Male	Female	Male	Female	Male
Treat 1	14.957***	14.511***	-16.706***	-7.811	28.158	-48.502**
	(5.262)	(4.261)	(6.343)	(20.920)	(20.554)	(21.741)
Treat 2	30.483***	21.087***	-30.839***	-40.887***	30.641*	-88.539***
	(3.158)	(3.494)	(6.607)	(11.798)	(17.573)	(19.881)
Control Mean	33.87	30.07	81.03	113.52	516.20	588.05
p-value (T2-T1)	0.00	0.09	0.03	0.08	0.89	0.06
WY FWER p-values (T1)	0.00	0.08	0.01	0.87	0.37	0.08
WY FWER p-values (T2)	0.00	0.00	0.00	0.00	0.14	0.00
RI p-values (T1)	0.01	0.07	0.02	0.59	0.23	0.07
RI p-values (T2)	0.00	0.00	0.00	0.00	0.08	0.00
R-squared	0.159	0.167	0.232	0.117	0.087	0.202

Notes: Standard errors clustered at the region level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects. Labor force participation includes (i) employment and related activities (activity for pay), (ii) time spent in seeking employment, (iii) time spent in traveling and commuting for employment, and (iv) time spent in farm activities, animal husbandry, fishing and household enterprise for the market. Home production includes, (i) production of goods for own/families final use, (ii) unpaid domestic services for household members. Unpaid caregiving services for household members include activities such as childcare and instruction, care for dependent adults, help to non-dependent adult household members, and other activities related to unpaid caregiving services for household members. Specifically, this includes childcare for individuals under 18 years of age, care for elderly individuals aged 60 and above, care for adult members between 18 and 60 years old, and traveling and accompanying goods or persons related to unpaid caregiving services for household members. Socializing and communication, community participation, and religious practice include activities such as socializing and communication; participating in community cultural/social events, involvement in civic and related responsibilities, religious practices, and other activities related to socializing and communication, community participation, and religious practice. Culture, leisure, mass-media, and sports practices include activities such as attending/visiting cultural, entertainment, and sports events/venues, cultural participation, hobbies, games, and other pastime activities, sports participation, exercise, and related activities; mass media use, activities associated with reflecting, resting, relaxing; and other activities related to culture, leisure, mass-media, and sports practices. Self-care and maintenance encompass activities such as sleep and related activities, eating and drinking, personal hygiene and care, receiving personal and health/medical care from others, and other self-care and maintenance activities.

Table 3: Impact of Couple Counseling (Treatment 1) and Couple Counseling with Coordination Activities (Treatment 2) on Time Use for Men and Women in the Follow-Up Survey

	Labor Force		Home Production		Unpaid Care	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Female	Male	Female	Male	Female	Male
Treat 1	13.304	6.391	-1.811	17.689	-22.282	11.978
	(26.077)	(35.824)	(28.241)	(16.857)	(31.922)	(13.097)
Treat 2	28.586	14.383	-13.875	27.420*	-39.924*	21.261*
	(24.568)	(28.727)	(26.265)	(15.901)	(23.716)	(12.618)
Control Mean	157.73	334.13	308.1	137.58	251.57	160.18
p-value (T2-T1)	0.46	0.78	0.66	0.43	0.56	0.51
WY FWER p-values (T1)	0.96	0.96	0.96	0.90	0.90	0.96
WY FWER p-values (T2)	0.51	0.96	0.51	0.09	0.09	0.08
RI p-values (T1)	0.60	0.85	0.70	0.44	0.53	0.58
RI p-values (T2)	0.24	0.62	0.28	0.08	0.11	0.09
R-squared	0.101	0.134	0.331	0.105	0.329	0.237
	Socializing		Leisure		Self-care	
Panel B	Female	Male	Female	Male	Female	Male
Treat 1	12.170	9.258**	-15.242**	-17.399	7.380	-12.849
	(10.113)	(4.393)	(7.456)	(11.292)	(30.564)	(29.820)
Treat 2	19.189*	16.676***	-19.068***	-29.538***	19.592	-48.135*
	(10.588)	(3.535)	(6.295)	(7.461)	(29.215)	(27.538)
Control Mean	42.17	40.7	78.97	105.83	512.55	602.85
p-value (T2-T1)	0.55	0.06	0.58	0.20	0.69	0.18
WY FWER p-values (T1)	0.90	0.09	0.96	0.96	0.96	0.96
WY FWER p-values (T2)	0.04	0.00	0.78	0.00	0.90	0.09
RI p-values (T1)	0.49	0.10	0.66	0.57	0.71	0.67
RI p-values (T2)	0.06	0.00	0.37	0.00	0.51	0.07
R-squared	0.261	0.190	0.191	0.149	0.100	0.117

Notes: Standard errors clustered at the region level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The follow up survey was conducted one year after the endline survey in August 2024. There are 899 couples in the follow-up survey. Couple counseling (Treatment 1) and Couple counseling with coordination activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each regression, we also control for age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects. Definitions of time use categories are consistent with the endline survey. All other specifications are similar to Table 2.

Table 4: Treatment Effects on Women Empowerment Indicators

Variables of Interest	Allowed to go out of house	Practice burkah/ghunghat	Have cash in hand to spend	Changed occupation	Monthly HH income (log)
Panel A: Female only					
Treat 1	0.130**	0.053	0.144**	0.022*	0.023
	(0.050)	(0.059)	(0.057)	(0.013)	(0.063)
Treat 2	0.141***	0.127**	0.200***	0.028**	0.090
	(0.043)	(0.053)	(0.055)	(0.012)	(0.057)
Control Mean	0.78	0.27	0.75	0.00	9.33
p-value (T2-T1)	0.78	0.19	0.16	0.62	0.26
WY FWER p-values (T1)	0.03	0.32	0.04	0.10	0.54
WY FWER p-values (T2)	0.01	0.05	0.01	0.05	0.10
RI p-values (T1)	0.01	0.37	0.01	0.07	0.70
RI p-values (T2)	0.00	0.02	0.00	0.01	0.14
R-squared	0.121	0.116	0.164	0.064	0.124

Notes: Standard errors clustered at the region level are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. All regressions control for the age and education of the respondent and partner, caste, religion, rural dummy, BPL ration card dummy, household size, joint family dummy, and ward fixed effects. The dummy *Allowed to go out of house* equals 1 if the respondent says 'Yes' to being allowed out alone, 0 otherwise. *Practice burkah/ghunghat* equals 1 if the woman does not practice veiling, 0 otherwise. *Have cash in hand to spend* equals 1 if the woman has cash for personal/household use, 0 otherwise. *Changed occupation* equals 1 if a respondent shifted from housewife to small business (only 16 women did). *Monthly household income* is logged.

Table 5: Treatment Effects on Gender Stereotype, Inequality, Domestic Violence and Relationship Dynamics, at Endline

Variables of Interest	Stereotype		Prof Stereotype		Inequality		Domestic violence		Connection score	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat 1	0.0957	0.145	0.113	0.133	0.216	0.273	0.270**	0.288**	0.452**	0.421**
	(0.122)	(0.235)	(0.117)	(0.161)	(0.133)	(0.167)	(0.128)	(0.134)	(0.179)	(0.171)
Treat 2	0.310***	0.415**	0.246**	0.310**	0.373***	0.452***	0.422***	0.454***	0.592***	0.497***
	(0.115)	(0.225)	(0.0999)	(0.124)	(0.113)	(0.154)	(0.128)	(0.107)	(0.149)	(0.152)
Control Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-value (T2 - T1)	0.03	0.21	0.20	0.17	0.12	0.16	0.15	0.21	0.31	0.51
WY FWER p-values (T1)	0.35	0.35	0.32	0.35	0.04	0.04	0.03	0.03	0.01	0.00
WY FWER p-values (T2)	0.00	0.02	0.03	0.04	0.00	0.01	0.00	0.00	0.00	0.00
RI p-values (T1)	0.44	0.56	0.43	0.48	0.03	0.03	0.04	0.03	0.02	0.01
RI p-values (T2)	0.02	0.07	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00
R-squared	0.119	0.182	0.070	0.094	0.148	0.223	0.190	0.167	0.239	0.203

Note: Standard errors clustered at the region level are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each regression, we also control for the age and education level of the respondent and partner, caste and religion of the household, rural region dummy, BPL ration card dummy, household size, joint family dummy, and ward-fixed effects. All outcome variables are standardized to mean zero and standard deviation one following Kling et al. (2007). Odd-numbered columns show treatment effects for women; even-numbered columns for men. The stereotype index is based on responses to four statements (Likert scale). The inequality index uses six statements, the domestic violence index seven, and the connection score aggregates 12 responses into a scale of 0 to 12.

Table 6: Treatment Effects on the Relationship Quality

Variables of Interest	Understanding		Trust		Cooperation		Connectedness		Sharing feelings		Respect	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat 1	0.089	0.135	0.296***	0.228*	0.310*	0.202	0.305*	0.215**	0.156	0.255*	0.246*	0.164
	(0.090)	(0.154)	(0.107)	(0.131)	(0.174)	(0.132)	(0.162)	(0.106)	(0.136)	(0.134)	(0.137)	(0.129)
Treat 2	0.186**	0.293**	0.337***	0.335***	0.372***	0.298**	0.359**	0.334***	0.231*	0.322**	0.342***	0.317**
	(0.083)	(0.123)	(0.116)	(0.109)	(0.127)	(0.120)	(0.165)	(0.118)	(0.127)	(0.143)	(0.118)	(0.141)
Control Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-value (T2 - T1)	0.25	0.22	0.72	0.30	0.68	0.30	0.72	0.23	0.50	0.62	0.36	0.25
WY FWER p-values (T1)	0.40	0.40	0.01	0.10	0.06	0.10	0.08	0.01	0.33	0.04	0.10	0.40
WY FWER p-values (T2)	0.04	0.00	0.01	0.00	0.00	0.01	0.04	0.00	0.09	0.00	0.00	0.03
RI p-values (T1)	0.32	0.37	0.09	0.07	0.10	0.08	0.01	0.01	0.27	0.03	0.07	0.34
RI p-values (T2)	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
R-squared	0.082	0.183	0.084	0.100	0.118	0.174	0.135	0.141	0.112	0.106	0.137	0.096

Note: Standard errors clustered at the region level are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. All regressions control for the age and education of the respondent and their partner, caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, joint family dummy, and ward-fixed effects. All outcomes are standardized. Odd columns present treatment effects for women; even columns for men. These outcomes represent different dimensions of relationship quality on a scale of 0 to 10, with higher values indicating better relationships.

Table 7: Experimental lab-in-the field games & preference survey

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Lab games	Risk preference		Time preference		Transferred to spouse (X)		Received from spouse (Y)		Investment in Business	
Variables	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Treat 1	-0.199	-0.298	-0.120	-0.314	3.738	9.792***	-4.327	1.198	1.308	15.321***
	(0.158)	(0.258)	(0.215)	(0.257)	(2.541)	(3.242)	(7.080)	(5.464)	(3.265)	(2.778)
Treat 2	-0.512**	-0.527*	-0.587**	-0.758*	7.676**	16.804***	22.183**	25.316***	-2.270	17.088***
	(0.241)	(0.259)	(0.262)	(0.396)	(2.902)	(3.679)	(9.505)	(6.247)	(3.369)	(2.838)
Control Mean	3.99	4.98	4.42	4.87	57.30	50.35	70.25	42.55	60.15	52.95
p-value (T2-T1)	0.03	0.32	0.00	0.10	0.17	0.05	0.01	0.00	0.26	0.35
WY FWER p-values (T1)	0.81	0.02	0.99	0.11	0.73	0.11	0.99	0.99	0.99	0.00
WY FWER p-values (T2)	0.34	0.00	0.29	0.10	0.18	0.00	0.26	0.02	0.99	0.00
RI p-values (T1)	0.23	0.00	0.56	0.01	0.12	0.01	0.56	0.84	0.64	0.00
RI p-values (T2)	0.04	0.00	0.03	0.00	0.01	0.00	0.02	0.00	0.48	0.00
R-squared	0.146	0.113	0.116	0.158	0.110	0.144	0.099	0.210	0.070	0.303
Panel B: Preference survey	Risk preference		Time preference		Trust Index		Reciprocity Index		Altruism Index	
Variables	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Treat 1	-0.173	-0.447*	0.0611	0.253	0.494	0.167	0.416	0.186	0.485*	0.410*
	(0.274)	(0.268)	(0.286)	(0.185)	(0.351)	(0.521)	(0.368)	(0.237)	(0.291)	(0.215)
Treat 2	-0.483*	-0.659***	0.492*	0.350*	0.561*	0.261	0.660**	0.500***	0.626**	0.562**
	(0.271)	(0.230)	(0.271)	(0.182)	(0.287)	(0.510)	(0.292)	(0.182)	(0.295)	(0.215)
Control Mean	4.71	8.32	5.86	6.78	5.83	5.64	6.05	6.68	6.15	6.80
p-value (T2-T1)	0.21	0.49	0.07	0.48	0.84	0.78	0.35	0.11	0.52	0.41
WY FWER p-values (T1)	0.64	0.08	0.80	0.18	0.17	0.80	0.28	0.62	0.08	0.04
WY FWER p-values (T2)	0.06	0.01	0.06	0.04	0.04	0.64	0.01	0.01	0.02	0.01
RI p-values (T1)	0.52	0.10	0.84	0.17	0.18	0.75	0.31	0.43	0.10	0.07
RI p-values (T2)	0.09	0.00	0.08	0.06	0.08	0.60	0.04	0.02	0.04	0.01
R-squared	0.148	0.170	0.113	0.072	0.322	0.179	0.211	0.048	0.120	0.125

Notes: Standard errors clustered at the region level are in parentheses. $***p < 0.01$, $**p < 0.05$, $*p < 0.1$. There are 899 couples at endline for the survey and a random sample of 299 couples selected for the games. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects. Odd columns present the estimated treatment effects for the women while the even columns present the same for the men. Panel B is constructed from the self-reported preference survey following Falk et al. (2023), while Panel A are results from the lab-in-the field experiments (details about the games are shown in Appendix A3). Risk preference is derived from the question: Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? Please use the following scale, where the value 0 means: "risk averse" and the value 10 means: "fully prepared to take risks". Time Preference is derived from the question: How willing are you to give up something that is beneficial for you today in order to benefit from that in the future?" Please use the following scale, where the value 0 means: "completely unwilling to do so" and the value 10 means: "very willing to do so". Trust & Positive reciprocity: Please indicate your answer on a scale from 0 to 10. A 0 means "does not describe me at all" and a 10 means "describes me perfectly". You can also use any numbers between 0 and 10 to indicate where you fall on the scale, like 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. For reciprocity: When someone does me a favor I am willing to return it. For Trust: I assume that people have only the best intentions. Altruism index of derived from the question: How willing are you to give to good causes without expecting anything in return? (Values from 0 meaning "completely unwilling to do so," to 10 meaning "very willing to do so." are allowed.)

Table 8: Treatment effects at endline (wellbeing outcomes) by social desirability bias

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Labor Force Participation		Unpaid domestic chores		Unpaid domestic care	
	Female	Male	Female	Male	Female	Male
Treat 1	21.069	41.740	-30.789	7.466	-33.960*	16.793
	(39.922)	(60.809)	(27.670)	(25.540)	(17.095)	(16.127)
Treat 2	72.139*	40.416	-51.711**	29.288	-47.682***	38.976**
	(39.945)	(40.435)	(24.188)	(20.008)	(16.142)	(15.036)
SDS_high	9.517	19.601	-9.342	17.299	0.298	19.563
	(42.157)	(37.574)	(24.495)	(18.732)	(16.798)	(15.037)
Treatment 1 X SDS_high	-6.442	-60.059	17.724	7.729	21.300	-20.281
	(50.270)	(68.972)	(31.718)	(27.040)	(21.631)	(20.186)
Treatment 2 X SDS_high	-59.664	-46.192	22.244	13.034	5.265	-18.397
	(57.123)	(47.777)	(33.158)	(23.431)	(22.542)	(19.587)
R-squared	0.132	0.152	0.129	0.134	0.094	0.142

Note: Social desirability score (SDS) is constructed from the 13-item questions following Crowne and Marlowe (Dhar, Jain, and Jayachandran, 2022)which addresses experimental demand effects. Collected at baseline, this measure captures the participant's propensity to give socially desirable answers. An individual is defined as having a high social desirability score (HSDS) if the score is above or equal to the median for the sample score.

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Online Appendix

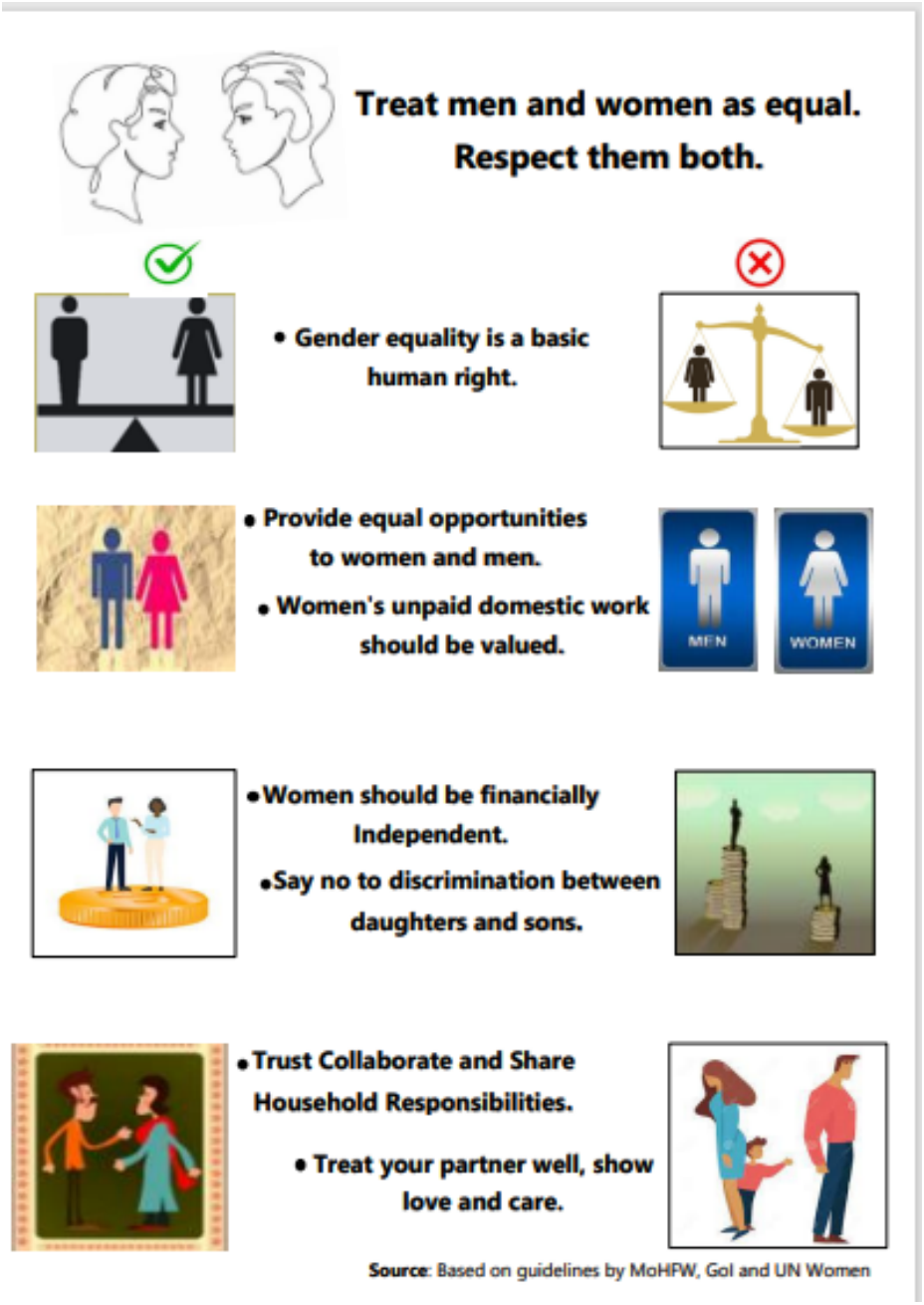


Figure A1: Poster shared with treated households

Notes: A Hindi language version of this poster was pasted on the inside walls of the treated households. The poster and instructions followed the guidelines from Ministry of Health and Family Welfare (MoHFW), Government of India (GoI), and United Nations (UN) Women.

A1 Brief Overview of Private Counseling Modules

Objectives:

- Raise couple awareness about issues of gender inequality, gender stereotypes/roles, and gender discrimination.
- Raise couple awareness about how to eliminate these issues in their routine lives.
- Raise couple support in activities of domestic tasks.
- Raise couple cooperation and coordination in household decision-making.

Outline: Couple Counseling intervention is divided into four sessions spread over a period of four weeks/months. Each session will last for about 40-45 minutes.

General Instructions for the Counselors:

- Following topics will be discussed face-to-face with the respondents. The counselors will discuss these topics in simple language so that the counselee can easily understand. The counselor should talk slowly so that the counselee understands everything. The counselor should talk at least 45-50 minutes with each couple.

A1.1 Session 1 (Day 1): Gender Inequality

- "I am _____. How are you? Today we would like to discuss with you an important/critical issue widely prevalent in our society - gender inequality. We will talk about what these issues are and their impact on your daily living and your children's well-being outcomes."

Preliminary Discussion:

- Have you heard about gender equality/what do you understand by gender equality?
- Do you think that parents should raise their daughters and sons as equals?
- Have you ever felt that you were treated differently because of your gender?
- Have you ever raised a concern when you witness or experience gender unequal treatment?

Explain and Discuss Basic Concepts:

- **What is gender equality:** Gender equality refers to equality between women and men in terms of equal rights, responsibilities, treatment, and opportunities of women, men, and girls and boys.
- **Where does gender inequality take place?** It can take place within households, economic sphere, political sphere, and social sphere.
- **Why is Gender equality important/why are we talking about gender equality?** Human right, ethically correct, development goal, better health and education outcomes for women and girl child within household, spillovers on household's social and economic condition.

- **Instruction for the Counselors:** Following video will be shown to the respondents followed by discussions. The counselors will discuss the content of the video in simple language so that the counselee can easily understand. The counselor should talk slowly so that the counselee understands everything.

- **Video 1:**
YouTube videos for gender stereotypes and equitable behavior.

Discussion:

- What did you observe in this video?

- Group discussion.

- Any key takeaways?

- Ask them if they do not agree with something and talk about that.

- **Conclude:** "Do you understand everything I have talked about until now? Have you learned something new today from what we have just discussed?"

- **Observer Notes:** Did the couples understand the discussion? Was there responsiveness in the discussion?

A1.2 Session 2: Gender Stereotypes

- Today, we will discuss the topic of gender stereotypes, which play a significant role in shaping our perceptions and behaviors. We'll explore how these stereotypes impact our lives and discuss ways to challenge and overcome them."

Preliminary Discussion:

- Have you ever encountered a situation where you were expected to behave in a certain way because of your gender?

- Can you think of any examples where men or women are stereotyped in our society?

Explain and Discuss Basic Concepts:

- **What are Gender Stereotypes:** Gender stereotypes are oversimplified ideas about the characteristics, roles, and behaviors of men and women. They can be both positive and negative but often limit individuals' potential and opportunities.

- **Impact of Gender Stereotypes:** Discuss how stereotypes can lead to discrimination and inequality in various spheres of life, such as education, employment, and personal relationships.

- **Discussion on Personal Experiences:** Encourage couples to share their experiences related to gender stereotypes and how they have dealt with them.

Video Presentation:

- Show a video that illustrates the effects of gender stereotypes on individuals and society. [Provide a link or description of a specific video]

- Discuss the key messages of the video and how they relate to the participants' own experiences.

Concluding Remarks:

- Summarize the key takeaways from the session and emphasize the importance of challenging gender stereotypes for achieving gender equality.
- Encourage couples to reflect on how they can actively counteract stereotypes in their daily lives.

Observer Notes:

- Record any notable observations or feedback from the participants regarding their understanding of gender stereotypes and their willingness to challenge them.

A1.3 Session 3: Gender Discrimination

- **Greetings:**
  "Hello, I am [Counselor's Name]. How are you? Today, we will delve into the critical issue of gender discrimination. We'll discuss how biological differences should not lead to social disparities. We will explore how women have been perceived as the weaker sex and have been targets of social evils like domestic and public space harassment, physical and mental abuse, and physical violence. We'll discuss the causes of such incidents and the potential actions that women and men should take to stop discrimination against women. Furthermore, we will discuss how these issues play a significant role in raising your sons and daughters."

Preliminary Discussion:

- What do you understand by gender discrimination?
- Can you think of any examples of gender discrimination in our society?
- Have you ever witnessed or experienced gender discrimination?

Explain and Discuss Basic Concepts:

- **What is Gender Discrimination:** Gender discrimination refers to any distinction, exclusion, or restriction made on the basis of sex, which can affect individuals' human rights and fundamental freedoms in political, economic, social, cultural, civil, or any other field.
- **Causes and Consequences:** Discuss how gender discrimination can be rooted in societal norms and stereotypes, and how it can lead to adverse outcomes for individuals and society as a whole.

Case Studies and Discussion:

- **Case Study 1:** "Priya goes to her coaching class every day on her two-wheeler. She notices that two boys wait for her every day and start chasing and whistling at her the moment she leaves her class. She is scared and frustrated."
  - What are the causes that lead to such incidents?

  - What actions should the girl take?
  - What can the community do to prevent such incidents?
  - Do you think Priya is a victim of gender discrimination?
- **Case Study 2:** "Ankita is a student who wants to become a doctor. However, her parents want her to apply for a B.A. pass course as they want to get her married soon. They do not want to spend on her education because of wedding expenses and investment in their son's business."
  - Are Ankita's parents doing the right thing? Why or why not?
  - What are the causes that lead to such incidents?
  - What could be a reasonable solution to such complex situations?
  - Do you think Ankita is a victim of gender discrimination?
- **Case Study 3:** "Kritika is a teacher, but after her marriage, she had to quit her job as the school was far from her husband's house. Her husband and in-laws asked her to take care of household tasks instead of pursuing her dreams."
  - Is Kritika's husband and in-laws doing the right thing? Why or why not?
  - What are the causes that lead to such incidents?
  - What could be a reasonable solution to such complex situations?
  - Do you think Kritika is a victim of gender discrimination?

A1.4 Session 4: Trust, Respect, and Cooperation

- In this session, we discussed the three fundamental elements of a successful and happy marriage: Respect, Trust, and Cooperation. We explored how these elements positively affect couples' well-being and that of their children."
- **Reminder and Revise:**
  "Last month, we discussed the basic concepts of gender discrimination. Now, let's briefly revise those concepts before we dive into today's topic."

Discussion on Relationship Basics:

- Ask basic questions about the couple's relationship, such as:
  - Do you spend quality time with each other (e.g., going for walks, eating meals together)?
  - Do you share your feelings with each other?
  - When do you usually talk to each other?
  - What do you usually talk about?

Key Elements of a Successful Marital Relationship:

- **Key 1: Respect for Your Partner** - Fundamental to a healthy marriage. Recognize your partner's worth as a human being. Treat your partner well, show love and care, and communicate properly. Respect in a marriage teaches children to value the same in their relationships.

- **Key 2: Trust** - The engine of happiness in a relationship. Trust allows partners to be their authentic selves and includes listening, supporting each other, respecting boundaries, being dependable, and resolving conflicts in healthy ways.

- **Key 3: Cooperation** - Instrumental in positive spillovers in a marriage. A common agenda and goal are essential for a happy relationship. Cooperation involves helping each other with daily life challenges, learning from your partner, and working together for the better upbringing of your children.

Discussion on Cooperation:

- Discuss simple efforts to cooperate with your partner on a daily basis, such as showing a willingness to cooperate, seeing things from your partner's perspective, letting go of your own ego, and developing a feeling of being in it together.

- Ask for examples of activities where the couple cooperates and where they would like to cooperate in the future.

Concluding Remarks:

- Summarize the key takeaways from the session and emphasize the importance of trust, respect, and cooperation in achieving a successful and happy marital relationship.

- Encourage the couple to incorporate these elements into their relationship.

Final Feedback:

- Ask the couple if they found the counseling sessions helpful and if they learned something that they would apply to their routine life.

- Inquire if the counseling sessions have impacted their behavior with their partner and/or children.

- Request any comments, suggestions, or feedback from the couple.

- **Observer Notes:**
  Record any notable observations or feedback from the participants regarding their understanding of trust, respect, and cooperation, and their willingness to incorporate these elements into their relationship .

A2 Treatment Arm 2: Activities for Couple

Day 1:

- **Game 1: Chapati Making Competition**: Couples will be assigned to make chapatis. The goal is to make at least 7 rounded chapatis in 2 minutes. The performance of the husband and wife will be noted down separately. The average points won by each couple will determine the winner, who will receive a gift prize. This game aims to highlight gender equality and cooperation in an activity, with the woman, typically

the chapati maker in the household, taking the lead and the man assisting her.

- **Game 2: Role Playing**: Husbands and wives will be asked separately to discuss two things they would do if they had the power to change or improve society. This gender stereotype game aims to encourage discussions in the direction of women as good leaders, breaking stereotypes of gender roles, and women empowerment. Each individual will think for 5 minutes and then discuss for 2 minutes their ideas for societal improvement. The activity will be structured so that if a man is speaking, he will be voted by 10 women and 9 men, whereas when the woman is speaking, she will be voted by 10 men and 9 women.

- **Game 3: Game with Blind Direction** The wife and husband will take turns walking up to a target utensil and hitting it, first on their own and then while the other partner gives directions.

- **Game 4: Yes, And:** This improvisation game allows partners to form meaningful sentences through cooperation. For example:

- Character #1: "What a hot and miserable day to be a ranch hand!"

- Character #2: "Yep, and the boss said we don't get no water until this fence is mended."

- Character #1: "Yes, and ain't he the meanest person we've ever worked for?"

- Character #2: "Yep, and it's made me think about leaving behind this cowboy life and headin' off for San Francisco."

Day 2:

- **Game 1: Pillow Game** Couples will play together, not against each other, to see how many pillow covers they can put on in 1 minute.

- **Game 2: Dumb Charades/Lip Reading/Guess the Word** Dumb charades is a popular party game where players use only gestures and body language to act out and help their teammates guess a word or phrase, typically the name of a movie, a song or characters of movies or TV shows. The game is divided into couples, and each couple takes turns having one member silently mime a word or phrase while their spouse attempt to guess it within 3 minutes. This game aims to foster feelings of cooperation and understanding. It is a coordination game where neither the man nor the woman has a competitive advantage, promoting the idea of gender equality.

- **Game 3: Balloon/Ball**: The objective is to keep a balloon or ball in between them without bursting it or letting it fall.

- **Game 4: Dustbin Ball Throw**: The wife will throw a ball, and the husband will give directions to aim for the dustbin.

- At the end of each activity, we averaged the points won by each couple for the specific competition to determine the winner. The winners received gift prize in kind.

A3 Lab-in-the-field games

The Trust Game

- **Trustor Endowment: E**
  - The Trustor can transfer x out of E to the partner (Trustee).
  - The experimenter will triple this x and give it to the Trustee ($3x$).
  - The Trustee is then asked to return any amount Y to the Trustor.
- **Income Formulas**
  - Income of Trustee: $E - x + Y$
  - Income of Trustor: $3x - Y$
- x is a measure of Trust (transferred to spouse) and Y is a measure of Trustworthiness (returned from spouse).
- The Trustee is asked to specify an amount $Y(x)$ for the amount of x chosen by the Trustor.
- **Endowment (E)**: Indian Rupee (INR) 100 .
- Since each subject played multiple games, the order in which the games were played was varied randomly to control for order effects. A visual representation of the trust game is shown below:

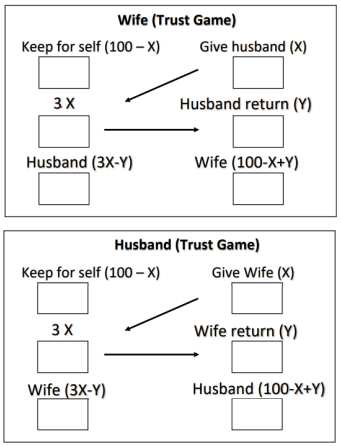


Figure A2: Pictorial representation of the Trust game

The Risk Game

- Each player has the option to invest from a given initial endowment. The individual can keep any amount he/she chooses not to invest.
- There is a 0.5 probability of tripling the amount and a 0.5 probability of no return (invested amount lost).
- Since each subject played multiple games, the order in which the games were played was varied randomly to control for order effects.
- Only one game was randomly chosen for payment purposes, through a lottery conducted after all participants had taken part in all games.
  - If the Trust Game was chosen for payment purposes, then the payoff depended on the actual amount that was chosen by the Trustor (x) and the conditional response of the Trustee $Y(x)$.
  - If the Risk Game was chosen for payment purposes, then a coin was tossed to determine whether the project was successful (triple return) or not (no return on investment).

Time Preference Game

In this game, we will ask you to choose between two alternatives. You need to choose between

(a) receiving a certain amount of money today or

(b) receiving a certain amount of money after two weeks.

Rest assured that the same reward points will also be available to you after two weeks. (The experimenter will explain the game to the participants before starting the game.)

Instruction for the experimenter

- Offer the options to the respondents one by one. Start with Option 1: Do you want 200 now or 200 two weeks from now? If A is chosen go to the next option otherwise go to the next game as soon as B is chosen for any option.
- **Option 1**
  - A. Receive Rs. 200 today
  - B. Receive Rs. 200 in two weeks from today
- **Option 2**
  - A. Receive Rs. 200 today
  - B. Receive Rs. 220 in two weeks from today

- **Option 3**
  - A. Receive Rs. 200 today
  - B. Receive Rs. 240 in two weeks from today
- **Option 4**
  - A. Receive Rs. 200 today
  - B. Receive Rs. 260 in two weeks from today
- **Option 5**
  - A. Receive Rs. 200 today
  - B. Receive Rs. 280 in two weeks from today
- **Option 6**
  - A. Receive Rs. 200 today
  - B. Receive Rs. 300 in two weeks from today

Name of the Player:....
Unique ID:.....
Option chosen (option at which B is chosen): RESPONSE 1 ;

Risk Preference Game

- Guidelines for the experimenter: In this game, we will ask you to choose an alternative that is similar to a coin toss. The alternatives are related to game-money. The experimenter will toss a coin and explain the probability of toss to the participants. Now you are given a list of options, from which you will choose one. You will get paid using game-money based on your choice. You will indicate your choice by putting a circle. Example: Suppose you have chosen the second option. Now we will toss the coin. If 'head' appears, you will get 200 reward points (or INR), and if 'tail' appears, you will get 80 reward points (or INR).

List of Options

- **Option 1**
  - If 'head' appears, you will get 100 INR
  - If 'tail' appears, you will get 100 INR
- **Option 2**
  - If 'head' appears, you will get 200 INR
  - If 'tail' appears, you will get 80 INR
- **Option 3**

  - If 'head' appears, you will get 250 INR
  - If 'tail' appears, you will get 70 INR
- **Option 4**
  - If 'head' appears, you will get 300 INR
  - If 'tail' appears, you will get 60 INR
- **Option 5**
  - If 'head' appears, you will get 350 INR
  - If 'tail' appears, you will get 50 INR
- **Option 6**
  - If 'head' appears, you will get 400 INR
  - If 'tail' appears, you will not get any money

Name of the Player:.....
Unique ID:.....
Option chosen

A4 Pre-Registry and Post-Intervention Outcomes

Table A1: Summary of Deviations from Pre-Registered Analysis Plan (as documented in the Online Appendix)

Outcomes Mentioned in AEA Registry	**Data Collected?**	**Reported in the Paper?**	**Reason**
Primary Outcomes (end points)			
Time-use outcomes: Total time spent in minutes per day on various activities	Yes	Yes	-
Sharing of care work (help with household work)	Yes	Yes	Measured using spouse's time spent in care work
Domestic help: Maid or external caregiver	Yes	No	Household help is rare; paper was too lengthy to include
Marital Relationship			
Quality time with spouse	Yes	Yes	Removed from main text due to length
Discussion with partner (various topics)	Yes	No	Removed from main text due to length; as per reviewers' suggestions
"How well do you know your partner" game	Yes	Yes	-
Satisfaction with relationship (0-10 scale)	Yes	Yes	-
Women's empowerment (mobility, decision-making, violence)	Yes	Yes	-
Gender norms	Yes	Yes	-
Experimental games (resource sharing, trust, cooperation, altruism)	Yes	Yes	-
Secondary Outcomes (end points)			
Economic			
Employment (total, self-, wage)	Yes	Yes	-
Intensity of employment (days/year, hours/day)	Yes	Yes	-
Earnings from employment	Yes	No	Not a good fit; limited variation in women's employment
Household consumption expenditure	Yes	No	Not a good fit; show aggregate income instead
Household income	Yes	Yes	-
Days unable to work	No	No	Dropped due to length; limited variation
Health and well-being of couples	Yes	Yes	-
Children's psychosocial welfare (spillovers)	Yes	Yes	Used in another paper

A4.1 A. Informed Consent Procedure

Prior to participation, respondents were provided with an informed consent form outlining the study's objectives, procedures, confidentiality measures, and voluntary nature of participation.

You are invited to participate in our research study which aims to understand the gender differences in time allocation in paid work, unpaid care work, unpaid domestic chores, leisure and self-care activities by men and women in Kanpur, India. If you agree, you will be asked to participate in different sessions with us and also fill surveys at three different time periods about various aspects of your life including work, earnings, education, health, social norms, and time-use patterns. Each session will take about 60 minutes and your participation is completely voluntary.

Please be advised that there are no risks associated with participation in these sessions. You shall not receive any compensation or direct benefit to participate in this study. You may choose not to answer a question or are free to withdraw consent and discontinue participation in the interview at any time for any reason without penalty or loss of benefits. All information will be confidential and be stored securely. Your information will be used in writing research reports, papers and books without identifying you. If you wish to speak with someone about your participation in this study, or if you have any queries, please contact: (+91)9559XXXXXX or Email at: XXXXXX@gmail.com. Participants provided written consent. The consent form was stored separately from their survey responses to ensure confidentiality.

A4.2 B. Study Registration and Ethical Approval

This study was registered in the AEA RCT Registry prior to baseline data collection:

- **Title:** Does Relationship Counselling Reduce Gender Inequality? Evidence from a Randomized Control Trial in India
- **RCT ID:** AEARCTR-0010461
- **Registration Date:** December 03, 2022
- **Citation:** Pakrashi, Debayan et al. 2023. *Does Relationship Counselling Reduce Gender Inequality? Evidence from a Randomized Control Trial in India.* AEA RCT Registry. May 19. https://doi.org/10.1257/rct.10461-1.1

The study protocol was approved by the Institutional Review Board (IRB) of Indian Institute of Technology Kanpur:

- **IRB Name:** Indian Institute of Technology Kanpur
- **Approval Date:** 2022-09-09
- **IRB Approval Number:** IITK/IEC/2022-23/I/21

A4.3 C. Eligibility Criteria and Recruitment Protocol

Eligibility criteria for participation, as stated in the pre-analysis plan, required: (i) both partners in the couple being aged 18 years or older; (ii) women being below 60 years of age; and (iii) couples residing in the study regions of Kanpur. In practice, recruitment proceeded as follows: within each cluster, a list of eligible couples (married, age 18+, residents for 12+ months, and willing to participate) was compiled. From these, 10 couples were randomly selected per cluster, yielding a sample of 900 couples. Couples who declined participation were replaced by randomly selected alternates from the same cluster. Replacements were infrequent.

A4.4 D. Funding Statement

: Funding for this project was received from the Asian Development Bank Institute.

A5 Detailed Model Derivations

A5.1 First-Order Conditions and Equilibrium Solutions

The household's total income Y is generated from market labor:

$$Y = w_1 t_1^m + w_2 t_2^m \tag{A1}$$

The household's budget constraint is: $C_1 + C_2 = Y$.
Each individual faces the following time constraint:

$$T_i = t_i^h + t_i^m + L_i \tag{A2}$$

where t_i^h and t_i^m represent time spent on household production and market labor, respectively, and L_i denotes leisure.
To derive the equilibrium outcomes, we solve the first-order conditions (FOCs) for the household's utility maximization problem. The FOCs with respect to each decision variable are derived as follows:
1. **Consumption C_i:**

$$\frac{\partial \mathcal{L}}{\partial C_i} = \frac{\theta_i}{C_i} - \lambda_0 - \sigma S = 0 \implies C_i^* = \frac{\theta_i}{\lambda_0 + \sigma S} \tag{A3}$$

This equation shows that individual consumption is influenced by bargaining power θ_i and the combined weight of baseline disutility and social accountability, $\lambda_0 + \sigma S$.
2. **Leisure L_i:**

$$\frac{\partial \mathcal{L}}{\partial L_i} = \frac{\phi_i \theta_i}{L_i} - \lambda_0 - \sigma S = 0 \implies L_i^* = \frac{\phi_i \theta_i}{\lambda_0 + \sigma S} \tag{A4}$$

Leisure is similarly affected by bargaining power and the augmented disutility due to social norms.
3. **Household Production Time t_i^h:**

$$\frac{\partial \mathcal{L}}{\partial t_i^h} = \frac{\gamma_i^{T2} \theta_i \delta \rho (t_1^h)^{\rho-1}}{G} - \lambda_0 - \sigma S = 0 \implies t_i^{h*} = \left(\frac{\gamma_i^{T2} \theta_i \delta \rho}{(\lambda_0 + \sigma S) G} \right)^{\frac{1}{1-\rho}} \tag{A5}$$

This equation indicates how time spent on household production depends on the effectiveness of learning by doing, bargaining power, and the elasticity of substitution ρ.
4. **Market Labor Time t_i^m:**

$$\frac{\partial \mathcal{L}}{\partial t_i^m} = \frac{w_i \theta_i}{Y} - \lambda_0 - \sigma S = 0 \implies t_i^{m*} = \frac{w_i \theta_i}{(\lambda_0 + \sigma S) Y} \tag{A6}$$

Market labor time is affected by the wage rates w_i, bargaining power θ_i, and the overall household income Y, modified by the disutility factors.

Appendix A5: Participation and Sample Selection Details

Session-Wise Participation in Couple Counseling

Table A2 summarizes the attendance rates for the 300 couples in the four counseling sessions, comparing participation between Treatment 1 and Treatment 2. Notably, 90.33% and 91.67% of couples in Treatments 1 and 2, respectively, attended all sessions. Participants who missed any session were required to review prior sessions before moving forward, ensuring continuity in the intervention.

Tables and Figures

Table A2: Session-wise Participation in Couple Counseling

Attendance	**Treatment 1**		**Treatment 2**	
	No. of participants	% of 300	No. of participants	% of 300
All four sessions	271	90.33	275	91.67
Three sessions	288	96.00	294	98.00
Two sessions	296	98.67	298	99.33
One session	299	99.67	300	100.00
None of the sessions	1	0.33	0	0.00

Note: This table reports the frequency of participation for the 300 couples in four couple counseling sessions (Gender Inequality, Gender Stereotype, Gender Discrimination, and Trust and Cooperation) separately for Treatments 1 and 2. Participants in our intervention could only participate in subsequent sessions after catching up on missed sessions. For example, if a participant missed the first session, the counselor would review the missed material before proceeding with the current session. This protocol was followed for all missed sessions, and all previous sessions were reviewed before beginning new ones.

Game-Wise Participation in Activity Days for Treatment 2

Table A3 details attendance in four games held on each of the two activity days for Treatment 2. Activity 1 games included Chapati-making competition, role-playing, blind direction, and the "Yes, and..." game, while Activity 2 featured the pillow game, dumb charades, balloon/ball, and dustbin ball throw. Non-participation was minimal and typically resulted from one partner's unavailability. We coordinated with local authorities to ensure high attendance, scheduling activities on holidays and distributing gifts such as bedsheets and tea sets to encourage engagement.

Table A3: Game-wise Participation in the Activities for Treatment Arm 2

Attendance	**Activity 1**		**Activity 2**	
	No. of participants	% of 300	No. of participants	% of 300
All four games	275	91.67	278	92.67
Three games	297	99.00	294	98.00
Two games	299	99.67	299	99.67
One game	300	100.00	300	100.00
None of the games	0	0.00	0	0.00

Note: This table reports the frequency of participation for the 300 couples in the four games on each of the two activity days specifically for Treatment 2. Activity 1 games include Chapati-making competition, role-playing, blind direction, and "Yes, and...". Activity 2 games include the pillow game, dumb charades, balloon/ball, and dustbin ball throw. Non-participation typically occurred when one partner could not attend a specific game. Coordination with local authorities, advance scheduling, and the distribution of various household gifts encouraged high participation rates.

Survey Logistics

Of the 900 participants surveyed at baseline, one couple from Treatment 1 did not attend any counseling sessions and did not participate in the endline and follow-up surveys due to the husband's death shortly after baseline. Among the remaining 899 couples, 861 were surveyed in-person at endline, while 38 couples (4.22%) were contacted by phone after multiple in-person attempts. Follow-up surveys were conducted in-person for 844 couples, with 55 couples (6.12%) reached by phone. Gifts were offered to encourage in-person survey participation and reduce attrition. Results are robust to excluding phone survey responses, with further details available upon request.

Game Selection

A sample of 299 couples was randomly selected for lab-in-the-field games to ensure similarity in baseline individual, partner, and household characteristics to those who were not selected (562 couples from the 861 in-person endline respondents, and 600 from the broader sample). This selection process ensured the lab sample remained representative of the overall sample. Results are available upon request.

Sample Selection Process

The sample was selected through a three-stage randomization. First, 90 clusters were randomly chosen from a list of approximately 150 clusters across Kanpur Nagar, ensuring geographic separation of at least 2 kilometers. Within each cluster, a list of eligible couples (married, age 18+, residents for 12+ months, and willing to participate) was created, and 10 couples were randomly selected from each cluster, yielding 900 couples in total. As far as we know, these couples were also not a part of any earlier on concurrent projects and were not subject to any other treatments. If a couple declined participation, they were replaced with another eligible couple from the same cluster, though replacements were rare. The 900 couples were then randomly assigned

to two treatment arms and a control arm, with baseline characteristics balanced across groups. Randomization was performed at the cluster level using computer software. Our results are robust to restricting the sample to participants who attended all four counseling sessions in Treatment 1 (271 participants) and those who completed all sessions and games in Treatment 2 (244 participants). Detailed results for these restricted samples are available upon request.

Table A4: Baseline Summary Statistics

Variables	Mean	Median	Std. dev.	Min	Max
Female characteristics					
Employment related activities	159.66	17.50	226.73	0.00	940.00
Unpaid domestic chores	304.18	300.00	157.83	0.00	900.00
Unpaid domestic care services	243.53	210.00	175.09	0.00	1090.00
Socializing & community participation	32.96	0.00	57.75	0.00	420.00
Leisure	74.00	60.00	75.00	0.00	390.00
Self-care	523.70	480.00	325.73	0.00	1350.00
Physical health	3.85	4.00	0.58	2.00	5.00
Mental health	3.96	4.00	0.56	1.00	5.00
Life satisfaction	6.06	6.00	2.25	1.00	10.00
Age of female respondents (in years)	34.92	35.00	8.45	18.00	59.00
Education of female respondents (in years)	7.13	8.00	5.38	0.00	17.00
Female respondent completed high (0/1)	0.26		0.44	0.00	1.00
Male characteristics					
Employment related activities	337.11	420.00	206.50	0.00	900.00
Unpaid domestic chores	140.14	120.00	105.02	0.00	630.00
Unpaid domestic care services	157.30	130.00	116.34	0.00	540.00
Socializing & community participation	44.66	40.00	35.48	0.00	300.00
Leisure	112.30	60.00	152.60	0.00	1100.00
Self-care	579.28	560.00	200.75	0.00	1200.00
Physical health	3.95	4.00	0.69	2.00	5.00
Mental health	4.00	4.00	0.68	2.00	5.00
Life satisfaction	6.12	7.00	2.13	0.00	9.00
Age of male respondents (in years)	39.34	40.00	9.20	18.00	68.00
Education of male respondents (in years)	7.86	8.00	5.23	0.00	17.00
Male respondent completed high (0/1)	0.29		0.45	0.00	1.00
Male respondent employed (0/1)	0.76		0.42	0.00	1.00
Household characteristics					
BPL (0/1)	0.25		0.43	0.00	1.00
Rural (0/1)	0.47		0.50	0.00	1.00
Hindu (0/1)	0.79		0.41	0.00	1.00
Joint family (0/1)	0.18		0.39	0.00	1.00
Household size	5.20	5.00	2.28	0.00	45.00
General caste	0.28		0.45	0.00	1.00
SC	0.20		0.40	0.00	1.00
ST	0.10		0.30	0.00	1.00
OBC	0.41		0.49	0.00	1.00
Others	0.01		0.11	0.00	1.00

Notes: The table presents baseline summary statistics for female and male respondents, who are married couples. There are 900 couples at baseline and 899 at endline. Household size excludes the couples. Values for employment, health, and satisfaction are reported separately for men and women.

Table A5: Endline Summary Statistics

Variables	Mean	Median	Std. dev.	Min	Max
Female characteristics					
Employment related activities	191.91	30.00	253.85	0.00	720.00
Unpaid domestic chores	291.66	300.00	133.34	0.00	930.00
Unpaid domestic care services	227.94	240.00	85.41	0.00	480.00
Socializing & community participation	49.00	30.00	37.59	0.00	240.00
Leisure	62.63	30.00	50.22	0.00	330.00
Self-care	521.31	570.00	208.28	0.00	950.00
Allowed to go out of house (0/1)	0.87		0.33	0.00	1.00
Practice burkah/ghunghat (0/1)	0.66		0.48	0.00	1.00
Have cash in hand (0/1)	0.88		0.33	0.00	1.00
Changed occupation (0/1)	0.02		0.13	0.00	1.00
Monthly household income (log)	9.35	9.39	0.45	8.16	10.71
Physical health	3.62	4.00	0.90	1.00	5.00
Mental health	3.74	4.00	0.82	1.00	5.00
Life satisfaction	6.91	7.00	1.57	2.00	10.00
Comfort handling family problems	6.61	7.00	1.62	2.00	10.00
Relationship with partner	7.33	7.00	1.21	4.00	10.00
Connection score	7.73	9.00	3.08	1.00	12.00
Male characteristics					
Employment related activities	360.95	450.00	243.59	0.00	720.00
Unpaid domestic chores	142.48	110.00	124.92	0.00	960.00
Unpaid domestic care services	185.31	180.00	89.91	0.00	630.00
Socializing & community participation	40.53	30.00	28.06	0.00	180.00
Leisure	98.54	35.00	123.51	0.00	510.00
Self-care	523.36	510.00	175.43	0.00	1080.00
Physical health	3.94	4.00	0.83	1.00	5.00
Mental health	3.89	4.00	0.77	1.00	5.00
Life satisfaction	8.03	8.00	1.64	1.00	10.00
Comfort handling family problems	8.36	9.00	1.42	3.00	10.00
Relationship with partner	8.94	9.00	1.08	4.00	10.00
Connection score	7.58	8.00	3.01	1.00	12.00

Notes: Table A4 presents aggregated descriptive statistics of outcomes and channel variables by gender, highlighting significant differences in the gendered division of labor. Women, on average, spend 3 hours daily in employment-related activities, compared to men's 6 hours. Conversely, women devote significantly more time to unpaid domestic chores (5 hours/day) and caregiving (4 hours/day), compared to men's 2.5 and 3 hours, respectively. Notably, 66% of women report practicing 'Burkah/Ghunghat,' reflecting a high prevalence of veiling systems. Men report higher life and relationship satisfaction compared to women. Employment-related activities, unpaid domestic chores, and caregiving are measured in minutes per day. Physical and mental health are assessed on a scale from 1 (very poor) to 5 (very good). Life satisfaction is rated from 0 (completely dissatisfied) to 10 (completely satisfied), and relationship satisfaction is similarly scored. Comfort in handling family problems is measured on a 0–10 scale. The connection score (0–12) reflects respondents' knowledge of their partners preferences. There are 899 couples at endline.

A6 Descriptive Statistics: Post Treatment

Table A6 provides descriptive results of the interventions for outcome and channel variables from the endline survey, for both men and women (aggregated summary statistics by gender are shown in Table A5). Among women participants, Treatment 2 stands out, with higher mean values for employment-related activities (in minutes per day) compared to the control group and Treatment 1 groups (218 vs. 156 and 200, respectively), indicating increased engagement in paid work. The control group exhibits higher mean values for unpaid domestic chores and care services (307 and 252, respectively) compared to Treatment 1 (305 and 224) and Treatment 2 (262 and 206), suggesting a potential trade-off between employment and domestic responsibilities for women. For women, Treatment 1 and 2 show higher levels of socializing & community participation (48 and 65, respectively) compared to the control group (34), indicating broader engagement in social and recreational activities. Women gave up leisure activities, as shown by Treatment 1 and 2 (58 and 48 minutes) compared the control group (81 minutes). For men, Treatment 1 generally increased time spent in domestic chores, caregiving, and social activities but reduced time spent on leisure and self-care. Treatment 2 amplified the trends found with Treatment 1, further increasing time spent on productive and social activities while reducing leisure and possibly streamlining self-care activities. These shifts suggest a possible trade-off with personal leisure and self-care time. The summary statistics of follow-up survey, in Table A9, shows that Treatment 2 reduces unpaid domestic care by 38 minutes and increases employment activities by 34 minutes among females compared to the control. For males, Treatment 2 increases engagement in unpaid domestic care by 36 minutes. Both treatments moderately improve life satisfaction and relationship quality, with Treatment 2 particularly enhancing time spent together by couples by approximately 1.09 hours. These outcomes indicate that the interventions not only redistribute domestic responsibilities but also positively impact interpersonal relationships and individual well-being.

Table A6: Summary statistics of variables across treatment types: Endline

	(1)	(2)	(3)
Variables	Control	Treatment 1	Treatment 2
Female level characteristics			
Employment related activities	156.55	200.92	218.30
Unpaid domestic chores	307.95	305.10	261.97
Unpaid domestic care services	252.68	224.26	206.87
Socializing & community participation	33.87	48.19	64.95
Leisure	81.03	58.06	48.77
Self-care	516.20	511.67	536.03
Allowed to go out of house (on your own) (0/1)	0.78	0.89	0.95
Practice burkah/ghunghat (0/1)	0.73	0.67	0.57
Have cash in hand to spend (0/1)	0.75	0.94	0.94
Decision Making Index	0.32	0.42	0.50
Changed occupation dummy (from housewife to small business)	0.00	0.02	0.03
Monthly household income (in log terms)	9.33	9.32	9.38
Physical health	3.55	3.61	3.70
Mental health	3.66	3.76	3.80
Life satisfaction	6.56	7.15	7.02
Comfortable in handling problems as a family	6.32	6.68	6.83
Relationship with partner	7.09	7.41	7.50
Connection score	6.50	7.86	8.81
Time spent together (in hours)	11.13	12.77	13.05
Male level characteristics			
Employment related activities	326.45	371.71	384.72
Unpaid domestic chores	140.43	134.06	152.92
Unpaid domestic care services	164.47	192.64	198.83
Socializing & community participation	30.07	40.72	50.82
Leisure	113.52	112.73	69.42
Physical health	3.93	3.90	4.00
Mental health	3.83	3.88	3.96
Life satisfaction	7.93	8.02	8.15
Comfortable in handling problems as a family	8.42	8.26	8.39
Relationship with partner	8.87	8.86	9.09
Connection score	6.46	7.80	8.47
Time spent together (in hours)	8.29	10.55	10.88

Notes: Description of variables similar to Table A5. Mean values reported for each variable.

Table A7: Balance results by treatment status

	(1)	(2)	(3)	(4)	(5)
				p-value	
Variables	Control	Treatment 1	Treatment 2	Treatment 1	Treatment 2
Age of female respondents (in years)	34.80	34.55	35.40	0.82	0.60
Education of female respondents (in years)	7.09	7.13	7.15	0.97	0.95
Female respondent completed high school dummy	0.26	0.25	0.28	0.86	0.74
Housewife dummy	0.89	0.92	0.97	0.48	0.04
Household size	5.35	5.11	5.13	0.22	0.30
BPL dummy	0.28	0.21	0.25	0.48	0.78
Household status	4.10	4.16	4.15	0.80	0.84
Rural dummy	0.50	0.40	0.50	0.44	0.98
Hindu dummy	0.77	0.75	0.84	0.79	0.34
General caste	0.31	0.24	0.29	0.33	0.72
SC	0.17	0.23	0.20	0.22	0.49
ST	0.07	0.11	0.12	0.36	0.30
OBC	0.43	0.39	0.39	0.61	0.64
Age of male respondents (in years)	39.28	39.20	39.53	0.95	0.84
Education of male respondents (in years)	7.85	7.73	7.98	0.92	0.90
Male respondent completed high school dummy	0.30	0.28	0.28	0.79	0.78
Male respondent employed dummy	0.73	0.83	0.73	0.26	0.97

Note: The female and male respondents are married couples. There are a total of 899 married couples at endline and 900 at baseline.

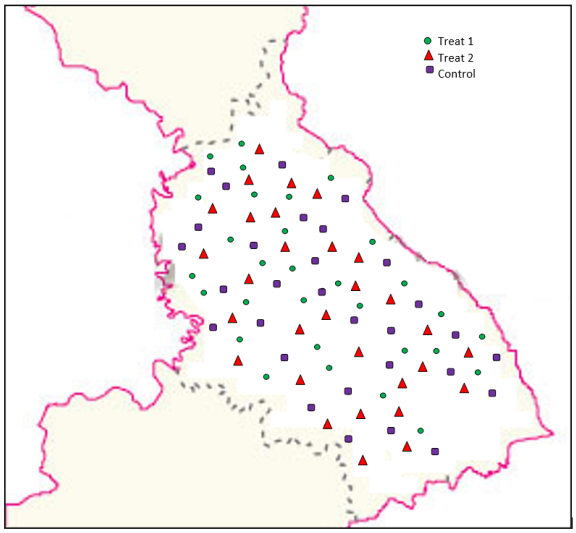


Figure A3: Locations of the 90 clusters where survey was conducted

Notes: The randomized controlled trial (RCT) was implemented across 90 clusters, with equal allocation of 30 clusters each to the Control, Treatment 1, and Treatment 2 arms. Randomization occurred at the cluster level to mitigate potential spillover effects between groups. Outcome variables were assessed at the individual level. The figure uses distinct visual markers to differentiate the groups: circles correspond to Treatment 1 clusters, triangles to Treatment 2 clusters, and squares to control clusters. Note that the locations are approximates and not exactly geocoded.

Table A8: Balance results for game

	(1)	(2)	(3)
Variables	Selected for game		
	No	Yes	p-value
Age of female respondents (in years)	35.30	34.14	0.20
Education of female respondents (in years)	6.54	8.29	0.05
Female respondent completed high school dummy	0.23	0.33	0.10
Housewife dummy	0.93	0.94	0.68
Household size	5.19	5.22	0.89
BPL dummy	0.26	0.23	0.76
Household status	4.17	4.06	0.60
Rural dummy	0.48	0.43	0.64
Hindu dummy	0.75	0.86	0.05
General caste	0.26	0.33	0.25
SC	0.21	0.18	0.43
ST	0.12	0.07	0.16
OBC	0.40	0.42	0.75
Age of male respondents (in years)	39.70	38.61	0.28
Education of male respondents (in years)	7.36	8.84	0.11
Male respondent completed high school dummy	0.25	0.36	0.13
Male respondent employed dummy	0.75	0.79	0.57

Note: The female and male respondents are married couples. There are a total of 299 married couples at endline and 300 at baseline selected for lab-in-the-field games. These are the regression coefficients, with standard errors clustered at the region level.

Table A9: Summary Statistics for the Follow-Up Survey

Category	Control	Treatment 1	Treatment 2
Female			
Employment related activities	157.73	176.59	192.38
Unpaid domestic chores	308.10	288.63	294.20
Unpaid domestic care services	251.57	241.45	212.68
Socializing & community participation	42.17	60.84	65.50
Leisure	78.97	58.36	57.85
Self-care	512.55	524.55	529.82
Physical health	3.58	3.67	3.67
Mental health	3.67	3.72	3.77
Life satisfaction	6.57	6.59	6.80
Comfortable in handling problems as a family	6.41	6.69	6.66
Relationship with partner	7.19	7.44	7.47
Time spent together (in hours)	11.09	11.32	12.18
Male			
Employment related activities	334.13	365.62	375.50
Unpaid domestic chores	137.58	133.21	149.87
Unpaid domestic care services	160.18	194.85	196.58
Socializing & community participation	40.70	43.76	55.08
Leisure	105.83	81.20	76.77
Self-care	602.85	574.87	527.93
Physical health	3.90	4.00	4.04
Mental health	3.79	3.84	3.87
Life satisfaction	7.90	7.74	8.05
Comfortable in handling problems as a family	8.50	8.46	8.61
Relationship with partner	8.90	8.89	9.09
Time spent together (in hours)	8.47	9.49	9.81

Notes: This table presents the summary statistics from the follow-up survey. It includes various measures of time use and well-being indicators for both female and male respondents across three groups: control, Treatment 1 (Couple Counseling), and Treatment 2 (Couple Counseling with Coordination Activities).



(a) Female and Male Labor Force Participation **(b)** Female and Male Unpaid Care

Figure A4: Impact of Treatments on Time Use in Labor Force and Unpaid Care at Baseline, Endline, and Follow-up.



(a) Female and Male Home Production **(b)** Female and Male Self Care

Figure A5: Impact of Treatments on Time Use in Home Production (panel a) and Self Care (panel b) at Baseline, Endline, and Follow-up.

Table A10: Treatment effects on extensive margins of wage and self-employment

	(1)	(2)	(3)	(4)
	Female		Male	
Variables of Interest	Wage Emp.	Self Emp.	Wage Emp.	Self Emp.
Treat 1	0.015	-0.005	0.114	-0.043
	(0.055)	(0.021)	(0.092)	(0.073)
Treat 2	0.023	0.041**	0.031	-0.077
	(0.063)	(0.019)	(0.086)	(0.078)
Control Mean	0.33	0.05	0.55	0.22
p-value (T2-T1)	0.87	0.04	0.30	0.62
WY FWER p-values (T1)	0.61	0.93	0.34	0.82
WY FWER p-values (T2)	0.93	0.04	0.93	0.55
RI p-values (T1)	0.37	0.82	0.23	0.59
RI p-values (T2)	0.77	0.03	0.72	0.34
R-squared	0.103	0.077	0.195	0.218

Note: *** p<0.01, ** p<0.05, * p<0.1. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects.

Table A11: Variables of Interest for Female and Male Respondents

	RCT Baseline				UP	India
Variables of Interest	**Mean**	**Std. dev.**	**Min**	**Max**	**Mean**	**Mean**
Age, female (in years)	34.92	8.45	18.00	59.00	31.06	32.16
Education of female respondents (in years)	7.13	5.38	0.00	17.00	6.88	7.28
Female respondent completed high school dummy	0.26	0.44	0.00	1.00	0.29	0.26
BPL dummy	0.25	0.43	0.00	1.00	0.24	0.20
Rural dummy	0.47	0.50	0.00	1.00	0.80	0.65
Hindu dummy	0.79	0.41	0.00	1.00	0.84	0.75
Joint family dummy	0.18	0.39	0.00	1.00	0.17	0.16
Caste categories						
General caste	0.28	0.45	0.00	1.00	0.19	0.19
SC	0.20	0.40	0.00	1.00	0.25	0.19
ST	0.10	0.30	0.00	1.00	0.02	0.18
OBC	0.41	0.49	0.00	1.00	0.54	0.38
Age, male (in years)	39.34	9.20	18.00	68.00	37.15	38.71
Education of male respondents (in years)	7.86	5.23	0.00	17.00	8.09	7.83
Male respondent completed high school dummy	0.28	0.45	0.00	1.00	0.29	0.25
Male respondent employed dummy	0.76	0.42	0.00	1.00	0.81	0.84

Note: The female and male respondents are married couples. There are a total of 899 married couples at endline and 900 at baseline. Completed high school dummy takes the value of 1 if education is greater than equal to 12 and 0 otherwise. UP (Uttar Pradesh) and India sample is from NFHS-5 for the years 2019-21. UP is one of the BIMARU states (i.e., relatively poorer, less educated, and underdeveloped states) and likely to be different in terms of characteristics than the rest of India.

Table A12: Treatment Effects on Time-Use: Attend All Sessions, Endline Surveys

	Labor Force		Home Production		Unpaid Care	
	Female	Male	Female	Male	Female	Male
Panel A						
Treat 1	15.514	17.355	-21.583	7.087	-23.248*	6.347
	(30.631)	(41.679)	(18.879)	(17.692)	(11.945)	(12.746)
Treat 2	49.025	27.921	-41.080**	29.651*	-48.024***	26.417**
	(30.492)	(34.668)	(17.017)	(17.091)	(11.831)	(12.175)
R^2	0.134	0.152	0.124	0.120	0.096	0.158
	Socializing		Leisure		Self-care	
	Female	Male	Female	Male	Female	Male
Panel B						
Treat 1	14.083***	14.139***	-18.989***	-9.031	31.267	-52.319**
	(5.337)	(4.167)	(6.505)	(20.789)	(19.789)	(21.315)
Treat 2	29.126***	20.137***	-29.059***	-40.037***	29.251*	-94.614***
	(3.217)	(3.574)	(6.508)	(12.341)	(16.020)	(20.650)
R^2	0.157	0.170	0.237	0.112	0.083	0.199

Note: Standard errors clustered at the region level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. There are 815 couples at endline. 271 Treatment 1 couples attended all four counseling sessions, while 244 Treatment 2 couples attended all four counseling sessions and all eight games in the two activity sessions. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. All regressions control for the age and education of the respondent and partner, caste, religion, rural region, BPL status, household size, joint family status, and ward-fixed effects.

Table A13: Treatment Effects on Time-Use: Attend All Sessions, Follow-up Surveys

	Labor Force		Home Production		Unpaid Care	
	Female	Male	Female	Male	Female	Male
Panel A						
Treat 1	8.611	11.545	-1.491	15.064	-29.105	12.830
	(26.782)	(36.863)	(28.071)	(17.639)	(32.312)	(13.469)
Treat 2	36.246	25.541	-11.877	25.963	-44.958*	19.188
	(25.178)	(30.450)	(26.898)	(16.512)	(23.114)	(12.446)
R^2	0.104	0.144	0.338	0.098	0.345	0.230
	Socializing		Leisure		Self-care	
	Female	Male	Female	Male	Female	Male
Panel B						
Treat 1	13.647	9.970**	-13.031*	-19.619	12.752	-13.992
	(10.018)	(4.470)	(7.700)	(11.914)	(30.616)	(30.411)
Treat 2	18.897*	17.592***	-16.517**	-33.331***	13.689	-48.232*
	(10.702)	(3.488)	(6.771)	(8.242)	(30.108)	(27.731)
R^2	0.248	0.197	0.189	0.140	0.100	0.120

Note: Standard errors clustered at the region level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. There are 815 couples at follow-up. 271 Treatment 1 couples attended all four counseling sessions, while 244 Treatment 2 couples attended all four counseling sessions and all eight games in the two activity sessions. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. All regressions control for age and education of the respondent and partner, caste, religion, rural region, BPL status, household size, joint family status, and ward-fixed effects.

Table A14: LATE Results at Endline

	Labor		Home Prod.		Care		Social		Leisure		Self-care	
	F	M	F	M	F	M	F	M	F	M	F	M
A: All Sessions (T1)												
Coefficient	13.832	-2.884	-17.471	-12.268	-16.161	20.623*	14.722***	12.108***	-15.471**	-8.305	19.389	-19.288
SE	(36.686)	(51.159)	(21.301)	(20.440)	(13.424)	(11.734)	(5.557)	(4.573)	(7.185)	(25.388)	(22.633)	(22.349)
Observations	599	599	599	599	599	599	599	599	599	599	599	599
R-squared	0.198	0.162	0.132	0.098	0.115	0.139	0.118	0.159	0.274	0.126	0.128	0.208
B: All Sessions (T2)												
Coefficient	65.836*	11.134	-45.480**	60.837***	-62.511***	34.183**	39.288***	30.274***	-35.882***	-41.762***	24.596	-133.479***
SE	(39.491)	(38.948)	(20.719)	(20.413)	(13.869)	(15.675)	(3.542)	(4.271)	(9.561)	(11.826)	(22.652)	(24.871)
Observations	600	600	600	600	600	600	600	600	600	600	600	600
R-squared	0.147	0.152	0.159	0.142	0.108	0.181	0.153	0.132	0.254	0.120	0.097	0.230

Note: *** p<0.01, ** p<0.05, * p<0.1. There are 899 couples at endline. This table presents the Local Average Treatment Effects (LATE) using treatment assignment as the instrument, defining compliers as those who attended all sessions. Treatment 1 refers to couple counseling only; Treatment 2 includes both counseling and activity sessions. All regressions control for respondent and spouse age and education, caste, religion, rural residence, BPL status, household size, joint family status, and ward-fixed effects. Panel A compares compliers in Treatment 1 to control; Panel B compares compliers in Treatment 2 to control.

Table A15: LATE Results at Follow-up

	Labor		Home Prod.		Care		Social		Leisure		Self-care	
	F	M	F	M	F	M	F	M	F	M	F	M
A: T1 Compliers												
Coeff.	12.28	4.78	22.19	2.60	-79.24**	12.11	12.02	12.47**	-10.22	-1.85	28.83	-4.50
SE	(34.93)	(45.10)	(36.59)	(20.11)	(34.59)	(14.15)	(8.25)	(5.29)	(8.82)	(12.97)	(32.42)	(38.44)
Obs.	599	599	599	599	599	599	599	599	599	599	599	599
R^2	0.142	0.165	0.428	0.085	0.467	0.227	0.364	0.210	0.239	0.146	0.132	0.110
B: T2 Compliers												
Coeff.	42.61	7.50	-17.88	54.21***	-26.05	28.36*	22.13*	22.95***	-26.20***	-39.14***	10.41	-82.32**
SE	(31.29)	(34.78)	(32.48)	(19.06)	(25.06)	(14.73)	(13.32)	(4.20)	(8.07)	(8.86)	(34.54)	(33.41)
Obs.	600	600	600	600	600	600	600	600	600	600	600	600
R^2	0.133	0.130	0.396	0.144	0.491	0.319	0.342	0.211	0.196	0.162	0.173	0.130

Note: *** p<0.01, ** p<0.05, * p<0.1. There are 899 couples at follow-up. This table presents Local Average Treatment Effects (LATE) using treatment status as an instrument, with compliers defined as couples who attended all sessions. Treatment 1 refers to couple counseling; Treatment 2 includes both counseling and community-based activities. All regressions control for the age and education of the respondent and spouse, caste, religion, rural location, BPL status, household size, joint family status, and ward fixed effects. Panel A compares Treatment 1 to control; Panel B compares Treatment 2 to control.

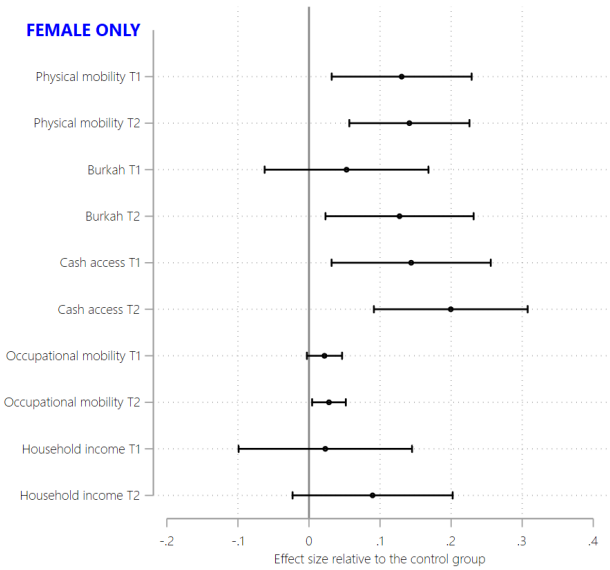


Figure A6: Treatment effects on women's mobility, social and economic freedom
Notes: The figure presents treatment effects on measures of women's physical, social and economic mobility. The error bars represent standard errors around the mean estimates.

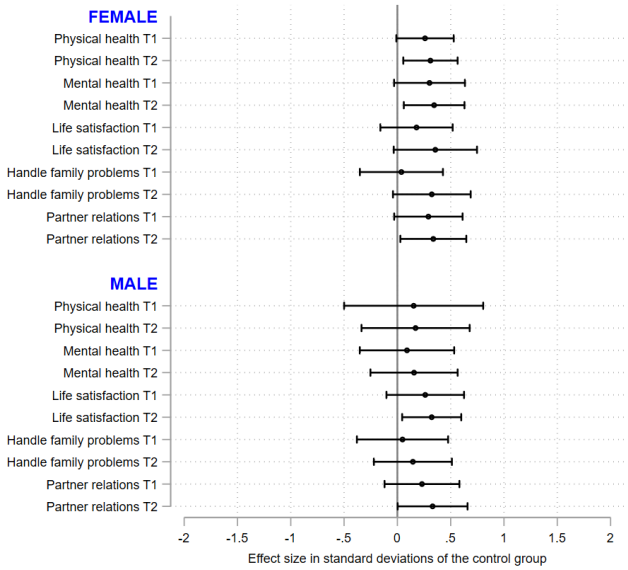


Figure A7: Treatment effects on women's health, life satisfaction and family relations

Notes: This figure presents treatment effects on physical health, mental health, life satisfaction, handling family problems, and partner relations. The error bars represent the standard errors.

Table A16: Treatment Effects on Health and Well-being

Variables of Interest	**Physical health**		**Mental health**		**Life satisfaction**		**Handle Family problems**		**Partner relations**	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat 1	0.259*	0.153	0.301*	0.090	0.180	0.261	0.038	0.048	0.291*	0.231
	(0.137)	(0.336)	(0.169)	(0.227)	(0.173)	(0.186)	(0.202)	(0.218)	(0.163)	(0.179)
Treat 2	0.310**	0.171	0.345**	0.156	0.356*	0.322**	0.323*	0.145	0.337**	0.330*
	(0.130)	(0.257)	(0.145)	(0.208)	(0.199)	(0.141)	(0.186)	(0.186)	(0.158)	(0.167)
Control Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-value (T2 - T1)	0.70	0.96	0.79	0.79	0.16	0.70	0.06	0.61	0.69	0.55
WY FWER p-values (T1)	0.03	0.36	0.07	0.12	0.03	0.01	0.58	0.28	0.01	0.00
WY FWER p-values (T2)	0.00	0.38	0.04	0.04	0.04	0.00	0.04	0.12	0.00	0.00
RI p-values (T1)	0.05	0.42	0.09	0.15	0.05	0.02	0.82	0.32	0.04	0.00
RI p-values (T2)	0.00	0.51	0.07	0.05	0.06	0.14	0.06	0.14	0.01	0.00
R-squared	0.084	0.202	0.090	0.102	0.164	0.082	0.114	0.061	0.146	0.108

Note: Standard errors clustered at the region level are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. All indices have been standardized so that the control group has a mean zero and standard deviation one following Kling et al. (2007). All regressions control for age and education of the respondent and partner (in years), caste, religion, rural dummy, BPL ration card dummy, household size, joint family dummy, and ward fixed effects. Odd columns show treatment effects for women; even columns for men. See footnote of Table 1 and Appendix A5 for detailed variable descriptions.

Table A17: Follow-Up Survey Treatment Effects on Health and Well-being

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Physical health		Mental health		Life satisfaction		Handle Family Problems		Partner relations	
Variables	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Treat 1	0.051	0.063	0.072	0.084	0.171	0.137	0.036	0.087	0.212	0.158
	(0.132)	(0.120)	(0.151)	(0.153)	(0.207)	(0.163)	(0.176)	(0.123)	(0.153)	(0.172)
Treat 2	0.166*	0.143	0.208*	0.111	0.301*	0.176	0.169	0.143	0.269*	0.194
	(0.097)	(0.134)	(0.111)	(0.151)	(0.163)	(0.134)	(0.164)	(0.108)	(0.146)	(0.153)
Control Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-value (T2-T1)	0.35	0.43	0.27	0.86	0.47	0.79	0.34	0.63	0.66	0.80
WY FWER p-values (T1)	0.93	0.93	0.93	0.93	0.93	0.59	0.93	0.84	0.26	0.93
WY FWER p-values (T2)	0.04	0.93	0.02	0.87	0.04	0.18	0.59	0.53	0.04	0.80
RI p-values (T1)	0.58	0.84	0.53	0.60	0.57	0.32	0.84	0.44	0.17	0.66
RI p-values (T2)	0.08	0.74	0.04	0.49	0.07	0.14	0.31	0.28	0.07	0.42
R-squared	0.144	0.109	0.108	0.214	0.194	0.149	0.091	0.188	0.110	0.186

Notes: Standard errors clustered at the region level are in parentheses. *** p¡0.01, ** p¡0.05, * p¡0.1. There are 899 couples in the follow-up survey. Couple counseling (Treatment 1) and Couple counseling with coordination activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. All indices have been standardized so that the control group has a mean of zero and standard deviation of one following Kling et. al. (2007). In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects. Odd columns present the estimated treatment effects for women while the even columns present the same for men. For a detailed discussion of the variables, see footnote of Table 1 and the Appendix A5.

Table A18: Follow up: Treatment Effects on Relationship Quality

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Time together		Understanding		Trust		Cooperation		Connectedness		Sharing feelings		Respect	
Variables	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Treat1	1.526*	1.998***	0.100	0.122	0.121	0.126	0.182	0.015	0.100	0.110	0.010	0.134	0.063	0.109
	(0.814)	(0.587)	(0.145)	(0.114)	(0.146)	(0.109)	(0.164)	(0.093)	(0.150)	(0.116)	(0.133)	(0.099)	(0.133)	(0.108)
Treat2	2.239***	2.254***	0.205*	0.136*	0.134	0.152	0.250*	0.172*	0.262*	0.223*	0.219*	0.207**	0.138	0.141
	(0.678)	(0.435)	(0.111)	(0.076)	(0.108)	(0.095)	(0.130)	(0.096)	(0.137)	(0.130)	(0.121)	(0.104)	(0.113)	(0.093)
Control Mean	11.09	8.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p-value (T2-T1)	0.31	0.54	0.41	0.87	0.91	0.82	0.65	0.07	0.23	0.35	0.11	0.53	0.55	0.74
WY FWER p-values (T1)	0.03	0.00	0.92	1.00	1.00	0.93	0.99	1.00	0.96	1.00	1.00	0.60	1.00	0.96
WY FWER p-values (T2)	0.00	0.00	0.11	0.07	0.86	0.43	0.14	0.21	0.21	0.86	0.19	0.07	0.91	0.52
RI p-values (T1)	0.01	0	0.41	0.88	0.89	0.46	0.71	0.87	0.53	0.86	0.95	0.22	0.96	0.55
RI p-values (T2)	0.00	0.00	0.05	0.03	0.37	0.16	0.07	0.07	0.09	0.36	0.08	0.03	0.41	0.18
R-squared	0.163	0.122	0.090	0.056	0.113	0.083	0.128	0.157	0.094	0.106	0.116	0.091	0.108	0.064

Notes: The table shows the impact of Treatment 1 and 2 on couple's relationship quality at the follow up survey. Standard errors clustered at the region level are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects. Odd columns present the estimated treatment effects for the women while the even columns present the same for the men. These are standardized outcomes created from quality of relationships across a range of indices on a scale of 0 to 10, with higher values indicating better relationship.

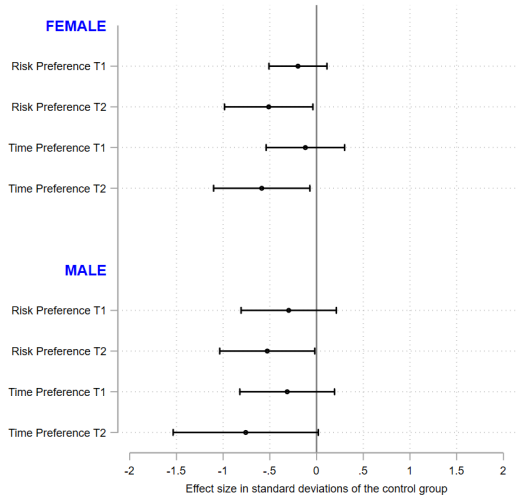


Figure A8: Treatment effects on preferences with lab-in-the-field experiment
Notes: This figure presents treatment effects from a lab-in-the-field experiment, measuring risk and time preferences, financial transfers with spouses, and investment decisions in business—quantified for both genders. The error bars represent the standard errors.

Table A19: Treatment effects on time-use: Heterogeneity analysis by caste

	(1)	(2)	(3)	(4)	(5)	(6)
	Labor Force		Home Production		Unpaid Care	
Panel A	Female	Male	Female	Male	Female	Male
Treat 1	1.013	-10.361	-20.971	6.948	-22.496*	5.463
	(34.493)	(42.856)	(20.878)	(16.845)	(12.312)	(12.763)
Treat 2	28.824	7.489	-39.359*	27.934*	-40.500***	25.265*
	(36.014)	(35.455)	(19.853)	(15.557)	(11.491)	(12.991)
General caste	-25.564	-36.300	6.562	3.817	11.707	-1.335
	(28.910)	(42.518)	(19.866)	(22.851)	(13.484)	(12.849)
Treat 1 x General caste	22.633	87.228	18.116	-0.298	-3.261	2.695
	(48.807)	(56.525)	(24.302)	(27.118)	(19.401)	(17.779)
Treat 2 x General caste	46.889	42.409	-3.721	15.838	-19.170	8.648
	(49.298)	(52.546)	(25.058)	(29.965)	(17.931)	(19.437)
R-squared	0.124	0.150	0.118	0.125	0.092	0.136
	Socializing		Leisure		Self-care	
Panel B	Female	Male	Female	Male	Female	Male
Treat 1	15.868**	10.923**	-12.921*	2.095	35.000*	-32.183
	(6.176)	(4.396)	(7.243)	(22.102)	(20.953)	(22.916)
Treat 2	31.491***	19.403***	-29.619***	-35.303**	35.453*	-77.857***
	(3.957)	(4.191)	(6.662)	(14.106)	(20.961)	(20.976)
General caste	5.233	-6.298*	3.808	11.738	-3.595	32.381
	(5.757)	(3.323)	(8.538)	(16.643)	(18.667)	(22.807)
Treat 1 x General caste	-4.838	13.594**	-13.006	-42.071*	-16.419	-60.435**
	(7.752)	(5.437)	(11.438)	(23.171)	(37.241)	(27.684)
Treat 2 x General caste	-3.216	6.616	-4.398	-19.715	-8.984	-49.220
	(8.786)	(5.766)	(10.068)	(20.687)	(38.225)	(35.632)
R-squared	0.157	0.172	0.232	0.119	0.086	0.200

Note: *** p<0.01, ** p<0.05, * p<0.1. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects.

Table A20: Treatment effects on time-use: Heterogeneity by rural/urban residence

	(1)	(2)	(3)	(4)	(5)	(6)
	Labor Force		Home Production		Unpaid Care	
Panel A	Female	Male	Female	Male	Female	Male
Treat 1	28.758	20.681	-12.710	31.912	-41.192**	-1.568
	(44.787)	(56.719)	(24.723)	(22.939)	(17.327)	(20.275)
Treat 2	56.956	26.886	-29.737	53.077**	-61.678***	18.834
	(38.955)	(49.928)	(21.078)	(25.688)	(14.502)	(19.494)
Rural	33.931	-73.383*	-17.080	39.328*	-26.463	-6.676
	(56.185)	(43.583)	(28.013)	(20.819)	(16.746)	(16.678)
Treat 1 x Rural	-23.976	-18.552	-14.964	-41.975	31.687	11.126
	(69.593)	(71.302)	(34.110)	(29.410)	(22.660)	(22.223)
Treat 2 x Rural	-26.703	-21.176	-22.965	-43.385	34.098	19.294
	(63.442)	(68.039)	(31.723)	(33.954)	(22.890)	(32.963)
R-squared	0.130	0.149	0.129	0.132	0.097	0.140
	Socializing		Leisure		Self-care	
Panel B	Female	Male	Female	Male	Female	Male
Treat 1	15.813**	20.324***	-18.218	-2.467	23.221	-82.799**
	(7.579)	(5.527)	(11.816)	(24.379)	(29.385)	(33.728)
Treat 2	26.058***	24.138***	-38.233***	-24.327*	36.903	-120.291***
	(4.963)	(4.582)	(10.457)	(13.048)	(24.182)	(28.792)
Rural	-0.452	9.374*	-9.406	33.179*	21.178	-3.416
	(4.736)	(5.164)	(14.360)	(17.895)	(28.167)	(31.188)
Treat 1 x Rural	-2.179	-11.008	2.104	-8.543	10.363	63.362
	(8.158)	(7.611)	(16.197)	(35.093)	(41.680)	(41.869)
Treat 2 x Rural	10.568	-5.779	16.964	-37.530	-15.828	66.296
	(6.977)	(6.772)	(15.352)	(24.043)	(35.764)	(41.683)
R-squared	0.163	0.170	0.236	0.120	0.088	0.207

Note: *** p<0.01, ** p<0.05, * p<0.1. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects.

Table A21: Treatment effects on time-use: Heterogeneity by High School completion status

	(1)	(2)	(3)	(4)	(5)	(6)
	Labor Force		Home Production		Unpaid Care	
Panel A	Female	Male	Female	Male	Female	Male
Treat 1	18.044	8.281	-23.816	18.658	-19.526	5.043
	(32.645)	(39.557)	(19.598)	(18.308)	(11.881)	(14.079)
Treat 2	38.124	6.470	-48.618***	39.925**	-40.852***	27.575**
	(34.684)	(34.533)	(17.452)	(17.837)	(11.677)	(13.523)
High School	1.667	-16.819	-15.738	33.795*	17.517	-1.063
	(35.234)	(38.736)	(19.089)	(17.107)	(14.842)	(11.157)
Treat 1 x High school	-6.523	7.206	14.057	-30.045	-18.466	-1.407
	(42.529)	(52.549)	(27.435)	(21.264)	(18.747)	(16.920)
Treat 2 x High school	22.714	39.103	32.744	-25.072	-18.315	0.200
	(49.693)	(47.640)	(22.631)	(21.397)	(18.571)	(18.523)
R-squared	0.130	0.150	0.130	0.131	0.093	0.139
	Socializing		Leisure		Self-care	
Panel B	Female	Male	Female	Male	Female	Male
Treat 1	15.968***	12.104***	-13.517**	-10.203	23.689	-48.155*
	(5.051)	(4.495)	(6.440)	(19.891)	(20.957)	(25.080)
Treat 2	32.493***	19.423***	-27.275***	-47.773***	36.045*	-79.680***
	(3.361)	(4.050)	(6.550)	(13.845)	(20.887)	(22.666)
High School	8.199*	-4.049	-0.955	-14.529	-4.624	2.889
	(4.571)	(4.246)	(9.469)	(20.298)	(24.476)	(27.856)
Treat 1 x High School	-4.607	9.226	-12.351	9.989	13.621	-5.297
	(5.780)	(6.325)	(13.815)	(29.154)	(32.258)	(38.299)
Treat 2 x High School	-8.411	5.177	-11.497	23.196	-21.682	-32.588
	(6.644)	(6.026)	(11.490)	(20.655)	(36.507)	(31.642)
R-squared	0.161	0.167	0.229	0.118	0.088	0.204

Note: *** p<0.01, ** p<0.05, * p<0.1. There are 899 couples at endline. Couple counseling (Treatment 1) and Couple counseling plus activities (Treatment 2) are the two treatment groups, and the Control group is the reference category. In each of the regressions, we also control for the age of the respondent and his/her partner (in years), education level of the respondent and his/her partner (years of education), caste and religion of the household, rural region dummy, below poverty level ration card dummy, household size, and joint family dummy. All regressions also control for ward-fixed effects.

Table A22: Treatment effects on time-use: Heterogeneity analysis by type of marriage

	Labor force		Home production		Unpaid care	
Panel A	Female	Male	Female	Male	Female	Male
Treat 1	18.457	8.797	-18.706	5.102	-23.693**	5.163
	(31.516)	(39.148)	(18.411)	(17.781)	(11.657)	(12.268)
Treat 2	45.242	18.221	-42.410**	26.491	-44.890***	27.612**
	(31.238)	(33.380)	(16.365)	(16.698)	(11.619)	(12.234)
Love marriage	18.729	4.340	-10.956	-32.368	-12.809	-3.576
	(52.085)	(61.581)	(34.108)	(31.214)	(12.650)	(17.769)
Treat 1 × Love marriage	-48.727	-33.344	5.225	21.381	0.657	26.738
	(78.249)	(83.301)	(43.079)	(34.369)	(22.961)	(22.128)
Treat 2 × Love marriage	59.711	-30.251	12.706	90.877*	-14.837	14.939
	(68.920)	(82.213)	(38.066)	(48.575)	(18.377)	(29.209)
R^2	0.139	0.160	0.134	0.145	0.096	0.150
	Socializing		Leisure		Self-care	
Panel B	Female	Male	Female	Male	Female	Male
Treat 1	14.096***	16.448***	-18.761***	-2.114	26.520	-50.851**
	(5.121)	(4.520)	(6.109)	(20.412)	(21.941)	(22.541)
Treat 2	29.736***	22.864***	-33.743***	-37.748***	36.335**	-90.678***
	(3.135)	(3.614)	(6.623)	(11.744)	(17.765)	(19.885)
Love marriage	-1.199	17.977***	-26.415***	43.633	34.411*	-39.087
	(5.426)	(6.048)	(8.538)	(34.203)	(19.131)	(25.748)
Treat 1 × Love marriage	11.568	-18.172***	24.636*	-33.540	-8.386	52.496
	(12.095)	(6.868)	(14.736)	(42.412)	(59.837)	(44.921)
Treat 2 × Love marriage	8.873	-8.421	24.953**	-38.702	-102.469**	-12.591
	(9.053)	(8.760)	(9.987)	(42.708)	(49.687)	(41.645)
R^2	0.161	0.188	0.241	0.125	0.093	0.213

Notes: Standard errors clustered at the region level are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. A follow-up phone survey was conducted in 2025 with 878 couples from the original sample. Of these, 71 couples (8.1%) reported having a love marriage. Treatment 1 denotes couple counseling; Treatment 2 includes both counseling and structured couple-based activities. The control group serves as the omitted category. All regressions control for age and education of both partners, caste, religion, household size, joint family structure, rural residence, BPL ration card, and ward fixed effects.

Table A23: Placebo results

Variables	(1) Type of marriage	(2) First born a girl	(3) First born full-term	(4) Miscarriage before study	(5) Vision correction (F)	(6) Vision correction (M)	(7) Twin (F)	(8) Twin (M)
Treat 1	-0.010	0.007	-0.002	0.034	0.032	0.050	-0.002	0.003
	(0.026)	(0.040)	(0.028)	(0.035)	(0.046)	(0.056)	(0.012)	(0.010)
Treat 2	-0.004	-0.060	0.028	0.015	0.046	-0.020	-0.005	0.007
	(0.017)	(0.038)	(0.024)	(0.029)	(0.038)	(0.044)	(0.007)	(0.009)
R^2	0.051	0.037	0.089	0.083	0.127	0.163	0.034	0.044

Note: Standard errors clustered at the region level are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Based on a 2025 phone survey with 878 couples from the original sample. Treatment 1 denotes couple counseling; Treatment 2 includes both counseling and community-based activities. All regressions control for age and education of both partners, caste and religion, rural residence, BPL ration card, household size, joint family, and ward fixed effects. 'Type of marriage' is 1 if the couple had an arranged marriage and 0 if a love marriage (71 love marriages, 8.1%). 'First born a girl' and 'full-term' refer to the first child. 'Miscarriage before the study' captures pre-study miscarriage history. 'Vision correction' is 1 if the respondent wears eyeglasses. 'Twin' is 1 if the respondent has a twin sibling.

Table A24: Cost Breakdown of Treatment 1 – Learning by Learning

Cost details	Unit	Per unit cost (USD)	Total cost (USD)
A. Fixed cost			
Rent of office space	4 months	$94	$376
Development of session modules	4 modules	$48	$192
Salary of field coordinator	4 months	$375	$1500
Salary of external trainer	20 days	$31.5	$630
B. Variable cost			
Training of para-counsellors	4 modules	$600	$2400
Travel + salary of para-counsellors	4 modules	$900	$3600
Mobile top-up (para-counsellors)	4 months	$50	$200
Pamphlets, posters, etc.	300 couples	$1.5	$450
C. Total cost (A + B)			**$9,348**
D. Cost per treated couple			**$31.16**

Note: Assumes an exchange rate of 1 USD = INR 80 for 2023.

Table A25: Cost Breakdown of Treatment 2 – Learning by Doing

Cost details	Unit	Per unit cost (USD)	Total cost (USD)
C. Fixed cost			
Rent of office space	4 months	$94	$376
Development of session modules	4 modules	$48	$192
Salary of field coordinators	4 months	$375	$1500
Salary of external trainer	20 days	$31.5	$630
Salary of game trainer	5 days	$50	$250
D. Variable cost			
Training of para-counsellors	4 modules	$600	$3600
Travel + salary of para-counsellors	4 modules	$900	$3600
Training of game staff	2 rounds	$900	$1800
Travel + salary of game staff	2 rounds	$1350	$2700
Mobile top-up (para-counsellors)	4 months	$50	$200
Mobile top-up (game staff)	2 months	$75	$150
Pamphlets, posters, etc.	300 couples	$1.5	$450
Game material cost	2 rounds	$60	$120
Game gift cost	2 rounds	$750	$1500
C. Total cost (C + D)			**$17,068**
D. Cost per treated couple			**$56.89**

Note: Assumes an exchange rate of 1 USD = INR 80 for 2023.