Economic Empowerment and Mental Health: Evidence from India*

Ajinkya Keskar Sulagna Mookerjee[†]

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Abstract

We examine the long-term impact of a large-scale women's empowerment policy on psychological well-being, using state-level amendments to inheritance laws in India as a natural experiment. Exploiting variation in the timing and geography of the Hindu Succession Act Amendment within a difference-in-differences framework, we find that women exposed to the reform exhibit significantly better mental health outcomes in later life. Specifically, the reform reduced the likelihood of depressive symptoms by 5.9–6.4 percentage points and improved a composite mental health index by 0.08σ to 0.093σ. Falsification tests show no effects among individuals from the same state-cohort groups belonging to communities to which the reform did not apply. We demonstrate improvements in multiple socio-economic indicators as mechanisms for the downstream effects on mental health: treated households are 4.2 percentage points more likely to own land, and treated women report a 0.11σ increase in autonomy. These results highlight the long-term benefits of women's empowerment policies in improving their mental well-being.

Keywords: Mental health; Depression; Women's empowerment; India

JEL codes: I31, I38, J16 and O15

1 Introduction

The World Health Organization estimates that over 300 million people worldwide suffer from depression, and 75% of individuals experiencing mental health disorders in low and middle-income countries do not receive any treatment (Kaur et al., 2021; Lacey et al., 2022). Prevention and treatment of non-communicable diseases (NCDs) and promoting mental health is now an explicit global policy goal (Sustainable Development Goals, Target 3.4: "*By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment, and promote mental health and well-being.*"). In India alone, the economic loss due to mental health conditions between 2012 and 2030 is estimated to be 1.03 trillion USD (WHO, 2017).[1] Prior medical and economics research has linked depression and stress with declines in productivity, cognition, and effective decision-making (Beck et al., 2011; Angelucci and Córdova, 2014; Abramson et al., 2024). While substantial evidence indicates that depression is more common among individuals living in poverty (Ridley et al., 2020; Haushofer and Fehr, 2014), the effect of poverty alleviation interventions on mental health remains inconclusive (see Lund et al. (2011) for an insightful review). Additionally, depression is almost twice as common among women (Baranov et al., 2020), and particularly noticeable in older age groups in low and middle-income countries (Banerjee et al., 2023).

There is a large body of literature demonstrating that policies that empower women socially or economically (e.g., through changes in divorce laws, equalizing inheritance rights or targeted cash/in-kind transfer schemes) also impact various dimensions of their well-being, such as labor supply (Voena, 2015; Heath and Tan, 2020), reduction in excess female mortality (Calvi, 2020), reduction in incidences of domestic violence (Anderson, 2021) and improvement in intrahousehold bargaining power (Roy, 2008; Mookerjee, 2019). Such policies also positively impact their children (Qian, 2008) and grandchildren (Duflo, 2000). However, their effectiveness in improving women's mental health remains an open question.[2]

This paper examines this question by exploiting variation from a national level legal reform to inheritance rights in India. The Hindu Succession Act, which governed the inheritance rights

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[1]According to the National Mental Health Survey of India (2016), around 150 million individuals suffer from some form of mental morbidity in India (Gautham et al., 2020).

[2]A crucial issue in assessing the impact of policies aimed at empowering women on their mental health is the two-way relationship between empowerment and psychological well-being. It has been observed that programs designed to enhance women's mental well-being can also lead to improvements in their financial empowerment (Baranov et al., 2020).

of certain religious groups (Hindus, Sikhs, Jains, and Buddhists, which together constitute more than 75% of the population), initially provided a birthright to joint family ancestral property to sons only. Between 1977 and 1994, five states reformed the law to extend such a birthright to daughters, making it gender-neutral (Kerala in 1976, Andhra Pradesh in 1986, Tamil Nadu in 1989, and Maharashtra and Karnataka in 1994). The amendments were nationally implemented in 2005.[3] We use the spatial and temporal variation in implementing the Hindu Succession Act Amendment (henceforth HSAA) as a natural experiment to study its impact on mental well-being in a differences-in-differences framework. Our data comes from the Longitudinal Ageing Study in India (LASI), a nationally representative survey of older adults above 45, which contains measures of the respondents' mental health obtained through survey questions framed on the basis of the 10-item Center for Epidemiologic Studies Depression Scale (CES-D 10) (Björgvinsson et al., 2013) as well as subjective life satisfaction measures.

Our setting constitutes an ideal context for examining this relationship for several reasons. First, the HSAA primarily improves the economic standing of women, who are especially vulnerable to depression and anxiety (WHO, 2017). Second, treatment eligibility is determined by a combination of the state of residence, the year of marriage, and religious affiliation and is, therefore, unlikely to have any direct influence on mental health. Third, while there are often concerns regarding the actual implementation of policies in developing country contexts, previous work has established that the HSAA did, in fact, increase women's likelihood of inheritance, overall resources, and dowry payments received from their natal families, and improved their educational, health, and labor market outcomes (Deininger et al., 2013, 2019; Roy, 2015; Heath and Tan, 2020; Calvi, 2020).[4] Such economic empowerment has further increased social autonomy for *both* the treated women and their husbands (Mookerjee, 2019). This raises the question of whether these socioeconomic advancements have improved the mental well-being of those affected by the reform.

The primary outcome of interest for our analysis is an indicator for depressive symptoms defined based on the respondents' CES-D 10 score (see Section 4 for details). Further, we also define a mental health index based on the CES-D 10 questionnaire. We find that, among women belonging to the Hindu, Sikh, Buddhist, or Jain religious groups that were under the purview of the reform,

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[3]See Section 3 for details regarding the Hindu Succession Act and it's amendments.
[4]Anderson (2021) finds a reduction in intimate partner violence due to stronger female property rights across Sub-Saharan Africa.

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those who were eligible for HSAA exhibited significantly better markers of mental health relative to their control group counterparts. Specifically, the likelihood of them having depressive symptoms reduced by 5.9 percentage points (18.3% reduction relative to the control mean of 32.2%), and their mental health index improved by 0.081σ. Furthermore, we find an improvement in their life satisfaction index of 0.25σ.[5] Falsification tests similar to Duflo (2001) show that in the absence of the reform, an identical comparison among women from HSAA-ineligible religious groups (Muslim, Christian, Jewish, Parsi/Zoroastrian, no religion specified, or categorized as "Others") yields no such differences.

To put this result in context, Haushofer and Shapiro (2016) found through a randomized controlled trial that unconditional cash transfers improved life satisfaction by 0.17σ and increased happiness by 0.16σ. Therefore, the HSAA's effects on improving women's psychological well-being in India are approximately 50% of the effects of unconditional cash transfers given to poor households in rural Kenya.

Next, we examine the impact of the reform on the husbands of treated women. The theoretical implications of the HSAA on the resource ownership of men are a priori ambiguous. On one hand, men married after the reform in eligible states may benefit indirectly through their wives' enhanced inheritance rights, which could increase the couple's total economic resources. On the other hand, men in reform states with unmarried sisters at the time of the reform may face a reduction in their own inheritance shares, as daughters gained equal coparcenary rights (Table A1 in the Appendix illustrates various scenarios outlining the ambiguous effect of the HSAA on men based on marriage timing and sibling composition, and in Section 6, we provide further details).[6] Further, the reform may also have affected male well-being through changes in intra-household dynamics—such as an increase in the couple's social status within the marital family (Mookerjee, 2019)—or via spillover effects from improvements in their wives' psychological health.

Empirically, we find a positive but statistically insignificant effect of the HSAA on psychological well-being among men belonging to HSAA-eligible religions (Hindu, Sikh, Buddhist, or Jain) when measured using the CES-D outcomes—namely, depressive symptoms and the mental health index. However, when using the life satisfaction index, we find a statistically significant improve-

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[5] Jayachandran (2015) using data from the World Values Survey finds that women's life satisfaction relative to men's is positively correlated with economic development.

[6] Our data does not include information on individuals not residing in the household, so we cannot verify whether treated husbands have sisters who were also eligible for the reform.

ment of approximately 0.2σ. In contrast, a falsification test among men belonging to non-eligible religions (Muslim, Christian, Jewish, Parsi/Zoroastrian, no religion specified, or "Other") shows no discernible impact of the reform on any mental health outcomes. These results suggest that while the psychological benefits for men are less pronounced than for women, the HSAA may have improved male well-being through indirect or household-level mechanisms.

Recent literature indicates that when treatment effects differ across groups or change over time, two-way fixed effects (TWFE) specifications can lead to biased estimates (Goodman-Bacon, 2021; De Chaisemartin and d'Haultfoeuille, 2020). We assess the issue of treatment effect heterogeneity using De Chaisemartin and d'Haultfoeuille (2020) and conclude that it is not a significant concern in our context. However, allowing for treatment effect heterogeneity, the results from estimating the average treatment on the treated (ATT) using the imputation estimator in Borusyak et al. (2024) indicates a reduction in depressive symptoms for HSAA-eligible-religion women by 5.2 percentage points (16% reduction relative to the control mean of 32%) and results from using doubly robust difference-in-differences estimator in Callaway and Sant'Anna (2021) indicates a reduction in treated women's depressive symptoms by ≈ 8 percentage points. In contrast, we find no statistically significant effects of the reform on depressive symptoms among men or among women belonging to non-eligible religious groups.

To further assess the credibility of our main findings, we conduct a set of robustness checks that address potential threats to identification. First, our data allows us to compare results using an alternative definition of treatment based on the women's state of residence instead of the state of birth. This allows us to check for selective migration of families across states and is an important factor to consider for married women, for whom the state of natal residence need not be the same as the state of the marital residence.[7] All our results are robust to defining treatment using the state of birth or the state of residence. Second, the possibility that observed differences in mental health outcomes are driven by pre-existing differences between treatment and control states rather than the reform itself. To address this concern, we estimate a series of placebo regressions assigning "false" treatment years to cohorts married before the reform. The estimated placebo effects are small and statistically insignificant, providing evidence that the observed improvements are not driven by pre-existing trends. Third, we implement a triple-differences specification following Calvi (2020), which allows us to net out religion-specific trends by comparing eligible and

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[7]Approximately one-fourth of women in India do not reside in the district where they were born (Calvi et al., 2022).

non-eligible groups of women and men across time and states. Fourth, even though the HSAA was implemented retrospectively relative to when it was announced, mitigating concerns about the endogeneity of marriage timing, we nevertheless account for such concerns following Heath and Tan (2020) and Calvi (2020) by (i) estimating intent-to-treat effects based on age at reform exposure, (ii) using an instrumental variables strategy that instruments exposure to the HSSAA with eligibility, and (iii) including controls for age at marriage. Across all these checks, our findings remain consistent.

Lastly, we examine whether the HSAA achieved its intended objective of increasing women's empowerment through economic and social channels. Treated individuals are 4.2 percentage points more likely to belong to a land-owning household—a 9% increase relative to the control mean. In addition, treated women exhibit a 0.11σ increase in the autonomy index. These findings are consistent with prior research and suggest that the reform successfully enhanced both economic resources and decision-making power for women.

Our findings have meaningful policy implications for Sustainable Development Goal (SDG) Target 3.4, which aims to promote mental health and well-being. First, depressive symptoms are strong predictors of future mortality, conditional on age and gender (Banerjee et al., 2023), and contribute significantly to the global burden of disease, as measured by Disability-Adjusted Life Years (DALYs) (Charlson et al., 2016).[8] Given the substantial excess mortality and health burden associated with depression—particularly among the elderly in low- and middle-income countries (LMICs)—our results offer important evidence on the effectiveness of policies aimed at empowering women in improving their mental health outcomes. Second, we contribute to the literature on the long-run determinants of psychological well-being (Adhvaryu et al., 2019). The Longitudinal Aging Study in India (LASI) is nationally representative of individuals aged 45 and above, allowing us to examine mental health outcomes decades after the policy was implemented. On average, the HSAA was enacted more than 25 years prior to the survey, enabling us to assess the long-run effects of a large-scale legal empowerment reform on their mental health in later life. To the best of our knowledge, this is one of the first papers to document that a nationwide women's empowerment policy produced improvements in the psychological well-being of women.

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[8]Banerjee et al. (2023) find a significant correlation between depression and two-year mortality rates across seven low- and middle-income countries. For example, in Tamil Nadu, India, the two-year mortality rate for elderly individuals likely to be depressed at baseline was 10%, compared to 8% for those not likely to be depressed.

2 Literature Review and Contribution

This paper intersects two key strands of literature: the impact of policies on mental health outcomes in developing countries and the research on the implications of inheritance rights.

First, to motivate why economic empowerment through the HSAA might be expected to have implications for mental wellbeing, we discuss a set of papers investigating evidence from cash transfer and other targeted programs. Haushofer and Shapiro (2016) conducted a randomized controlled trial (RCT) in rural Kenya and found that unconditional cash transfers improve psychological well-being by 0.26σ, supporting the hypothesis that poverty alleviation has psychological benefits. Notably, the study revealed a 0.14σ higher psychological well-being index for female recipients compared to male recipients, driven by lower levels of the stress hormone cortisol and higher self-esteem. The authors suggest that this may be due to increased female empowerment reducing stress. Our results further illuminate this mechanism by demonstrating that the HSAA policy, known to enhance women's empowerment, also significantly improves their mental health outcomes. Haushofer et al. (2020) shows that economic improvements seem to be more effective at improving psychological wellbeing than psychotherapy programs; through an RCT in Kenya, they find that a USD 1076 PPP unconditional cash transfer scheme improved mental wellbeing, but there were no such improvements for individuals in the treatment arm who received five weeks of psychotherapy. In India, McKelway et al. (2023) through an RCT in Tamil Nadu, India, assessed the impact of a 6-week phone-based cognitive behavioral therapy (CBT) and a one-time cash transfer of 1000 rupees on older individuals living alone. The results indicate that the cash transfer slightly decreased depression scores at the 3-week follow-up, but these effects did not persist at 3 months. Neither CBT alone nor the combination of interventions had significant short-term or long-term effects on depression. In a related paper, Ozer et al. (2011) find that the popular conditional cash transfer program in Mexico, *Oportunidades*, where transfers were explicitly targeted to women, lowered depressive symptoms among women in the treatment group.[9] The program is well-known for improving women's intrahousehold bargaining power, consequently altering the allocation of resources within the household (Attanasio and Lechene, 2014). Our results on the impact of the HSAA on a wide array of psychological well-being and life satisfaction measures further support the argument that policies enhancing women's bargaining power can improve their men-

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[9]Leight et al. (2022) find a siginificant negative correlation between women's empowerment and maternal stress and depression using data from Burkina Faso.

tal health. Lastly, Baird et al. (2013) also find that cash transfers reduced psychological distress among adolescent girls in Malawi.

A range of welfare programs have also been shown to improve the psychological well-being of low-income individuals without explicitly targeting it. Bandiera et al. (2013) use an RCT that provided assets and training to the poorest women in rural Bangladesh and find an improvement in self-reported life satisfaction of 6.4 percentage points, four years after the program. Jana et al. (2013), through an RCT, found that a training program designed to improve self-esteem and agency among marginalized sex workers in Kolkata, India, improved self-reported measures of happiness and self-esteem. Banerjee et al. (2015), using six RCTs across six countries, show that a multifaceted program that includes livelihood assistance, productive asset transfer, saving encouragement, and health education services successfully improved the mental health of treated individuals, as measured by a mental health index, perception of status in life, and lack of stress index.[10]

Finally, the effectiveness of psychotherapy and pharmacotherapy programs on psychological outcomes in developing countries is mixed. Haushofer et al. (2020) find that, compared to an unconditional cash transfer, a five-week psychotherapy program had no effect on treated individuals' psychological outcomes. In contrast, Blattman et al. (2017), through an RCT, find that cognitive behavioral therapy was successful in reducing depression and stress among criminally engaged men in Liberia in the short term, but the effects dissipate over time. However, the combined treatment of a cash transfer and cognitive behavioral therapy has a persistent effect after one year. Bryant et al. (2017), through an RCT, find that a five-session behavioral treatment called Problem Management Plus was successful in improving the psychological outcomes of women who were victims of gender-based violence. Baranov et al. (2020) via an RCT found that psychotherapy provided to prenatally depressed mothers in rural Pakistan reduced depression by 17% and improved women's financial empowerment. Lastly, Angelucci and Bennett (2024) provide one of the few pieces of evidence on the effectiveness of pharmacotherapy in developing countries. Using an RCT that cross-randomized pharmacotherapy and livelihoods assistance among depressed adults in Karnataka, India, the authors find a persistent reduction in depression severity in the combined

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[10]In the context of developed countries, Lindqvist et al. (2020) find that lottery players who won large prizes in Sweden experienced an improvement in overall life satisfaction that lasted over a decade driven by improvement in financial life satisfaction. Ahammer and Packham (2023) using administrative data from Austria, find that a 9-week extension in unemployment insurance lowered antidepressant prescriptions among eligible women by 50%. Similarly, Kuhn et al. (2009) also finds significant effects of job loss on antidepressant expenditure.

treatment arm. However, pharmacotherapy alone has weaker effects that do not persist.

The contribution of our paper to the existing literature is two-fold. First, we demonstrate the effectiveness of a large-scale, nationally implemented economic empowerment policy in improving the psychological well-being of beneficiaries in a low- and middle-income country setting. Second, we provide evidence of persistent, long-term effects—measured more than two decades after exposure—complementing existing studies that focus primarily on short-term impacts of economic shocks, and consistent with findings that early-life circumstances can shape adult mental health outcomes (Adhvaryu et al., 2019).

Women's inheritance rights: There is a substantial body of literature studying the impact of improving women's inheritance rights on their well-being. In India, Deininger, Jin, Nagarajan, and Xia (2019) finds evidence that the HSAA significantly increased the likelihood of daughters inheriting their natal land. We corroborate this finding using the LASI data. Heath and Tan (2020) find that the HSAA improved women's labor supply by 3.8 to 6.1 percentage points and increased autonomy by 0.17σ. Roy (2008) also finds that the HSAA improved women's autonomy and their intrahousehold bargaining power. Mookerjee (2019) shows that the increase in women's bargaining power is at the expense of the older generation in the household, not the husband. Lastly, Calvi (2020) finds that the HSAA increased women's resource share and reduced the individual-level female poverty rate. The author uses the structural model to provide suggestive evidence that the HSAA potentially alleviated the missing women crisis in India (Sen, 1992; Coale, 1991; Anderson and Ray, 2010) by reducing excess female deaths at older ages. Our results on women's autonomy validate this by showing a statistically significant increase in the autonomy index for women and a positive but insignificant increase for husbands. Similar improvements in autonomy through inheritance rights have also been documented in the context of Kenya by Harari (2019).

3   The Hindu Succession Act and its Amendment

The legal reform relevant to our context was an amendment to the Hindu Succession Act (HSA) of 1956, which governed intestate inheritance rights for Hindus, Sikhs, Buddhists, and Jains. The HSA distinguished between individual property (acquired by an individual during their lifetime) and joint property (e.g., ancestral property or assets jointly held by extended family members). While sons and daughters were granted equal rights to individual property, they did not share

equal rights to joint property. In contrast, the inheritance rights of Muslim women were governed by Muslim Personal Law, while the Indian Succession Act applied to Christian, Parsee, and Jewish women. Neither of these frameworks made a distinction between ancestral and self-acquired property.

Under the HSA, sons became members of the "Hindu coparcenary" at birth. If a family owning joint property had n male members, each would be entitled to a $\frac{1}{n}$ share. If a new male was born into the family, he automatically received a birthright share, adjusting each male's share to $\frac{1}{n+1}$. For example, if a father held ancestral property of value A and had a son and daughter, he and his son would each hold a share of $\frac{A}{2}$ during his lifetime. Upon the father's death, his share would be divided between his children, such that the son would receive $\frac{3A}{4}$ overall, and the daughter $\frac{A}{4}$, of the initial A. This framework led to significantly skewed inheritance rights, often leaving daughters with no inheritance. Given that a large proportion of Indians die intestate (around 65% (Deininger et al., 2019)), the HSA effectively determined inheritance practices for much of the population. Additionally, while sons had a birthright to property that could not be willed away, daughters' shares could be manipulated through wills.

Between 1976 and 1994, five states amended the law to make daughters coparceners at birth, thereby removing gender-based differences in inheritance rights. Using our previous example, the father, son, and daughter would each hold $\frac{A}{3}$ of the joint property during the father's lifetime, and after his death, each child would be entitled to a net $\frac{A}{2}$. The amendments were implemented in Kerala (1976), Andhra Pradesh (1986), Tamil Nadu (1989), and Maharashtra and Karnataka (1994). Notably, these amendments applied only to daughters who were unmarried at the time, ensuring that dowry decisions had not yet been made for them.

Two key considerations informed our definition of the primary analysis sample. First, the earliest implementation of the reform occurred in Kerala, which adopted a substantively different version of the amendment. Rather than extending coparcenary rights to daughters within the joint family system, Kerala enacted the Kerala Joint Hindu Family System (Abolition) Act, which abolished the joint family property system altogether—effectively treating all property as individual property with full and equal ownership rights for all family members (Roy, 2015). Second, the Hindu Succession (Amendment) Act was implemented nationally in 2005, after which legal variation across states ceased. Therefore, we exclude individuals married after 2005 from our main

analysis sample, and show robustness of our findings excluding individuals from Kerala.

4 Data and Measurement

4.1 Data

Our analysis draws on Wave 1 of the Longitudinal Aging Study in India (LASI), a nationally representative survey conducted across all Indian states in 2017–18. The survey covers adults aged 45 and above and includes detailed information on mental health—a dimension rarely available in household surveys—making LASI particularly well-suited for examining the psychological impacts of legal reforms such as the HSAA.

The full LASI dataset comprises 73,396 individuals residing in 43,359 unique households. To construct our analysis sample, we proceed as follows. First, we exclude respondents from Jammu and Kashmir, as the original Hindu Succession Act of 1956 did not apply to the region. Second, we restrict the sample to individuals who were married between 1970 and 2005. These restrictions yield a final sample of 51,020 individuals (28,479 women and 22,541 men) from 31,575 households.

LASI provides rich information on respondents' socioeconomic conditions, family structure, and multiple dimensions of well-being, including mental health, physical health, life satisfaction, and social support. Critically, for our identification strategy, the data include each respondent's religion, year of marriage, and state of residence. An important feature of the dataset is that it also records respondents' state of birth, enabling us to identify internal migrants. This allows us to define treatment exposure using both the state of birth (i.e., where legal exposure originated) and state of residence.

As discussed earlier, Kerala presents a special case: it implemented the reform by abolishing the joint family property system altogether. To address concerns arising from this difference, we report our main results excluding Kerala in Appendix Section C. Additionally, in robustness checks, we estimate average treatment effects using Callaway and Sant'Anna (2021) and a triple-difference specification that includes individuals married after 2005, when the amendments were adopted nationwide.

4.2 Measurement

We measure depressive symptoms using the 10-item Center for Epidemiologic Studies Depression Scale (CES-D 10), capturing the frequency of respondents experiencing certain feelings or behaviors in the past week (Björgvinsson et al., 2013). Each CES-D item is scored from 0 (rarely or none of the time, less than 1 day) to 3 (most or all of the time, 5–7 days). The original CES-D 10 items include being bothered by things usually not bothersome, having trouble concentrating, feeling depressed, everything feeling like an effort, feeling hopeful about the future (reverse-coded), feeling fearful, sleeping restless, feeling happy (reverse-coded), feeling lonely, and could not "get going."

The LASI dataset includes eight CES-D items corresponding to trouble concentrating (FS701), feeling depressed (FS702), feeling afraid (FS704), feeling lonely (FS706), bothered by things (FS707), everything feeling an effort (FS708), feeling hopeful about future (FS709, reverse-coded), and felt happy (FS710, reverse-coded). LASI also includes two additional items not in the original CES-D: feeling tired or low in energy (FS703) and feeling overall satisfied (FS705).[11]

Our analysis relies on eight items from the CES-D scale that are available in the LASI questionnaire, resulting in a maximum possible score of 24 (as opposed to 30 in the standard 10-item CES-D).[12] We construct an indicator variable for depressive symptoms equal to one if the CES-D 8-item score is 8 or higher and zero otherwise. This threshold proportionally aligns with the established cutoff of 10 for the standard 10-item CES-D scale.[13] *The indicator variable for depressive symptoms is our main outcome of interest.*

We also construct a mental health index from the eight CES-D items included in LASI and the two additional items not in the original CES-D using Principal Component Analysis (PCA). First, responses are recoded from a scale of 1–4 to 0–3, and positively phrased items (FS705, FS709, FS710) are reverse-coded to maintain consistency in the direction of scoring. We then perform PCA on these ten recoded items and extract the first principal component. Finally, we normalize the resulting principal component scores to create a mental health index ranging from 0 (best mental health) to 1 (worst mental health), and to have a mean of zero and standard deviation of

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[11]FS701 to FS710 refer to the question numbers in the LASI.

[12]Our results are robust to including the LASI item on feeling tired or low in energy (FS703) as a proxy for the "could not get going" question from the CES-D-10, and to defining depressive symptoms using a 9-item scale instead of eight.

[13]Specifically, the standard cutoff represents approximately 33% of the maximum score ($10/30 \approx 33\%$). Applying this proportion to our 8-item scale yields a comparable threshold: $33\% \times 24 \approx 8$.

one among HSAA-eligible-religion women not treated by the HSAA.

Additionally, we construct a life satisfaction index, which is measured using responses to five statements on a 7-point Likert scale (1 = "strongly disagree," 7 = "strongly agree"). These statements are: "In most ways, my life is close to ideal," "The conditions of my life are excellent," "I am satisfied with my life," "So far, I have got the important things I want in life," and "If I could live my life again, I would change almost nothing." We use PCA to extract the first principal component from these items. The first principal component is then normalized to form a life satisfaction index ranging from 0 (lowest life satisfaction) to 1 (highest life satisfaction), and to have a mean of zero and standard deviation of one among HSAA-eligible-religion women not treated by the HSAA.

Table 1 reports summary statistics, separately for males (Column 1) and females (Columns 2). The average age of the male sample is 56, significantly higher by about 5 years than the average age of the female sample. Around 58% of the men and 38% of the women have finished primary schooling. A significantly higher proportion of the men are also currently married, at 93%, relative to the female sample who are more likely to have been widowed. Around 85% of men and women belong to the Hindu religious groups, 27% belong to a scheduled caste or scheduled tribe, and 66% reside in rural areas.

In terms of mental health outcomes, female respondents in our sample report significantly worse psychological well-being than male respondents. The average 8-item CES-D score is 6.72 for women and 6.44 for men, a statistically significant difference of 0.27 points (p-value< 0.01). Using the threshold of 8 or higher to identify depressive symptoms, 33.6% of women are classified as having depressive symptoms compared to 29.9% of men—a gap of 3.8 percentage points (p-value< 0.01). Women also have significantly lower scores on both the standardized mental health index (0.017 vs. –0.054; p-value< 0.01) and the life satisfaction index.

Concerns regarding underreporting of mental health outcomes are well documented. Bharadwaj et al. (2017), using data from Australia, find that individuals underreport mental health diagnoses 36% of the time—substantially more than for other health conditions. However, these gender gaps in mental health are consistent with existing evidence. For instance, Banerjee et al. (2023) find that 38% of women and 30% of men aged 61–70 in India exhibit depressive symptoms, compared to only 14% and 11% respectively in the United States. These psychological well-being measures are also in line with the measures reported in Bau et al. (2022) from India. Further,

in Section 6 we show that the HSAA had no impact on the reporting of mental health questions across HSAA-eligible-religion and HSAA-non-eligible-religion individuals.

Table 1: Summary Statistics

Variable	N	(1) Male Mean/(SE)	N	(2) Female Mean/(SE)	N	(1)-(2) Pairwise t-test Mean difference
Age	22541	56.420 (0.085)	28479	50.977 (0.074)	51020	5.443***
Primary Education	22541	0.584 (0.005)	28479	0.377 (0.005)	51020	0.207***
Married	22541	0.934 (0.003)	28479	0.820 (0.004)	51020	0.114***
Hindu, Sikh, Buddhist, or Jain	22541	0.855 (0.004)	28479	0.851 (0.003)	51020	0.004
Scheduled Caste or Scheduled Tribe	22541	0.273 (0.005)	28479	0.281 (0.004)	51020	-0.008
Rural	22541	0.665 (0.005)	28479	0.652 (0.005)	51020	0.013*
8-item CES-D score (out of 24)	21999	6.443 (0.038)	28026	6.715 (0.031)	50025	-0.272***
Depressive Symptoms [8-item CES-D score>=8]	21999	0.299 (0.005)	28026	0.336 (0.004)	50025	-0.038***
Mental Health Index	21999	-0.054 (0.011)	28026	0.017 (0.009)	50025	-0.071***
Life Satisfaction Index	21982	0.012 (0.011)	28012	-0.054 (0.010)	49994	0.067***

Notes: The sample consists of men and women from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. Sampling weights applied. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The variable *Primary Education* is a dummy variable that equals 1 if the individual has completed grade five. The variable *Scheduled Caste or Scheduled Tribe* is a dummy variable that equals 1 if the household belongs to a Scheduled Caste or Scheduled Tribe. Sampling weights applied.

5   Empirical Strategy

Our identification strategy exploits the following eligibility criteria for the HSAA: it applied only to women who (i) resided in the reform states (Andhra Pradesh, Tamil Nadu, Maharashtra, and Karnataka), (ii) were unmarried at the time of the reform, and (iii) belonged to the Hindu, Buddhist, Sikh or Jain religious groups. An additional feature of the reform helps assuage endogeneity concerns concerning selection in the timing of marriage, namely that the states adopted it retrospectively relative to when it was announced.[14] This would mean that families who intended to disinherit their daughters could not selectively choose to marry them off before the reform was im-

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[14]For instance, the state of Andhra Pradesh formally passed the act in May 1986 but deemed it to have come into effect starting September 1985.

plemented in their state. In Section 6.2, we provide several robustness checks to address potential concerns regarding the selection in the timing of marriage.

We estimate a difference-in-difference model comparing respondents belonging to the reform and non-reform states and married before and after the reform, as follows:

$$y_{ist} = \beta_0 + \beta_1 \text{Treated}_{ist} + X'_{ist}\gamma + \alpha_s + \alpha_t + \epsilon_{ist}, \tag{1}$$

where y_{ist} denotes the outcome of interest for individual i, born in state s and married in year t. The variable Treated_{ist} is a binary indicator equal to 1 if the individual was born in a state that enacted the HSAA reform and was married after the reform's implementation in that state.

We estimate Equation (1) both unconditionally and conditional on a vector of individual-level covariates, X_{ist}, which includes age, an indicator for belonging to a Scheduled Caste or Scheduled Tribe, and an indicator for rural residence. All specifications include state-of-birth fixed effects (α_s) and year-of-marriage fixed effects (α_t). Standard errors are clustered at the secondary sampling unit (village or urban ward) level. Results are robust to clustering standard errors at the state-cohort, state-religion and state-cohort-religion levels.

We estimate the model separately for individuals belonging to HSAA-eligible religions (Hindu, Sikh, Buddhist, or Jain) and those belonging to non-eligible religions. The coefficient of interest, β_1, captures the difference-in-differences estimate: it captures the additional change in the average outcomes for individuals in reform states who married after the policy, relative to those who married before, net of the same time trend in non-reform states. If the reform caused changes in the outcomes of interest, we expect to find significant effects for the HSAA-eligible-religion sample but no corresponding effect for the non-eligible sample to whom the law did not apply.

6 Results

In this section, we present the intent-to-treat estimates of the impact of the Hindu Succession Act Amendment (HSAA) on mental health outcomes for women and men by defining treatment using individuals' state of birth and their state of residence. We then assess the robustness of these findings through a series of additional specification checks and subsequently explore potential underlying mechanisms.

14

6.1 Effect of HSAA on Women's Mental Health

Table 2 presents the impact of the Hindu Succession Amendment Act (HSAA) on mental health outcomes among Hindu, Sikh, Buddhist, and Jain women. When treatment is defined by state of birth (Panel A), exposure to HSAA reduces depressive symptoms by 5.9 percentage points (18.3% reduction relative to the control mean of 32.2%; p-value< 0.01), reduces the matched CES-D score (in %) by 1.49 percentage points (5.4% reduction relative to the control mean of 27.4%; p-value< 0.05), and improves the mental health index by 0.081σ (p-value< 0.10). Similarly, when treatment is defined by state of residence (Panel B), HSAA exposure reduces depressive symptoms by 6.4 percentage points (19.9% reduction relative to the control mean of 32.2%; p-value< 0.01), reduces matched CES-D scores by 1.55 percentage points (5.6% reduction relative to the control mean of 27.4%; p-value< 0.05), and improves the mental health index by 0.086σ (p-value< 0.05).[15] All results remain robust after including covariates, which include age and indicators for rural residence and belonging to either the scheduled caste or scheduled tribe. Table A9 in Appendix show that the results are qualitatively unchanged for the sample, excluding Kerala. Table A2 shows that there are no systematic differences in the likelihood of non-response to the CES-D questionnaire module between the treatment and control groups. Specifically, the probability of missing responses to any CES-D item is similar across men and women, and across individuals belonging to HSAA-eligible and non-eligible religions.

Next, we conduct an analogous analysis for the sample of HSAA-non-eligible-religion women who are are excluded from the purview of the reform, in the spirit of a falsification test. Table 3 presents the results on psychological well-being. We find no significant effects of HSAA exposure on any mental health outcomes, regardless of whether treatment is defined by state of birth or state of residence. In addition, Table A10 in the Appendix shows that these results remain qualitatively unchanged for the sample excluding Kerala.

In Table A3 in the Appendix, we examine an alternative dimension of subjective psychological well-being—the life satisfaction index. As seen from the first two columns, we find a substantial improvement of approximately 0.25σ (p-value< 0.01) for HSAA-eligible-religion women, but no such impact on life satisfaction among HSAA-non-eligible-religion women to whom the reforms did not apply.

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[15]In terms of the magnitude of the effect, these results are in line with a recent paper by Anukriti et al. (2025), which finds that mothers-in-law with grandsons experience an 18% reduction in rates of anxiety or depression compared to mothers-in-law with granddaughters.

Table 2: Impact of HSAA on Mental Health: HSAA-Eligible-Religion Women

	Panel A: Treatment defined by State of Birth					
	(1)	(2)	(3)	(4)	(5)	(6)
	Depressive symptoms	Mental Health Index	Matched CES-D Score (%)	Depressive symptoms	Mental Health Index	Matched CES-D Score (%)
Treated (state of birth)	-0.059***	-0.081*	-1.494**	-0.059***	-0.083*	-1.530**
	(0.020)	(0.043)	(0.601)	(0.020)	(0.043)	(0.598)
Observations	21,453	21,453	21,453	21,453	21,453	21,453
Mean of Dep. Variable (Control)	0.322	0.000	27.424	0.322	0.000	27.424
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.130	0.179	3.297	0.130	0.179	3.297

	Panel B: Treatment defined by State of Residence					
	(1)	(2)	(3)	(4)	(5)	(6)
	Depressive symptoms	Mental Health Index	Matched CES-D Score (%)	Depressive symptoms	Mental Health Index	Matched CES-D Score (%)
Treated (state of res)	-0.064***	-0.086**	-1.526**	-0.064***	-0.086**	-1.548***
	(0.020)	(0.043)	(0.599)	(0.020)	(0.043)	(0.598)
Observations	21,678	21,678	21,678	21,678	21,678	21,678
Mean of Dep. Variable (Control)	0.322	0.001	27.435	0.322	0.001	27.435
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.142	0.190	3.383	0.022	0.012	2.184

Notes: The sample consists of women from the Longitudinal Ageing Study in India (LASI) who belong to one of the HSAA-eligible religions (Hindu, Sikh, Buddhist, or Jain) and were married between 1970 and 2005. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. The control group consists of HSAA-eligible-religion women married before the HSAA. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome. TEH (Treatment Effect Heterogeneity) Robust $\hat{\sigma}$ reports the minimum standard deviation of treatment effects across treated group-time cells under which the TWFE estimate could be consistent with an average treatment effect of the opposite sign (De Chaisemartin and d'Haultfoeuille, 2020). A larger value indicates that the estimate would only reflect an average effect of the opposite sign if treatment effect heterogeneity were implausibly large.

Table 3: Impact of HSAA on Mental Health: HSAA-Non-Eligible-Religion Women

	Panel A: Treatment defined by State of Birth					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of birth)	-0.024	-0.142	-2.179	-0.022	-0.144	-2.168
	(0.045)	(0.138)	(1.669)	(0.044)	(0.138)	(1.652)
Observations	6,326	6,326	6,326	6,326	6,326	6,326
Mean of Dep. Variable (Control)	0.299	-0.006	26.724	0.299	-0.006	26.724
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.037	0.219	3.353	0.037	0.219	3.353
	Panel B: Treatment defined by State of Residence					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of res)	-0.015	-0.008	-1.521	-0.011	-0.004	-1.439
	(0.041)	(0.092)	(1.275)	(0.041)	(0.093)	(1.275)
Observations	6,348	6,348	6,348	6,348	6,348	6,348
Mean of Dep. Variable (Control)	0.299	-0.006	26.747	0.299	-0.006	26.747
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.022	0.012	2.184	0.022	0.012	2.184

Notes: Notes: The sample consists of women from the Longitudinal Ageing Study in India (LASI) who belong to one of the HSAA-non-eligible religions (Muslim, Christian, Jewish, Parsi/Zoroastrian, no religion specified, or categorized as "Others") and were married between 1970 and 2005. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. The control group consists of HSAA-non-eligible-religion women married before the HSAA. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome. TEH (Treatment Effect Heterogeneity) Robust $\hat{\sigma}$ reports the minimum standard deviation of treatment effects across treated group-time cells under which the TWFE estimate could be consistent with an average treatment effect of the opposite sign (De Chaisemartin and d'Haultfoeuille, 2020). A larger value indicates that the estimate would only reflect an average effect of the opposite sign if treatment effect heterogeneity were implausibly large.

Table 4: Impact of HSAA on Mental Health: HSAA-Eligible-Religion Men

	Panel A: Treatment defined by State of Birth					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of birth)	-0.020	-0.037	-0.969	-0.020	-0.038	-0.961
	(0.024)	(0.051)	(0.799)	(0.024)	(0.051)	(0.780)
Observations	16,943	16,943	16,943	16,943	16,943	16,943
Mean of Dep. Variable (Control)	0.289	-0.060	26.554	0.322	0.000	27.424
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.042	0.080	2.070	0.042	0.080	2.070

	Panel B: Treatment defined by State of Residence					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of res)	-0.017	-0.036	-0.712	-0.016	-0.035	-0.667
	(0.022)	(0.049)	(0.685)	(0.022)	(0.049)	(0.675)
Observations	17,162	17,162	17,162	17,162	17,162	17,162
Mean of Dep. Variable (Control)	0.289	-0.059	26.556	0.289	-0.059	26.556
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.037	0.078	1.538	0.037	0.078	1.538

Notes: The sample consists of men from the Longitudinal Ageing Study in India (LASI) who belong to one of the HSAA-eligible religions (Hindu, Sikh, Buddhist, or Jain) and were married between 1970 and 2005. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. The control group consists of HSAA-eligible-religion men married before the HSAA. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome. TEH (Treatment Effect Heterogeneity) Robust $\hat{\sigma}$ reports the minimum standard deviation of treatment effects across treated group-time cells under which the TWFE estimate could be consistent with an average treatment effect of the opposite sign (De Chaisemartin and d'Haultfoeuille, 2020). A larger value indicates that the estimate would only reflect an average effect of the opposite sign if treatment effect heterogeneity were implausibly large.

Table 5: Impact of HSAA on Mental Health: HSAA-Non-Eligible-Religion Men

	Panel A: Treatment defined by State of Birth					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of birth)	-0.023	-0.019	-0.165	-0.019	-0.009	-0.055
	(0.054)	(0.125)	(1.745)	(0.054)	(0.127)	(1.754)
Observations	4,825	4,825	4,825	4,825	4,825	4,825
Mean of Dep. Variable (Control)	0.269	-0.082	25.709	0.269	-0.082	25.709
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.036	0.029	0.257	0.036	0.029	0.257
	Panel B: Treatment defined by State of Residence					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of res)	-0.060	-0.089	-1.563	-0.058	-0.082	-1.487
	(0.050)	(0.125)	(1.537)	(0.050)	(0.127)	(1.551)
Observations	4,837	4,837	4,837	4,837	4,837	4,837
Mean of Dep. Variable (Control)	0.270	-0.081	25.740	0.270	-0.081	25.740
Covariates	No	No	No	Yes	Yes	Yes
TEH Robust $\hat{\sigma}$	0.084	0.126	2.205	0.084	0.126	2.205

Notes: The sample consists of men from the Longitudinal Ageing Study in India (LASI) who belong to one of the HSAA-non-eligible religions (Muslim, Christian, Jewish, Parsi/Zoroastrian, no religion specified, or categorized as "Others") and were married between 1970 and 2005. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. The control group consists of HSAA-non-eligible-religion men married before the HSAA. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome. TEH (Treatment Effect Heterogeneity) Robust $\hat{\sigma}$ reports the minimum standard deviation of treatment effects across treated group-time cells under which the TWFE estimate could be consistent with an average treatment effect of the opposite sign (De Chaisemartin and d'Haultfoeuille, 2020). A larger value indicates that the estimate would only reflect an average effect of the opposite sign if treatment effect heterogeneity were implausibly large.

Effect of HSAA on Men's Mental Health

We now turn to the effects of the Hindu Succession Amendment Act (HSAA) on male respondents, for whom the impact is theoretically ambiguous. To clarify this ambiguity, it is helpful to differentiate between the reform's impact on a man's wife's inheritance and his own inheritance.

For men in reform states who married after the amendment (i.e., those classified as "treated" under Equation (1)), there is potential for a positive economic shock via increased inheritance rights granted to their wives. In contrast, the impact on a man's own inheritance depends on his sisters' presence and their marital status at the time of the reform. Men in the reform states who had only brothers, or whose sisters were already married at the time of the reform, experience no

change in their inheritance share. However, men in these states with unmarried sisters at the time of the reform—i.e., HSAA-eligible sisters—may see a reduction in their own expected inheritance as those sisters become legally entitled to an equal share in ancestral property. Table A1 in the Appendix provides an illustration of these different scenarios based on men's own marriage timing and their sisters' marital status.

Taken together, this implies that "untreated" men in the reform states (i.e., those married prior to the reform) likely experience a net negative inheritance: their wives are not eligible to benefit from the reform, while their inheritance may be diluted due to their sisters' enhanced inheritance rights. For "treated" men in these states, the overall effect is theoretically non-obvious, depending on the relative sizes of the gains through their wives and the potential losses to their sisters, and their net resource ownership may in fact be positive. Given this ambiguity, the overall impact of the reform on men's wellbeing remains an empirical question.

Table 4 presents the impact of the HSAA on mental health outcomes among the HSAA-eligible-religion men. For both definitions of treatment, using the respondent's state of birth (Panel A) and state of residence (Panel B), we see no impact of the HSAA on depressive symptoms, the matched CES-D score, or the mental health index. The results are robust to including covariates and remain qualitatively unchanged when using the sample excluding Kerala (see Table A12 in the Appendix for details). Table 5 presents another falsification test and shows no effects for HSAA-non-eligible-religion men, and the results remain robust to the inclusion of covariates and for the sample excluding Kerala (see Table A12 in the Appendix).

However, as seen from the last two columns in Table A3 in the Appendix, we do see an improvement in the life satisfaction index for treated HSAA-eligible-religion men, of approximately 0.2σ (p-value< 0.01), while the difference for those belonging to HSAA-non-eligible religions is statistically insignificant.

Taken together, the evidence suggests a consistently positive effect of the HSAA on women's psychological well-being across all mental health dimensions. For men, the findings point to a more nuanced picture: while the CES-D score and the composite mental health index show no significant improvement, the positive and statistically significant effect on the life satisfaction index suggests that men may still experience meaningful gains in overall subjective well-being—potentially driven by improved household resources, marital dynamics (we explore these channels further in Section

), or as a direct spillover of their wives' enhanced well-being.

6.2 Parallel Trends, Robustness Checks, and Treatment Effect Heterogeneity

The results in Section 6, showing no effects on the corresponding cohorts of HSAA-non-eligible-religion women and men who were outside the scope of the reform, serves as a falsification test ruling out the concern that these results are purely driven by overall differential time trends in the reform and non-reform states. We now present additional robustness checks to validate our findings further. These robustness checks address three major concerns: 1) Potential violation of parallel trends: Hindu communities in HSAA-eligible states may have experienced faster economic growth or other improved amenities over time relative to HSAA non-eligible states, as a result violating the parallel trends. 2) Selection in marriage timing: Exposure to the HSAA is determined by each woman's year of marriage, raising potential concerns regarding the endogeneity of treatment (even though, as mentioned earlier, states adopted HSAA retrospectively relative to when it was announced). 3) Treatment effect heterogeneity: Our estimates rely on a Two-way fixed effects (TWFE) specification, which is unbiased only if treatment effects are homogeneous across cohorts and states. If treatment effects vary across groups or over time, TWFE may produce biased estimates (Goodman-Bacon, 2021; De Chaisemartin and d'Haultfoeuille, 2020). In the remainder of this section, we conduct robustness checks that directly address these concerns.

First, to examine whether our main results could be driven by pre-existing advantages accruing differentially to Hindu women in the treatment states, we estimate a series of placebo specifications using hypothetical treatment years prior to the actual policy implementation. The goal of this exercise is to assess whether individuals who were married shortly before the reform in HSAA states (and were therefore not actually benefitting from it) experienced any spurious improvements compared to their counterparts in non-reform states.

Specifically, for each placebo test, we assign a "placebo treatment year" defined as $l - k$, where l is the actual reform year in state s and k ranges from 1 to 10. We then estimate the following specification for the sample of Hindu respondents who were never actually exposed to the reform.

$$y_{ist} = \delta_0 + \delta_1 \text{Placebo}_{ist}^k + X_{ist}'\gamma + \alpha_s + \alpha_t + \epsilon_{ist}, \tag{2}$$

where Placebo_{ist}^k is a binary indicator equal to 1 if individual i was married after the placebo

21

treatment year $l-k$ in a state that eventually implemented the reform, but before the actual reform year. The placebo coefficient δ_1 captures any differential outcome for those who would have been "just treated" under such a hypothetical earlier implementation. Since these individuals were not actually eligible for the HSAA, we expect δ_1 to be close to zero and statistically insignificant. On the other hand, if δ_1 were similar to β_1, it would imply that our results may be explained by pre-existing differences prior to the implementation of the HSAA in the reform states accruing to younger cohorts of married women.

Figure 1 presents the results. Panel (A) defines treatment by state of birth, and Panel (B) by state of residence. Each point represents the estimated coefficient from a separate regression using a different placebo treatment year, with depressive symptoms as the outcome. Across all placebo specifications, the estimated effects are close to zero in magnitude and statistically insignificant.

The results indicate that the differences in mental health outcomes between individuals who were married before and after the reform implementation in treatment states are not merely the result of existing trends or variations in cohort composition. Rather, the timing of the observed improvements closely corresponds with the introduction of the reform itself.

Figure 1: Placebo Estimates Using Depressive Symptoms as Outcome

(A) Treatment Defined by State of Birth   (B) Treatment Defined by State of Residence
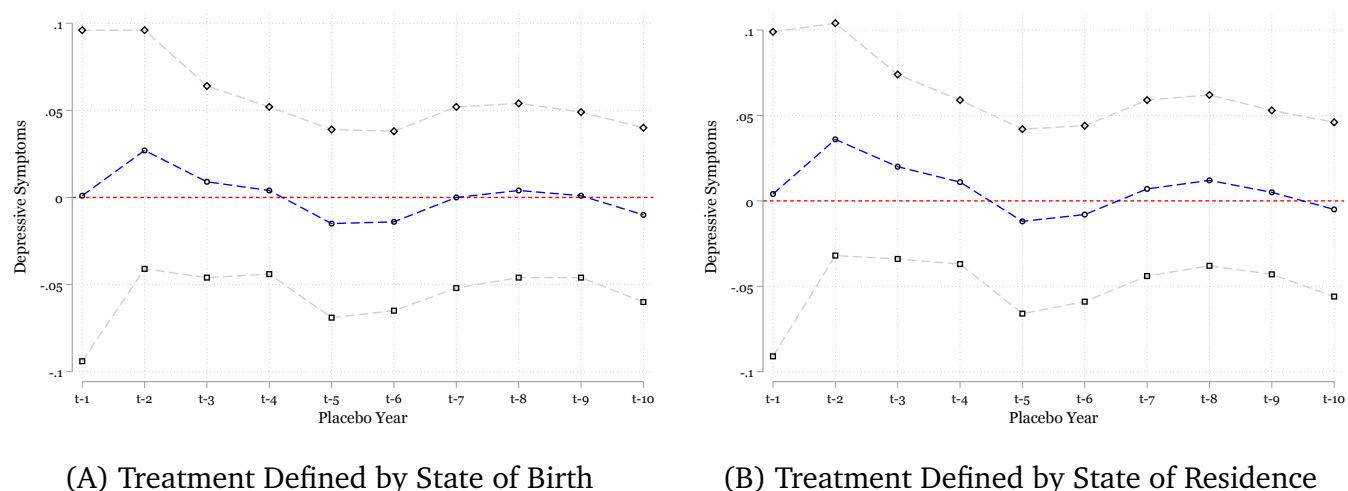
Notes: The sample consists of HSAA-eligible-religion women (Hindu, Sikh, Buddhist, or Jain) from the Longitudinal Aging Study in India (LASI) who were not actually treated by the HSAA. Each point corresponds to the estimated effect of a placebo treatment assigned k years prior to the actual reform year in the respondent's state, using Equation (2). The outcome is a binary indicator for depressive symptoms. Covariates include age, Scheduled Caste/Tribe status, and rural residence. Each regression includes state-of-birth and year-of-marriage fixed effects.

Second, all primary results are estimated using two alternative definitions of treatment: one based on the respondent's state of birth and the other based on state of residence.[16] This dual definition serves two purposes. First, it addresses concerns that marriage market selection may be

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[16]In our sample, 10% of respondents have migrated out of their birth state, while 90% continue to reside in their state of birth.

correlated with inheritance prospects. For example, if women expecting to benefit from the HSAA were more likely to marry within their reform state, and those expecting to be disinherited were more likely to marry outside it, relying on either treatment definition alone may introduce bias. The robustness of results to both definitions alleviates this concern. Second, because prior studies on the HSAA have primarily defined treatment by state of residence due to data limitations (Roy, 2015; Heath and Tan, 2020; Mookerjee, 2019), showing consistent results across both definitions strengthens the credibility of our findings and addresses potential concerns about measurement error in the broader literature.

Third, we estimate a triple-differences specification to account for potential differential trends across religious groups, following a approach similar to Calvi (2020). Specifically, we estimate the following equation:

$$\text{Depressive Symptoms}_{irsc} = \beta\,\text{HSAA Exposed}_{irsc} + X'_{irsc}\gamma + \alpha_r + \alpha_c + \alpha_s + \alpha_{rs} + \alpha_{rc} + \alpha_{sc} + \epsilon_{irsc}$$

The dependent variable Depressive Symptoms$_{irsc}$ is an indicator equal to 1 if individual i, of religion r, living in state s and born in cohort c, has a matched CES-D score of 8 or higher. The main explanatory variable HSAA Exposed$_{irsc}$ is an indicator equal to 1 if the individual belongs to a religion eligible under the HSAA (Hindu, Sikh, Buddhist, or Jain) and was married after the amendment was implemented in her state. The vector X_{irsc} includes controls for rural residence and membership in a scheduled caste or scheduled tribe, and fixed effects for religion (α_r), cohort (α_c), and state of residence (α_s), along with all two-way interactions among these dimensions ($\alpha_{rs}, \alpha_{rc}, \alpha_{sc}$) to flexibly control for group-specific trends. Standard errors are clustered at the primary sampling unit level. The results are robust to alternative clustering levels, including state-cohort, state-religion, cohort-religion, and state-cohort-religion combinations.

Table A4 in the Appendix reports the results for our primary outcome of interest—depressive symptoms. Panel A, column (1) of Table A4 shows that the HSAA reduced depressive symptoms among HSAA-eligible-religion women by 5.4 percentage points, corresponding to a 17% decline relative to the control mean of 32.4% (p-value< 0.01). This effect is similar to the estimates reported in Table 2 using two-way fixed effects (TWFE). In contrast, Panel B, column (1) shows no significant impact of the HSAA on depressive symptoms for HSAA-eligible-religion men. Taken together with the placebo tests, these results suggest that our findings are not driven by broader,

religion-specific time trends—such as increasing economic empowerment among certain religious group.

Fourth, we address concerns related to the endogeneity of treatment timing, given that a woman's year of marriage—which determines her exposure to the HSAA—is an endogenous choice. We follow an approach similar to Heath and Tan (2020) and Calvi (2020) to address this concern in two ways. First, we estimate an intent-to-treat (ITT) specification, where HSAA eligibility is defined based on a woman's state of birth, religion, and year of birth rather than her year of marriage. Specifically, we compare women aged 14 or younger when the HSAA was implemented in their state (and thus likely to marry under the amended law) to those aged 24 or older (and thus likely married before the reform). Second, we implement an instrumental variables (IV) strategy in which actual HSAA exposure (based on marriage timing) is instrumented using this eligibility measure. The IV exclusion restriction for identification is that HSAA eligibility affects psychological outcomes only through actual exposure to the amended inheritance laws. This assumption is plausible, as other policies or social changes affecting young women during this period are unlikely to vary systematically by religion, and are accounted for through cohort-by-state fixed effects. Table A5 shows that our main result is robust to these specifications. Lastly, to further address concerns about endogenous marriage timing, we control directly for age at marriage in our triple-difference specification. Despite mixed findings in the literature regarding HSAA's impact on women's age at marriage (Roy, 2015; Calvi, 2020; Heath and Tan, 2020), we find that our main result remains qualitatively unchanged when age at marriage is included as a covariate (Panel A, column (3), and Panel B, column (3) of Table A4).

Finally, we perform a series of robustness tests to address a well-documented concern with the two-way fixed effects (TWFE) estimator in settings with staggered treatment adoption—namely, that it may yield biased estimates when treatment effects are heterogeneous (Goodman-Bacon, 2021; De Chaisemartin and d'Haultfoeuille, 2020). First, we implement the diagnostic in De Chaisemartin and d'Haultfoeuille (2020) and determine that treatment effect heterogeneity is not a critical concern in our context. Further, we re-estimate the effects of the HSAA on women's mental health using two recent estimators that are robust to treatment effect heterogeneity: the imputation estimator proposed by Borusyak et al. (2024), and the doubly robust difference-in-differences estimator of Callaway and Sant'Anna (2021), and show that our results remain qualitatively un-

changed. We elaborate on these tests and discuss the results in detail in the Appendix, Section B.

Taken together, all of our robustness checks provide evidence that the HSAA led to a reduction in depressive symptoms among the women who were exposed to it.

6.3   Potential Mechanisms Underlying the Impact of HSAA on Mental Health

Having established our main finding—that HSAA-eligible women experienced significant improvements in psychological outcomes—we now turn to investigating the underlying mechanisms driving these effects. We focus on two key channels: economic empowerment and social empowerment through enhanced autonomy.

Economic Empowerment via Land Ownership.   We begin by examining the role of economic empowerment, using land ownership as a proxy for household resource access. While this measure has important limitations—most notably, our inability to distinguish land acquired through the husband's family from land inherited by the wife—it still provides informative evidence on whether treated households experienced net increases in asset ownership.[17]

Table 6 presents the results. Among HSAA-eligible-religion respondents in reform states, those married after the HSAA are 4.2 percentage points more likely to belong to a landowning household—a 9% increase relative to the control mean of 47% (p-value< 0.05), controlling for covariates. In contrast, the corresponding coefficient for HSAA-non-eligible-religion respondents is small and statistically insignificant. These results are robust to defining treatment either by state of birth or state of residence.

Although land ownership is a coarse and indirect measure of wealth, the pattern is consistent with earlier findings that the HSAA increased land inheritance among women (Deininger et al., 2013) and raised net transfers from women's natal families (Roy, 2015). Together, these findings point at the scope of economic empowerment—potentially via enhanced property rights—in improving mental health outcomes.

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[17]The data records nominal land ownership within the household, typically assigning ownership to the household head, with co-owners noted in some cases.

Social Empowerment via Autonomy. While economic resources may contribute directly to improved psychological well-being, another potential channel is social empowerment—specifically, increased autonomy within the household from strengthened inheritance rights. Enhanced legal rights may raise a woman's social standing in her marital family, increasing her influence in household decision-making (Roy, 2008). Notably, improvements in autonomy for both women and men are consistent with Mookerjee (2019), who finds that increased female bargaining power—driven by transitions from joint to nuclear family living arrangements—can benefit both spouses, at the expense of older household members.

To assess this mechanism, we construct an autonomy index based on LASI survey questions covering five domains: (i) arranging a son's or daughter's marriage, (ii) buying or selling property, (iii) giving gifts to children, grandchildren, or relatives, (iv) education of family members, and (v) organizing social or religious events. Respondents report whether they have no role, decide alone, contribute to the decision, or if the item is not applicable. For each domain, we create a binary indicator coded 1 if the respondent participates in decision-making (either deciding alone or contributing), and 0 otherwise. We then aggregate these indicators using principal component analysis (PCA), defining the autonomy index as the first principal component, normalized to have mean zero and standard deviation one among untreated HSAA-eligible-religion women.

Table 7 presents the results. Autonomy increased significantly for both HSAA-eligible-religion women and men in reform states who married after the HSAA. For HSAA-eligible-religion women, the autonomy index increased by 0.105σ (p-value< 0.05) when treatment is defined by state of birth, and by 0.114σ (p-value< 0.05) when defined by state of residence. HSAA-eligible-religion men also experienced modest gains in autonomy—0.042σ (state of birth) and 0.044σ (state of residence)—though these estimates are not statistically significant at conventional levels. In contrast, there is no evidence of any effect on autonomy among HSAA-non-eligible-religion men or women.

Table 6: Effect of HSAA on Land Ownership

	Panel A: Treatment defined by State of Birth			
	(1) Own Land	(2) Own Land	(3) Own Land	(4) Own Land
Treated (state of birth)	0.032	0.042**	0.008	0.013
	(0.021)	(0.018)	(0.036)	(0.035)
Observations	39,194	39,194	11,341	11,341
Mean of Dep. Variable (Control)	0.469	0.469	0.420	0.420
Covariates	No	Yes	No	Yes
HSAA Eligible Religion	Yes	Yes	No	No
	Panel B: Treatment defined by State of Residence			
	(1) Own Land	(2) Own Land	(3) Own Land	(4) Own Land
Treated (state of res)	0.028	0.042**	-0.036	-0.023
	(0.022)	(0.018)	(0.036)	(0.032)
Observations	39,645	39,645	11,375	11,375
Mean of Dep. Variable (Control)	0.469	0.469	0.420	0.420
Covariates	No	Yes	No	Yes
HSAA Eligible Religion	Yes	Yes	No	No

Notes: The sample consists of women and men from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. HSAA eligible religions are Hindu, Buddhist, Sikh or Jain. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied.

Table 7: Effect of HSAA on Autonomy

	Panel A: Treatment defined by State of Birth			
	(1) Autonomy Index	(2) Autonomy Index	(3) Autonomy Index	(4) Autonomy Index
Treated (state of birth)	0.105**	-0.023	0.042	-0.045
	(0.048)	(0.098)	(0.029)	(0.056)
Observations	16,611	5,040	13,854	4,063
Mean of Dep. Variable (Control)	-0.000	0.026	0.154	0.105
Women Sample	Yes	Yes	No	No
HSAA Eligible Religion	Yes	No	Yes	No
	Panel B: Treatment defined by State of Residence			
	(1) Autonomy Index	(2) Autonomy Index	(3) Autonomy Index	(4) Autonomy Index
Treated (state of res)	0.114**	-0.008	0.044	-0.039
	(0.049)	(0.095)	(0.028)	(0.055)
Observations	16,799	5,060	14,038	4,073
Mean of Dep. Variable (Control)	0.002	0.026	0.154	0.106
Women Sample	Yes	Yes	No	No
HSAA Eligible Religion	Yes	No	Yes	No

Notes: The sample consists of women and men drawn from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. HSAA eligible religions are Hindu, Buddhist, Sikh or Jain. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied.
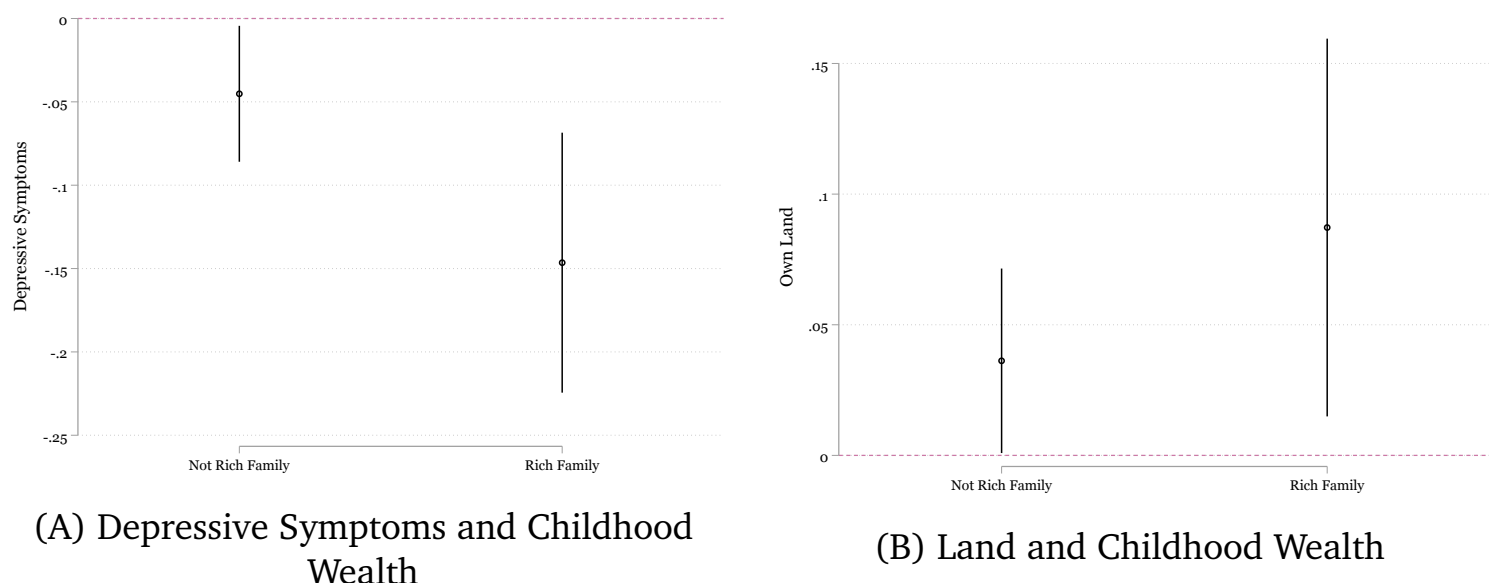
6.4 Heterogenous Effects of the HSAA

Figure 2: Depressive Symptoms and Land Ownership

(A) Depressive Symptoms and Childhood Wealth

(B) Land and Childhood Wealth

Note: The sample consists of Hindu, Buddhist, Sikh or Jain women from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. Sampling weights applied. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The childhood family wealth indicator is derived from a question asking respondents to reflect on their family's financial status during their childhood (from birth to age 16) compared to other families in their community. The response options were: 1. Pretty well off financially, 2. Average, 3. Poor, 4. Varied. A family is classified as rich if the respondent answered 1 to the above question; otherwise, the family is classified as not rich.

Our main finding shows that the HSAA significantly improved the mental health outcomes of treated women. We now examine the heterogeneity of this effect to understand how the policy's impact varies with women's family wealth. Specifically, we test whether the observed mental health improvements are more pronounced among women who stood to gain more from increased inheritance rights—specifically, those from relatively affluent families. The LASI questionnaire asked respondents to subjectively assess their natal family's economic status during childhood (from birth to age 16) relative to other households in their community. Based on this, we construct an indicator for whether a respondent grew up in a relatively wealthy household.

Figure 2, Panel (A), shows that the reduction in depressive symptoms is significantly larger for treated women who report being from relatively well-off backgrounds. The coefficient on the interaction between HSAA exposure and childhood family wealth is -0.10 (p-value< 0.05), indicating stronger mental health gains for women from more advantaged natal households. In Panel (B), we examine heterogeneity in household land ownership—an indirect measure of po-

29

tential inheritance. We find that current household landholding is higher for treated women from wealthier childhood backgrounds, although the interaction term is not statistically significant at conventional levels. The coefficient on the interaction is 0.05 (p-value $= 0.14$). These results offer suggestive evidence consistent with the idea that women from landowning households are more likely to inherit land and, in turn, benefit more from the HSAA. Together, these findings highlight the importance of baseline affluence in mediating the impact of inheritance reforms on women's well-being and resource access.

6.5 Discussion

Our findings align with the social implications of the HSAA reform documented in previous studies. First, Amaral (2017) demonstrates that violence against women decreases due to improved marriage market negotiations, which may have contributed to the improvements observed in mental health outcomes. Second, Bahrami-Rad (2021) provides evidence that treated girls were more likely to marry paternal cousins, arranged by their families as a strategy to keep property within the male lineage. These continued ties with natal families and proximity through consanguineous marriages may have also contributed to lower rates of depression and loneliness among women. Lastly, Bose and Das (2024) show that the HSAA increased fertility among treated women, as well as a higher proportion of sons for a given family size. In line with Becker (1973, 1992) and Angelucci and Bennett (2021), fertility outcomes can be considered a measure of gains from marriage. Thus, increased gains from marriage may have potentially led to improvements in psychological outcomes for treated women and their husbands.

Our findings also potentially contribute to understanding the status and survival of women in India. Calvi (2020) shows that the HSAA increased women's share of household resources and reduced individual-level female poverty, providing suggestive evidence that the reform helped mitigate the "missing women" phenomenon (Sen, 1992; Coale, 1991; Anderson and Ray, 2010) by reducing excess female mortality at older ages. Consistent with this channel, we document significantly higher rates of depressive symptoms among older women compared to men in India (see Table 1), echoing broader gender disparities in mental health. Moreover, recent evidence from Banerjee et al. (2023) establishes a strong association between depressive symptoms and short-run mortality risk in LMICs. Taken together, our results suggest a novel pathway through

which legal empowerment policies like the HSAA may contribute to narrowing gender gaps in late-life survival—namely, by reducing the burden of depression among older women.

7 Conclusion

In this paper, we study the impact of women's empowerment on psychological well-being by exploiting a natural experiment in India: state-level amendments to inheritance laws that granted women equal rights to ancestral property. Using a difference-in-differences framework, we find that the reform significantly improved women's mental health across multiple dimensions. Specifically, exposure to the policy reduced the likelihood of depressive symptoms by 5.9–6.4 percentage points and improved a composite mental health index by 0.08σ to 0.093σ.

Depression symptoms are strong predictors of future mortality (Banerjee et al., 2023); further, mental health and its social, economic, and public health consequences have been of significant concern to policymakers in India (Ranade et al., 2022) as well as globally (Galea and Ettman, 2021). According to Charlson et al. (2016), one-third of global Disability-Adjusted Life Years (DALYs) due to mental, neurological, and substance use disorders occur in China and India, highlighting the need for prevention, early identification, and effective treatment programs. Our findings demonstrate the effectiveness of policies enhancing women's agency and economic standing in addressing these challenges.

8 Declaration of generative AI in scientific writing statement

This Declaration of generative AI in scientific writing is regarding our paper "Economic Empowerment and Mental Health: Evidence from India" While preparing this work, the authors used ChatGPT to improve the manuscript's readability and language. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the article's content.

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A   Additional Tables and Figures

Table A1: Illustrative Scenarios: Impact of HSAA on Men's Inheritance Outcomes

#	Sisters' Marital Status	Own Marriage Timing	HSAA-Eligible Sister	HSAA-Eligible Wife	Net Impact on Man
1	No sisters	Pre-reform	No	No	None
2	No sisters	Post-reform	No	Yes	Positive
3	Sister already married	Pre-reform	No	No	None
4	Sister already married	Post-reform	No	Yes	Positive
5	Unmarried sister	Pre-reform	Yes	No	Negative
6	Unmarried sister	Post-reform	Yes	Yes	Ambiguous

Notes: "HSAA-eligible sister" refers to a sister who was unmarried when the HSAA was enacted in her state and married after the reform, thereby becoming eligible for inheritance under the amended law. "Marriage timing" refers to the respondent man's year of marriage relative to the reform. "Wife gains inheritance" indicates whether the man's wife is eligible for inheritance rights (i.e., married post-reform in a reform state). The "Net Impact on Man" reflects the expected inheritance-related consequences, combining potential gains through the wife and losses through the sister.

Table A2: Missing CES-D Score

	(1) Missing CES-D Score	(2) Missing CES-D Score	(3) Missing CES-D Score	(4) Missing CES-D Score
Treated (state of birth)	-0.001	0.014	-0.006	0.010
	(0.009)	(0.016)	(0.008)	(0.019)
Observations	21,822	6,407	17,372	4,934
Mean of Dep. Variable (Control)	0.016	0.012	0.025	0.021
Women Sample	Yes	Yes	No	No
HSAA Eligible Religion	Yes	No	Yes	No

Notes: The sample consists of women and men from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. All regressions include individual's year of marriage and state of birth fixed effects. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied.

Table A3: Effect on Mental Health: Life Satisfaction

	Panel A: Treatment defined by State of Birth			
	(1) Life Satisfaction Index	(2) Life Satisfaction Index	(3) Life Satisfaction Index	(4) Life Satisfaction Index
Treated (state of birth)	0.251***	-0.065	0.198***	0.157
	(0.056)	(0.101)	(0.047)	(0.124)
Observations	21,448	6,317	16,940	4,811
Mean of Dep. Variable (Control)	-0.000	-0.005	0.044	0.039
Women Sample	Yes	Yes	No	No
HSAA Eligible Religion	Yes	No	Yes	No
	Panel B: Treatment defined by State of Residence			
	(1) Life Satisfaction Index	(2) Life Satisfaction Index	(3) Life Satisfaction Index	(4) Life Satisfaction Index
Treated (state of res)	0.253***	-0.074	0.190***	0.196
	(0.058)	(0.098)	(0.048)	(0.122)
Observations	21,673	6,339	17,159	4,823
Mean of Dep. Variable (Control)	-0.000	-0.005	0.044	0.039
Women Sample	Yes	Yes	No	No
HSAA Eligible Religion	Yes	No	Yes	No

Notes: The sample consists of women and men from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied.

Table A4: Effect of HSAA on Depressive Symptoms: Triple Difference-in-Differences

	Panel A: Women		
	(1) Depressive Symptoms	(2) Depressive Symptoms	(3) Depressive Symptoms
HSAA Exposed	-0.054*** (0.016)	-0.046*** (0.015)	-0.040** (0.016)
Age at Marriage			-0.001 (0.001)
Observations	28,633	28,633	28,632
Mean of Dep. Variable (Control)	0.324	0.324	0.324
Covariates	No	Yes	Yes
Age at Marriage	No	No	Yes
	Panel B: Men		
	(1) Depressive Symptoms	(2) Depressive Symptoms	(3) Depressive Symptoms
HSAA Exposed	-0.022 (0.018)	-0.015 (0.018)	-0.009 (0.019)
Age at Marriage			-0.001 (0.001)
Observations	22,434	22,434	22,434
Mean of Dep. Variable (Control)	0.292	0.292	0.292
Women Sample	No	No	No
Covariates	No	Yes	Yes
Age at Marriage	No	No	Yes

Notes: The sample consists of women (Panel A) and men (Panel B) from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. * significant at 10%; ** significant at 5%; *** significant at 1%. All specifications include a religion indicator, equal to 1 if a woman is Hindu, Buddhist, Sikh or Jain, state and cohort fixed effects, and state-religion, state-cohort, and religion-cohort fixed effects. Covariates include indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level.

Table A5: Effect on Depressive Symptoms: Triple Difference-in-Differences by Eligibility (Women)

	Panel A: Treatment Defined by HSAA Eligibility by Age	
	(1) Depressive Symptoms	(2) Depressive Symptoms
HSAA Eligibility	-0.088**	-0.090***
	(0.033)	(0.034)
Observations	25,322	25,322
Mean of Dep. Variable (Control)	0.321	0.321
Covariates	No	Yes

	Panel B: HSAA Eligibility by Age as an Instrument Variable
	(1) Depressive Symptoms
HSAA Exposed	-0.109**
	(0.043)
Observations	25,466
Mean of Dep. Variable (Control)	0.324
Kleibergen-Paap F-statistic	646.410

Notes: The sample includes women from the Longitudinal Ageing Study in India (LASI) who were married between 1970 and 2005. *HSAA eligibility* is defined as an interaction between an indicator variable equal to 1 if the individual was 14 years old or younger in the year the Hindu Succession Act Amendment (HSAA) was passed in their state of birth, and 0 if the individual was 23 years old in that year and a religion indicator, equal to 1 if a woman is Hindu, Buddhist, Sikh or Jain. In Panel B: *HSAA exposed* is instrumented with *HSAA eligibility*. * significant at 10%; ** significant at 5%; *** significant at 1%. All specifications include a religion indicator, equal to 1 if a woman is Hindu, Buddhist, Sikh or Jain, state and cohort fixed effects, and state-religion, state-cohort, and religion-cohort fixed effects. Covariates include indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the state-religion-level.

B Robustness Tests: Staggered Implementation and Treatment Effect Heterogeneity

A well-documented concern with the two-way fixed effects (TWFE) estimator in settings with staggered treatment adoption is that it may yield biased estimates when treatment effects are heterogeneous. When treatment effects vary across units and/or time, the TWFE estimate of the average treatment effect on the treated (ATT) is a weighted average of the underlying effects τ_{it}, where some unit-time observations can receive negative weights (Goodman-Bacon, 2021; De Chaisemartin and d'Haultfoeuille, 2020). This arises because the TWFE estimator combines two types of comparisons: (i) "clean" comparisons between treated and not-yet-treated units, and (ii) "forbidden" comparisons between already-treated units that received treatment at different times. The

latter can distort the overall estimate, particularly when treatment effects are dynamic or differ across cohorts.

First, to assess the robustness of our two-way fixed effects (TWFE) estimates to treatment effect heterogeneity, we implement the diagnostic in De Chaisemartin and d'Haultfoeuille (2020). This method estimates the minimum amount of heterogeneity—expressed as the standard deviation of group-time treatment effects—required for the TWFE estimate β_1 to differ in sign from the true ATT. The authors propose the following rule of thumb under the assumption that group-time treatment effects are drawn from a uniform distribution: Suppose that the treatment effects across group-time cells are bounded in absolute value by some constant $B > 0$. Then, if the absolute value of the estimated coefficient satisfies $|\hat{\beta}_1| \geq \hat{\underline{\sigma}} \cdot \sqrt{3}$, the observed estimate could be compatible with an average treatment effect of zero, as long as $\hat{\underline{\sigma}}$ does not represent an implausibly large degree of treatment effect heterogeneity. In contrast, if $|\hat{\beta}_1| < \hat{\underline{\sigma}} \cdot \sqrt{3}$, the estimate may or may not be consistent with a zero average effect, depending on whether the maximum plausible treatment effect B is less than or greater than $\hat{\underline{\sigma}} \cdot \sqrt{3}$. Because the true value of B is unknown, we interpret estimates as robust to treatment effect heterogeneity when $|\hat{\beta}_1| < \hat{\underline{\sigma}} \cdot \sqrt{3}$ similar to Calvi and Keskar (2023). Across all our outcomes for HSAA-eligible-religion and HSAA-non-eligible-religion women and men, as presented in Tables 2, 3, 4, and 5, we do not find treatment effect heterogeneity to be a critical concern, as shown by the reported $\hat{\underline{\sigma}}$. Finally, in Table A6, we report the Stata output from the `twowayfeweights` command (De Chaisemartin and d'Haultfoeuille, 2020) for HSAA-eligible-religion women, using depressive symptoms as the outcome. Under the common trends assumption, the two-way fixed effects (TWFE) estimate of -0.0587 represents a weighted average of 98 group-by-time average treatment effects on the treated (ATTs). Of these, 88 receive positive weights summing to 1.0120, while 10 receive negative weights summing to -0.0123, indicating that the estimate is nearly a convex combination of the underlying ATTs.[18]

To further address this issue, we re-estimate the effects of the HSAA on women's mental health using two recent estimators that are robust to treatment effect heterogeneity: the imputation estimator proposed by Borusyak et al. (2024), and the doubly robust difference-in-differences estimator of Callaway and Sant'Anna (2021). Both approaches avoid the negative weighting problem inherent in TWFE and provide more reliable estimates in the presence of variation in treatment effects across groups or over time.

First, we use the imputation estimator of Borusyak et al. (2024). The method estimates unit and time-fixed effects using only untreated observations. These fixed effects—denoted $\hat{\gamma}_i$ and $\hat{\lambda}_t$—are then used to impute counterfactual untreated potential outcomes for the treated units in post-treatment periods. For each treated observation, the treatment effect is estimated as: $\hat{\tau}_{it} = Y_{it} - \hat{\gamma}_i - \hat{\lambda}_t$. Finally, the individual treatment effects $\hat{\tau}_{it}$ are aggregated using weights that correspond to the desired estimand—such as the average treatment effect on the treated (ATT), as in our case. Therefore, the procedure avoids using already-treated units as controls, thereby eliminating the problematic "forbidden comparisons" that can bias traditional two-way fixed effects estimates. Table A7 presents results from the imputation estimator of Borusyak et al. (2024).

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[18]Similar decompositions for other outcomes, for HSAA-non-eligible-religion women and men and HSAA-eligible-religion men, defining treatment using state of birth or state of residence are omitted for brevity but are available upon request.

Using this method, we find that HSAA exposure significantly reduces depressive symptoms among HSAA-eligible-religion women. When treatment is defined by the respondent's state of birth, the reform leads to a 5.2 percentage point decline in depressive symptoms, corresponding to a 16% reduction relative to the control mean of 32% (p-value< 0.05). When treatment is defined by the state of residence, the effect is a 5.6 percentage point decline or an 18% reduction relative to the same control mean (p-value< 0.01). In contrast, the estimated effects for all other groups—HSAA-non-eligible-religion women and both male subsamples—are small in magnitude and statistically insignificant. These findings are similar to the results reported using the two-way fixed effects estimator in Table 2, and show that the mental health impacts of the HSAA were primarily concentrated among women targeted by the reform.

Second, we implement the doubly robust difference-in-differences estimator proposed by Callaway and Sant'Anna (2021) (CSDID), which allows for treatment effect heterogeneity across groups and over time. This approach estimates group-time-specific treatment effects and then aggregates them into an overall average treatment effect on the treated (ATT) using user-specified weights. Unlike traditional TWFE, CSDID avoids contamination from already-treated units and can accommodate dynamic treatment effects. We report results using two alternative control groups: (i) never-treated units, and (ii) never-treated and not-yet-treated units. Table A8 reports the estimated ATT for HSAA-eligible-religion women across both specifications. Using never-treated units as the control group, the HSAA reduces depressive symptoms by 7.7 percentage points (a 24% reduction relative to the control mean of 32%; p-value< 0.10). When using units that have not yet been treated alongside units that have never been treated as the control group, the estimated reduction is 8.1 percentage points (a 25% reduction relative to the control mean of 32%; p-value< 0.10). Further, the pre-trend tests yield p-values of 0.13 and 0.14 for the never-treated and not-yet-treated specifications, respectively, indicating no statistically significant differences in trends prior to the reform. These findings support the credibility of the parallel trends assumption and provide further evidence that the observed mental health improvements can be attributed to the HSAA.

Table A6: Treatment Effect Heterogeneity: Depressive Symptoms Outcome, HSAA-Eligible-Religion Women (De Chaisemartin and d'Haultfoeuille, 2020)

```
Under the common trends assumption,
the TWFE coefficient beta, equal to -0.0587, estimates a weighted sum of 98 ATTs.
88 ATTs receive a positive weight, and 10 receive a negative weight.

Treat. var: after_birth        # ATTs          ∑ weights
Positive weights        88             1.0120
Negative weights        10            -0.0123
-----------------------
Total                   98             0.9997

Summary Measures:
TWFE coefficient (β_fe) =      -0.0587
min σ(Δ) compatible with β_fe and Δ_TR = 0:      0.1296
min σ(Δ) compatible with treatment effect of opposite sign
    than β_fe in all (g,t) cells:              0.9119

Reference:  Corollary 1, De Chaisemartin and d'Haultfoeuille (2020).
Results computed using the twowayfeweights command in Stata.
Note:  This result is for the depressive symptoms outcome, with treatment defined using state of birth.
Note:  Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence.
Note:  Standard errors are clustered at the secondary sampling (villages/urban wards) unit level.  Sampling weights applied.
```

Table A7: Effect of HSAA on Mental Health: Imputation Estimator (Borusyak et al., 2024)

	Panel A: Treatment defined by State of Birth			
	(1) Depressive symptoms	(2) Depressive symptoms	(3) Depressive symptoms	(4) Depressive symptoms
τ	-0.052**	0.018	0.015	0.010
	(0.021)	(0.047)	(0.019)	(0.054)
Observations	21,678	6,348	17,162	4,837
Control Mean	0.320	0.301	0.289	0.273
Sample	Eligible-Religion Women	Non-Eligible-Religion Women	Eligible-Religion Men	Non-Eligible-Religion Women

	Panel B: Treatment defined by State of Residence			
	(1) Depressive symptoms	(2) Depressive symptoms	(3) Depressive symptoms	(4) Depressive symptoms
τ	-0.056***	0.029	0.017	0.013
	(0.021)	(0.048)	(0.020)	(0.057)
Observations	21,678	6,348	17,162	4,837
Control Mean	0.320	0.301	0.289	0.273
Sample	Eligible-Religion Women	Non-Eligible-Religion Women	Eligible-Religion Men	Non-Eligible-Religion Women

Notes: The sample consists of women and men from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include indicators for belonging to a Scheduled Caste or Tribe and rural residence. HSAA eligible religions are Hindu, Buddhist, Sikh or Jain. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. Sampling weights applied. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. τ estimate is obtained from the imputation estimator in Borusyak et al. (2024).

Table A8: Effect of HSAA on Mental Health: HSAA-Eligible-Religion Women (Callaway and Sant'Anna, 2021)

	(1) Depressive symptoms	(2) Depressive symptoms
ATT	-0.077*	-0.081*
	(0.042)	(0.042)
Control Group	Never Treated	Not Yet Treated
Pretrend Test (Chi-squared)	68.87	68.66
Pretrend Test (p-value)	0.13	0.14

Notes: The sample consists of Hindu, Buddhist, Sikh or Jain women from the Longitudinal Ageing Study in India (LASI) who were married between 1970 and 2010. Estimates are computed using the doubly robust difference-in-differences (DiD) estimator in Sant'Anna and Zhao (2020), implemented using the `csdid` package in Stata (Callaway and Sant'Anna, 2021; Sant'Anna and Zhao, 2020). Estimates use either (i) only never-treated observations as the control group or (ii) both never-treated and not-yet-treated observations. Covariates include indicators for Scheduled Caste or Tribe membership and rural residence. The *p*-value for the null hypothesis that all pre-treatment ATTGTs (average treatment effect on the treated by group and time) are jointly zero is 0.135 when using only never-treated observations, and 0.139 when using both never-treated and not-yet-treated observations. Standard errors are computed using a multiplicative Wild Bootstrap procedure. * significant at 10%; ** significant at 5%; *** significant at 1%. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4.

C Results Excluding Kerala

Table A9: Effect on Mental Health: HSAA-Eligible-Religion Women

	Panel A: Treatment defined by State of Birth					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of birth)	-0.057***	-0.108**	-1.783***	-0.058***	-0.110**	-1.816***
	(0.021)	(0.045)	(0.624)	(0.020)	(0.044)	(0.621)
Observations	20,793	20,793	20,793	20,793	20,793	20,793
Mean of Dep. Variable (Control)	0.322	0.001	27.422	0.322	0.001	27.422
Covariates	No	No	No	Yes	Yes	Yes
	Panel B: Treatment defined by State of Residence					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of res)	-0.064***	-0.115**	-1.869***	-0.064***	-0.115***	-1.886***
	(0.021)	(0.045)	(0.624)	(0.021)	(0.045)	(0.624)
Observations	21,017	21,017	21,017	21,017	21,017	21,017
Mean of Dep. Variable (Control)	0.322	0.002	27.430	0.322	0.002	27.430
Covariates	No	No	No	Yes	Yes	Yes

Notes: The sample consists of HSAA-eligible religions (Hindu, Sikh, Buddhist, or Jain) women drawn from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005, excluding the state of Kerala. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome.

Table A10: Effect on Mental Health: HSAA-Non-Eligible-Religion Women

	Panel A: Treatment defined by State of Birth					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of birth)	-0.023	-0.094	-1.469	-0.021	-0.092	-1.433
	(0.050)	(0.102)	(1.462)	(0.050)	(0.102)	(1.458)
Observations	5,901	5,901	5,901	5,901	5,901	5,901
Mean of Dep. Variable (Control)	0.299	-0.004	26.708	0.299	-0.004	26.708
Covariates	No	No	No	Yes	Yes	Yes

	Panel B: Treatment defined by State of Residence					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of res)	-0.037	-0.041	-1.995	-0.032	-0.032	-1.845
	(0.049)	(0.097)	(1.462)	(0.049)	(0.097)	(1.460)
Observations	5,922	5,922	5,922	5,922	5,922	5,922
Mean of Dep. Variable (Control)	0.300	-0.005	26.727	0.300	-0.005	26.727
Covariates	No	No	No	Yes	Yes	Yes

Notes: The sample consists of HSAA-non-eligible religions (Muslim, Christian, Jewish, Parsi/Zoroastrian, no religion specified, or categorized as "Others") women drawn from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005, excluding the state of Kerala. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome.

Table A11: Effect on Mental Health: HSAA-Eligible-Religion Men

	Panel A: Treatment defined by State of Birth					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of birth)	-0.030	-0.061	-1.314	-0.030	-0.061	-1.298
	(0.025)	(0.053)	(0.836)	(0.025)	(0.053)	(0.817)
Observations	16,463	16,463	16,463	16,463	16,463	16,463
Mean of Dep. Variable (Control)	0.290	-0.058	26.571	0.322	0.001	27.422
Covariates	No	No	No	Yes	Yes	Yes

	Panel B: Treatment defined by State of Residence					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of res)	-0.028	-0.057	-1.048	-0.027	-0.054	-0.990
	(0.023)	(0.051)	(0.715)	(0.023)	(0.051)	(0.705)
Observations	16,681	16,681	16,681	16,681	16,681	16,681
Mean of Dep. Variable (Control)	0.290	-0.057	26.573	0.290	-0.057	26.573
Covariates	No	No	No	Yes	Yes	Yes

Notes: The sample consists of HSAA-eligible religions (Hindu, Sikh, Buddhist, or Jain) men drawn from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005, excluding the state of Kerala. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome.

Table A12: Effect on Mental Health: HSAA-Non-Eligible-Religion Men

	Panel A: Treatment defined by State of Birth					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of birth)	-0.001	0.091	0.153	0.003	0.109	0.354
	(0.061)	(0.138)	(1.876)	(0.061)	(0.140)	(1.894)
Observations	4,508	4,508	4,508	4,508	4,508	4,508
Mean of Dep. Variable (Control)	0.269	-0.079	25.707	0.269	-0.079	25.707
Covariates	No	No	No	Yes	Yes	Yes

	Panel B: Treatment defined by State of Residence					
	(1) Depressive symptoms	(2) Mental Health Index	(3) Matched CES-D Score (%)	(4) Depressive symptoms	(5) Mental Health Index	(6) Matched CES-D Score (%)
Treated (state of res)	-0.030	0.018	-0.902	-0.028	0.034	-0.740
	(0.054)	(0.129)	(1.638)	(0.055)	(0.130)	(1.646)
Observations	4,520	4,520	4,520	4,520	4,520	4,520
Mean of Dep. Variable (Control)	0.270	-0.079	25.726	0.270	-0.079	25.726
Covariates	No	No	No	Yes	Yes	Yes

Notes: The sample consists of HSAA-non-eligible religions (Muslim, Christian, Jewish, Parsi/Zoroastrian, no religion specified, or categorized as "Others") men drawn from the Longitudinal Ageing Study in India (LASI) married between 1970 and 2005, excluding the state of Kerala. All regressions include individual's year of marriage and state of birth (or state of residence) fixed effects. Covariates include age, and indicators for belonging to a Scheduled Caste or Tribe and rural residence. Standard errors are clustered at the secondary sampling (villages/urban wards) unit level. * significant at 10%; ** significant at 5%; *** significant at 1%. Sampling weights applied. Depressive symptoms are measured using a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) (Björgvinsson et al., 2013). While the standard cutoff for identifying individuals at risk of depression using the full 10-item CES-D is a score of 10 or higher, we use an adjusted threshold of 8. This adjustment accounts for proportional scaling, as only 8 of the 10 items from the original CES-D are included in the LASI questionnaire. Matched CES-D Score (%) is calculated as the respondent's CES-D score expressed as a percentage of the maximum possible score (24). Depressive Symptoms is an indicator variable equal to 1 if the 8-item CES-D score (out of 24) is greater than or equal to 8. For further details on the construction of mental health measures, see Section 4. The mental health index is negatively coded, higher value of the index indicates a more negative outcome.