

Swaying Gender Norms Around Women's Work in Indonesia: Evidence from an Online Intervention

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Abstract

How to influence social norms that drive behavior in relation to women's participation in employment is not well understood. We report results from an online survey and intervention with over 4000 Indonesian men and women. We first describe social norms in relation to married women with children participating in the labor market in Indonesia. Our data show that respondents underestimate women's support for working women and the level of support among men for sharing childcare. Respondents report that the support of mothers and mothers-in-law is most important when deciding whether the wife in the household works. We then experimentally test whether providing information to individuals on i) women's level of support for women with children working outside the home; ii) husband's support for sharing day-to-day childcare with wives; and iii) support for working women amongst older women (mothers' and mothers-in-law's generation) changes men and women's willingness to support women's employment outside the home. Providing the above information increases the probability of men (women) choosing a career mentoring course for their wives (themselves) by about 26% (23%). Information beyond women's level of support for working women is found to have an insignificant impact, although there is suggestive evidence that information on support among older women shapes younger women's attitudes. We find no heterogeneity of treatment impact with respect to the direction and extent of individuals' original misperceptions. Results from a sub-sample who made hypothetical rather than real reward choices showed significant social desirability bias which was not evident when real reward choices were made.

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1. INTRODUCTION

Over the last thirty years many countries across the globe have made large investments in the education and health of girls and women. Such investments have, however, not systematically translated into increased participation of women in the labour market. The continuing low economic participation of women in many places is likely due to social norms that emphasize the role of women as mothers and carers. These gender norms - informal societal rules about appropriate or acceptable behavior for women and men - hinder female opportunities, choices, and achievements across the globe. (See for example Alesina et al., 2013; Fernandez 2013; Bertrand et al., 2015; and Jayachandran, 2021.) While governments can try to change norms through public messaging, there is relatively little known about how effective such campaigns are and how best to influence them. Lack of information on the benefits of women working is one plausible explanation for such norms, but interventions providing information to families to change social norms related to married women's labor force participation have had mixed success (Dean and Jayachandran, 2019; McKelway, 2021).² Inaccurate perceptions of support among peers is another possible explanation. Bursztyn et al (2020) show that in Saudi Arabia correcting underestimates of the extent to which male peers support women working outside the home increased men's support for working women and increased women's labor force participation.³ Aloud et al. (2020), also in Saudi Arabia, find that informing female students of the labor market aspirations of their peers increases expectations about their own labor force participation. Cortes et al (2022) find that individuals in the US also systematically overestimate gender conservativeness in relation to labor supply of mothers with young children, and that once information on peer beliefs is provided they are more likely to donate towards organizations advocating for women in the workplace.

In this paper we build on the literature examining the role of misperceptions of support among peers. We report the results of two data collection exercises. First, an online survey which was designed to measure and enhance our understanding of social norms around women's work in Indonesia. Specifically, we collected information from approximately 500 female and 500 male respondents in metropolitan areas across Indonesia on their behavior (whether female respondents and wives of male respondents work outside the home), personal attitudes (level of support for women working) and

² Dean and Jayachandran (2019) and McKelway (2021) evaluate interventions in India which provided information on female employment opportunities and/or the benefits of female employment. Both found very little change in the acceptability of women working. Makino (forthcoming) however found that having parents of young women in Pakistan attend a two-hour lecture which provided information on the safe, female-friendly working environment in large garment factories made parents more positive about their daughters working in factories. Interventions targeting adolescents in India have also had some success in changing gender attitudes (see Dhar et al., 2022).

³ While not designed to change social norms, Field et al (2021) show that male attitudes towards female work and their beliefs about community acceptance of women working were shifted by an intervention that resulted in women receiving wages into their own bank account rather than their husband's account. This shift was hypothesized to come about due to the consequent increase in women's household bargaining power.

injunctive norms (incentivized estimates of the extent to which others are supportive of women working). To better understand the motivations that underpin such norms, we also collected information on relevant reference groups (people whose opinion is important to respondents), the concerns that men and women have, and the sanctions they may face, if the wife works outside of home.

We find that respondents' estimates of the level of support among men for married women with children working outside the home for pay are relatively accurate (unlike Bursztyn et al., 2020), but both men and women significantly underestimate the extent of *women's support*. Men and women also underestimate the extent of support among men for husbands sharing day-to-day childcare responsibilities with wives.⁴ Information on which reference groups' opinions are most important to respondents when deciding whether to work (for women) or, to support their wives working (for men) shows that both men and women are highly concerned about the views of their mothers and mothers-in-law when deciding whether they (female respondents) or their wives (male respondents) work.

These results underpin the online intervention which we subsequently conducted with more than 4000 respondents in our second online survey. In our three treatment arms we expose male and female participants to information on the extent of support:

- 1) among women for women with children working;
- 2) among men for parents sharing childcare; and
- 3) among older women (in their mother's/mother-in-law's generation) for women with children working.

All treatment groups receive information on the extent of women's support for women with children working; treatment group 2 also receives information on the extent of men's support for shared child care; and treatment group 3 receives all three types of information listed above.

The interventions significantly increase both men and women's support for working women – 43% of participants in the treatment arms chose to select an online career mentoring course for themselves (female respondents) or their wives (male respondents) over a shopping voucher of equal value, compared to 34% in the control group. The provision of the additional information on men's childcare sharing norms and older women's attitudes towards working women further increased working women's interest in their career – an additional 5.7 percentage points (16%) chose the career mentoring course but this additional effect was only marginally statistically significant ($p=0.12$). Men whose wives were not currently working were 6.5 percentage points (21%) more likely to choose a career

⁴ Changing men's behavior in relation to participating in home production and childcare goes hand-in-hand with increasing female labor force participation. Since childcare is still largely a gendered task, changing this norm has the potential to increase women's ability to search for employment opportunities outside the home.

mentoring course for their wives over a shopping voucher but this difference was statistically insignificant ($p=0.18$). The additional information on the level of support amongst women in their mothers' and mothers-in-laws' generation did not further increase men's support. The impact of the interventions on respondents with preschool aged children was about half the size of the impact on respondents with older children, reflecting that young children, and lack of access to childcare, are a significant barrier to women's economic participation.

Heterogeneity analysis rejects a model of norm formation in which the further one's own perceptions of the social norm are from that which is revealed to them, the greater the adjustment in one's attitude. Rather, being made aware that there is a high level of support for working women appears to uniformly increase support for working women, regardless of initial expectations. The level of support increases both for those who underestimated and overestimated the level of support and doesn't vary with the magnitude of the perception error.

Our paper contributes to the small but growing literature which uses field experiments to examine the impacts of interventions that address misperceptions about others' beliefs in relation to women's employment. While interventions to "correct" misperceptions about others' beliefs (*pluralistic ignorance*) have been frequently used to study voting behavior and preferences for income redistribution (see Bursztyn and Yang, 2022 for a review), to our knowledge only Bursztyn et al (2020), Aloud et al. (2020) and Cortes et al (2022) have experimentally examined inaccuracies in perceptions of support for women's work – first two studies in the context of Saudi Arabia and among male neighbors and female students, respectively, and the third one in the US.⁵ We build on this evidence and test its effectiveness in a different cultural context – Southeast Asia which is home to almost 700 million people and is very distinct from the context of previous work. While still largely more socially conservative than Western nations, female labor force participation in Southeast Asia is considerably higher than in the Middle East and women generally have more freedoms, even in Muslim majority Indonesia.⁶

We introduce two innovations to the literature on "pluralistic ignorance" in relation to women's employment. First, it is the first paper of which we are aware which explores whether information on women's attitudes can be harnessed to change men's attitudes.⁷ We explore whether making

⁵ Aloud et al. (2020) examines the impact of information on what percentage of female students expect to be working for pay when they are 25 alongside information on monthly wages and a job assistance program.

⁶ Gauri et al (2019) also finds evidence of misperceptions on attitudes to women's work in Jordan but do not implement an intervention to address these misperceptions.

⁷ Bursztyn et al (2020) study the effect of men's attitudes on men and women. Aloud et al. (2020) study the effect of women's attitudes on women.

participants (men and women) aware of their misperceptions of women's support for working women changes attitudes. Second, we examine complementary norms that drive decision making for women's employment outside the home. In addition to norms around the acceptability of women working, we seek to address the strong norms around women being responsible for childcare. We do this by expanding the type of information provided to include information on attitudes to the sharing of childcare between husbands and wives. Our intervention also incorporates information on mothers and mothers-in-law's support for working women as these groups were identified by respondents as being the most important reference groups whose views are important to the female labor force participation decision.

We also contribute to the literature on light touch interventions aimed at changing norms. Our results demonstrate that an inexpensive online intervention, as opposed to a more costly in person intervention, can impact social norms. Previous literature had cast doubt on the effectiveness of light touch interventions. For example, Dean and Jayachandran (2019) and McKelway (2021) found that interventions which showed videos to family members highlighting female employment opportunities and the non-monetary benefits of women's employment had no effect on families' support for female members' employment. That, in our case, such a light touch online intervention was able to significantly increase the extent of support for working women is good news for governments and other policy bodies seeking to increase women's labor force participation. If accurately targeted to address existing misperceptions, our results suggest that less costly online campaigns can successfully sway norms. Although our research does not provide evidence on the longevity of such a change, work by Field et al (2021) suggests that norms changed in the short run can have longer run impacts and Bursztyn et al. (2020) found that the change in perceptions of norms evoked by their intervention, continued to affect perceptions three to five months after exposure. That we were able to change norms in the short run suggests that continued exposure to such messaging (for example, in an ongoing public information campaign) is likely to change norms over the longer term.

Extrapolating from Bursztyn et al. (2020) suggests that our intervention could result in an increase in female labor force participation as large as 6 percentage points (12%) from the current FLFP rate of 53%. That is, an extra 3.5 million women working with an estimated consequent increase in annual GDP growth of approximately 0.67%.⁸

Finally, the paper makes a methodological contribution by demonstrating that real stakes outcome measures are needed to evaluate changes in norms. Twenty percent of our respondents were asked to make a hypothetical choice between the career-mentoring course and the shopping voucher. Unlike the

⁸ Using calculations conducted by the Australia Indonesia Partnership for Economic Governance, as cited at <http://www.bbc.com/indonesia/indonesia-42428508>.

real reward choices, hypothetical choices were significantly and overwhelmingly swayed by social-desirability bias. Individuals who were the most prone to social desirability bias - measured via a 5-point Crowne and Marlowe (1960) scale – were 28 percentage points (72% of the control mean) more likely to choose the socially-desirable career-mentoring course than those with the lowest social desirability bias scores when the choice was hypothetical. In contrast, when the stakes were real, social desirability bias had an insignificant effect on respondent choices. In the absence of real stakes, the interventions would have appeared ineffective.

2. DATA COLLECTION

Our first online survey covers 1,050 respondents (50% male, 50% female) residing in large urban centers throughout Indonesia.⁹ The aim of the first survey was to measure social norms and people's perceptions of these norms. We targeted respondents who were 18 to 40 years old, with at least a junior secondary education and who were married with at least one child aged under 18 years and living with their spouse. We focus on respondents with at least junior secondary school education as research has shown that women with this level of education have the most discretion over whether they work or not and so are more likely to be able to have their behavior influenced.¹⁰ The sample was constructed such that 75% of both male and female respondents were high school educated and 25% tertiary educated (to roughly reflect the coverage of these groups in the Indonesian population). The survey collected demographic information (including age, gender, number of children, own and spousal work status) and information on respondents' attitudes and perceptions of social norms.

Specifically, we collected information on personal attitudes in relation to the extent of support for a) female labor force participation: “*Are you supportive of married women with children under 12 working for pay outside the home?*”; and b) sharing of childcare between husband and wife: “*How supportive are you of husbands sharing day-to-day childcare duties with their wives?*”.

We also elicited injunctive norms on what proportion of married men and married women are supportive of the above behaviors. These estimates were incentivized by paying approximately USD25 to respondents who made the most accurate estimate. The difference between the reported population

⁹ The impact of marriage and childbirth appears to be even larger in urban areas where women are more educated, there are more job opportunities and women's productivity is potentially higher, Cameron et al. 2019. Both surveys were conducted using Qualtrics' online platform and with members of Qualtrics panel respondents who met our eligibility criteria, i.e., they lived in a metropolitan area, were married, aged 18-40 years, living with their partner, had children under the age of eighteen, and had at least junior secondary education. Metropolitan areas are those areas defined as such by the Centre for Urban Development and include Lampung, Bandung, Batam, Bekasi, Bogor, Depok, Makassar, Medan, Palembang, Pekanbaru, Semarang, Tangerang, and Jakarta. See <http://perkotaan.bpiw.pu.go.id/v2/metropolitan>.

¹⁰ Women with upper secondary education have the lowest female labour force participation in Indonesia, Cameron et al. (2019).

response/social norm and the individually reported perception of social norms in both domains generates a measure of the extent of misperceptions about the social norm.

We also collected information on which people's opinions are important to respondents when making decisions about female household members working and sharing childcare. Respondents were asked to indicate the extent to which they were concerned about the opinions of husbands, parents, parents-in-law, extended family members, people in their social networks and people in their religious community. Finally, we enquired about the potential sanctions individuals would face if they decided to deviate from the social norm.

Our second online survey collected similar information from 4,478 similarly selected respondents (female, male 50:50).¹¹ The information intervention was embedded in the survey just prior to survey exit. The intervention is detailed further below in Section 3.¹²

3. SOCIAL CONTEXT

Female labor force participation in Indonesia has remained relatively constant over the past two decades with around 50% of women working, even with high economic growth, concomitant large increases in women's educational attainment and the service sectors and a decrease in the fertility rates.¹³ Previous research in Indonesia has shown that women's economic participation is hindered by marriage and childcare responsibilities (for example, Cameron et al. 2019, 2023).¹⁴ To the extent that data on Indonesian social norms were available prior to our study, they suggest that norms in relation to women's work are very conservative. For example, Indonesian men have a similar tolerance to women working as Saudi Arabian men and are less tolerant than Indian men.¹⁵ Data on attitudes to women's work from the World Values Survey 2018 shows that 76% of Indonesian men agree with the statement that *men have more right to a job than women*, with women being only slightly (2 ppts) less likely to

¹¹ Participants in the second surveys had previously been surveyed in the first survey. This was necessary as our sample size exhausted Qualtrics' existing panel of respondents. We are able to control for whether someone was surveyed twice in our analysis.

¹² Ethics approval for the surveys and interventions was obtained from the University of Melbourne (2022-23161-28577-5) and University of Indonesia (LPEM FEB - 14/UN2.F6.D2.LPM/PPM.KEP/2022). The trial was registered with the AEA RCT Registry (AEARCTR-0009493).

¹³ 31% of Indonesian women aged over 25 years in 2018 had completed upper secondary school, compared to only 3.4% in 1980. World Bank Databank. Accessible at <https://databank.worldbank.org>. The service sector accounted for about 29% of employment in 1991 and 49% in 2019. See <https://data.worldbank.org/indicator/SL.SRV.EMPL.ZS?locations=ID&view=chart>.

¹⁴ Halim et al. (2023) show that the expansion of public pre-school provision from 2003 has not changed this situation. The expansion did not lead to an increase in female paid employment.

¹⁵ A Gallup survey found that 43% of Indonesian men prefer women to not engage in paid work outside the home, the same as Saudi Arabia and more than India (35%), (Gallup-ILO, 2017).

agree with this statement than men.¹⁶ Women and men, even young adults, continue to strongly conform to social norms that emphasize women's childcare and domestic responsibilities because women are perceived as being better at care-giving (YouGov & Investing in Women, 2020). In a qualitative study of 40 young adults in Greater Jakarta and Surabaya, Setyonaluri et al. (2021) found that such persistent social norms often stem from perceptions about *kodrat*, or God's will when defining gender roles. Participants in their study see women working for pay as positive, but only if it is done to support husbands and women do not 'neglect' their responsibilities at home.

As a result of our sample being comprised of respondents in large urban centers who have access to the internet, 81% of the women in our sample worked, significantly above the national participation rate of 53%.¹⁷ Only 53% of wives of male respondents worked, however.

Of the female respondents who were working, only 41% worked exclusively outside the home (45% of the wives of male respondents). 47% of female respondents who worked were wage workers, with the remainder being self-employed with no employees (37%), self-employed with employees (7%) or casual or family workers (9%). If we define the formal sector to consist of wage workers and self-employed businesses with staff, 54% of working women in our sample are employed in the formal sector. The formal sector is known to not be particularly family friendly, Cameron et al. (2023).¹⁸

Among female respondents who are not working or looking for work, 76% reported that they were unable to do so because of childcare - they had either chosen to look after their children or couldn't find anyone else to look after them.¹⁹ A further 20% reported that they were not working as their husband didn't want them to. These findings support the conjecture that there is considerable scope for interventions to increase female labor force participation, either through the provision of childcare or, as is our focus below, by changing social norms around women's work and childcare responsibilities.

Social norms around women's work

Conservative social norms aside, there was substantial support reported for women with children under 12 working outside the home for pay - 76% of female respondents reported being supportive and 62% of male respondents.²⁰

¹⁶ This is significantly higher from what it was reported in the WVS in 2006 where 65% and 42% of men and women agreed with that statement respectively.

¹⁷ World Bank, <https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS?locations=ID> .

¹⁸ 58% of the wives of male respondents who worked were waged workers and 62% were employed in the formal sector. Cameron et al. (2023) find that women who were employed in the formal sector prior to having their first child were 20 percentage points less likely to be working than other women in the year following the birth.

¹⁹ Currently Indonesian preschool sessions are very short and so allow women to increase unpaid work but not paid activities outside the home, Halim et a. (2023).

²⁰ Defined as people who reported they were very supportive, supportive or somewhat supportive.

All respondents were asked to nominate up to three reasons against supporting women with children under 12 working for pay outside the home. Figure 1 shows that the most often reported reason men give (reported by 22% of respondents) is that women's role is to care for their children, whereas women most often report that finding someone to look after their children is difficult. 16% of both male and women respondents report that working will result in a mother neglecting her family duties.

Female (male) respondents were also asked who, among a list of family members and social contacts, would not be supportive of them (their wife) working for pay outside the home. The most oft-cited category was mothers (16% for female respondents; 15% for male respondents). Mothers-in-law came a close second at 12% for female respondents and 14% for male respondents. Around 85% stated they were sure of their mother's (mother-in-law's) attitude. 98% (80%) of women (men) report that it is important to them to have their mother's support. Having their mothers-in-law's support was important to 84% of both men and women. Mothers and mothers-in-law are hence the most important reference groups for both men and women. Female respondents also reported that having their husband's support is important to them (91%).

Figure 2 shows what women who report that their husband is not supportive of women working for pay outside the home would be most concerned about if they worked. The concern women most often reported is that the husband would be worried that others will think that they are not able to financially provide for his family (34%, or 45% if we include those who report that others will think the family is in financial need); that the husbands will view them (the women) as neglecting their family (21%); and that others will think that they don't respect their husband (20%). Only 5% reported that they themselves will not be respected by their husbands. Interestingly, for this better educated group of women in Muslim-majority Indonesia, only 4% reported being concerned that others will view them as not following their religious traditions.²¹ Our findings are similar to those of Bernhardt et al. (2018) who found that in India husband's social status was the main concern for husbands if their wives worked outside of the house. The main concern for women in India, however, was that they were perceived as being disobedient to their husband.

Misperceptions about Social Norms Pertaining to Married Women Working

Figure 3 shows the level of support reported for women with children under 12 working for pay outside the home and the estimated (perceived) level of support amongst peers. Female (male) respondents were asked to think of women who are similar to themselves (their wife) in terms of having children, their level of education and religion, and to estimate "Out of 100, how many of these women do you think are

²¹ A similar pattern was found for respondents who reported that their mothers were not supportive of women working outside the home - 50% (46%) of women (men) reported that if the woman worked their mothers would think that the husband was not able to provide for the family or that the family was in financial need. 21% of the female respondent were worried that their mother would think they were neglecting their family.

supportive of wives with children under 12 years working for pay outside the home?”. While the actual level of support reported among respondents was 76%, the mean (incentivized) estimate of the level of support by women was 67% - an underestimate of 9 percentage points; and men estimated that 59% of women are supportive - an even larger underestimate of 17 percentage points.

The left hand set of bars in the same figure show men’s support for women working for pay outside the home. Both men and women estimate this level of support amongst men (62%) relatively accurately. The average estimate of the level of male support among male respondents is 59% of men, an underestimate of just 3 percentage points. Women overestimate the level of support among men by 2 percentage points.

The data hence suggest that there is scope to influence gender norms in favor of working women by providing information about the greater than expected support among women. There is however little scope for an intervention to influence gender norms by providing information on men’s support for working women (a la Bursztyn et al., 2020). This result underscores the importance of formative research to ensure intervention design reflects the cultural context.

Misperceptions about Social Norms Pertaining to Sharing of Childcare

A similar range of questions were asked about the level of support among men and women for husbands and wives sharing day-to-day childcare duties. The professed support for husbands sharing day-to-day childcare responsibilities with wives - for example, feeding the child, bathing and dressing the child, taking the child from/to school, as well as monitoring the child’s nap times, playtimes, and other activities - is very high with 90% of men and 96% of women being supportive.²²

Figure 4 shows that both men and women substantially underestimate the high level of support amongst their peers for shared childcare (e.g. men estimate that 65% of men support sharing childcare duties). This points to scope for an effective information intervention that tells people about the level of support in the community for shared childcare.

²² In practice most of the childcare is however performed by wives. Our data show that men overestimate their share of childcare. On average they report they undertake 34% of childcare duties with their wives doing 54%, while women report their husbands only undertake 23% of childcare duties, compared with their 63%.

4. EVALUATION DESIGN

3.1 Theory of Change

The theory of change that underpins the intervention is illustrated in Figure A1. Social norms reflect people's perceptions of the attitudes of others in society. Informing individuals of inaccuracies in their perceptions of others' attitudes causes updating of their perceptions and as individuals' behavior is theorised to be determined, in part, by social norms, the updating of such norms results in behavioral change.²³ Over time this will create a self-reinforcing loop in which others observe the changed behavior and update their perceptions and change their behavior.

3.2 Intervention Design

Respondents were randomly divided into four groups – a control group and three treatment groups with the treatment groups receiving information designed to influence their social norms. The design of the interventions reflects the results of the first survey and, as discussed above, consists of the provision of the following information:

- 1) The extent of women's support for women with children under 12 years working for pay outside the home [*reflecting the underestimates among men and women of the level of women's support found in the first survey*];
- 2) The extent of men's support for childcare being shared among husbands and wives [*reflecting the underestimates among men and women of the level of men's support in the first survey*]; and
- 3) The extent of older women's (from the respondents' mothers' generation) support for women with children working for pay outside the home [*reflecting the concern about mothers' and mothers-in-law's support found in the first survey*].²⁴

The control group received no such information. Figure A2 in the appendix shows the format in which this information was presented to each treatment group.

²³ Bursztyn et al. (2020) present a simple theoretical model to show how social norms affect labor force decisions in a world where husbands makes the decision as to whether to allow their wives to work so as to maximize utility. Utility is modelled as a positive function of the income from wife's employment but with costs to utility associated with the stigma of acting against societal norms and the psychic cost of making a decision incompatible with one's own beliefs. They show that if a sufficiently large shift in beliefs occurs (reducing the perceived probability of being stigmatized), the new equilibrium will see an increase in the number of women working.

²⁴ In the first survey we did not collect information on the support of mothers or mothers-in-law for married women with children working outside the home. We instead use information on the proportion of women aged 40 to 60 who disagree or strongly disagree with the statement "When a mother works for pay, the children suffer". This was taken from the World Values Survey data 2018. For more on this survey see Haerpfer et al. (2022).

Our main outcome measure is respondents' choices as to whether to receive payment for their participation in the form of an online career mentoring course for women or an online shopping voucher of equal value. Respondents were told that about one in every three participants in the survey would be randomly selected to receive a reward for participating in the research project (and they would be told at the end of the survey whether they had been selected for the reward). They were then asked to indicate whether they would prefer to receive:

- Free access to an online career mentoring course with practical career advice from HR professionals for female participants or the wives of male respondents. The course was valued at Rp100,000 (USD6.50) and equips participants with the skills to create a CV, write a cover letter, prepare for a job interview, and create a LinkedIn profile²⁵; or
- a Rp100,000 convenience store shopping voucher.

Choosing the career mentoring course is taken to indicate support for their own (for female respondents) or their wife's (for male respondents) labor force participation. A comparison of this variable across the control and treatment groups provides an estimate of the interventions' impacts.²⁶

5. RESULTS

5.1 Summary Statistics and Tests of Balance

The demographic characteristics of respondents in the second survey are similar to the first. The average age of respondents is 30.5 years. 92% of respondents are Muslim. Almost all men work (99%), while 83% of women work. Wives of male respondents are considerably less likely to be working (53%) than female respondents.

²⁵ See <https://skillacademy.com/p/career-mentoring-regular-bimbingan-untuk-dapat-kerja?courseType=SingleCourse>. The shopping vouchers were redeemable at Indomaret and Alfamart stores which are ubiquitous throughout urban Indonesia.

²⁶ We also conducted a list experiment which generates an alternative outcome measure. At the end of the survey (just prior to the choice of reward), respondents were asked how many of the following statements they agreed with (in randomized order): a) *The minimum wage should be kept at its current level*; b) *It is currently difficult to find a good job in Indonesia*; c) *Unemployment is a big problem in Indonesia*; and d) *Women with young children should be supported to work outside the home*.

The list experiment enables the researcher to identify whether respondents in the treatment groups are more likely to agree with the statement about women with young children being supported to work outside the home (as it is the only statement that should be affected by the information interventions) from a comparison of answers across the control and treatment groups, without being able to identify whether individual respondents agreed with that particular statement. It thus has the advantage of not being affected by social desirability bias. It however produces imprecise estimates of intervention impacts. The treatments were found not to have any impact on the reports in the list experiment. Results available on request.

Respondents were randomly allocated across treatment arms (with stratification by gender; education; and whether the voucher choice was real or hypothetical).²⁷ Table 1 provides summary statistics and tests of balance. Importantly, we found that the personal beliefs in this sample are almost identical to those in the first survey and whose level of support was used for the treatment design. 75% of female respondents reported that they were supportive of married women with children under the age of 12 working for pay outside the home (compared to 76% in the first survey), and 63% of male respondents were supportive (compared to 62% in the first survey). 95% (90%) of female (male) respondents reported being supportive of shared day-to-day childcare, compared to 96% (90%) in the first survey. 75% of respondents reported that their mother is supportive of the above (this information was not collected in the first survey).

The control and treatment arms are well balanced. Only two variables differ across arms, with the differences being relatively small and statistically significant only at the 10% level.

Social Desirability Bias. One concern with reporting of attitudes is that the reports may reflect experimenter demand effects. That is, respondents might be more likely to report friendlier attitudes towards working women, to experimenters who are likely to be in favor of women working. The effect of social desirability bias is lessened in online surveys due to the lack of personal interactions, nevertheless, to ascertain the extent to which this is a problem, we collected information on a 5-item social desirability scale following Crowne and Marlowe (1960) and Hays et al. (1989). This module asked respondents whether they have several too-good-to-be-true traits such as being always courteous even to people who are disagreeable, never taking advantage of others, being always forgiving, being never resentful and being always a good listener. We sum these variables to construct a social desirability index (SDI) which ranges in value from 0 (least subject to social desirability bias) to 5 (most subject to social desirability bias) with an average score of 3.36.

Table A1 in the appendix shows that social desirability is not an important driver of reported levels of support for women working, shared childcare, nor for whether respondents' mothers are supportive of women working. The coefficients on the social desirability bias when regressed on these variables are very small and two out of three are not statistically significant. Respondents' reported perceptions of other's support (columns 4 to 6) are again not meaningfully influenced by SDI.²⁸ Below we examine whether social desirability bias affects our outcome measure – the choice of the carer mentoring course.

²⁷ Two of Qualtrics' panel partners would not let us provide vouchers to respondents. These panel partners contributed 20% of respondents. For these respondents we asked them which they would choose if given a choice i.e. a hypothetical choice.

²⁸ Interestingly, respondents' perceptions of the extent of support are heavily influenced by their own level support.

5.2 Intervention Impacts

To estimate the impact of the provision of information on social norms, we estimate regressions of the following form:

$$Y_i = \alpha + \beta T_i + \gamma_1 X_i + \varepsilon_i \quad (1)$$

where Y_i is the outcome variable (choice of online career mentoring); T_i is a vector of treatment arm indicators (relative to the omitted control group); X_i is a vector of control variables (gender, education, social desirability bias index) and ε_i are robust standard errors.

Table 2 shows the results of estimating equation 1.²⁹ Column 1 presents results for the entire sample, Columns 2 and 3 present them for female and male respondents, respectively. The treatments significantly increase the probability of respondents choosing to be compensated for their time by receipt of the online career mentoring course, rather than the shopping voucher. This is the case in all treatment arms (relative to control). Respondents are between 7 and 11 percentage points more likely to choose the career mentoring course. This is a 20% to 32% increase over the control mean of 0.343. Although the point estimates of the interventions' impacts increase from 0.067 in treatment 1 through to 0.98 in treatment 3, they are not statistically significantly different from one another. The impacts on men are larger than for women for treatments 1 and 2 but slightly smaller in treatment 3. The only difference across treatment arms that approaches statistical significance is the difference between treatments 1 and 3 for women. The point estimate for the impact of treatment arm 3 is 5.1 percentage points larger than for treatment arm 1 ($p=0.12$). This is suggestive that information on men's support for shared childcare and mothers support for working women may have additional salience for women.

Columns 4 to 9 present results for the sample by whether the woman (female respondent/wife of male respondent) is working or not. These results are informative as to whether the treatments are likely to increase women's labor force participation. The point estimates are uniformly larger in the sample where the woman is not working at the time of the survey (column 4 vs column 7). The interventions increase the probability of the career mentoring course being selected by 8.2 to 12.1 percentage points. These are very large impacts (27% to 39%). Column 5 reports the results for non-working female respondents and Column 6 for male respondents with non-working wives. The result is being driven by the impact on male respondents who have a non-working wife. These men are 8.2 (26%) to 14.7 (47%) percentage points more likely to choose the career mentoring course for their wife than a shopping

²⁹ We report results for the real rewards sample only and go on to explore the effect of using a hypothetical choice as the outcome variable further below. Table A2 in the appendix reports results without controls. The inclusion of controls has very little effect on the results.

voucher. The point estimates are largest for male respondents in treatment 2 (where respondents receive information on social norms about men's support for sharing childcare responsibilities in addition to information on women's support for married women with children working), suggesting that the information on the extent of support among their male peers for shared childcare increased their support for their wife working beyond the impact of the information on women's support for working women, but not statistically significantly so.

The treatment impacts for non-working female respondents are statistically insignificant. The point estimates are however similar in magnitude to those estimated over all women so this may reflect the lack of precision associated with estimating this specification over a much-reduced sample (N=307).

Columns 7 to 9 report results for the sub-sample where the women are working. Here the results are being driven by the working female respondents. Being exposed to treatments 2 and 3 increases the probability of a female respondent who works selecting the career mentoring course by 8.6 to 10.8 percentage points.

In terms of the control variables, tertiary education appears to play little role in respondents' choices. Only tertiary educated men who are married to a working woman are more likely to choose the career monitoring than non-tertiary educated men with working wives (7 ppts). Social desirability bias does not affect the reward choice in these real reward interventions.

Panel B in Table 2 reports results where the treatment impacts are restricted to be equal across treatment arms. Large treatment impacts are detected for all groups other than non-working women.

To address the issue that our sample oversamples working women, Table A3 in the appendix reports results of regressions in which the sample is reweighted to be representative of the population in the large urban centers from which our respondents are sampled, i.e., with lesser weight being applied to working women and greater weight to non-working women. The point estimates are largely unchanged.³⁰

Exposure to the treatment

³⁰ The weights for working women were calculated as the number of working women in the sample over the number of working women in the population (similarly for men using the number of wives working). For the non-working women the weight was calculated as the number of non-working women in the sample (or non-working wives) over the total of non-working women in the population. The population numbers were taken from the National Socioeconomic Survey (SUSENAS). We used inverse probability weights in the estimations. We also estimated specifications including controls for whether the respondent is supportive of women working outside the home for pay. The coefficients are similar to the ones reported here, as the level of support prior to treatment is balanced across control and treatment groups. Results available upon request.

On average people spent 19 seconds reading the information in treatment 1, 26 seconds in treatment 2 and 35 seconds in treatment 3 (as the format of the information is similar in each treatment, the time spent accelerates). No one spent more than 2.5 minutes reading the information. If spending more time reading the information is an indicator that respondents are more deeply engaging with the information, finding that more time spent reading is associated with a greater likelihood of choosing the career mentoring voucher would be further evidence that the information provided is driving the choice. Table 3 includes interactions of treatment dummies with the total time spent on the intervention pages.³¹ Column 1 shows that for each additional 10 seconds spent in the screen of the interventions the probability of selecting the career voucher increased by 0.9 percentage points. For women, an additional 10 seconds spent in the screen is associated with an 1.8 percentage point (5%) increase the probability of choosing the career mentoring course. Column 4 shows that for observations where the female respondent or wife of a male respondent is not working, an additional ten seconds spent reading the information increases the probability of choosing the career mentoring course by 1.6 percentage point (5.2%).

Heterogeneity Analysis

We explore if there is heterogeneity in the effects with the availability of job opportunities, the stickiness of norms and the constraints faced due to children. Table 4 columns 1 and 2 shows that the intervention has a similar magnitude in areas where there is high and low availability of formal employment, suggesting that labor market opportunities do not affect the effectiveness of the intervention. Similarly, when we compare individuals whose mothers worked (col 3) or not (col 4) when they were 12 years old we reject the hypothesis that the treatment has an effect only for individuals who grew-up in more progressive households. Finally, columns 5 and 6 examine whether there is heterogeneity in intervention impact across families with and without pre-school children. Much larger effects are found for families in which women are not constrained by having young children ($p=0.10$). For individuals who are in a household where the youngest child is over 6, participation in any of the treatments increases the probability of choosing the career mentoring course by 16 percentage points, this is a 55% increase relative to the control group. Once children start primary school, women are more likely to be able to look for work, reflecting the limited access to pre-primary school childcare in Indonesia.

The Role of Misperceptions

To further explore the way in which the interventions affected participant choices, following the previous literature, we examine whether those who underestimated the level of support in the community were more greatly impacted by the interventions (than those who estimated the level of

³¹ We also estimated a specification with a quadratic term but its coefficient was not significant.

support correctly or over-estimated it). Figure 5 shows the extent of misperceptions in the three domains of the interventions. The red line shows the actual level of support in the community (as measured in our first survey or the World Values survey for older women's attitudes). All three figures show that there was substantial, and varying, misperceptions in all three domains.

Table 5 presents results where we interact treatment with the extent to which respondents underestimated or overestimated the extent of community support for the social norms relevant to their treatment arm. For respondents in treatment arm 1 we allow the treatment impact to differ with the extent of over or underestimation of support for working women. For respondents in treatment 2 we allow for participants' under/over-estimation of support for working women and for shared childcare to affect the treatment impact. We do the same for respondents in treatment 3 but also allow their under/over-estimate of the extent of mothers' support for working women to affect the treatment impact.

Table 5 shows that there is little relationship between misperceptions of the social norm and the impact of the treatment. The interactions between treatment and misperceptions are insignificant in all cases, except for men in treatment 3 where the coefficient is counterintuitively signed (suggesting that if one underestimated the extent of support from mothers, and so gets a greater positive shock when finding out it is so high, the treatment impact is smaller than if one estimated correctly or over-estimated.)³²

That the extent of misperceptions had little impact is a surprising result, contrary to the theory of change outlined above and in contrast to the results in Burzstyn et al. (2020) and Aloud et al. (2020). While a demonstration that women's support for working women, men's support for shared childcare and mothers' support for working mothers is greater than many perceive shifted participants' views to also be more supportive, the mechanism does not seem to be via the correction of misperceptions, rather the program impact was similar for people with different estimations of the extent of support.³³

This result suggests that merely highlighting majority community support can change social norms and behavior across the community. This is a positive finding in the sense that it suggests one doesn't need to worry about the provision of information on a norm reducing support among those who estimate there are higher levels of support than the prevailing norm. Rather it seems that a demonstration of strong community support for a behavior (i.e., women with children working) encourages increases in support among those with lower levels of personal support while at the same time reaffirming the views of those who already believed that there was strong community support.

³² It may be that these men found the extent of support reported from mothers (90%) was too high to be believable.

³³ Similar results were found when using indicator variables of whether someone overestimated versus underestimated the extent of support.

Potential long-run effects

To test if the intervention is likely to have long lasting effects, we track whether individuals claimed the career mentoring course within the one-month period we gave participants to do so. We find that 72% of the female respondents/wives of male respondents who selected the course claimed it.³⁴ Table A4 shows the effect of the interventions on the probability of choosing the voucher and using it. The results are very similar to our main results presented in Table 2 with the exception that for men with working wives, the intervention effect is now larger for treatment 3 and statistically significant for treatment 1.

Is it necessary to use real reward payoffs?

Table 6 presents results where we pool the respondents who were asked to make a real choice as to whether to receive the career mentoring course or the shopping voucher (80% of all respondents) and those who were asked to make a hypothetical choice. Two of Qualtrics panel partners who supply Qualtrics with respondents would not allow us to randomly select some respondents to receive a reward as this went against their contract with respondents. As those making the hypothetical choice were not randomly selected, Table A5 in the appendix compares the characteristics of respondents in these panels with the other respondents. The respondents who are given the hypothetical choice are demographically very similar to the other respondents. They however report themselves and their family members (spouses and mothers) as being more supportive of women working and husbands sharing daily childcare. We hence control for these variables in some of the specifications.

Columns (1)-(4) of Table 6 report results for the entire sample (men and women). Column 1 shows that all else equal, participants faced with a hypothetical choice were 7.9 percentage points more likely to choose the career mentoring course than participants who were making a real choice. Column 2 adds a control for social desirability bias. It shows that those social desirability bias increases the chance of choosing the career mentoring course. In Column 3 we interact the social desirability bias measure with whether the choice was hypothetical or not. The interaction term is strongly statistically significant ($p < 0.01$). If their choice is hypothetical, participants who are most concerned about appearing to behave in a socially desirable way (social desirability index = 5) are 28 percentage points (72%) more likely to choose the career mentoring course than those who are the least concerned (social desirability index=0). Social desirability does not affect outcomes in real rewards interventions. The coefficient on the hypothetical variable is now negative and marginally significant ($p < 0.1$). Column 4 adds controls for

³⁴ A total of 86% of the individuals claimed the course, but 14% of the people who claimed the course were men and the remaining 72% of the people were women. When the women were the respondent, 100% of them used the voucher for themselves. Most of the men (67%) gave it to their wives. For cases in which the husband claimed the course for himself, we code the voucher as being “not used”.

baseline attitudes which differ across the hypothetical and real rewards games. These variables are all statistically insignificant and the main results are unchanged.

Columns (5) to (8) present the results of estimating the same models on the sample of female respondents and Columns (9) to (12) for male respondents. The results are largely being driven by male respondents (possibly because male respondents may feel more social pressure to support working women than women amongst whom support is already relatively high and who would be seen to be acting in their self-interest).

Table 7 presents the results estimated over only the sub-sample of respondents who made a hypothetical choice. We focus on male respondents here as they are the most affected by the interaction of social desirability bias and hypothetical stakes. All treatment effects are statistically insignificant when the outcome choice is hypothetical. The coefficients are mainly small and, in some cases, negative. Only the coefficients on treatments 1 and 2 for men with non-working wives approach the magnitude of the estimates over the real reward sample. Hence, the use of a real, meaningful outcome choice is essential to the identification of intervention impacts. Note that the choice needn't have real world consequences with 100% probability. In our case offering a 33% probability of the choice being real created sufficient salience for the decision to be taken more seriously.

6. DISCUSSION AND CONCLUSIONS

With the current data we are unable to examine the impacts of such an intervention on women's labor force participation.³⁵ Our data however show that there is likely to be considerable scope for increasing women's labor force participation by influencing men's attitudes - 20% of women who were not working at the time of the survey report that this was because their husband does not wish them to, and the percentage of women who report that they were not working because they do not wish to is very low at 1% of female respondents.

Perceptions of others' attitudes play a substantial role in their husband's attitudes, especially perceptions about husbands status. 65% of women who viewed their husbands as not being supportive report that if they were to work, their husband would be worried what other people will think about them either about their capacity to provide for their family (49%) or that his wife does not respect him (20%). These concerns are likely to be alleviated if he knows that there is wide-spread support in the community for women working. In contrast, only 35% of the women are concerned about their own reputation, being the main where 20% of women were concerned that their husband would view them as neglecting their

³⁵ Due to anticipated high attrition rates among online survey respondents and budgetary constraints we were unable to collect follow-up data on women's labor market activity.

family. Others' attitudes towards the husband are also an oft-cited reason for husbands not being supportive of husbands and wives sharing childcare.

Given the percentage increase in men's support for working women attributed to the intervention (25%) and assuming the same elasticity of female labour supply to men's support as found in Bursztyn et al. (2020), we estimate that our intervention could increase Indonesian female labour supply by as much as 6 percentage points (12%). Projecting this onto GDP³⁶, is estimated to result in an increase in annual GDP growth of 0.67%.

The finding that this light touch, low cost, easily scalable online intervention was able to change behavior so that participants made choices consistent with an aspiration for either themselves (for female respondents) or their wives (for male respondents) to work is promising in terms of the likely effectiveness of public information campaigns that demonstrate community support for working women. These could be in the form of TV commercials, billboards or social media posts. The greater understanding of existing social norms towards working women in Indonesia generated here will also be useful for the formulation of such campaigns. Campaigns that try to dispel the link between wives working and a husband's financial capacity and that demonstrate support among older women are likely to be especially successful.

³⁶ Using previous work conducted by the Australia Indonesia Partnership for Economic Governance, see <http://www.bbc.com/indonesia/indonesia-42428508>.

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Figure 1

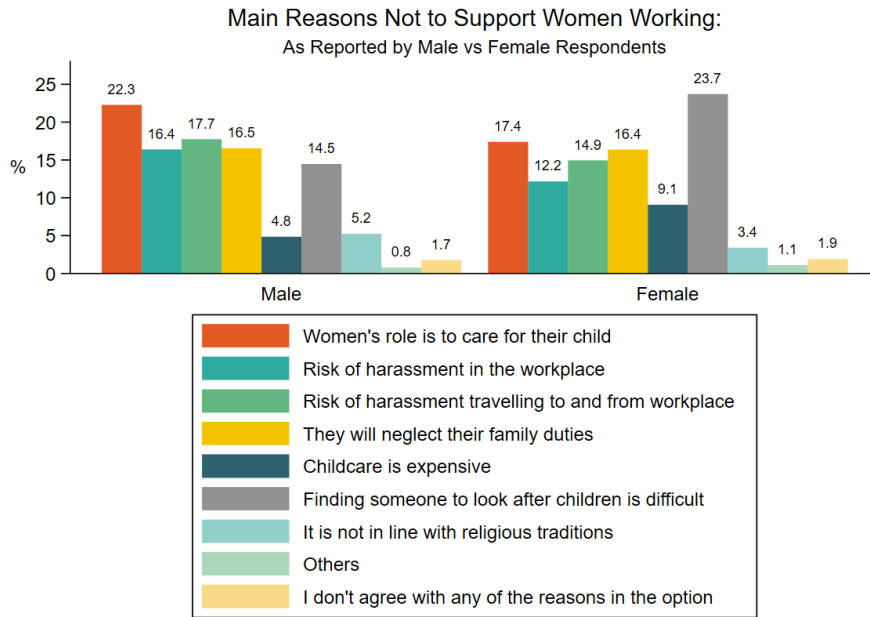
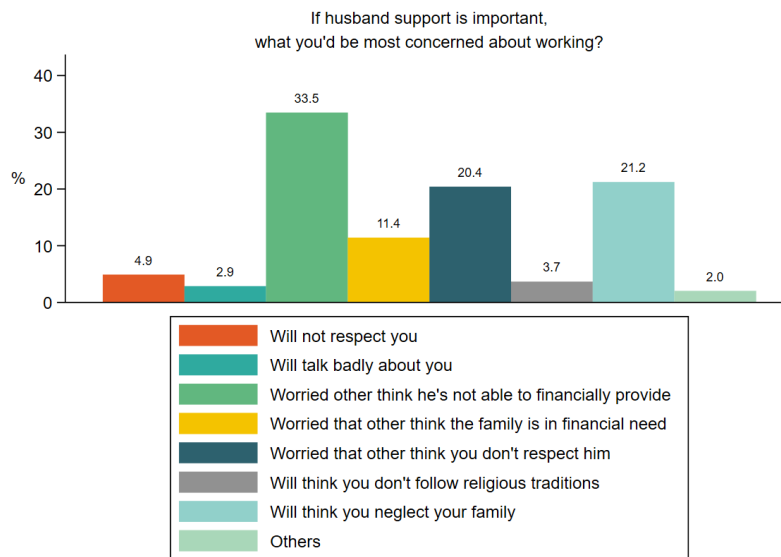


Figure 2³⁷



³⁷ The complete set of options were: Your husband will not respect you; Your husband will talk badly about you; Your husband will be worried that other people will think he is not able to financially provide for your family; Your husband will be worried that other people will think the family is in financial need; Your husband will be worried that other people will think you do not respect your husband; Your husband will think that you do not follow religious traditions; Your husband will think that you are neglecting your family; Other.

Figure 3

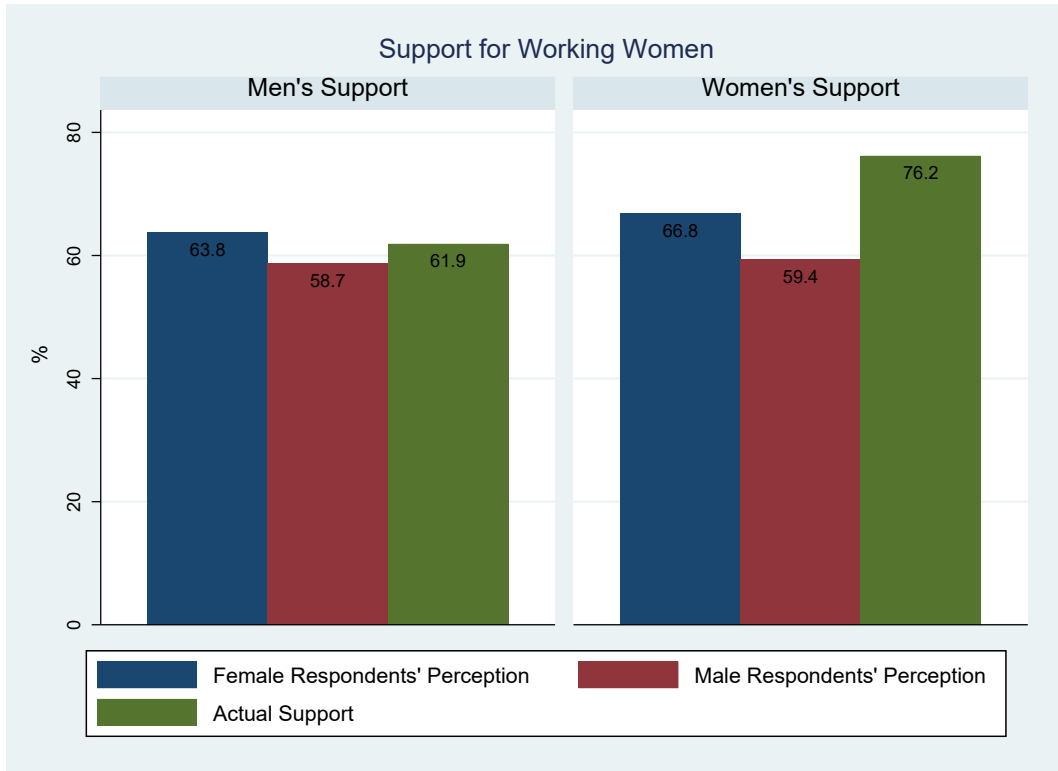


Figure 4

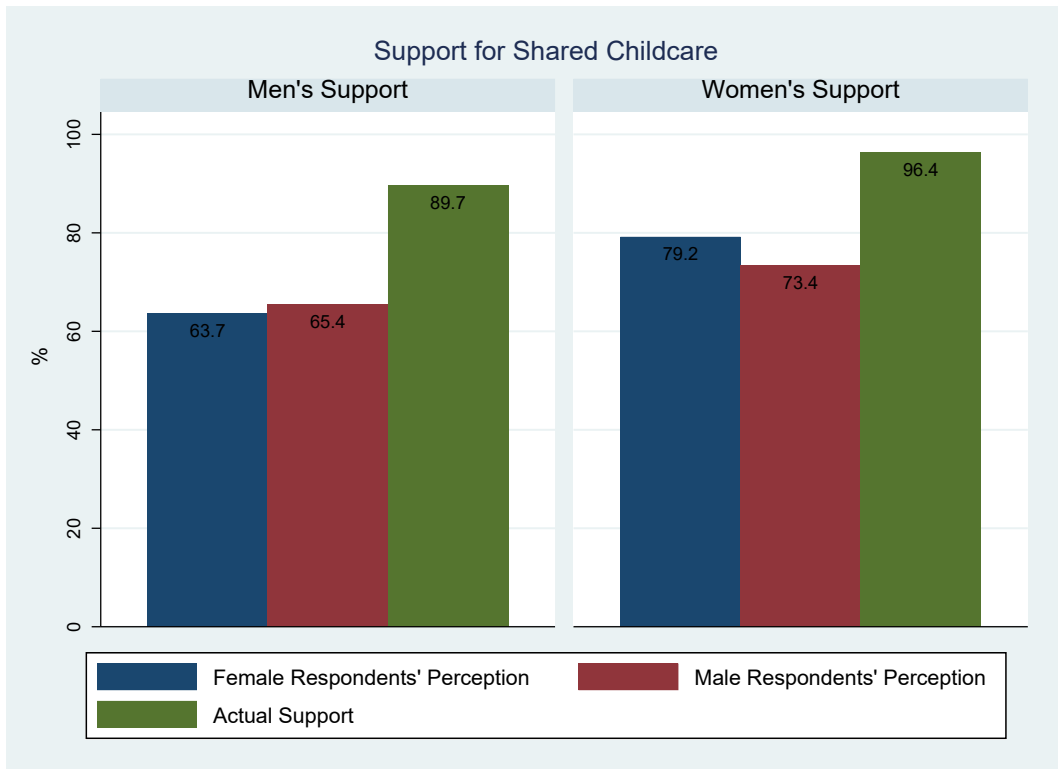


Figure 5

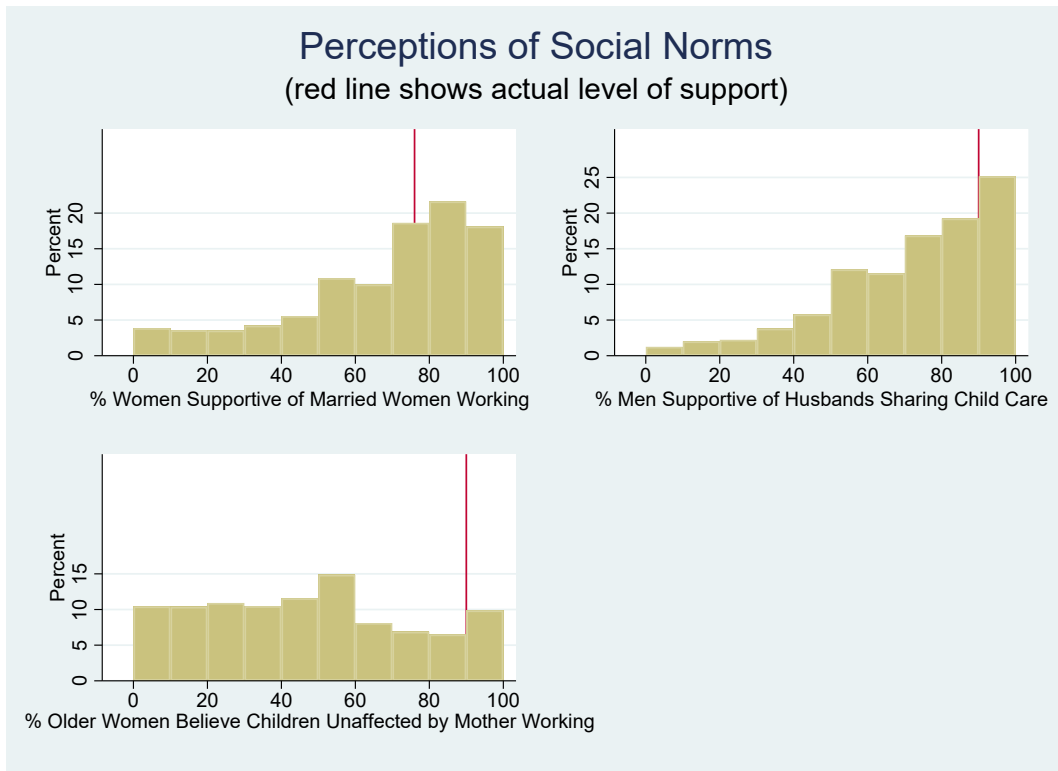


Table 1: Descriptive Statistics first and second survey and Test of Balance

	Mean						t-test of equality of means (p-values)		
	1 st Survey	2 nd Survey					T1 vs C	T2 vs C	T3 vs C
	All	All	Treatment 1	Treatment 2	Treatment 3	Control			
Age	31.3	30.5	30.3	30.7	30.6	30.5	0.42	0.46	0.72
Tertiary educated	0.26	0.25	0.26	0.26	0.23	0.25	0.79	0.65	0.21
Live in Java	0.79	0.80	0.79	0.8	0.79	0.8	0.58	0.82	0.65
Muslim	0.89	0.92	0.91	0.92	0.93	0.93	0.17	0.53	0.99
Male respondent works	0.96	0.99	0.98	0.99	0.99	0.99	0.13	0.56	0.4
Female respondent works	0.81	0.83	0.84	0.84	0.82	0.82	0.57	0.57	0.89
Wife works	0.53	0.53	0.55	0.53	0.54	0.51	0.19	0.53	0.24
Female respondent working exclusively outside of home	0.41	0.47	0.50	0.46	0.45	0.45	0.09	0.72	0.87
Wife working exclusively outside of home	0.45	0.45	0.46	0.47	0.43	0.44	0.68	0.51	0.70
Female respondent waged work	0.47	0.50	0.50	0.46	0.55	0.48	0.43	0.61	0.03
Wife waged work	0.58	0.60	0.61	0.59	0.59	0.58	0.56	0.83	0.85
Mother worked	N/A	0.69	0.69	0.69	0.7	0.67	0.19	0.37	0.16
Friends' mothers worked	N/A	0.92	0.93	0.92	0.92	0.92	0.42	0.58	0.69
<u>Support for married women working:</u>									
Female respondent	0.76	0.75	0.74	0.75	0.74	0.75	0.74	0.99	0.8
Male respondent	0.62	0.63	0.63	0.65	0.62	0.62	0.84	0.25	0.98
Mother supportive	N/A	0.75	0.74	0.77	0.76	0.74	0.79	0.08*	0.14
<u>Support for shared child-care:</u>									
Female respondent	0.96	0.95	0.94	0.95	0.95	0.96	0.35	0.49	0.89
Male respondent	0.9	0.9	0.91	0.89	0.89	0.92	0.68	0.16	0.13
Wife supportive	0.92	0.92	0.93	0.91	0.91	0.94	0.64	0.12	0.12
Husband supportive	0.94	0.95	0.95	0.94	0.96	0.94	0.7	0.89	0.23

Social desirability bias index	N/A	3.36	3.42	3.36	3.33	3.33	0.06*	0.51	0.9
Hypothetical reward choice	N/A	0.2	0.2	0.2	0.2	0.2	0.98	0.98	0.98
Max N	1050	4478	1120	1120	1120	1118			

Table 2: Impacts of Information Interventions (Real Reward Sample)

Dependent Variable: Choice of Career Mentoring Course (1/0)									
	All			Not working			Working		
	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment1	0.067***	0.056*	0.080**	0.082**	0.083	0.082*	0.058**	0.051	0.074
	[0.023]	[0.032]	[0.032]	[0.040]	[0.077]	[0.047]	[0.028]	[0.036]	[0.045]
Treatment2	0.092***	0.081**	0.103***	0.121***	0.048	0.147***	0.077***	0.086**	0.063
	[0.023]	[0.032]	[0.033]	[0.040]	[0.077]	[0.047]	[0.028]	[0.036]	[0.045]
Treatment3	0.098***	0.107***	0.089***	0.107***	0.110	0.106**	0.093***	0.108***	0.074*
	[0.023]	[0.033]	[0.032]	[0.040]	[0.075]	[0.047]	[0.028]	[0.036]	[0.045]
Female	-0.013			-0.048			-0.015		
	[0.016]			[0.032]			[0.020]		
Tertiary educated	0.029	0.018	0.039	-0.026	-0.013	-0.032	0.035	0.011	0.069**
	[0.019]	[0.027]	[0.027]	[0.040]	[0.104]	[0.044]	[0.022]	[0.029]	[0.034]
Social Desirability Bias	0.004	-0.001	0.010	0.016	-0.003	0.025	-0.001	-0.002	0.000
	[0.007]	[0.010]	[0.010]	[0.013]	[0.024]	[0.016]	[0.009]	[0.011]	[0.014]
Constant	0.328***	0.339***	0.303***	0.270***	0.301***	0.236***	0.364***	0.352***	0.353***
	[0.030]	[0.042]	[0.041]	[0.053]	[0.096]	[0.062]	[0.037]	[0.047]	[0.056]
T1=T2 (t-test p-values):	0.3	0.45	0.48	0.36	0.66	0.18	0.51	0.32	0.81
T2=T3	0.19	0.42	0.68	0.73	0.43	0.41	0.56	0.55	0.8
T1=T3	0.79	0.12	0.77	0.56	0.73	0.63	0.22	0.11	0.99
T1=T2=T3	0.38	0.3	0.78	0.65	0.73	0.41	0.56	0.28	0.96
ASSUMING EQUAL TREATMENT EFFECTS:									
Treatment	0.086***	0.082***	0.091***	0.103***	0.083	0.112***	0.076***	0.082***	0.070*
	[0.019]	[0.026]	[0.026]	[0.032]	[0.061]	[0.037]	[0.023]	[0.029]	[0.037]
Female	-0.013			-0.048			-0.015		
	[0.016]			[0.032]			[0.020]		
Tertiary educated	0.029	0.018	0.039	-0.024	-0.011	-0.030	0.035	0.010	0.068**
	[0.019]	[0.027]	[0.027]	[0.040]	[0.104]	[0.044]	[0.022]	[0.029]	[0.034]
Social Desirability Bias	0.004	-0.002	0.010	0.016	-0.004	0.025	-0.001	-0.002	0.000
	[0.007]	[0.010]	[0.010]	[0.013]	[0.024]	[0.016]	[0.009]	[0.011]	[0.014]
Constant	0.329***	0.341***	0.303***	0.271***	0.302***	0.235***	0.365***	0.355***	0.352***
	[0.030]	[0.042]	[0.041]	[0.052]	[0.096]	[0.061]	[0.037]	[0.047]	[0.056]
Control Mean:	0.343	0.339	0.346	0.307	0.289	0.313	0.36	0.349	0.377
Observations	3,590	1,795	1,795	1,131	307	824	2,459	1,488	971

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Intensity of the intervention effects

Dependent Variable: Choice of Career Mentoring Course (1/0)					
	All	Men	Female	All - Not working women	All - Working women
	(1)	(2)	(3)	(4)	(5)
Treatment	0.064*** [0.021]	0.090*** [0.030]	0.035 [0.029]	0.064* [0.037]	0.060** [0.025]
Time reading information (10 seconds)	0.009** [0.004]	0.000 [0.005]	0.018*** [0.005]	0.016** [0.008]	0.006 [0.004]
Female	-0.013 [0.016]			-0.050 [0.032]	-0.015 [0.020]
Tertiary educated	0.027 [0.019]	0.039 [0.027]	0.015 [0.027]	-0.024 [0.040]	0.033 [0.022]
Social Desirability Bias	0.005 [0.007]	0.010 [0.010]	-0.001 [0.010]	0.017 [0.013]	-0.001 [0.009]
Constant	0.327*** [0.030]	0.303*** [0.041]	0.339*** [0.042]	0.267*** [0.053]	0.363*** [0.037]
Control Mean:	0.343	0.346	0.339	0.307	0.36
Observations	3,590	1,795	1,795	1,131	2,459

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Notes: Sample includes individuals in the real rewards sample.

Table 4: Heterogeneity of treatment effects

Dependent Variable: Choice of Career Mentoring Course (1/0)

	High share of formal employment	Low share of formal employment	Working mother when aged 12	Non-working mother when aged 12	Youngest child aged 6 or under	Youngest child aged over 6
	(3)	(4)	(7)	(8)	(11)	(12)
Treatment	0.078*** [0.022]	0.100*** [0.034]	0.093*** [0.022]	0.073** [0.033]	0.071*** [0.020]	0.162*** [0.045]
Female	-0.026 [0.020]	0.015 [0.030]	-0.012 [0.020]	-0.010 [0.030]	-0.019 [0.018]	0.027 [0.042]
Tertiary ed	0.050** [0.022]	-0.029 [0.040]	0.022 [0.023]	0.044 [0.035]	0.033 [0.021]	0.009 [0.045]
SDB	0.011 [0.009]	-0.010 [0.013]	0.008 [0.009]	-0.003 [0.013]	0.004 [0.008]	0.001 [0.019]
Constant	0.306*** [0.036]	0.373*** [0.054]	0.305*** [0.036]	0.374*** [0.055]	0.339*** [0.033]	0.275*** [0.076]
Control Mean	0.343	0.341	0.329	0.369	0.351	0.296
Observations	2,480	1,110	2,467	1,123	3,021	569

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Notes: Sample includes individuals in the real rewards sample. Cities classified as high share of formal employment are those where the proportion of people in formal employment is above the median across all the cities. Cities classified as low share of formal employment are those who are below the median.

Table 5: Impacts of Misperceptions (Real Reward Sample)

Dependent Variable: Choice of Career Mentoring Course (1/0)	All (1)	Female (2)	Male (3)
Treatment1	0.062*** [0.024]	0.045 [0.034]	0.086** [0.035]
Treatment2	0.094*** [0.027]	0.079** [0.038]	0.114*** [0.038]
Treatment3	0.108** [0.043]	0.036 [0.061]	0.180*** [0.059]
Female	-0.014 [0.016]		
Tertiary	0.027 [0.019]	0.014 [0.028]	0.036 [0.027]
Social Desirability Bias	0.005 [0.007]	-0.001 [0.010]	0.010 [0.010]
Misperceptions in Women's support for women working (ww)	0.001 [0.001]	0.001 [0.001]	0.000 [0.001]
Misperceptions in Men's support for shared childcare (scc)	-0.001 [0.001]	-0.001 [0.001]	-0.000 [0.001]
Misperceptions in Older women's support for women working	0.000 [0.000]	0.001* [0.000]	-0.001 [0.000]
Treatment * Misperception in in Women's support for ww	-0.001 [0.001]	-0.001 [0.001]	0.000 [0.001]
Treatment * Misperceptions in Men's support for scc	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]
Treatment * Misperceptions in Older women's support for ww	0.000 [0.001]	-0.002 [0.001]	0.002* [0.001]
Constant	0.324*** [0.036]	0.360*** [0.051]	0.267*** [0.048]
Control mean:	0.343	0.339	0.346
Observations	3,590	1,795	1,795

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Effect of Hypothetical Choices and Social Desirability Bias

Dependent Variable: Choice of Career Mentoring Course (1/0)												
	All				Female			Male				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treatment	0.043**	0.043**	0.043**	0.043**	0.017	0.016	0.017	0.016	0.070***	0.069***	0.069***	0.068***
	[0.017]	[0.017]	[0.017]	[0.017]	[0.024]	[0.024]	[0.024]	[0.024]	[0.024]	[0.024]	[0.024]	[0.024]
Hypothetical	0.079***	0.081***	-0.101*	-0.102*	0.097***	0.098***	0.003	0.005	0.061**	0.063**	-0.212***	-0.216***
	[0.019]	[0.019]	[0.056]	[0.056]	[0.026]	[0.027]	[0.079]	[0.080]	[0.026]	[0.026]	[0.077]	[0.077]
Social Desirability Bias (SDB)		0.015**	0.004	0.004		0.005	-0.001	-0.002		0.026***	0.009	0.009
		[0.007]	[0.007]	[0.007]		[0.009]	[0.010]	[0.010]		[0.009]	[0.010]	[0.010]
Hypothetical*SDB			0.056***	0.056***			0.029	0.028			0.084***	0.085***
			[0.016]	[0.016]			[0.023]	[0.023]			[0.022]	[0.022]
BL support women working				0.008				0.032				-0.013
				[0.020]				[0.028]				[0.028]
BL support shared childcare				-0.003				-0.073				0.039
				[0.037]				[0.058]				[0.049]
BL spouse supported shared childcare				-0.004				0.015				-0.019
				[0.039]				[0.055]				[0.054]
Mother supportive of women working				0.014				-0.015				0.041
				[0.021]				[0.031]				[0.030]
Constant	0.375***	0.324***	0.363***	0.354***	0.389***	0.372***	0.393***	0.438***	0.362***	0.275***	0.331***	0.294***
	[0.015]	[0.026]	[0.028]	[0.041]	[0.021]	[0.038]	[0.041]	[0.065]	[0.021]	[0.037]	[0.040]	[0.054]
Control Mean:	0.391	0.391	0.391	0.391	0.408	0.408	0.408	0.408	0.374	0.374	0.374	0.374
Observations	4,478	4,478	4,478	4,478	2,239	2,239	2,239	2,239	2,239	2,239	2,239	2,239

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Table 7: Results for Male Respondents with Hypothetical Choices

Dependent Variable: Choice of Career Mentoring Course (1/0)			
	All (1)	Wife not working (2)	Wife working (3)
Treatment1	0.008 [0.066]	0.081 [0.094]	-0.060 [0.094]
Treatment2	-0.000 [0.066]	0.074 [0.092]	-0.068 [0.097]
Treatment3	-0.037 [0.068]	-0.001 [0.090]	-0.063 [0.102]
Tertiary	0.083 [0.064]	0.121 [0.095]	0.058 [0.087]
Social Desirability Bias	0.094*** [0.020]	0.110*** [0.027]	0.081*** [0.030]
Constant	0.162** [0.080]	0.054 [0.106]	0.261** [0.118]
Control Mean:	0.486	0.448	0.528
Observations	444	226	218

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Appendix

Figure A1. Theory of Change

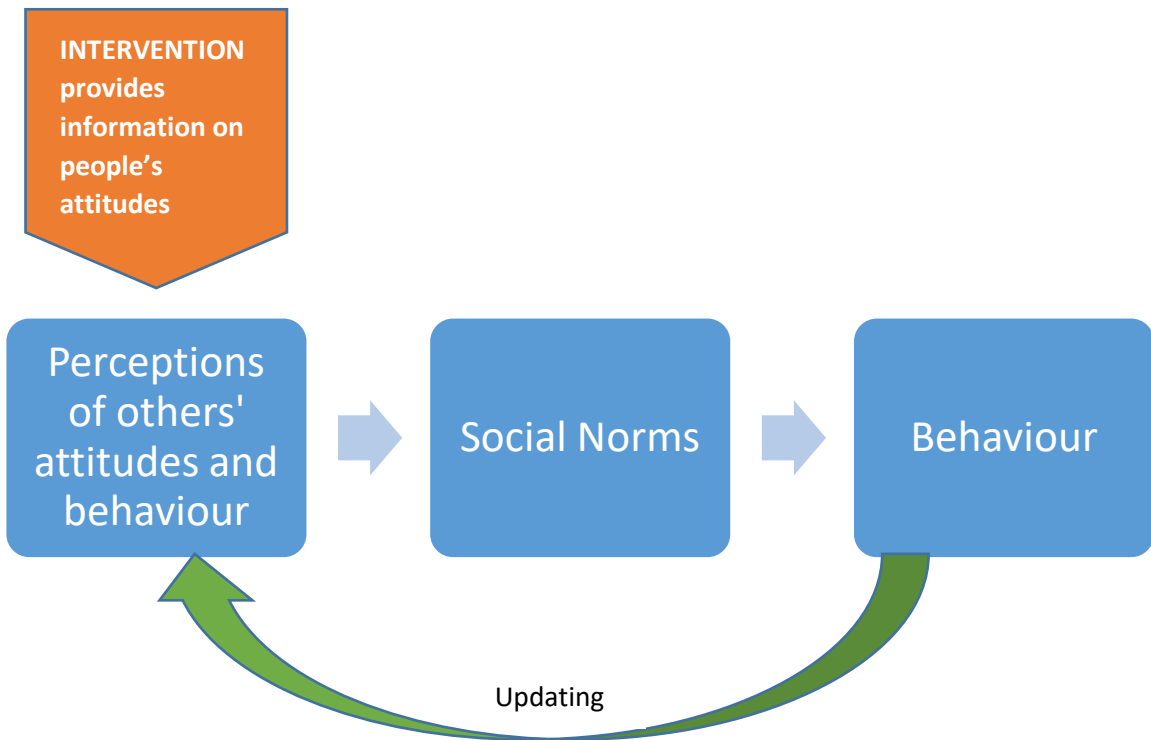


Figure A2: Information Presented to Each Treatment Arm

<p>TREATMENT GROUP 1</p>	<p>In a previous question, we asked you to estimate how many out of 100 Indonesian women (with an education level similar to yourself) support wives with children under 12 working for pay outside the home.</p> <p style="text-align: center;">Your estimate: xx% of women are supportive.</p> <p>We surveyed married women with children with similar education level as you across urban Indonesia to assess their support for wives with children under 12 working for pay outside the home and found that:</p> <p style="text-align: center;">Survey result: 76% of women are supportive.</p>
<p>TREATMENT GROUP 2</p> <p>This group receives the information received by treatment group 1 &:</p>	<p>You were also previously asked to indicate how many out of 100 Indonesian men (with an education level similar to your husband) support husbands sharing day-to-day childcare responsibilities with their wives.</p> <p style="text-align: center;">Your estimate: xx% of husbands are supportive.</p> <p>We surveyed married men with children with a similar education to your husband across urban Indonesia to assess their support for husbands sharing childcare duties.</p> <p style="text-align: center;">Survey result: 90% of husbands are supportive</p>
<p>TREATMENT GROUP 3</p> <p>This group receives the information received by treatment group 2 &:</p>	<p>Many parents of young children are concerned about their mothers and mothers-in-law not supporting if they work for pay outside the home.</p> <p>Above you were asked to estimate how many women in your mother’s generation would agree with the statement: “when a woman works her children suffer”.</p> <p style="text-align: center;">Your estimate: xx% of women of your mother’s generation agree</p> <p>A representative survey of Indonesian women found that your mother and mother-in-law's generation are actually quite supportive of women with young children working for pay outside the home.</p> <p style="text-align: center;">Survey result: Less than 10% of women in your mother's generation agree.</p>

Table A1: The Role of Social Desirability Bias

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Support for women working	Support for shared childcare	Mother supportive of women working	Perception of support for women working	Perception of support for shared childcare	Perceptions of mothers' social norms towards women working
Social Desirability Index	0.014** (0.006)	0.005 (0.004)	0.004 (0.005)	0.424 (0.286)	1.280*** (0.299)	0.728*** (0.277)
Support for women working				28.763*** (0.823)		
Support for shared childcare					19.179*** (1.597)	
Mother supportive of women working ^a						22.720*** (0.864)
Female	0.113*** (0.014)	0.047*** (0.008)	0.079*** (0.013)	1.548** (0.651)	-0.403 (0.658)	4.397*** (0.664)
Tertiary	0.101*** (0.015)	0.015* (0.008)	0.082*** (0.014)	0.389 (0.709)	0.131 (0.747)	1.664** (0.713)
Metropolitan area	0.085*** (0.016)	0.027*** (0.009)	0.057*** (0.015)	1.097 (0.732)	-0.066 (0.737)	-1.232* (0.719)
Constant	0.498*** (0.025)	0.863*** (0.016)	0.638*** (0.023)	43.167*** (1.256)	48.989*** (1.880)	45.326*** (1.259)
Observations	4,478	4,478	4,478	4,478	4,478	4,478
R-squared	0.035	0.012	0.021	0.286	0.055	0.184

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Notes: a. This is the respondent's belief of their own mother's level of support.

Table A2: Impacts of Information Interventions (Real Rewards Sample, No Controls)

Dependent Variable: Choice of Career Mentoring Course (1/0)									
	All			Not Working			Working		
	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
treatment1	0.068*** [0.023]	0.057* [0.032]	0.079** [0.032]	0.084** [0.040]	0.084 [0.077]	0.085* [0.047]	0.060** [0.028]	0.052 [0.035]	0.072 [0.045]
treatment2	0.093*** [0.023]	0.082** [0.032]	0.104*** [0.033]	0.122*** [0.040]	0.049 [0.077]	0.148*** [0.047]	0.078*** [0.028]	0.087** [0.036]	0.064 [0.045]
treatment3	0.098*** [0.023]	0.108*** [0.032]	0.088*** [0.032]	0.104*** [0.040]	0.111 [0.075]	0.102** [0.047]	0.095*** [0.028]	0.109*** [0.036]	0.072 [0.045]
Constant	0.343*** [0.016]	0.339*** [0.022]	0.346*** [0.022]	0.307*** [0.027]	0.289*** [0.052]	0.313*** [0.032]	0.360*** [0.020]	0.349*** [0.025]	0.377*** [0.032]
Control mean:	0.343	0.339	0.346	0.307	0.289	0.313	0.36	0.349	0.377
Observations	3,590	1,795	1,795	1,131	307	824	2,459	1,488	971
R-squared	0.006	0.007	0.007	0.009	0.008	0.012	0.005	0.007	0.004

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1. These results were estimated over the sample of respondents who were in the pool to receive the career mentoring course or shopping voucher.

Table A3: Impacts of Information Interventions (Weighted Regressions, Real Rewards Sample)

Dependent Variable: Choice of Career Mentoring Course (1/0)									
	All			Not working			Working		
	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment1	0.074***	0.068	0.080**	0.083*	0.083	0.082*	0.061**	0.051	0.074
	[0.026]	[0.042]	[0.032]	[0.045]	[0.077]	[0.047]	[0.029]	[0.036]	[0.045]
Treatment2	0.088***	0.070*	0.106***	0.098**	0.048	0.147***	0.074**	0.086**	0.063
	[0.026]	[0.042]	[0.033]	[0.045]	[0.077]	[0.047]	[0.029]	[0.036]	[0.045]
Treatment3	0.099***	0.108**	0.090***	0.108**	0.110	0.106**	0.089***	0.108***	0.074*
	[0.027]	[0.042]	[0.032]	[0.045]	[0.075]	[0.047]	[0.029]	[0.036]	[0.045]
Female	-0.030			-0.048			-0.015		
	[0.019]			[0.032]			[0.020]		
Tertiary educated	0.031	0.025	0.036	-0.021	-0.013	-0.032	0.041*	0.011	0.069**
	[0.021]	[0.034]	[0.027]	[0.045]	[0.104]	[0.044]	[0.023]	[0.029]	[0.034]
Social Desirability Bias	0.005	-0.001	0.011	0.009	-0.003	0.025	-0.001	-0.002	0.000
	[0.009]	[0.013]	[0.010]	[0.015]	[0.024]	[0.016]	[0.009]	[0.011]	[0.014]
Constant	0.324***	0.317***	0.299***	0.297***	0.301***	0.236***	0.362***	0.352***	0.353***
	[0.035]	[0.054]	[0.041]	[0.059]	[0.096]	[0.062]	[0.038]	[0.047]	[0.056]
Control Mean:	0.343	0.339	0.346	0.307	0.289	0.313	0.36	0.349	0.377
Observations	3,590	1,795	1,795	1,131	307	824	2,459	1,488	971

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1 We report results from weighted ordinary least squares estimation where observations are weighted to reflect the female labour force participation population composition.

Table A4: Impacts of information interventions on selection and use of the mentoring career course

Dependent Variable: Choice and use of Career Mentoring Course (1/0)									
	All			Women not working			Women working		
	All	Female	Men	All	Female	Men	All	Female	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment 1	0.066***	0.053*	0.080**	0.079**	0.069	0.082*	0.059**	0.050	0.076*
	[0.023]	[0.032]	[0.032]	[0.040]	[0.075]	[0.046]	[0.028]	[0.035]	[0.045]
Treatment 2	0.075***	0.076**	0.074**	0.091**	0.031	0.113**	0.066**	0.084**	0.040
	[0.023]	[0.032]	[0.032]	[0.040]	[0.076]	[0.047]	[0.028]	[0.035]	[0.044]
Treatment 3	0.090***	0.091***	0.089***	0.094**	0.088	0.096**	0.089***	0.093***	0.085*
	[0.023]	[0.032]	[0.032]	[0.040]	[0.074]	[0.047]	[0.028]	[0.036]	[0.044]
Female	-0.013			-0.057*			-0.006		
	[0.016]			[0.032]			[0.020]		
Tertiary Educated	0.039**	0.034	0.044*	-0.011	0.030	-0.020	0.046**	0.026	0.076**
	[0.019]	[0.027]	[0.026]	[0.040]	[0.103]	[0.044]	[0.022]	[0.029]	[0.034]
Social Desirability Bias	0.004	-0.000	0.009	0.025*	0.025	0.025	-0.005	-0.007	-0.003
	[0.007]	[0.010]	[0.010]	[0.013]	[0.022]	[0.016]	[0.009]	[0.011]	[0.014]
Constant	0.307***	0.313***	0.288***	0.234***	0.190**	0.227***	0.345***	0.345***	0.331***
	[0.030]	[0.041]	[0.041]	[0.051]	[0.089]	[0.061]	[0.037]	[0.047]	[0.055]
Control Mean:	0.343	0.339	0.346	0.307	0.289	0.313	0.36	0.349	0.377
Observations	3,590	1,795	1,795	1,131	307	824	2,459	1,488	971

Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Notes: Sample includes individuals in the real rewards sample.

Table A5 - Test of Balance by Real Reward /Hypothetical

	All	Means		t-test of equality of means (p-value)
		Real Reward	Hypothetical	
Age	30.5	30.3	31.4	0.00
Tertiary educated	0.25	0.25	0.25	0.99
Live in Java	0.80	0.80	0.79	0.44
Muslim	0.92	0.93	0.91	0.06*
Male respondent works	0.99	0.98	1.00	0.06*
Female respondent works	0.83	0.83	0.83	0.91
Wife works	0.53	0.54	0.49	0.06*
Mother worked	0.69	0.69	0.68	0.69
Friends' mothers worked	0.92	0.92	0.93	0.18
<u>Support for married women working:</u>				
Female respondent	0.75	0.73	0.81	0.00***
Male respondent	0.63	0.62	0.67	0.04**
Mother supportive	0.75	0.74	0.79	0.00***
<u>Support for shared child-care:</u>				
Female respondent	0.95	0.94	0.97	0.02**
Male respondent	0.90	0.90	0.92	0.12
Wife supportive	0.92	0.92	0.94	0.08*
Husband supportive	0.95	0.95	0.94	0.54
Social desirability bias index	3.36	3.39	3.25	0.00***
Max N	4478	3590	888	