

Leveraging Women's Views to Influence Gender Norms around Women Working: Evidence from an Online Intervention in Indonesia*

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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 provide randomly selected participants with information on the extent of i) women's support for women with children working; ii) husband's support for sharing day-to-day childcare with wives; and iii) mothers' and mother-in-law's support for working women. As a result, the probability of choosing an online career mentoring course for women over a shopping voucher of equal value increased by 25%. Information beyond women's support for working women further increased support for women working for some groups, although not strongly so.

Keywords: gender norms, women's employment, social desirability bias, Indonesia.

JEL Classification Code: O12, O15, J16.

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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 labor 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 and non-government initiatives 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) and McKelway (2021).¹ 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.² 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. Cortés et al. (2012) 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

¹Dean 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 (ming) 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)).

²While 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.

(whether female respondents and wives of male respondents work outside the home), personal attitudes (level of support for women working) and 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 about women working, 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.³ 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 respondents' mother's and 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.

³Bursztyn et al. (2023) examines misperceptions of social norms using nationally representative datasets from 60 countries, including Indonesia. They find that Indonesia has one of the lowest shares of support for women having the right to work outside the home (supported by 59% of men and 73% of women). These figures are very similar to the levels of support found in our study - 62% and 76% for men and women respectively. They further find that Indonesians underestimate the level of support for women having the right to work outside the home. The underestimation of women's support for women working outside the home is 7.9 percentage points (very similar to the average underestimation of 9.4 percentage points in our sample); and of men's support is 6 percentage points (slightly larger than the 2.5 percentage point underestimate in our sample).

⁴Changing 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.

The interventions significantly increase both men and women’s support for working women – 43% of participants in the treatment arms, compared to 34% in the control group, chose to select an online career mentoring course for themselves (female respondents) or their wives (male respondents) instead of a shopping voucher of equal value. The vast majority of vouchers for the career mentoring course were redeemed, signifying respondents’ genuine interest in women’s labor force participation. The provision of the additional information on men’s childcare sharing norms and older women’s attitudes towards working women further increased support for women working for some groups, although not strongly so. The two additional pieces of information together increased the probability of choosing the career mentoring course increased by 5.7 percentage points (16%) for working women ($p=0.11$). For male respondents whose wives were not working, the additional information about the extent of support among men for parents sharing childcare increased their likelihood of selecting the career mentoring course by 6.5 percentage points (21%) but not significantly so ($p=0.18$). The information on the level of support amongst women in their mothers’ and mothers-in-laws’ generation did not further increase men’s support. Taken together, the impact of the interventions across all treatment arms was about twice as large for respondents with school-aged children (aged over 6 years) than for those with pre-school aged children, reflecting that young children in an environment with very restricted 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 be true, 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. This result is contrary to that found by Bursztyn et al. (2020), Aloud et al. (2020) and Cortés et al. (2012).

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 Cortés et al. (2012) 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 in the US.⁵ We build on this evidence and test

⁵Aloud et al. (2020)) examine the impact of information on what percentage of female students expect to be working for pay when they are twenty-five years old alongside information on monthly wages and a

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.

We introduce two innovations to the literature on “pluralistic ignorance” in relation to women’s employment. First, ours 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.⁶ Our data suggest that both men and women have relatively accurate perceptions of the extent of support among men for women working but significantly underestimate the support among women for working women, consistent with women not being able to voice their opinions. We explore whether making 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 aiming to change 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 we are unable to 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

job assistance program. Gauri et al. (2019) also find evidence of misperceptions on attitudes to women’s work in Jordan but do not implement an intervention to address these misperceptions.

⁶Bursztyn 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. Cortés et al. (2012) examine the effect of revealing own-gender attitudes on both men and women.

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.

A further, and interesting, corollary of our findings is that in contexts where women’s support for working women (or any other social phenomenon) is underestimated - and the social norm is formed on the basis of observations of people’s behavior rather than stated preferences - empowering women to express their opinions would likely encourage adoption of a less conservative norm. Hence, empowerment of women’s voices is an alternative policy prescription to public information campaigns for changing social norms.

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 real reward choices, hypothetical choices were significantly and overwhelmingly swayed by social-desirability bias. When the choice was hypothetical, 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. 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

Data was collected in two online surveys. The first online survey covers 1,050 respondents (50% male, 50% female) residing in large urban centers throughout Indonesia.⁷ 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

⁷We sample from urban areas as previous research has shown the negative impact of marriage and childbirth on women’s labor force participation to be 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 the Regional Infrastructure Development Agency’s Strategic Plan 2020-2024: https://bpiw.pu.go.id/product/get_index/1.

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.⁸ 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 behaviours. These estimates were incentivized by paying approximately USD17 to the respondents who made the most accurate estimate. The difference between the mean of the sample's reported level of support 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. The information intervention was embedded in the survey just prior to survey exit. The intervention is detailed further below in Section 4.⁹

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

⁸Women with upper secondary education have the lowest female labor force participation in Indonesia, Cameron et al. (2019).

⁹Ethics 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 and pre-analysis plan were registered with the AEA RCT Registry (AEARCTR-0009493). Unless otherwise indicated, the analysis presented follows that laid out in the pre-analysis plan.

and a decrease in fertility rates.¹⁰ 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).¹¹ 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 conservative. For example, Indonesian men have a similar tolerance to women working as Saudi Arabian men and are less tolerant than Indian men.¹² 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 agree with this statement than men.¹³ 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 and 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 of kodrat, or God's will when defining gender roles. Participants in their study saw women working for pay as positive, but only if it was done to support husbands and women did 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%.¹⁴ However, only 53% of wives of male respondents worked.

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 not particularly family friendly with flexible and part-time work rarely being available (Cameron et al., 2023).¹⁵

¹⁰31% 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>.

¹¹Halim et al. (2023) show that the expansion of public pre-school provision from 2003 has not changed this situation.

¹²A 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 and ILO, 2017).

¹³Gender norms are becoming more conservative in Indonesia over time. In the 2006 World Values Survey 65% and 42% of men and women agreed with the above statement respectively.

¹⁴As reported in the World Bank data bank, see <https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS?locations=ID/>.

¹⁵58% 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.

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 could not find anyone else to look after them.¹⁶ A further 20% reported that they were not working as their husband did not 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.

3.1 Social norms around women’s work

Conservative social norms aside, our data reveal show that majority of Indonesian men and women support women with children under 12 working outside the home for pay - 76% of female respondents reported being supportive and 62% of male respondents.¹⁷

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 male 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 female 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 themselves (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 and 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 an important reference groups for both men and women. 91% of female respondents reported that having their husband’s support is important to them.

Figure 2 shows what women who report that their husband’s support is important to them would be most concerned about in relation to their husband if they worked. The concern women most often reported is that their husband would be worried that others will think that he is 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

¹⁶Currently Indonesian preschool sessions are very short and so allow women to increase unpaid work but not paid activities outside the home (Halim et al., 2023).

¹⁷Defined as people who reported they were very supportive, supportive or somewhat supportive.

group of women in Muslim-majority Indonesia, only 4% reported being concerned that others will view them as not following their religious traditions.¹⁸ 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.

3.2 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 education level and to estimate “Out of 100, how many of these women do you think are supportive of wives with children under 12 years working for pay outside the home?”. The right hand set of bars show that while the actual level of support reported among female respondents was 76%, the mean (incentivized) level of women’s support as estimated by female respondents was 67% - an underestimate of 9 percentage points; and men estimated that only 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.

These findings are consistent with men’s views being more widely known and hence more accurately perceived, while women’s views are more closely held. They 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 Bursztyjn et al. (2020)). This result underscores the importance of formative research to ensure intervention design reflects the cultural context.

¹⁸A 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.

3.3 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.¹⁹

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.

4 Evaluation Design

4.1 Theory of Change

The theory of change that underpins the intervention is illustrated in Figure A.1. 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.²⁰ Over time this will create a self-reinforcing loop in which others observe the changed behavior and update their perceptions and change their behavior.

4.2 Intervention Design

Respondents in the second survey were randomly divided into four groups – a control group and three treatment groups with the treatment groups receiving information designed to

¹⁹In practice most of the childcare is, however, performed by wives. Our data show that men overestimate their share of childcare relative to what wives report. 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%.

²⁰Bursztyn 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.

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).²¹

The control group received no such information. Figure A.2 in the appendix shows the format in which this information was presented to each treatment group.

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 for female participants or the wives of male respondents. The course provides practical career advice from HR professionals and was valued at Rp100,000 (USD6.50). It equips participants with the skills to create a CV, write a cover letter, prepare for a job interview, and create a LinkedIn profile; or
- a Rp100,000 convenience store shopping voucher.²²

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.²³

²¹In 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. The information provided on norms in this domain is constructed from 2018 Indonesian World Values Survey data 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”. For more information on the World Values Survey, see Haerpfer et al. (2022).

²²For information on the career mentoring course, 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.

²³We also conducted a list experiment which generates an alternative outcome measure. At the end

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.

Respondents were randomly allocated across treatment arms (with stratification by gender; education; and whether the voucher choice was real or hypothetical).²⁴ 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 which were 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.

5.1.1 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

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 did not have a significant impact on choices in the list experiment. Results available on request.

²⁴Two of Qualtrics' panel partners would not allow us to provide vouchers to respondents. These panel partners contributed 20% of respondents. These respondents were asked which they would choose if given a choice i.e. a hypothetical choice.

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 A.1 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 small and two out of three are not statistically significant. Respondents’ reported perceptions of other’s support (columns 4 to 6) are again not heavily influenced by the SDI.²⁵ Below we examine whether social desirability bias affects our outcome measure – the choice of the career mentoring course.

5.2 Intervention Impacts

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

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

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 over the real rewards sample.²⁶ Column 1 presents results for the pooled sample of male and female respondents. 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 10 percentage points more likely to choose the career mentoring course. This is a 20% to 29% increase over the control mean of 0.343. Columns 2 and 3 present results separately for female and male respondents, respectively. All treatment arms have significant effects for both men and women.

Although the point estimates of the interventions’ impacts differ across treatment

²⁵Interestingly, respondents’ perceptions of the extent of support are heavily influenced by their own level support.

²⁶We 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 A.2 in the appendix reports results without controls. The inclusion of controls has very little effect on the results.

arms, increasing from 0.067 in treatment 1 through to 0.98 in treatment 3 (column 1), they are not statistically significantly different from one another. 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 separately by whether the woman (female respondents and wives of male respondents) works 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 results are stronger for male respondents who have a non-working wife (possibly due to the smaller sample size of non-working female respondents leading to imprecise estimates). Men with non-working wives are 8.2 (26%) to 14.7 (47%) percentage points more likely to choose the career mentoring course for their wife than a shopping voucher. The point estimates on the treatment indicators are, however, very similar in magnitude across Columns 5 and 6, with the exception of the coefficient on the indicator for Treatment 2. 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.

Columns 7 to 9 report results for the sub-sample where the women are working. The point estimates are a similar magnitude for both female and male respondents, but more strongly significant for 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 and 10.8 percentage points, respectively, relative to the control group. The difference between the impact of treatments 1 and 3 again approaches statistical significance ($p=0.11$).

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

these real reward interventions.²⁷

Panel B in Table 2 reports results where the treatment impacts are restricted to be equal across treatment arms. Across the entire sample of male and female respondents (column 1), treatment increases the probability of choosing the career mentoring course by 8.6 percentage points (25%). Large treatment impacts are detected for all groups other than non-working women (the point estimate on treatment is similar in magnitude to other groups but not statistically significant).

To address the issue that our sample oversamples working women, Table A.3 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.²⁸

5.2.1 Intensity of the treatment

In this section we examine whether spending more time reading the information presented in the treatments – arguably a sign of more deeply engaging with the information – is associated with a greater likelihood of choosing the career mentoring voucher. If so, this provides further evidence that the information provided is driving participants’ choices. Table 3 includes a variable for the total time spent on the intervention pages.²⁹ Column 1 shows that for each additional 10 seconds spent looking at the intervention screen, the respondent’s probability of selecting the career voucher increased by 0.9 percentage points (2.6%). For respondents in a couple in which the woman does not work (Column 2), ten more seconds spent reading the intervention material increases the probability of the respondent choosing the career mentoring course by 1.6 percentage points (5.2%). Reading time has no effect for respondents in a couple in which the woman already works (Column 3).

5.2.2 Heterogeneity Analysis

We now explore the heterogeneity of treatment effects. One might expect larger treatment effects in households which are more open to attitudinal change, possibly through greater

²⁷Interactions of the social desirability index with the treatment indicators are also not statistically significant. 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.

²⁸Weights for (non-)working women were calculated as the number of (non-)working women in the population over the number of (non-)working women in the sample. The population numbers were calculated from the 2020 National Socioeconomic Survey (SUSENAS).

²⁹On 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. We also estimated a specification with a quadratic term but its coefficient was not significant.

exposure to role models of working women, and who have real prospects of being able to find and retain a job. To this end, we examine whether treatment effects are larger for respondents: 1) whose mothers worked when they were age 12; 2) in regions with more job opportunities (a larger formal sector); and 3) with less binding childcare responsibilities (those with children aged 6 or older).

Table 4 shows that when we compare individuals whose mothers worked (column 1) with those whose mother did not (column 2), we find little difference in treatment impact, suggesting that the absence of positive role models in childhood does not hamper the treatment’s effectiveness. The intervention impact is also similar in areas where there is high and low availability of formal employment opportunities (columns 3 and 4), showing that labor market opportunities do not affect the effectiveness of the intervention. There is however significant 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 the presence of young children ($p=0.05$). 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. The treatment is effective, but less so, for respondents with younger children – 7.1 percentage point impact (20%). 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.³⁰

5.2.3 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 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-

³⁰These heterogeneity tests were not pre-specified. The pre-analysis plan specified tests of heterogeneity of treatment effects in relation to gender (presented in the main results above); education; religiosity; female respondents’ and male respondents’ wives’ pre-intervention labour force participation; pre-intervention attitudes to working women and shared childcare; and reasons the woman in the couple is not working. No heterogeneity was found along these dimensions. Results available on request.

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 small, counterintuitively signed and significant only at the 10% level.

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), Aloud et al. (2020) and Cortes et al. (2022). The 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 be more supportive but 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.³¹

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 does not 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.

5.2.4 Potential long-run effects

To test if the intervention is likely to have long lasting effects, we track whether female respondents who selected the career mentoring course and wives of male respondents who selected the course actually enrolled in the course. Seventy-two percent of those who selected the course enrolled within the one-month period after the intervention for which the offer was valid. Table A.4 shows the effect of the interventions on the probability of choosing the voucher and using it.³² The results remain strongly statistically significant and are very similar to the main results presented in Table 2. This suggests that the ma-

³¹Similar results were found when using indicator variables of whether someone overestimated versus underestimated the extent of support.

³²A total of 86% of the vouchers for the career mentoring course were redeemed. Of the redeemed vouchers - all female respondents used the voucher themselves and 67% of male respondents enrolled their wife in the course, with 33% claiming the course for themselves rather than giving it to their wives as intended. In the latter case, we code the voucher as "not being used". (The career mentoring course was presented as being for their wives when respondents made their choice but in practice we were unable to enforce this.)

majority of respondents were sincere in their interest in the women’s career mentoring course and that these light-touch interventions are capable of generating meaningful behavioral change.

5.2.5 Is it necessary to use real reward payoffs?

We now examine whether similar results are observed when the choice over the career mentoring course for women is hypothetical. Two of Qualtrics panel partners who supply Qualtrics with respondents (constituting 20% of respondents) would not allow us to randomly select respondents to receive a reward as this went against their contract with respondents. As those making the hypothetical choice were not randomly selected, Table A.5 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. Demographic differences are small in magnitude and not strongly statistically significant. Respondents in the hypothetical sample however report that they and their family members (spouses and mothers) are more supportive of women working and husbands sharing daily childcare. The magnitude of the differences are relatively small but we nevertheless control for these variables in the specifications below (doing so does not affect the results).

Column (1) of Table 6 reports results for the entire sample (men and women). Although 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 (48.6% versus 40.7%), this result is driven by the interaction between making a hypothetical choice and treatment, rather than the choice being hypothetical, per se. Respondents in treatment arms where the choice was hypothetical were 22 percentage points less likely to choose the career mentoring course over the shopping voucher. This is observed for both men and women (columns 2 and 3). The hypothetical choice also interacts with social desirability bias. 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).

Columns (2) and (3) present the results of estimating the same models on the sample of female respondents and male respondents, respectively. The results are broadly similar for men and women. One difference is that women are more likely to choose the career mentoring course per se when the choice is hypothetical, whereas men are more susceptible to social desirability bias (possibly because male respondents may feel more social pressure to support working women than women who would be seen to be acting in their self-interest).³³

³³The interaction between social desirability bias and treatment and the triple interaction between treatment, hypothetical choice and the social desirability index were both insignificant in all specifications.

Columns (4) to (6) present the results estimated over only the sub-sample of respondents who made a hypothetical choice. In the absence of a real reward choice, we would have concluded that treatment *decreases* the probability of female participants choosing the career mentoring course and has no effect on male respondents. Hence, the use of a real, meaningful outcome choice is essential to the identification of intervention impacts. The choice need not have real world consequences with 100% probability. In our case offering a one third probability of the choice being real created sufficient salience for the decision to be taken more seriously.³⁴ The greater susceptibility of men to social desirability bias in this setting is again evident.

6 Discussion and Conclusions

Our results demonstrate that a light-touch, inexpensive intervention that seeks to change gender norms around women’s work can be effective in a middle-income, majority and moderate-Muslim nation like Indonesia. We have thus broadened the scope of the evidence of the impact of interventions that seek to address correct misperceptions beyond studies in the developed world and the very specific context of the Middle East. The ability of such interventions to change men’s attitudes is especially important as in our sample 20% of women who were not working at the time of the survey reported that this was because their husband does not wish them to, while the percentage of women who reported that they were not working because they do not wish to is very low at 1%.

Given the percentage increase in men’s support for working women attributed to the intervention (25%) and assuming the same elasticity of female labor supply to men’s support as found in Bursztyn et al. (2020), we estimate that our intervention could increase Indonesian female labor supply by as much as 6 percentage points (12%).

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. Mass media has been shown to influence norms in a variety of contexts and on a variety of issues (Kearney and Levine, 2015; La Ferrara et al., 2012; La Ferrara, 2016; Banerjee et al., 2019). The greater understanding of existing social norms towards working women in Indonesia generated here will also be

³⁴This result is seemingly at odds with the findings of Cortés et al. (2012)) who find that incentivizing their outcome measure of how much of \$100 to donate to a non-profit organization that advocates for women in the workplace (with the remainder being forfeited) has no effect. They find no difference in results when this measure is incentivized by respondents being informed that five survey participants would be randomly selected and their choices implemented. The difference in their results may reflect the relatively low value of the incentives they employ (only applying to five people in their sample of over 1500 participants and there being no direct payoff to the participant).

useful for the formulation of such campaigns.

We show that perceptions of others' attitudes play a substantial role in husband's attitudes to women working and to shared childcare, especially perceptions about husbands' status. 65% of women who viewed their husbands as not being supportive of them working report that if they were to work, their husband would be worried what other people would think about him - either about his capacity to provide for his 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. Campaigns that further try to dispel the link between wives working and a husband's financial capacity are likely to be especially successful.

Finally, that the extent of women's support for working women is underestimated suggests an alternative policy approach. Empowering women to speak up and voice their opinions in the home, and more widely, may influence social norms just as effectively as a public information campaign. This is an area worthy of further research.

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Figure 1: Reasons Not to Support Women Working
(by gender of respondent)

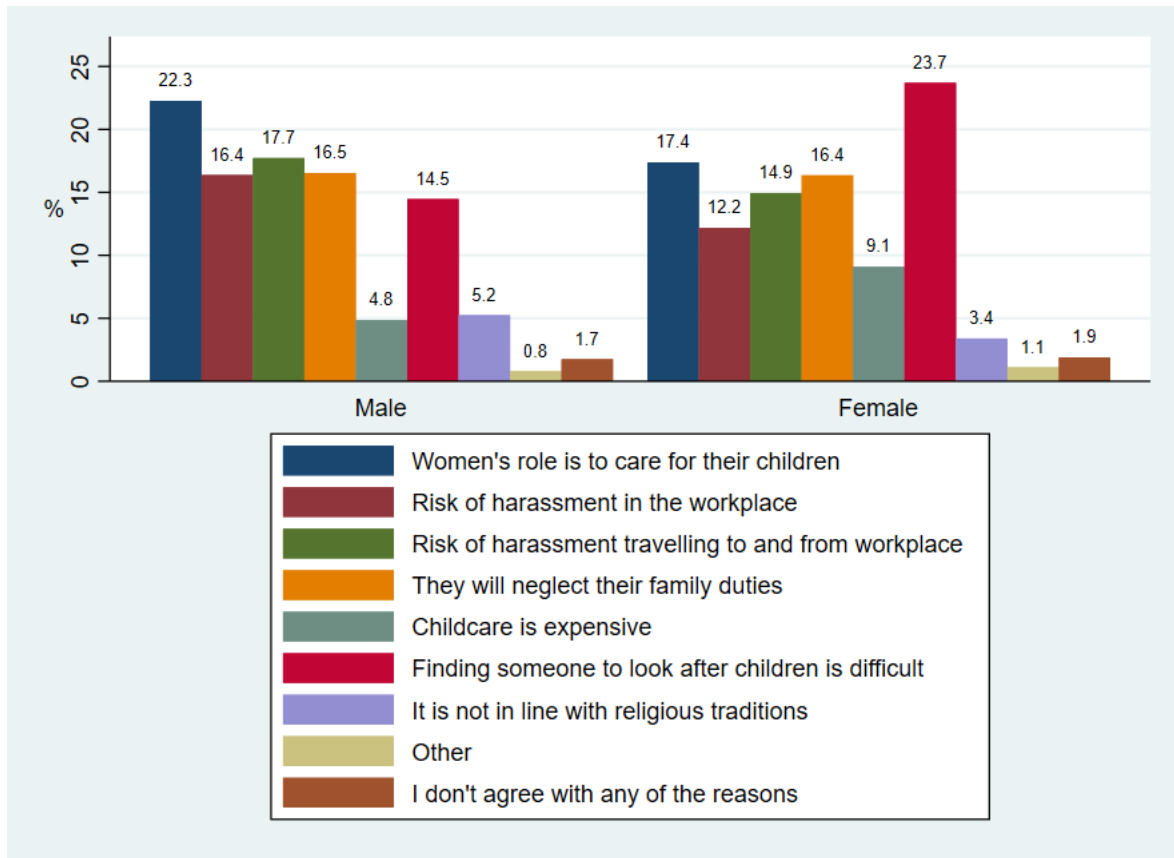
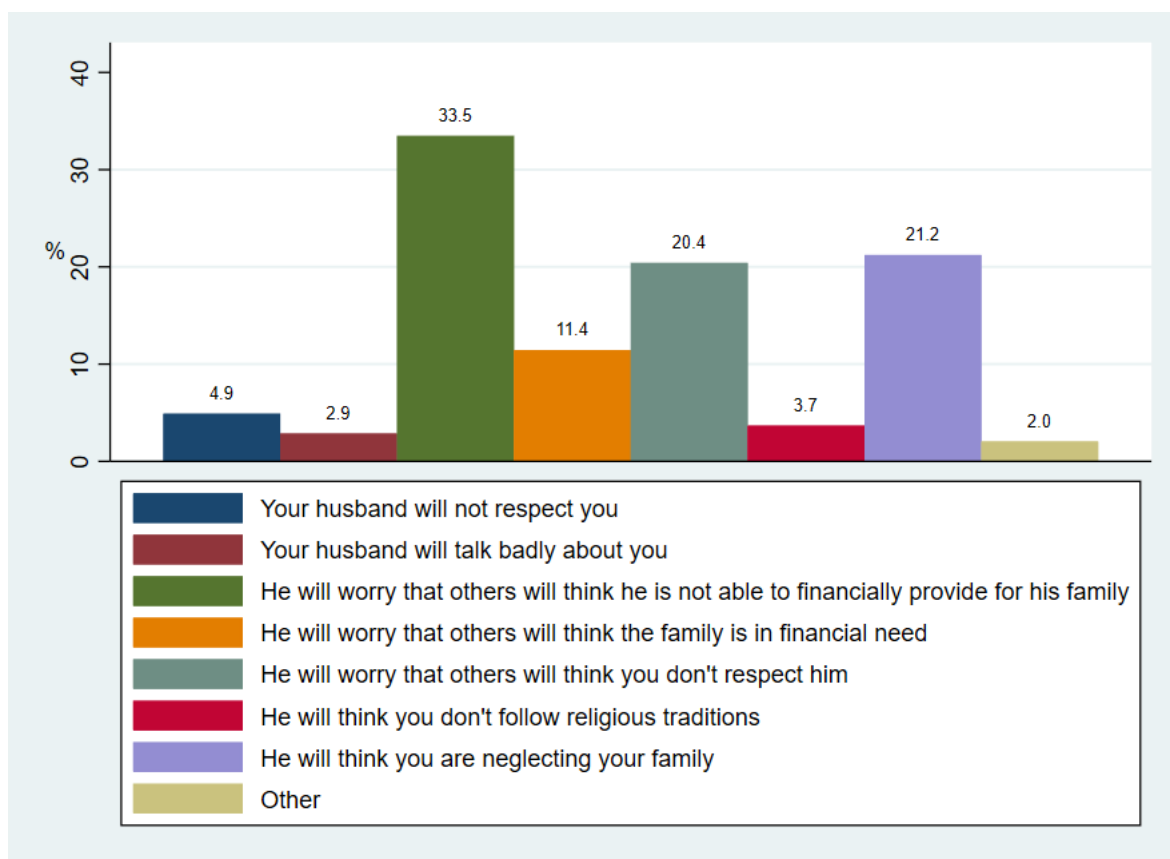


Figure 2: Concerns of Female Respondents About Their Husbands if They Work



Notes. The sample is restricted to female respondents who report that their husband's support for them working is somewhat or very important to them.

Figure 3: Perceived and Actual Support for Working Women (by gender)



Figure 4: Perceived and Actual Support for Shared Child Care (by gender)



Figure 5: Perceptions of Social Norms
 (vertical line shows actual level of support)

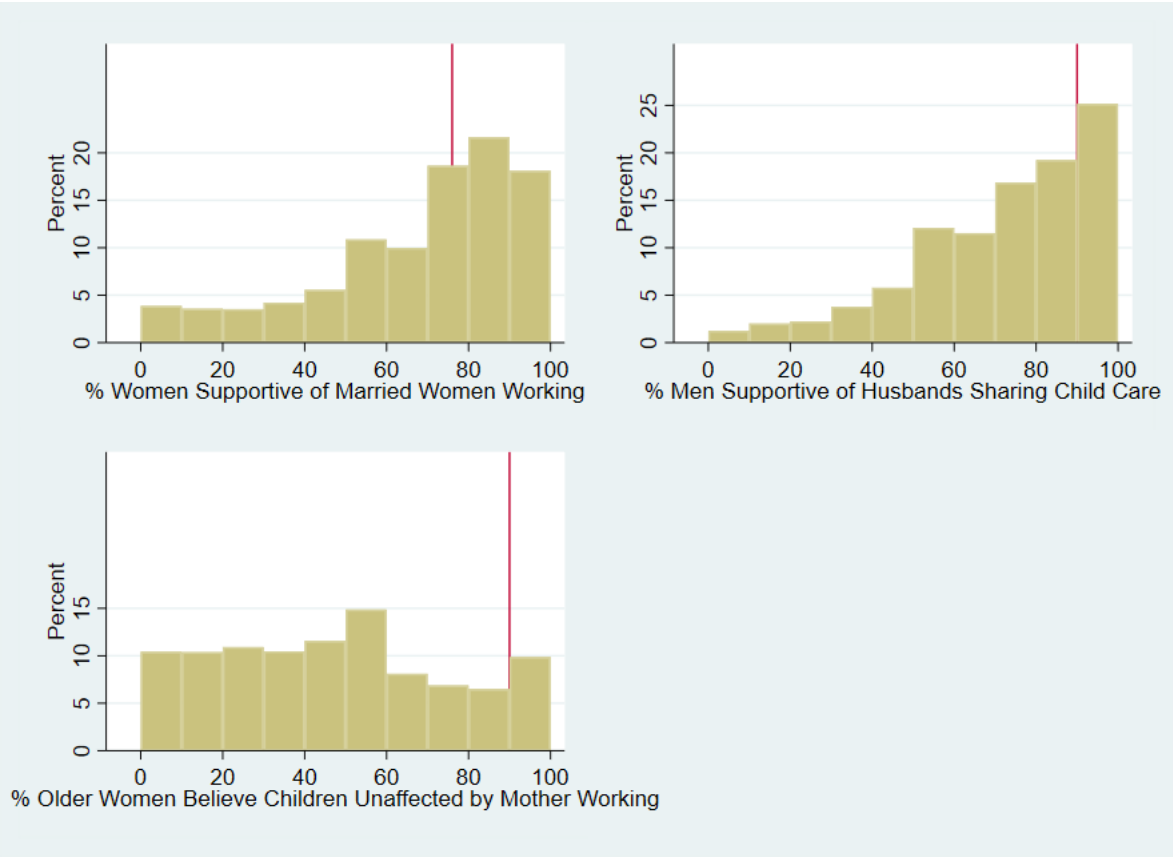


Table 1: Descriptive Statistics and Tests of Balance

	First Survey		Mean Values				Tests of equality of means (p-values)		
	All	All	Treatment 1	Treatment 2	Treatment 3	Control	T1 vs C	T2 vs C	T3 vs C
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
Number of children	1.76	1.80	1.78	1.77	1.83	1.81	0.47	0.27	0.78
Live in Java	0.79	0.80	0.79	0.80	0.79	0.80	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	0.40
Female respondent works	0.81	0.83	0.84	0.84	0.82	0.82	0.57	0.57	0.89
Wife of male respondent works	0.53	0.53	0.55	0.53	0.54	0.51	0.19	0.53	0.24
Female respondent works outside home	0.56	0.61	0.58	0.60	0.61	0.63	0.15	0.57	0.32
Wife of male respondent works outside home	0.37	0.37	0.39	0.34	0.39	0.35	0.20	0.73	0.16
Mother worked	-	0.69	0.69	0.69	0.70	0.67	0.19	0.37	0.16
Friends' mothers worked	-	0.92	0.93	0.92	0.92	0.92	0.42	0.58	0.69
<u>Support for married women working among:</u>									
Female respondents	0.76	0.75	0.74	0.75	0.74	0.75	0.74	0.99	0.80
Male respondents	0.62	0.63	0.63	0.65	0.62	0.62	0.84	0.25	0.98
Mothers of respondents	-	0.75	0.74	0.77	0.76	0.74	0.79	0.08*	0.14
<u>Support for shared child care among:</u>									
Female respondents	0.96	0.95	0.94	0.95	0.95	0.96	0.35	0.49	0.89
Male respondents	0.90	0.90	0.91	0.89	0.89	0.92	0.68	0.16	0.13
Wife of male respondent	0.92	0.92	0.93	0.91	0.91	0.94	0.64	0.12	0.12
Husbands of female respondents	0.94	0.95	0.95	0.94	0.96	0.94	0.70	0.89	0.23
Social desirability index	-	3.36	3.42	3.36	3.33	3.33	0.06*	0.51	0.90
Hypothetical reward	-	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 Rewards Sample)

Dependent variable: choice of career mentoring course (1/0)									
Sample:	All			Women not working			Women Working		
Respondents:	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Individual Treatment Effects									
Treatment1	.067 (.023)***	.056 (.032)*	.08 (.032)**	.082 (.04)**	.083 (.077)	.082 (.047)*	.058 (.028)**	.051 (.036)	.074 (.045)
Treatment2	.092 (.023)***	.081 (.032)**	.103 (.033)***	.121 (.04)***	.048 (.077)	.147 (.047)***	.077 (.028)***	.086 (.036)**	.063 (.045)
Treatment3	.098 (.023)***	.107 (.033)***	.089 (.032)***	.107 (.04)***	.11 (.075)	.106 (.047)**	.093 (.028)***	.108 (.036)***	.074 (.045)*
Female	-.013 (.016)			-.048 (.032)			-.015 (.02)		
Tertiary-educated	.029 (.019)	.018 (.027)	.039 (.027)	-.026 (.04)	-.013 (.104)	-.032 (.044)	.035 (.022)	.011 (.029)	.069 (.034)**
Social desirability index	.004 (.007)	-.001 (.01)	.01 (.01)	.016 (.013)	-.003 (.024)	.025 (.016)	-.001 (.009)	-.002 (.011)	.0003 (.014)
Constant	.328 (.03)***	.339 (.042)***	.303 (.041)***	.27 (.053)***	.301 (.096)***	.236 (.062)***	.364 (.037)***	.352 (.047)***	.353 (.056)***
Tests of equality of treatment effects (p-values):									
T1=T2	0.30	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	0.80
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	0.30	0.78	0.65	0.73	0.41	0.56	0.28	0.96
Panel B: Assuming equal treatment effects									
Treatment	.086 (.019)***	.082 (.026)***	.091 (.026)***	.103 (.032)***	.083 (.061)	.112 (.037)***	.076 (.023)***	.082 (.029)***	.07 (.037)*
Female	-.013 (.016)			-.048 (.032)			-.015 (.02)		
Tertiary-educated	.029 (.019)	.018 (.027)	.039 (.027)	-.024 (.04)	-.011 (.104)	-.03 (.044)	.035 (.022)	.01 (.029)	.068 (.034)**
Social desirability index	.004 (.007)	-.002 (.01)	.01 (.01)	.016 (.013)	-.004 (.024)	.025 (.016)	-.001 (.009)	-.002 (.011)	.0004 (.014)
Constant	.329 (.03)***	.341 (.042)***	.303 (.041)***	.271 (.052)***	.302 (.096)***	.235 (.061)***	.365 (.037)***	.355 (.047)***	.352 (.056)***
Control Mean	0.343	0.339	0.346	0.307	0.289	0.313	0.360	0.349	0.377
Observations	3590	1795	1795	1131	307	824	2459	1488	971

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

Table 3: Intensity of Intervention Effects

Dependent variable: choice of career mentoring course (1/0)	Sample:		
	All	Male respondents whose wives are & Female respondents who are: Not working	Working
	(1)	(2)	(3)
Treatment	.064 (.021)***	.064 (.037)*	.06 (.025)**
Time spent reading intervention material (10 secs)	.009 (.004)**	.016 (.008)**	.006 (.004)
Female	-.013 (.016)	-.05 (.032)	-.015 (.02)
Tertiary-educated	.027 (.019)	-.024 (.04)	.033 (.022)
Social desirability index	.005 (.007)	.017 (.013)	-.0009 (.009)
Constant	.327 (.03)***	.267 (.053)***	.363 (.037)***
Control Mean:	0.343	0.307	0.360
Observations	3590	1131	2459

Notes: The sample is restricted to respondents who were facing a real (not hypothetical) reward. Column 2 restricts the sample to female respondents who are not working and male respondents whose wives are not working. Column 3 restricts the sample to female respondents who are working and male respondents whose wives work. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Heterogeneity of Treatment Effects

Dependent variable: choice of career mentoring course (1/0)						
	Working mother when aged 12 (1)	Non-working mother when aged 12 (2)	High share of formal employment (3)	Low share of formal employment (4)	Youngest child aged 6 or under (5)	Youngest child aged over 6 (6)
Treatment	.093 (.022)***	.073 (.033)**	.078 (.022)***	.1 (.034)***	.071 (.02)***	.162 (.045)***
Female	-.012 (.02)	-.01 (.03)	-.026 (.02)	.015 (.03)	-.019 (.018)	.027 (.042)
Tertiary-educated	.022 (.023)	.044 (.035)	.05 (.022)**	-.029 (.04)	.033 (.021)	.009 (.045)
Social desirability index	.008 (.009)	-.003 (.013)	.011 (.009)	-.01 (.013)	.004 (.008)	.001 (.019)
Constant	.305 (.036)***	.374 (.055)***	.306 (.036)***	.373 (.054)***	.339 (.033)***	.275 (.076)***
Control mean:	0.329	0.369	0.33	0.341	0.351	0.296
Observations	2467	1123	2480	1110	3021	569

Notes: Sample includes individuals in the real rewards sample. Cities classified as high (low) share of formal employment are those where the proportion of people in formal employment is above (below) the median across all cities. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Impacts of Misperceptions (Real Reward Sample)

Dependent variable: choice of career mentoring course (1/0)			
	All (1)	Female (2)	Male (3)
Treatment1	.062 (.024)***	.045 (.034)	.086 (.035)**
Treatment2	.094 (.027)***	.079 (.038)**	.114 (.038)***
Treatment3	.108 (.043)**	.036 (.061)	.18 (.059)***
Female	-.014 (.016)		
Tertiary-educated	.027 (.019)	.014 (.028)	.036 (.027)
Social desirability index	.005 (.007)	-.0006 (.01)	.01 (.01)
Misperceptions of women's support for women working	.0008 (.0006)	.001 (.0009)	.0002 (.0009)
Misperceptions of men's support for shared childcare	-.0008 (.0005)	-.001 (.0008)	-.0004 (.0007)
Misperceptions of older women's support for women working	-.00007 (.0003)	-.0008 (.0005)*	.0006 (.0005)
Treatment*misperception of women's support for women working	-.0005 (.0007)	-.001 (.001)	.0003 (.001)
Treatment*misperceptions of men's support for shared child care	.0004 (.0008)	.0004 (.001)	.0003 (.001)
Treatment*misperceptions of older women's support for working women	.0002 (.0007)	-.002 (.001)	.002 (.001)*
Constant	.337 (.058)***	.378 (.086)***	.286 (.078)***
Control mean:	0.343	0.339	0.346
Observations	3590	1795	1795

Notes: Sample includes individuals in the real rewards sample. 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)						
Sample:	Real and Hypothetical Reward Sample			Hypothetical Reward Sample		
	All (1)	Female (2)	Male (3)	All (4)	Female (5)	Male (6)
Treatment	.086 (.019)***	.085 (.026)***	.09 (.026)***	-.146 (.038)***	-.278 (.05)***	-.009 (.055)
Hypothetical reward choice	.061 (.064)	.257 (.089)***	-.133 (.088)			
Hypothetical x Treatment	-.22 (.042)***	-.339 (.058)***	-.105 (.06)*			
Social desirability index	.003 (.007)	-.003 (.01)	.01 (.01)	.061 (.014)***	.033 (.019)*	.094 (.02)***
Hypothetical x Social desirability index	.056 (.016)***	.03 (.022)	.085 (.022)***			
Female	-.009 (.015)			.042 (.034)		
Constant	.326 (.041)***	.405 (.065)***	.267 (.055)***	.409 (.06)***	.687 (.079)***	.161 (.08)**
Control Mean:	0.391	0.408	0.374	0.586	0.685	0.486
Observations	4478	2239	2239	888	444	444

Notes: Columns (1) to (3) include controls for baseline levels of support: whether the respondent was supportive of women working; whether the respondent was supportive of shared childcare; whether the respondent's mother was supportive of women working; and whether the respondent's spouse was supportive of shared childcare. None of these variables were statistically significant in any of the specifications. Controls for being tertiary educated were included in all specifications. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

A Appendix:

Figure A.1: Theory of Change

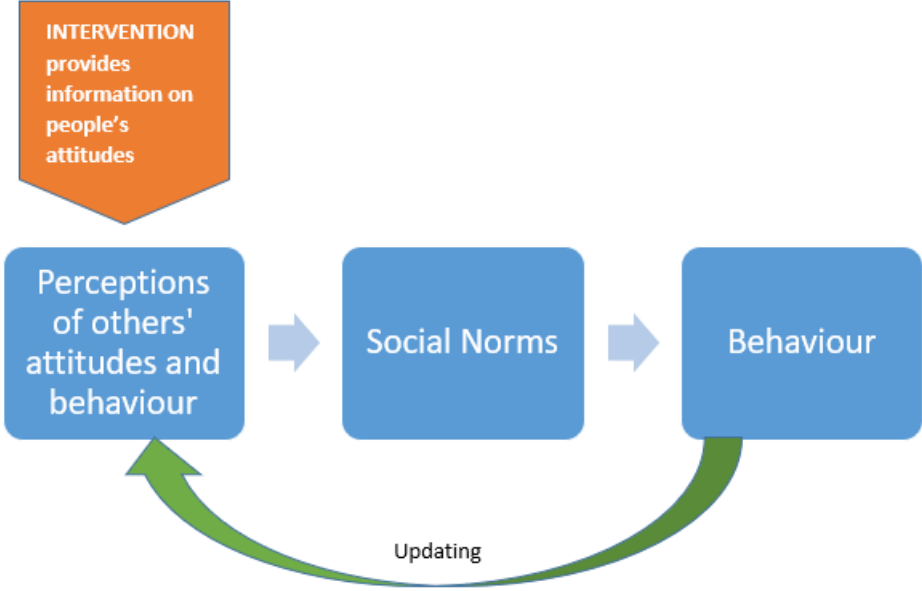


Figure A.2: Information Presented in Each Treatment Arm

<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 A.1: The Role of Social Desirability Bias

Dependent variables:	Support for women working (1)	Support for shared child care (2)	Mother supportive of women working (3)	Perceptions of support for women working (%) (4)	Perceptions of support for shared child care (%) (5)	Perceptions of mother's social norms towards women working (%) (6)
Social Desirability Index	.015 (.006)**	.005 (.004)	.004 (.005)	.433 (.286)	1.28 (.299)***	.717 (.277)***
Support for women working				28.851 (.819)***		
Support for shared child care					19.174 (1.596)***	
Mother supportive of women working						22.645 (.864)***
Female	.114 (.014)***	.047 (.008)***	.079 (.013)***	1.553 (.651)**	-.403 (.658)	4.386 (.663)***
Tertiary educated	.114 (.015)***	.019 (.008)**	.091 (.014)***	.543 (.702)	.121 (.738)	1.486 (.7)**
Constant	.553 (.023)***	.881 (.014)***	.675 (.021)***	43.829 (1.185)***	48.951 (1.824)***	44.579 (1.196)***
Mean of Dependent variable:	0.689	0.925	0.751	66.1	70.8	66.6
Observations	4478	4478	4478	4478	4478	4478

Notes: Column 6 reports results for respondents' beliefs of their own mother's level of support. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A.2: 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	.068 (.023)***	.057 (.032)*	.079 (.032)**	.084 (.04)**	.084 (.077)	.085 (.047)*	.06 (.028)**	.052 (.035)	.072 (.045)
Treatment2	.093 (.023)***	.082 (.032)**	.104 (.033)***	.122 (.04)***	.049 (.077)	.148 (.047)***	.078 (.028)***	.087 (.036)**	.064 (.045)
Treatment3	.098 (.023)***	.108 (.032)***	.088 (.032)***	.104 (.04)***	.111 (.075)	.102 (.047)**	.095 (.028)***	.109 (.036)***	.072 (.045)
Constant	.343 (.016)***	.339 (.022)***	.346 (.022)***	.307 (.027)***	.289 (.052)***	.313 (.032)***	.36 (.02)***	.349 (.025)***	.377 (.032)***
Observations	3590	1795	1795	1131	307	824	2459	1488	971

Notes: Sample includes individuals in the real rewards sample only. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A.3: Impacts of Information Interventions (Weighted Regressions, Real Rewards Sample)

Dependent variable: Choice of Career Mentoring Course (1/0)			
	All (1)	Female (2)	Male (3)
Treatment1	.072 (.024)***	.068 (.042)	.08 (.032)**
Treatment2	.100 (.024)***	.070 (.042)*	.106 (.033)***
Treatment3	.100 (.024)***	.108 (.042)**	.090 (.032)***
Female	-.016 (.017)		
Tertiary	.022 (.02)	.025 (.034)	.036 (.027)
Social desirability index	.008 (.008)	-.0006 (.013)	.011 (.01)
Constant	.31 (.032)***	.317 (.054)***	.299 (.041)***
Control Mean:	0.343	0.339	0.346
Observations	3590	1795	1795

Notes: We report results from weighted ordinary least squares estimation when observations are re-weighted to reflect female labor force participation in the general population. The sample includes individuals in the real rewards sample. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.4: Impacts of information interventions on selection and use of career mentoring course

Dependent variable: <u>Choice and use of Career Mentoring Course (1/0)</u>									
	All			Not working			Working		
	All	Female	Male	All	Female	Male	All	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment1	.066 (.023)***	.053 (.032)*	.08 (.032)**	.079 (.04)**	.069 (.075)	.082 (.046)*	.059 (.028)**	.05 (.035)	.076 (.045)*
Treatment2	.075 (.023)***	.076 (.032)**	.074 (.032)**	.091 (.04)**	.031 (.076)	.113 (.047)**	.066 (.028)**	.084 (.035)**	.04 (.044)
Treatment3	.09 (.023)***	.091 (.032)***	.089 (.032)***	.094 (.04)**	.088 (.074)	.096 (.047)**	.089 (.028)***	.093 (.036)***	.085 (.044)*
Female	-.013 (.016)			-.057 (.032)*			-.006 (.02)		
Tertiary educated	.039 (.019)**	.034 (.027)	.044 (.026)*	-.011 (.04)	.03 (.103)	-.02 (.044)	.046 (.022)**	.026 (.029)	.076 (.034)**
Social desirability index	.004 (.007)	-.0002 (.01)	.009 (.01)	.025 (.013)*	.025 (.022)	.025 (.016)	-.005 (.009)	-.007 (.011)	-.003 (.014)
Constant	.307 (.03)***	.313 (.041)***	.288 (.041)***	.234 (.051)***	.19 (.089)**	.227 (.061)***	.345 (.037)***	.345 (.047)***	.331 (.055)***
Control Mean:	0.343	0.339	0.346	0.307	0.289	0.313	0.360	0.349	0.377
Observations	3590	1795	1795	1131	307	824	2459	1488	971

Notes: Sample includes individuals in the real rewards sample only. Robust standard errors in brackets.
 *** p<0.01, ** p<0.05, * p<0.1.

Table A.5: Tests of Balance by Real Reward/Hypothetical

	Mean Values			Tests of equality of means (p-values)
	All	Real Reward	Hypothetical	
Age	30.5	30.3	31.4	0.00***
Tertiary educated	0.25	0.25	0.25	0.99
Number of children	1.80	1.79	1.83	0.31
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 of male respondent works	0.53	0.54	0.49	0.06*
Female respondent works outside home	0.61	0.61	0.61	0.87
Wife of male respondent works outside home	0.37	0.37	0.35	0.50
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 among:</u>				
female respondents	0.75	0.73	0.81	0.00***
male respondents	0.63	0.62	0.67	0.04**
mothers of respondents	0.75	0.74	0.79	0.00***
<u>Support for shared child care among:</u>				
female respondents	0.95	0.94	0.97	0.02**
male respondents	0.90	0.90	0.92	0.12
wife of male respondent	0.92	0.92	0.94	0.08*
husbands of female respondents	0.95	0.95	0.94	0.54
Social desirability index	3.36	3.39	3.25	0.00***
Max N	4478	3590	888	