

Valuing Women's Voice

Sexism and Discrimination in the Workplace: Experimental Evidence from Pakistan

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Background

- Gender gaps in labor market outcomes persist despite legislation
- Copious literature on gender discrimination in the work place
 - Discriminatory Hiring (Neumark, 1996; Goldin & Rouse, 2006; Neumark 2012)
 - Wage Differentials (Altonji and Blank, 1999)
- Equally copious literature on differences between genders
 - Risk aversion & Competitiveness
 - (Eckel and Grossman, 2008; Croson and Gneezy, 2009 for a review)

Background: Gender discrimination in Pakistan

- Gaps in the literature
 - Much less is written on “subtle” discrimination in every day work.
 - Subtle discrimination – such as mansplaining - could potentially explain the persistence of wage differentials as well as the glass ceiling.
 - Preferences for Discrimination or statistical discrimination
 - Fershtman and Gneezy (2001, Statistical); Charles, Guryan and Pan (2009, Preferences); List (2004; statistical); Castillo and Petrie (statistical)

Subtle Discrimination – Chauvinism/Mansplaining - in the Lab

- Conceptualize a work interaction as a difficult question to answer.
- Students of an elite university
- LUMS students were given a trivia task with really difficult questions.
- Trivia task
 - Students were required to answer 10 questions.
 - The closer they got to the correct answer, the more money they could make
 - 1000 tokens (455 PKR; 3.31 GBP) if response is within 10% of the correct answer
 - 800 tokens (364 PKR; 2.65 GBP) if response is within 20%
 - 600 tokens (273 PKR; 1.99 GBP) if response is within 30%
 - 400 tokens (182 PKR; 1.32 GBP) if response is within 40%
 - 200 tokens (91 PKR; 0.66 GBP) if response is within 50%
 - 0 tokens otherwise

Trivia questions

What is the maximum heart rate per minute of a hummingbird
How many eggs does an average hen lay in a year?
How many unique dominoes are in a standard 'double six' set?
Donald Trump is what number President of the USA?
Which age do you have to reach to be eligible to become Prime Minister of Pakistan?
What number is the 'answer to the ultimate question of life, the universe, and everything' in the The Hitchhiker's Guide to the Galaxy?
Pure gold is how many carat?
The average football (soccer) is held together by how many stitches?
How many yards are there in a mile?
How many jumps does a horse have to make to win the Grand National?

How much is a gross?
What number, between two hyphens, is used by journalists, etc., to mark the end of a newspaper or broadcast story?
How many dimples are said to be on a standard golf ball?
Roaring' refers to what pluralised number in describing a 1900s decade of western world prosperity?
Traditionally what number of years' anniversary is symbolized by silver?
What number is Hurricane on the Beaufort Scale?
Any line of three numbers in the 'magic square' (a 3 x 3 grid of the numbers 1-9) adds up to what?
At what age did Amy Winehouse, Jimi Hendrix, Janis Joplin and Kurt Cobain all die?
Which shirt number would you associate with ice hockey legend Wayne Gretzky?
How many elements are there on the periodic table?

What is the ninth prime number?
If 27 solid cubes are formed into one big 3x3x3 cube how many individual cubes, at most, are visible from any single angle?
Conventionally, how many books are in the Bible's New Testament?
What is the maximum allowable length of a cricket bat (in inches)?
How many years are celebrated in a traditional 'Pearl Wedding Anniversary'?
Greek deka, and Latin decem, are what number?
What is generally stated to be the number of major joints in the human body?
Dogs are capable of understanding up to how many words and gestures?
How many lines are there traditionally in a sonnet?
Japanese haiku poems loosely comprise how many syllables?

How many times in a second does a bumble bee flap its wings?
What is the maximum number of clubs golf players are allowed in their bag?
What is the only number that equals twice the sum of its digits (digit means numerical symbol)?
In the movie Spinal Tap what number is: Well, it is one louder..?
Traditionally the diameter of the 45rpm gramophone record is (how many) millimetres?
Height, in stories, of the Bank of China Tower in Hong Kong.;
How many cards make up a typical tarot card deck?
The Tropics of Cancer and Capricorn are respectively (what number)-and half degrees north and south of the Equator?
What is the longest recorded length of a jellyfish (in feet)?
What is the atomic number of Platinum (PT)?

Screen shot of the Trivia task...

Question 1 of 10

What number is the 'answer to the ultimate question of life, the universe, and everything' in the The Hitchhiker's Guide to the Galaxy?

Range	Payoff (Tokens)
Within 10% of the correct response	1000.00
Within 20% (but outside 10%) of the correct response	800.00
Within 30% (but outside 20%) of the correct response	600.00
Within 40% (but outside 30%) of the correct response	400.00
Within 50% (but outside 40%) of the correct response	200.00
Outside 50% of the correct response	0.00

Advisor task

- Students were given the same 10 questions as in Task 1.
- But this time they were also given suggestions (henceforth advice) from subjects who had played the game previously (advisors).
 - Note: Advisors were LUMS students that had participated in previous sessions. Not subjects in the current session
- Subjects were given the option to keep their own answer or change it based on additional information.
- Outcome variable: whether subject changed their response upon receiving the advice
- Payoff: based on the absolute difference between correct answer and response (identical to the trivia task)
- Treatments varied the information available to the subject about the advisor (more on this in a bit)
- Alternated between male and female advisors (randomly)



Screenshot of Advisor task

Question 1 of 10

What number is the 'answer to the ultimate question of life, the universe, and everything' in the The Hitchhiker's Guide to the Galaxy?

Your answer (from task 1) 1

NAME: Katarina

GPA: 3.2

THEIR ANSWER (from previous session) 10

Revised answer:

Range	Payoff (Tokens)
Within 10% of the correct response	1000.00
Within 20% (but outside 10%) of the correct response	800.00
Within 30% (but outside 20%) of the correct response	600.00
Within 40% (but outside 30%) of the correct response	400.00
Within 50% (but outside 40%) of the correct response	200.00
Outside 50% of the correct response	0.00

Treatments varied information about the advisor(s)

- No information control: subjects provided only the responses of the advisors, but nothing else
- Gender information: subjects provided a fake name of the advisor
- GPA information: subjects provided self-reported GPA of the advisors
- Gender + GPA: subjects provided both

Fake names...

Female names

"Katarina"; "Aneesa"; "Sara M";
"Hibs"; "Maheen Khan"; "Priya";
"Tania"; "Alexis"; "Samantha";
"Dania"; "Janice"; "Noor";
"Hafsa"; "Ayesha"; "Mahira";
"Fatima"; "January Jones"; "Sana";
"Mary"; "Hina"; "Daniela";
"Komal"; "Billi"; "Asma"; "Betty";

Male names

"York"; "Shiraz"; "Hercule Poirot";
"Qaisar-osaurus"; "Fahad";
"Ali Khan"; "Muhammed"; "Bilal";
"John"; "Spiderman"; "Jay"; "Ryu";
"Fareed"; "Qasim"; "Xavier";
"Kumail"; "Django"; "Riz Kaus";
"Ammar Ali"; "Dan"; "Bert";
"Asif Masood"; "Optimus Prime";
"Ali Taha"; "Muhammed Ali";

Measuring sexism: Ambivalent Sexism Inventory

- We use a well-known measure from Social Psychology called the Ambivalent Sexism Inventory (ASI) which uses the following two components.
- Questions on the sexism measures shown below were asked in a post-experiment survey.
- Hostile Sexism Items:
 - "Most women fail to appreciate all that men do for them."
 - "Women seek to gain power by getting control over men."
 - "Most women interpret innocent remarks or acts as being sexist."
- Benevolent Sexism Items:
 - "Women should be cherished and protected by men."
 - "Many women have a quality of purity that few men possess."
 - "A good woman ought to be set on a pedestal by her man."
- Number of other measures that we do not collect data on
 - Attitudes towards Women Scale (Spence and Helmreich, 1970)
 - Old Fashioned Sexism Scale (Swim et al 1995)
 - Modern Sexism (Swim et al 1995)
 - Neo sexism (Tougas et al 1995)

Sample Questions on ASI

(4) Most women interpret innocent remarks or acts as being sexist.

Disagree strongly

0	1	2	3	4	5
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 Agree strongly

(5) Women are too easily offended.

Disagree strongly

0	1	2	3	4	5
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 Agree strongly

Sample by treatment and gender

Treatment	N (Men)	N (Women)	Total
Control - No information on Gender or GPA	37	26	63
Gender information	34	21	55
GPA information	41	11	52
GPA + Gender	36	10	46
Total	148	68	216

Sexism Scores for Experiment Subjects

(Score Range [0,5])

Men

Variable	Obs	Mean	Std. Dev.	Min	Max
asi_hostil~e	2,780	2.693918	.7747317	.0909091	4.727273
asi_ben_sc~e	2,780	2.922171	.6657605	.4545455	4.636364

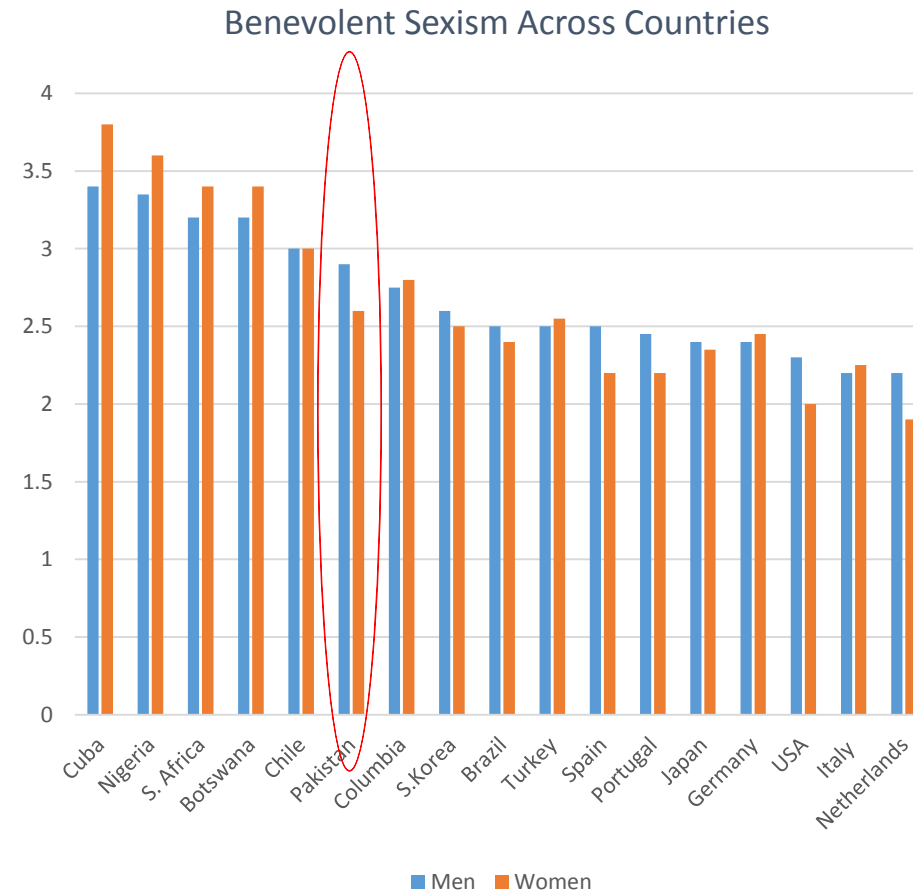
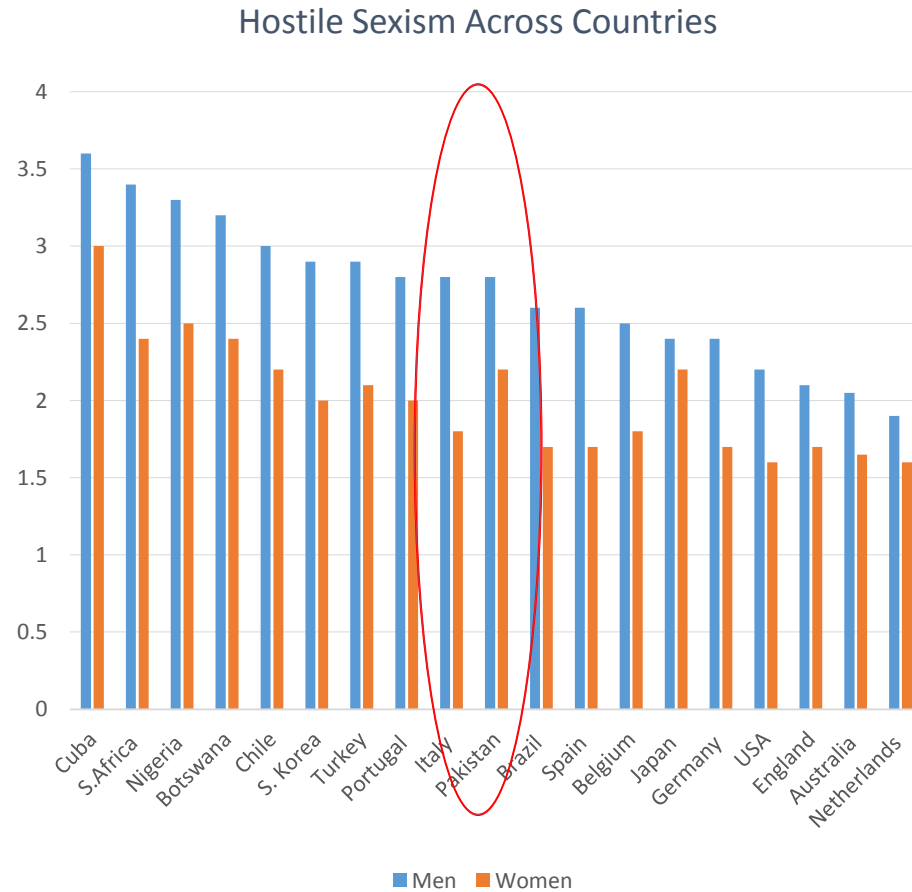
Women

Variable	Obs	Mean	Std. Dev.	Min	Max
asi_hostil~e	1,150	2.051383	.9780868	.1818182	4.181818
asi_ben_sc~e	1,150	2.559684	.8317087	.7272727	4.272727

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Sexism Scores Across Countries

(Pakistan's score is from this experiment)

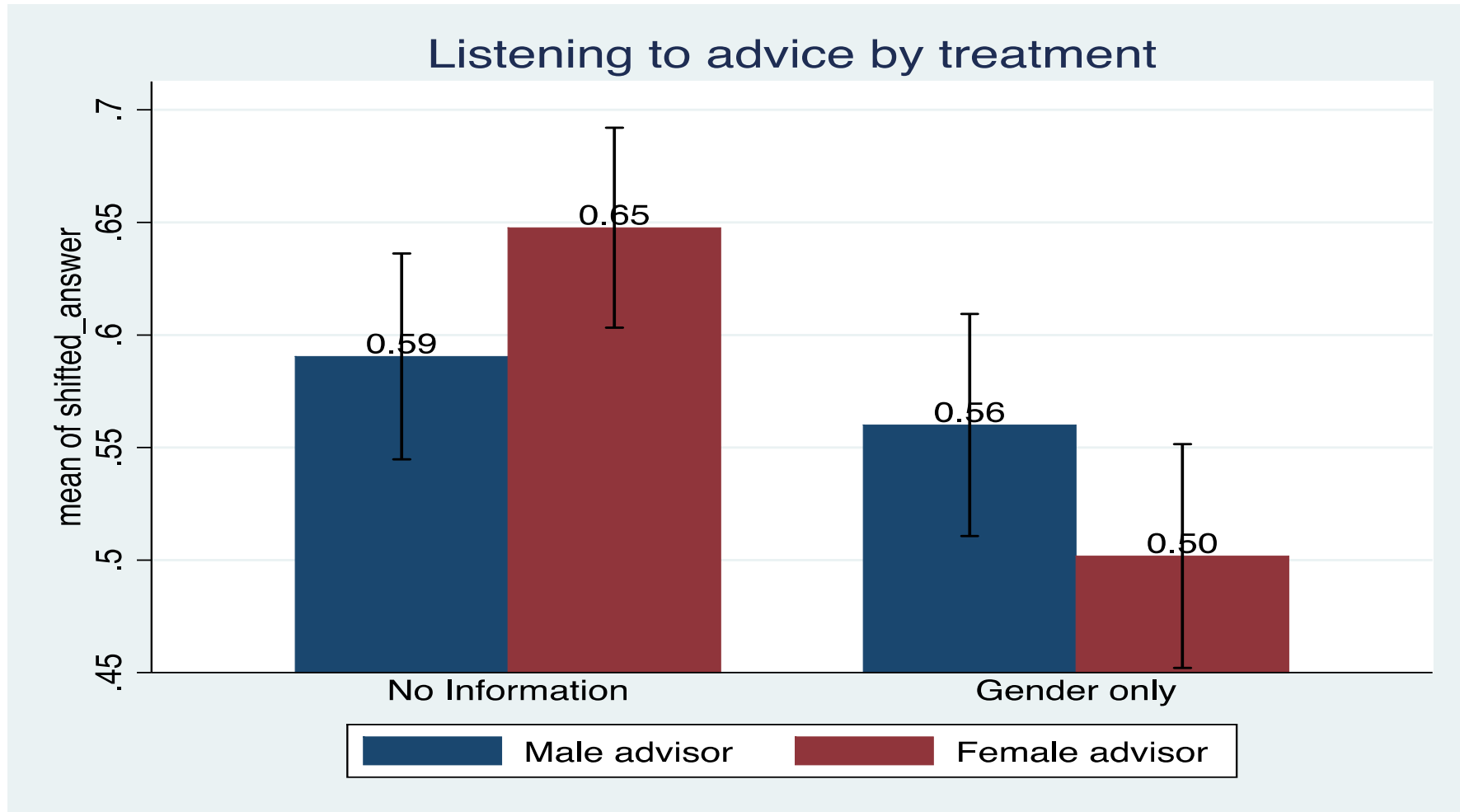


Defining Sexist Men and Women

- Sexist Dummy Variables
 - Sexist if aggregate score (benevolent and hostile sexism) > Median/Xth percentile
 - Independently for men and women

Results: Advisor task (Gender Treatment)

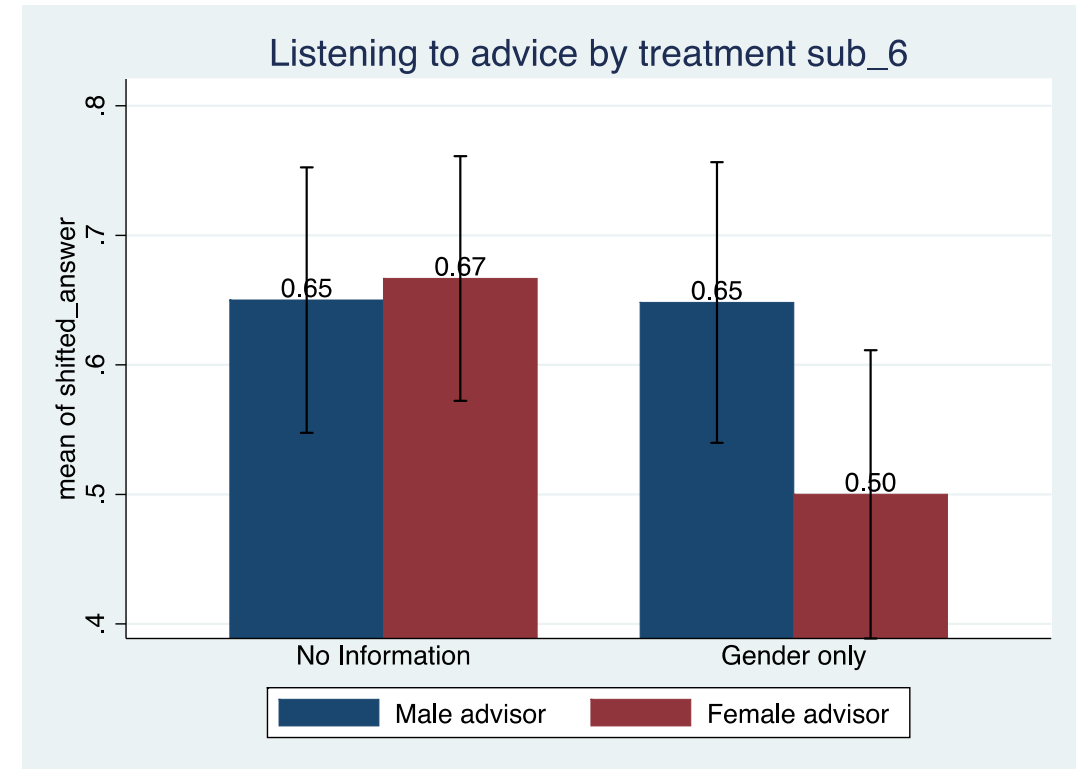
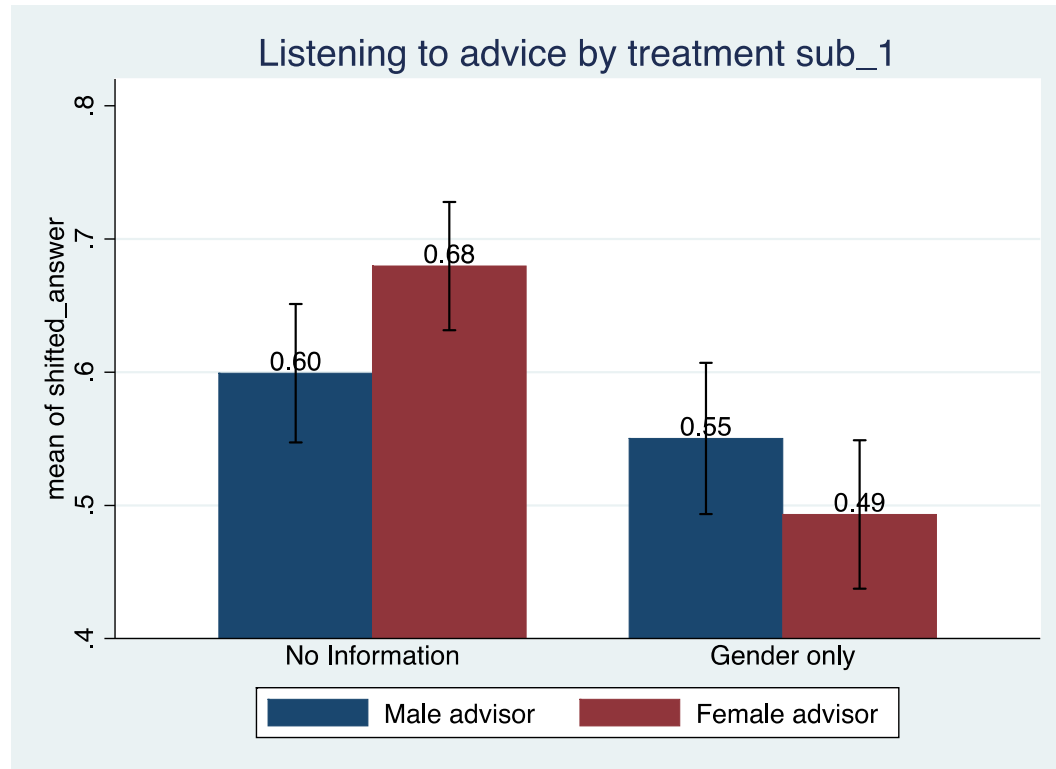
Gender information reduces likelihood of taking advice (shifting answer)



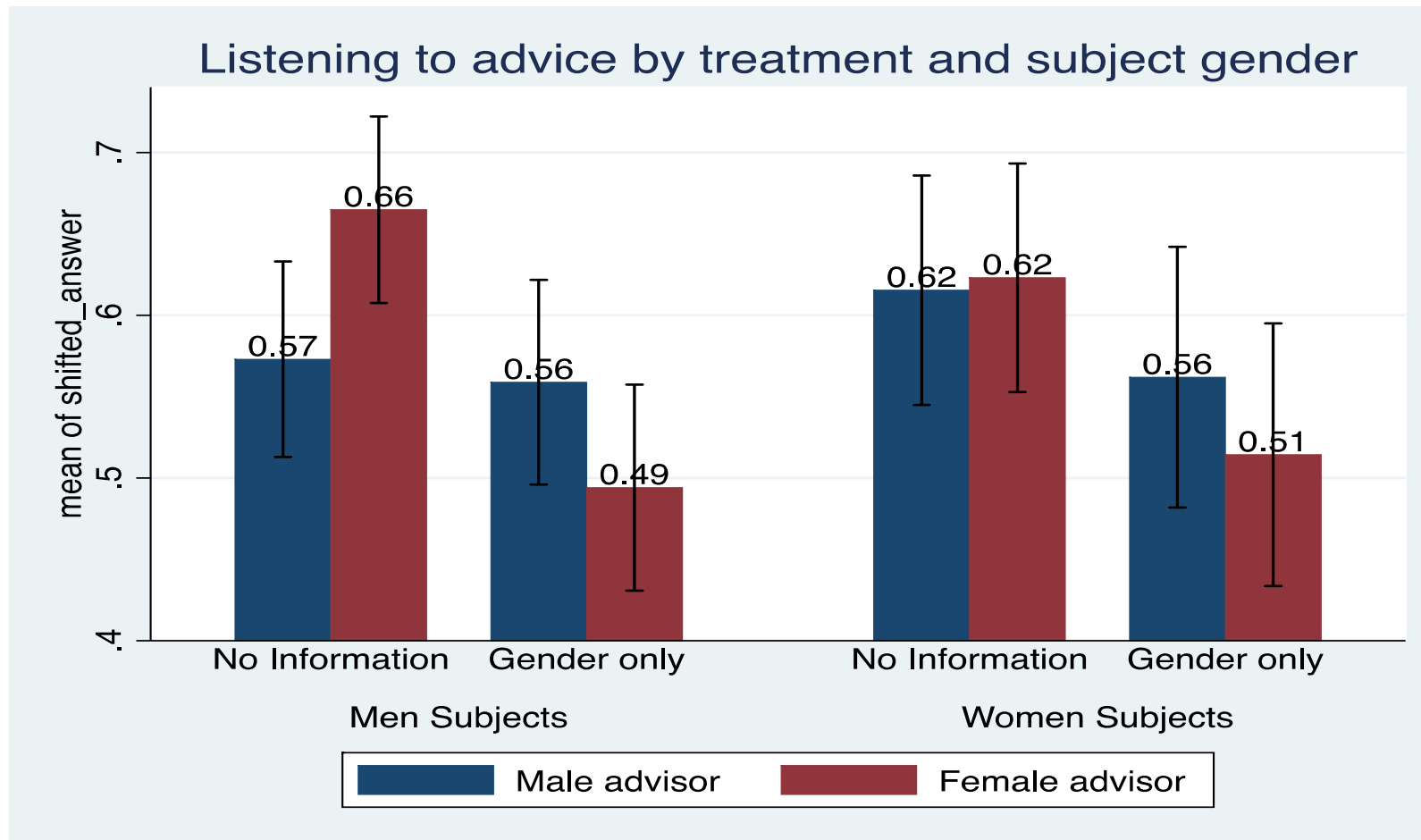
Robustness Checks

- Could question specific effects be driving results?
 - Given small sample size, female advisors may be associated with certain kind of questions.
 - Include Question specific fixed effects ?
 - Limit analysis to questions that are distributed similarly across male and female advisors
 - Question 10 drawn 11 times, 7 times for women and 4 times for men – drop
 - Question 5 drawn 21 times, 11 times for men and 10 times for women – keep
 - Drop if one of the sexes has more than 60% share of the question.
 - Dropped 10 questions.
 - Limit analysis to questions where male and female advisors have similar rates of advice uptake (8 questions only)

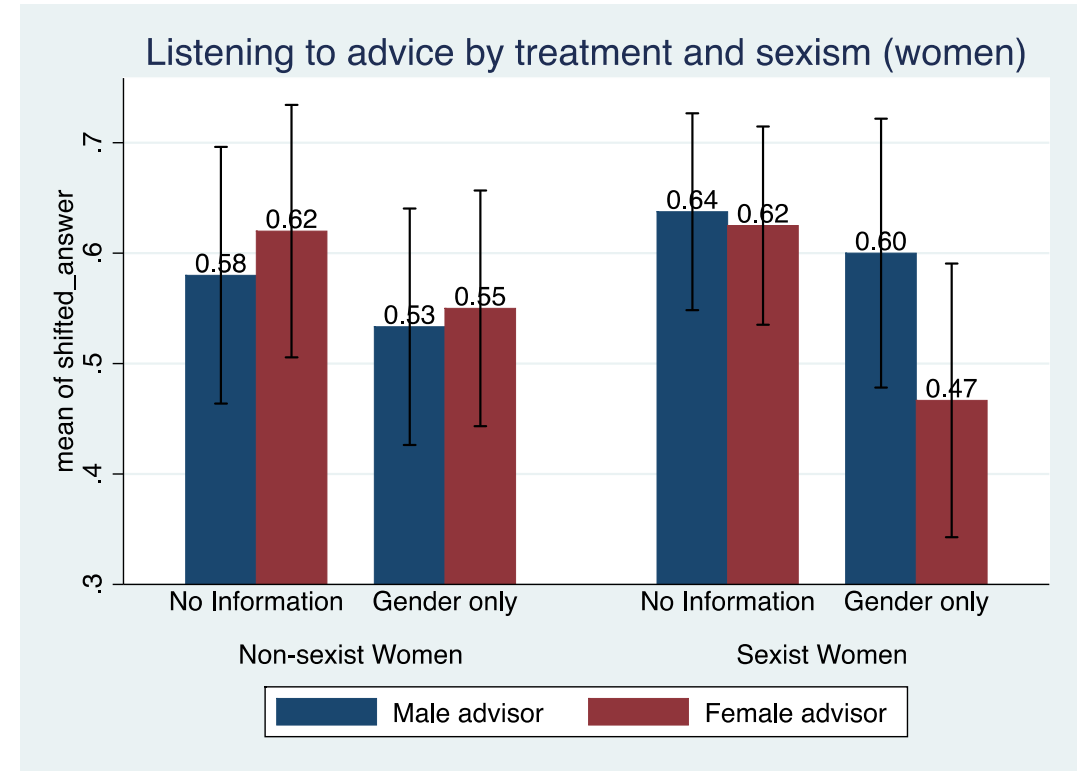
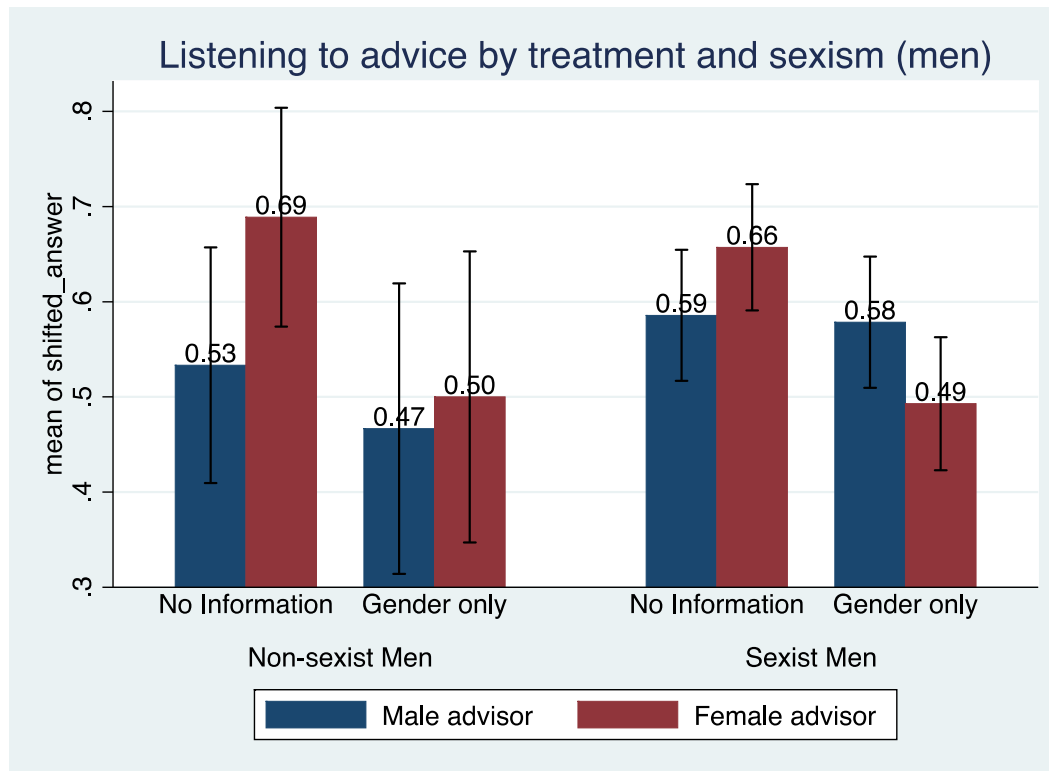
Sub-Sample: Gender Neutral Questions Only



Men are more likely than women to reduce listening (shifting answer)



Sexist men are more likely than women to reduce listening to advice

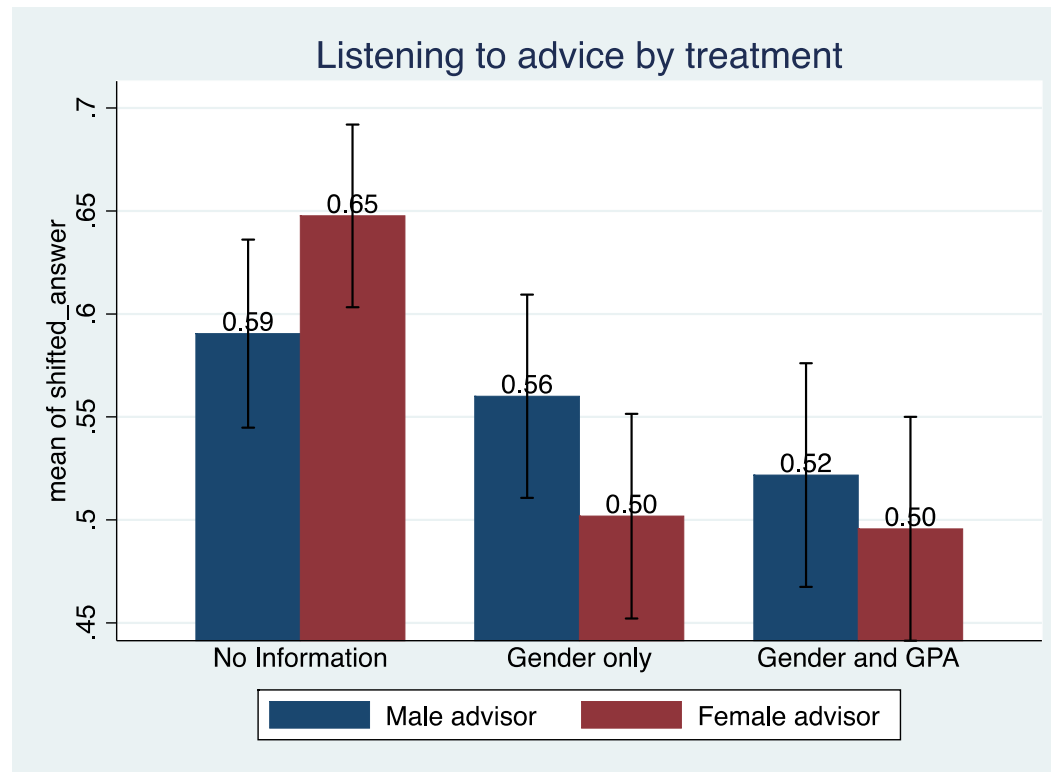


Summary of Results from Treatment 1

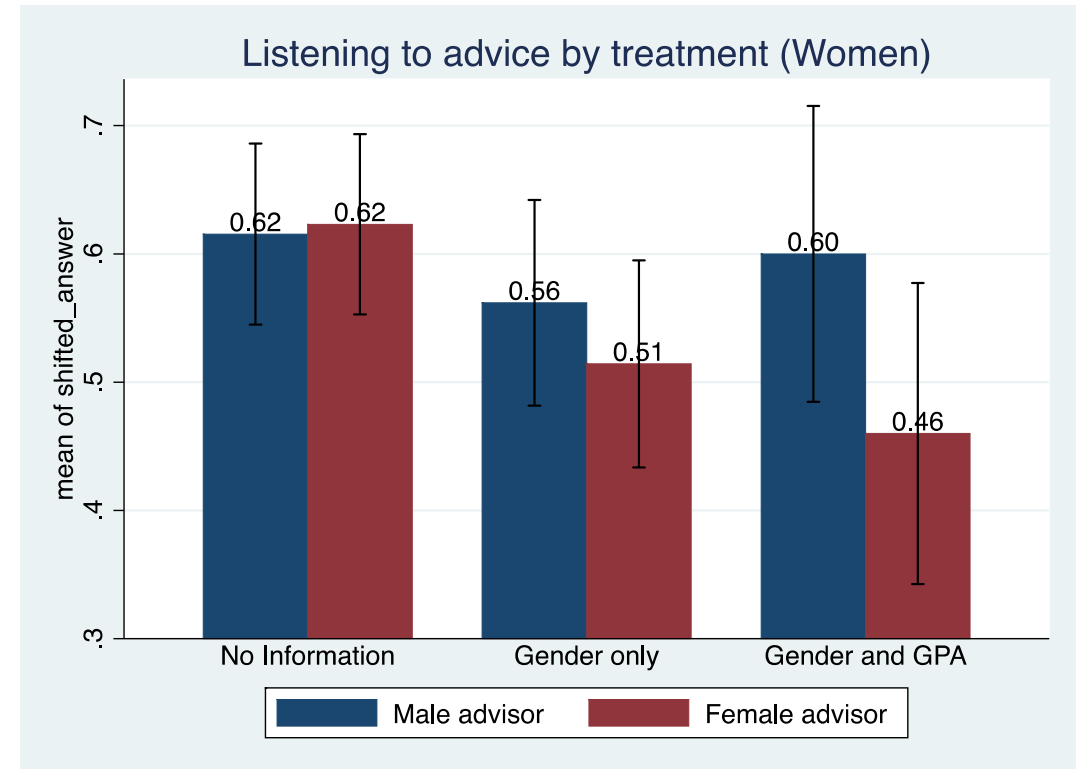
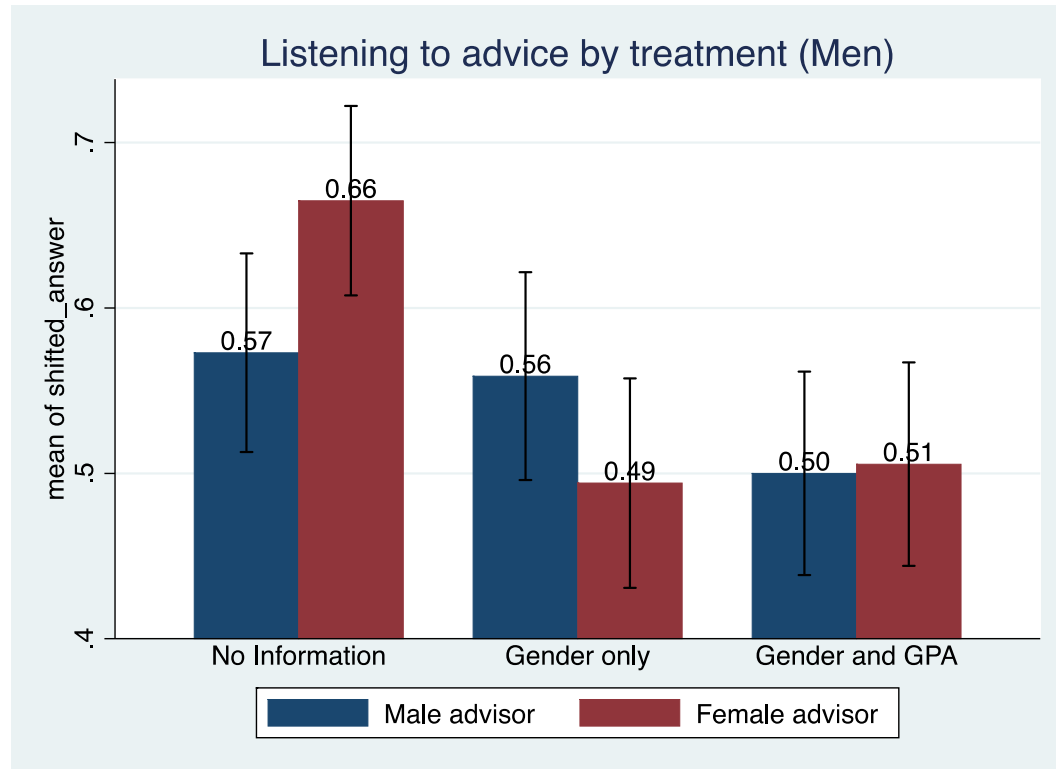
- Knowing the gender of the advisor reduces the likelihood of listening to women by 15 percentage points.
- This occurs for both men (17 pp) and women (11pp)
- The effect on men (17 pp) is statistically indistinguishable from that on women (11 pp) but this could be due to the smaller sample size for women. (The effect for men is estimated much more tightly)
- When we further divide the samples by sexism
 - Significant treatment effect on sexist men and women
 - Insignificant treatment effect on non-sexist men and women

Results: Advisor task (Gender and GPA Treatment)

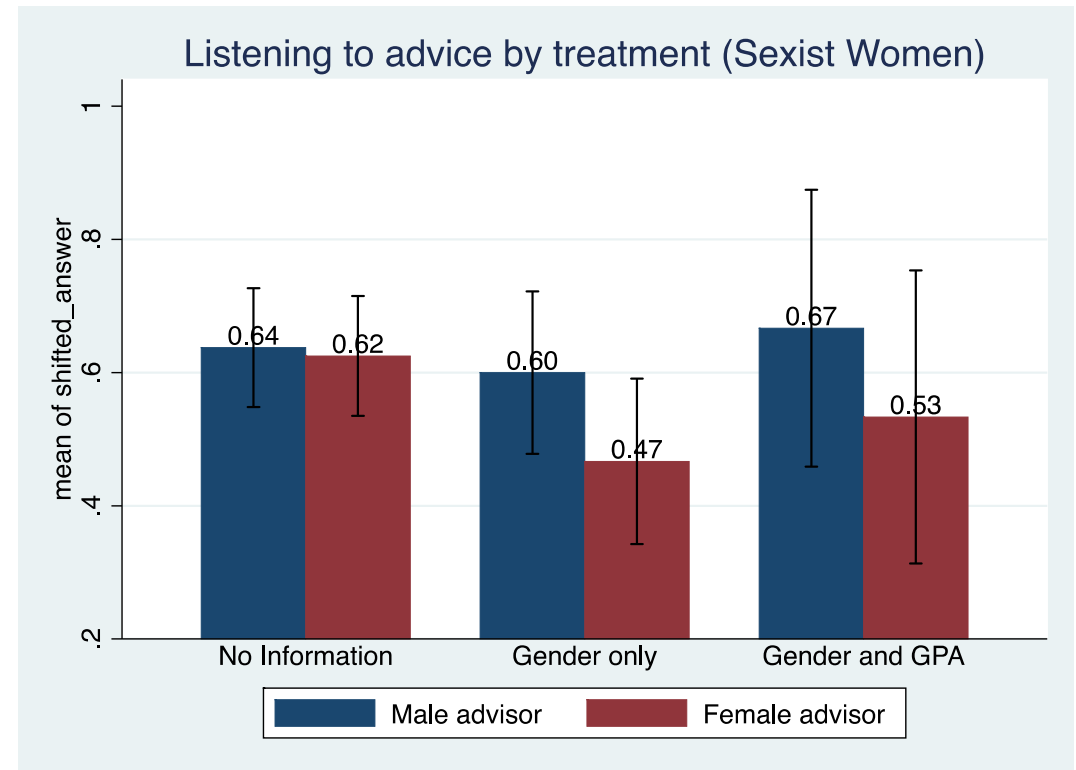
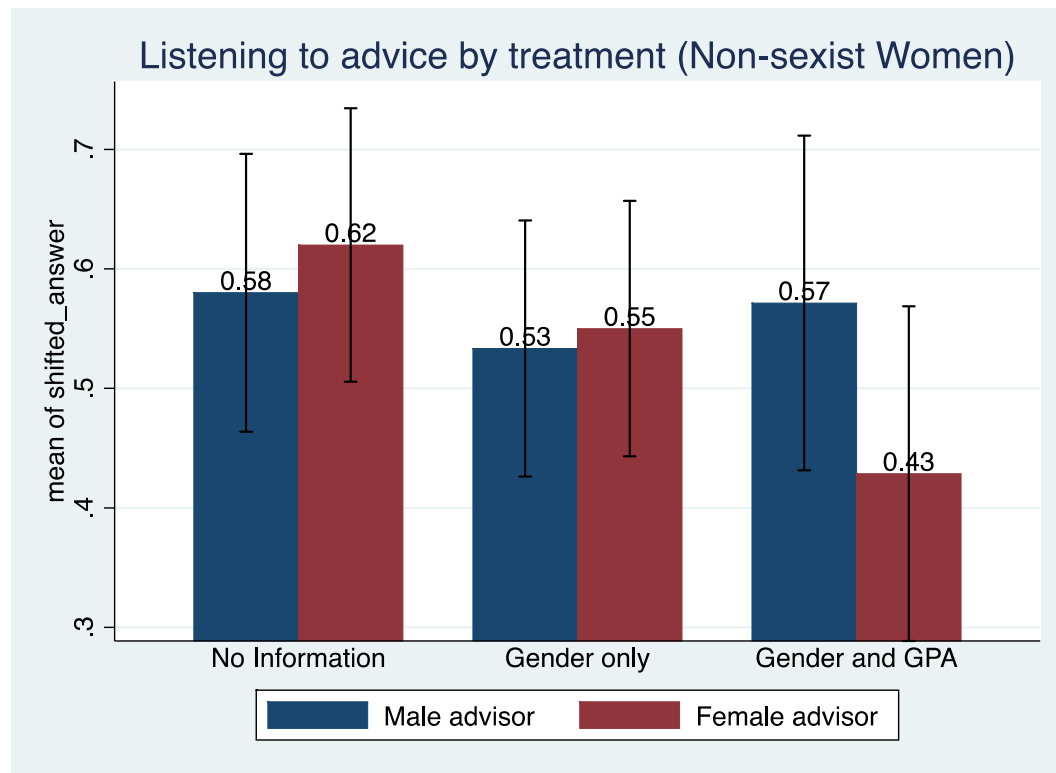
GPA information has no impact on the propensity to take advice



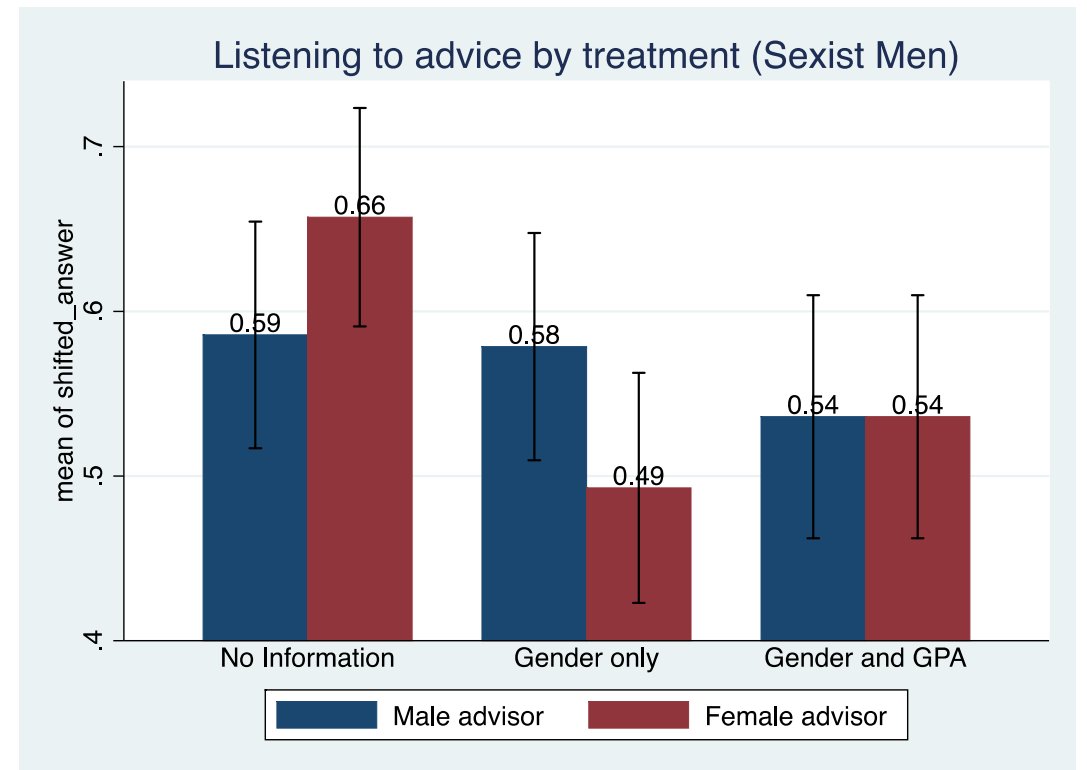
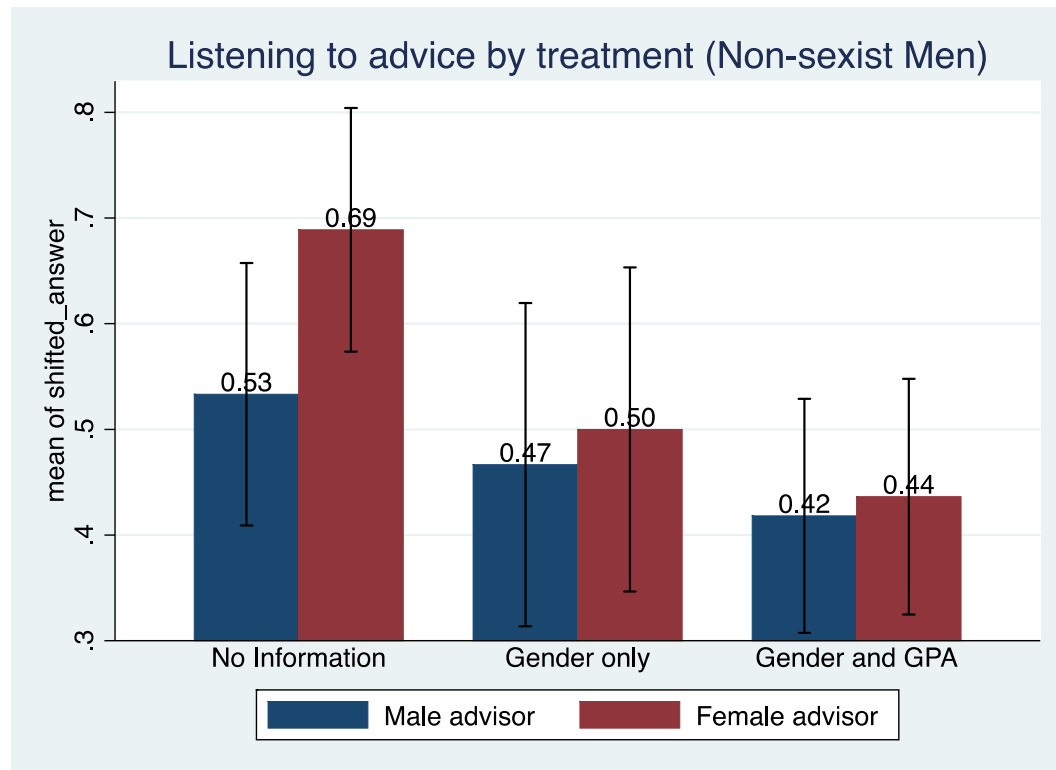
GPA information has no impact on taking advice for men or women.



GPA information has no impact on taking advice for sexist or non-sexist women.



GPA information has no impact on taking advice for sexist or non-sexist men.



Conclusions

- Both men and women undervalue women's voices
- The results are driven primarily by prejudice as measured by the Ambivalent Sexism Inventory.
- Providing information on the merit of women does not increase valuation.
- Our results are more in line with a prejudice based theory than with an informational asymmetry based theory of discrimination.

Summary

- Providing GPA information in addition to Gender information does not have an impact, on average.
- Men respond positively to GPA information
- Non-sexists listen to men and women equally in both control and treatment sessions
- Non-sexists respond to the GPA treatment positively.

Cost of Discrimination

- Subjects took men's advice roughly 60 percent of the time.
- Equal treatment would imply taking women's advice 60 percent of the time.
- Estimating the cost of discrimination
 - Unbiased defined as those who listened to men and women equally
 - The average Unbiased subject earned 49 points less.
- What if each question was paid?

Language and Reading the ASI Questions

- Most women fail to appreciate all that men do for them
- Every man should cherish and put his woman on a pedestal
- It is not sexist to think that some women fail to appreciate what men do
- It is not sexist to think that husbands should cherish their wives
- It is sexist to prescribe across the board regulations and to generalize

Distribution of Sexism by Gender

	Women	Men
Non-Sexist	47 (35%)	50 (14%)
Benevolent Sexists	43 (31%)	78 (22%)
Hostile Sexists	11 (8)%	33 (9)
Benevolent and Hostile	35 (26%)	194 (55%)
Total	136	355

Additional design details

- All players, including the advisors from the pilot, had been asked to provide information about themselves (prior to the tasks).
 - Choose a fake name (that may be passed on to others)
 - Report current GPA (to the best of your knowledge)
- Payment procedure:
 - Randomly select one task for payment (Triva, Advisor, Team lead) to induce independence between tasks
 - Randomly select four questions for payment to guard against portfolio effects
 - No feedback between tasks or questions
 - In fact, the only feedback was at the end of the experiment: final payoff
- Fixed set of advisors (equal male and female advisors)
 - Average reported GPA: 3.1 for males; 3.3 for females

Sexism (II)

