weesa
GENDER DISPATCH

South Asia
Gender
Innovation Lab

Measuring Workplace Harassment in Bangladesh:

How Survey Methods Matter

Thursday, 27 February 2025

9 am - 10 am (EST)

Monitoring Harassment in Organizations

Laura Boudreau[1] Sylvain Chassang[2] Ada González-Torres[3]
Rachel Heath[4]

[1]Columbia University

[2]Princeton University

[3]Ben-Gurion University and Harvard University

[4]University of Washington

WEESA, 2025

February 27, 2025

Motivation

- Organizations' ability to act against harassment is limited by their ability to collect information from relevant parties.

Motivation

- Organizations' ability to act against harassment is limited by their ability to collect information from relevant parties.
  - Victims and witnesses concerned about possible retaliation and reputational costs.

Motivation

- Organizations' ability to act against harassment is limited by their ability to collect information from relevant parties.
- Prevents organizations from assessing the scope and nature of harassment and from acting on the problem.
  - How prevalent is harassment?
  - What share of employees is responsible for the damage?
  - How isolated are victims across teams?

Motivation

- Organizations' ability to act against harassment is limited by their ability to collect information from relevant parties.
- Prevents organizations from assessing the scope and nature of harassment and from acting on the problem.
- Theory predicts that providing **plausible deniability** through **garbling** can improve information transmission
  - Warner, 1965; Chassang & Padró i Miquel, 2018; Chassang and Zehnder, 2019
  - Randomly switching reports that *no harassment took place*, to reports that *harassment did take place*

Motivation

- Organizations' ability to act against harassment is limited by their ability to collect information from relevant parties.
- Prevents organizations from assessing the scope and nature of harassment and from acting on the problem.
- Theory predicts that providing **plausible deniability** through **garbling** can improve information transmission
- **This research:**
  - Test impact of survey design: **garbling**, **removing team-level information**, and **rapport building** on reporting misbehavior.
  - Using improved survey data, assess policy-relevant aspects of harassment.

Context: Bangladeshi producer concerned about harassment

Source: 47roots.com.

- Partner with senior management of large apparel producer that aims to use workers' feedback to improve its HR policies. More Producer

Context: Bangladeshi producer concerned about harassment

Source: 47roots.com.

- Partner with senior management of large apparel producer that aims to use workers' feedback to improve its HR policies. More Producer
- Conduct phone-based survey experiment with 2197 workers at 2 plants — on harassment experienced by workers from supervisors.

Context: Bangladeshi producer concerned about harassment

Source: 47roots.com.

- Partner with senior management of large apparel producer that aims to use workers' feedback to improve its HR policies. More Producer
- Conduct phone-based survey experiment with 2197 workers at 2 plants — on harassment experienced by workers from supervisors.
- Randomize survey method (direct or garbled), degree of team-level info (manager id or not), and degree of rapport built during survey.

Research questions

Q1 How does garbling, rapport building, and removing team level information affect respondents' propensity to report harassment?

Research questions

Q1 How does garbling, rapport building, and removing team level information affect respondents' propensity to report harassment?

a. Do these methods complement or substitute for each other? What are the trade-offs?

b. Do these methods differentially affect reporting by women compared to men?

Research questions

Q1 How does garbling, rapport building, and removing team level information affect respondents' propensity to report harassment?

a. Do these methods complement or substitute for each other? What are the trade-offs?

b. Do these methods differentially affect reporting by women compared to men?

Q2 Using our improved reporting data, what do we learn about the nature and scope of harassment?

Preview of findings

Q1 How does garbling, rapport building, and removing team level information affect respondents' propensity to report harassment?

1. **Garbling:** Reports of physical harassment $\uparrow$ 290%, sexual harassment $\uparrow$ 271%, and threatening behavior $\uparrow$ 45%. Larger for men, but not statistically signif. difference.

Preview of findings

Q1 How does garbling, rapport building, and removing team level information affect respondents' propensity to report harassment?

1. **Garbling:** Reports of physical harassment $\uparrow$ 290%, sexual harassment $\uparrow$ 271%, and threatening behavior $\uparrow$ 45%. Larger for men, but not statistically signif. difference.
2. **Rapport building:** Weak effect.
3. **No team-level info:** Positive, weak effect.

Preview of findings

Q1 How does garbling, rapport building, and removing team level information affect respondents' propensity to report harassment?

1. **Garbling:** Reports of physical harassment $\uparrow$ 290%, sexual harassment $\uparrow$ 271%, and threatening behavior $\uparrow$ 45%. Larger for men, but not statistically signif. difference.
2. **Rapport building:** Weak effect.
3. **No team-level info:** Positive, weak effect.
4. **Complements vs. substitutes:** Some evidence of complementarity.

Preview of findings

Q2 Using our improved reporting data, what do we learn about the nature and scope of harassment?

With garbling:

1. 14% of workforce reports threatening behavior by supervisor, 6% physical harassment, and 8% sexual harassment.
2. Most teams have at least 1 worker who has been victimized (72% threats, 40% sexual h, 25% physical h).
3. Victims of sexual and physical h. are relatively isolated.

Plan

1. **Context**
2. Theory
3. Experimental Design
4. Results

Garment production in Bangladesh

Low-skill, labor intensive manufacturing sector:

- Production organized into cutting, sewing, finishing teams. Washing teams for garment processing.

Partner

Garment production in Bangladesh

Low-skill, labor intensive manufacturing sector:

- Production organized into cutting, sewing, finishing teams. Washing teams for garment processing.
  - 60-70% female workers; 90%+ male managers.

Partner

Garment production in Bangladesh

Low-skill, labor intensive manufacturing sector:

- Production organized into cutting, sewing, finishing teams. Washing teams for garment processing.
  - 60-70% female workers; 90%+ male managers.
  - Narrow hierarchy: Workers; line supervisors (2); line chiefs (1); floor-level supervisors (varies); (assistant) production managers (1-2).

Partner

Garment production in Bangladesh

Low-skill, labor intensive manufacturing sector:

- Production organized into cutting, sewing, finishing teams. Washing teams for garment processing.
  - 60-70% female workers; 90%+ male managers.
  - Narrow hierarchy: Workers; line supervisors (2); line chiefs (1); floor-level supervisors (varies); (assistant) production managers (1-2).
- Broader context: Weak legal institutions; socially-conservative norms.

Partner

Reporting risks: Motivating evidence from focus groups

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

Reporting risks: Motivating evidence from focus groups

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

> *"...if he gets punished or loses his job because of Fatima then he might threaten Fatima in the road. He might make Fatima scared through threatening to harm her physically or mentally."*

> *"If Bilal loses his job, everybody will accuse Fatima that Bilal lost the job because of her."*

Reporting risks: Motivating evidence from focus groups

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

> *"...if he gets punished or loses his job because of Fatima then he might threaten Fatima in the road. He might make Fatima scared through threatening to harm her physically or mentally."*
>
> *"If Bilal loses his job, everybody will accuse Fatima that Bilal lost the job because of her."*

- *Fear of retaliation*
- *Reputational costs*

More FGDs ◂ back

Plan

1. Context
2. **Theory**
3. Experimental Design
4. Results

Conceptual framework Theory Costs Scripts

- Intuition for **hard garbling** (HG):

Conceptual framework Theory Costs Scripts

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question ("*did you experience X?*"), will be randomly switched to "yes".

Conceptual framework Theory Costs Scripts

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question ("*did you experience X?*"), will be randomly switched to "yes".
  - This means you will not be the only one reporting.

Conceptual framework Theory Costs Scripts

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question ("*did you experience X?*"), will be randomly switched to "yes".
  - This means you will not be the only one reporting.
  - If the data leaked, it does not reveal whether a particular "yes"-report is a true *yes*, or a randomly flipped *yes*.

Conceptual framework Theory Costs Scripts

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question ("*did you experience X?*"), will be randomly switched to "yes".
  - This means you will not be the only one reporting.
  - If the data leaked, it does not reveal whether a particular "yes"-report is a true *yes*, or a randomly flipped *yes*.

    $\Rightarrow$ Plausible deniability

Conceptual framework Theory Costs Scripts

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question ("*did you experience X?*"), will be randomly switched to "yes".
  - This means you will not be the only one reporting.
  - If the data leaked, it does not reveal whether a particular "yes"-report is a true *yes*, or a randomly flipped *yes*.

    $\Rightarrow$ Plausible deniability
  - Since we know the flipping/garbling rate, we are able to calculate team-level statistics of prevalence of harassment.

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:
    - (subjective) leakage probability p

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:
    - (subjective) leakage probability p
    - cost if leaked

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:
    - (subjective) leakage probability p
    - cost if leaked

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:
    - (subjective) leakage probability p
    - cost if leaked — (goes down with garbling rate $\pi \uparrow$)

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:
    - (subjective) leakage probability p
    - cost if leaked — (goes down with garbling rate $\pi \uparrow$)
  - Prediction

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:
    - (subjective) leakage probability p
    - cost if leaked — (goes down with garbling rate $\pi \uparrow$)

  - Prediction
    - A non-harassed worker does not report $r = 0$

Conceptual framework: the value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status — it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report $\tilde{r}$;
  - Expected reputational / retaliation cost — depending on:
    - (subjective) leakage probability p
    - cost if leaked — (goes down with garbling rate $\pi \uparrow$)

  - Prediction
    - A non-harassed worker does not report $r = 0$
    - A harassed worker is more likely to report $r = 1$ as $p \downarrow$ and garbling rate $\pi \uparrow$

Conceptual framework

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question (*"did you experience X?"*), will be randomly switched to "yes".
  - This means you will not be the only one reporting.
  - If the data leaked, it does not reveal whether a particular "yes"-report is a true *yes*, or a randomly-flipped *yes*.

    $\Rightarrow$ Plausible deniability
  - Since we know the garbling rate, we are able to calculate team-level statistics of prevalence of harassment.

- Prediction:
  - **HG** increases workers' willingness to report — relative to the status quo of **direct elictiation** (DE);

Conceptual framework

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question ("*did you experience X?*"), will be randomly switched to "yes".
  - This means you will not be the only one reporting.
  - If the data leaked, it does not reveal whether a particular "yes"-report is a true *yes*, or a randomly-flipped *yes*.

    $\Rightarrow$ Plausible deniability
  - Since we know the garbling rate, we are able to calculate team-level statistics of prevalence of harassment.

- Prediction:
  - **HG** increases workers' willingness to report — relative to the status quo of **direct elictiation** (DE);
  - Relative to the true level of harassment, there is (weak) underreporting*

Conceptual framework

- Intuition for **hard garbling** (HG):
  - Tell workers that 1-in-5 "no"-reports to a sensitive question ("*did you experience X?*"), will be randomly switched to "yes".
  - This means you will not be the only one reporting.
  - If the data leaked, it does not reveal whether a particular "yes"-report is a true *yes*, or a randomly-flipped *yes*.

    $\Rightarrow$ Plausible deniability
  - Since we know the garbling rate, we are able to calculate team-level statistics of prevalence of harassment.

- Prediction:
  - **HG** increases workers' willingness to report — relative to the status quo of **direct elictiation** (DE);
  - Relative to the true level of harassment, there is (weak) underreporting*

    *assume no false positives (motivating evidence).

Plan

1. Context
2. Theory
3. **Experimental Design**
4. Results

Experimental Design

- **Set-up:** Phone-based survey with 2,197 employees at 2 factories that produce denim products.
  - 3 phone calls:
    1. Recruitment & baseline trust-building call
    2. Main survey (experiment)
    3. Follow-up survey 2 weeks later

Experimental Design

- **Set-up:** Phone-based survey with 2,197 employees at 2 factories that produce denim products.
  - 3 phone calls:
    1. Recruitment & baseline trust-building call
    2. Main survey (experiment)
    3. Follow-up survey 2 weeks later
- Conducted by BRAC Institute of Governance and Development (BIGD).
- Participants informed that results would be shared with senior management and would inform HR policy.
- Pre-analysis plan pre-registered on AEA RCT Registry.

Survey sections

Experimental design

- **Outcomes:** Intended response to question, *"In the past year, has your line supervisor taken* **any of the following actions** *toward you against your will?" (Yes/No)*

Experimental design

- **Outcomes:** Intended response to question, *"In the past year, has your line supervisor taken* **any of the following actions** *toward you against your will?" (Yes/No)*
- We list actions which define one of 3 types of harassment:

Experimental design

- **Outcomes:** Intended response to question, *"In the past year, has your line supervisor taken* **any of the following actions** *toward you against your will?" (Yes/No)*

- We list actions which define one of 3 types of harassment:
  1. Threatening behavior

Experimental design

- **Outcomes:** Intended response to question, *"In the past year, has your line supervisor taken* **any of the following actions** *toward you against your will?" (Yes/No)*

- We list actions which define one of 3 types of harassment:
  1. Threatening behavior
  2. Physical harassment

Experimental design

- **Outcomes:** Intended response to question, *"In the past year, has your line supervisor taken* **any of the following actions** *toward you against your will?" (Yes/No)*

- We list actions which define one of 3 types of harassment:
  1. Threatening behavior
  2. Physical harassment
  3. Sexual harassment

Treatment conditions Arms Balance

- Survey method for harassment-related questions Scripts:

  1.a) DE

  1.b) HG with a 20% ex-ante flipping rate

Treatment conditions Arms Balance

- Survey method for harassment-related questions Scripts:

  1.a) DE

  1.b) HG with a 20% ex-ante flipping rate

- Personally-identifying information (PII):

  2.a) Status quo: Ask questions that reveal relatively more PII, including production section/line number and direct supervisor.

  2.b) Low PII: Limit PII requested; no questions asked about production section/line number or direct supervisor.

Treatment conditions Arms Balance

- Survey method for harassment-related questions Scripts:
  - 1.a) DE
  - 1.b) HG with a 20% ex-ante flipping rate
- Personally-identifying information (PII):
  - 2.a) Status quo: Ask questions that reveal relatively more PII, including production section/line number and direct supervisor.
  - 2.b) Low PII: Limit PII requested; no questions asked about production section/line number or direct supervisor.
- Rapport-building (RB):
  - 3.a) Status quo: Typical social science intro script and survey.
  - 3.b) RB: Survey enumerators allocate survey time to build rapport, or trust, with the participant. Short v long RB

Treatment arms

		No RB	RB 1	RB 2
DE	PII	Arm 1	Arm 2a	Arm 2b
	No PII	Arm 3	Arm 4	
HG	PII	Arm 5	Arm 6a	Arm 6b
	No PII		Arm 7	

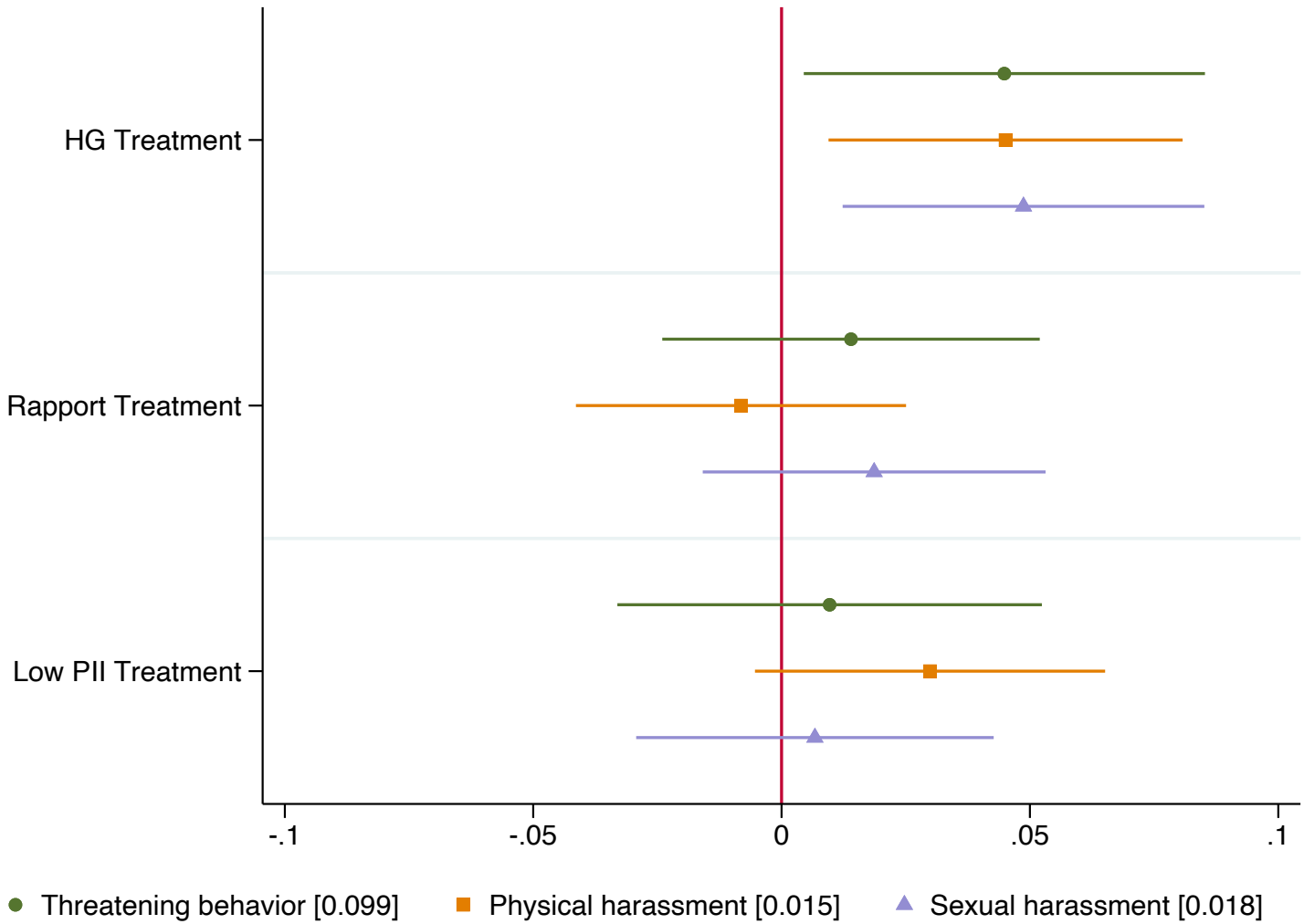
- Benchmark: Arm 1.
- Ex ante most protective: Arm 7.

We **randomly** assign workers to each treatment condition (statified-random sampling). Design

Plan

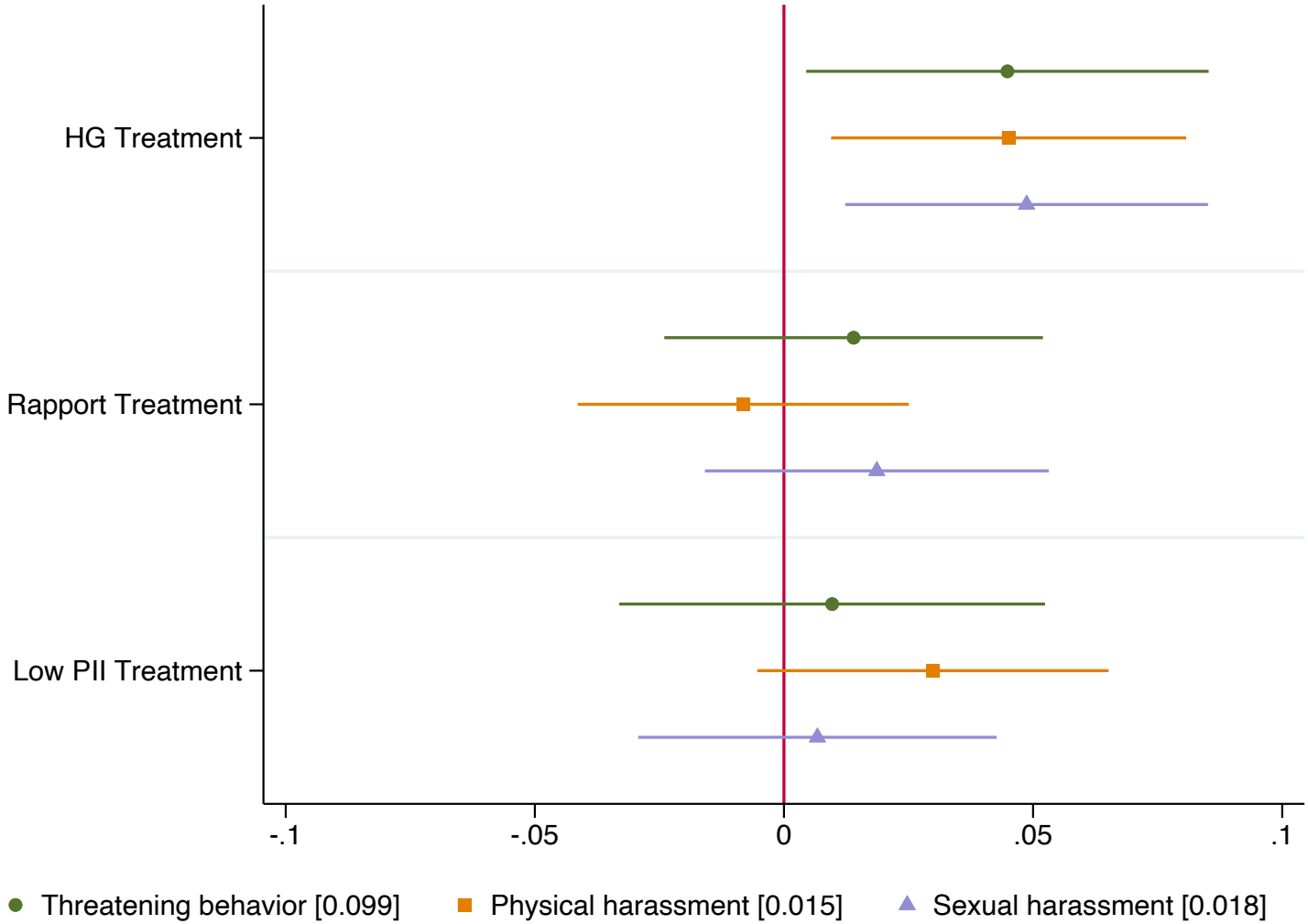
1. Context
2. Theory
3. Experimental Design
4. **Results**

Impacts of survey design



Notes: Omitted group is DE×PII×No rapport (control group). Whiskers are 95% CIs calculated using robust standard errors.

Impacts of survey design

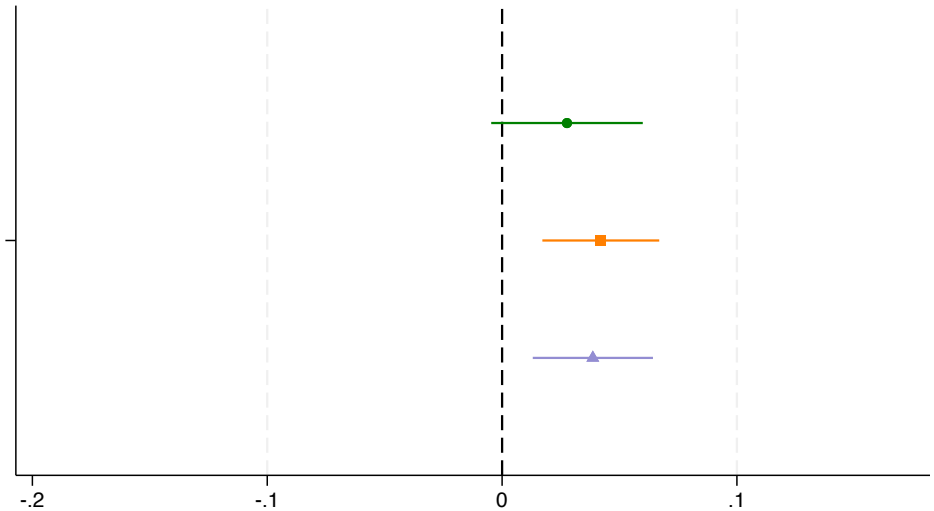


Notes: Omitted group is DE×PII×No rapport (control group). Whiskers are 95% CIs calculated using robust standard errors.

- **HG:** Reporting of threatening behavior ↑ 45%, physical harassment ↑ 290%, sexual harassment ↑ 271%.

Impacts of survey design: Heterogeneity by gender

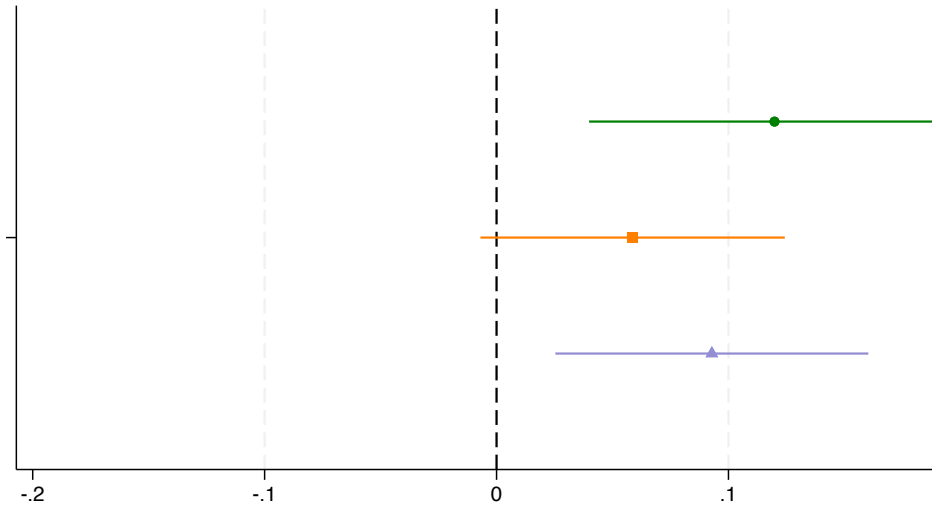
HG× Female



- Threatening behavior [0.080]
- Physical harassment [0.009]
- Sexual harassment [0.018]

(Note: 95% confidence intervals, includes controls selected with double lasso)

HG× Male



- Threatening behavior [0.191]
- Physical harassment [0.044]
- Sexual harassment [0.015]

(Note: 95% confidence intervals, includes controls selected with double lasso)

Notes: Omitted group is DE×PII×No rapport (control group). Whiskers are 95% CIs calculated using robust standard errors.

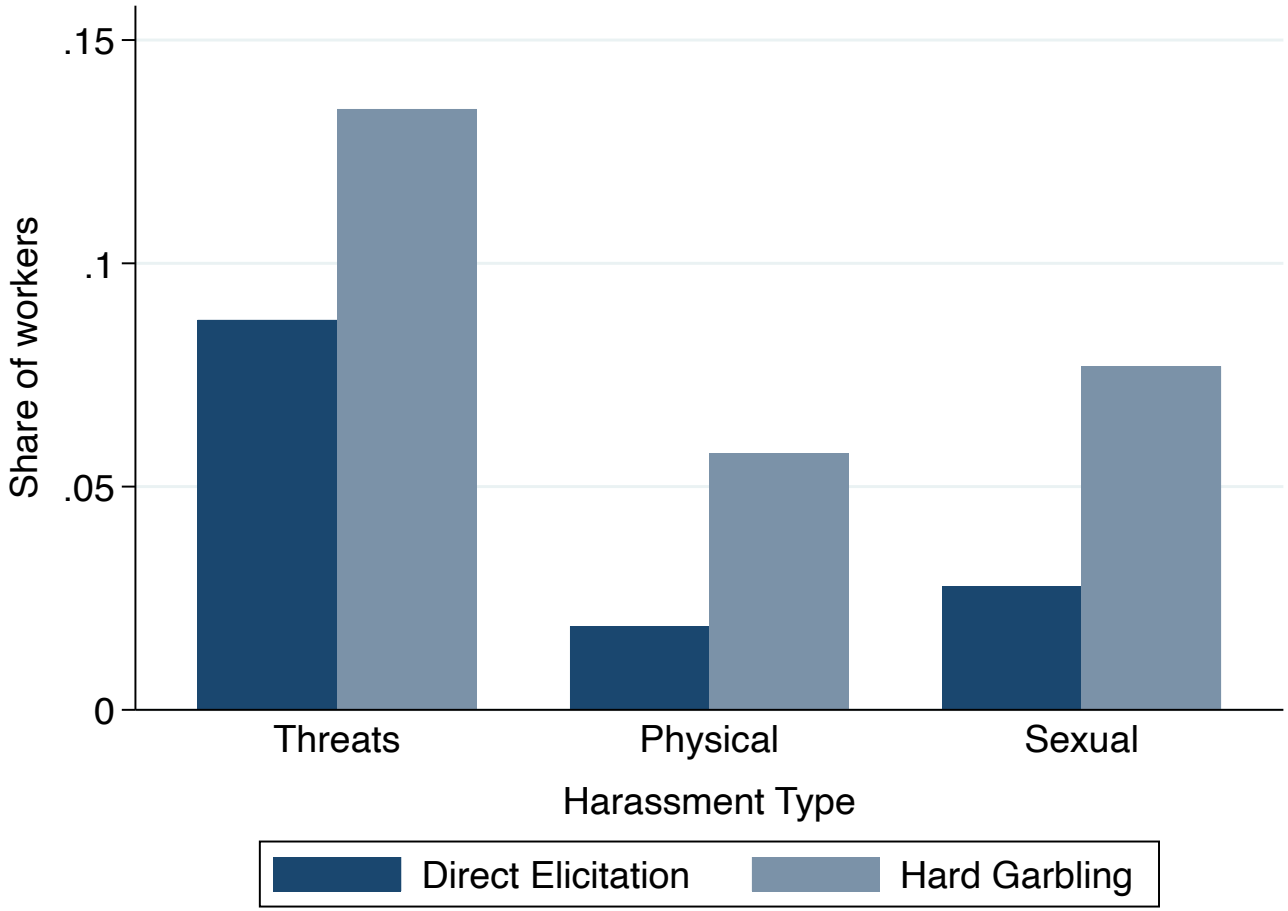
Table | Table By sex | Model | Cov. | Short & long rapport | Robustness | Interactions

Understanding Harassment

Q2 Using our improved reporting data, what do we learn about the nature and scope of harassment?

Harassment underdetected (DE), yet widespread (HG)

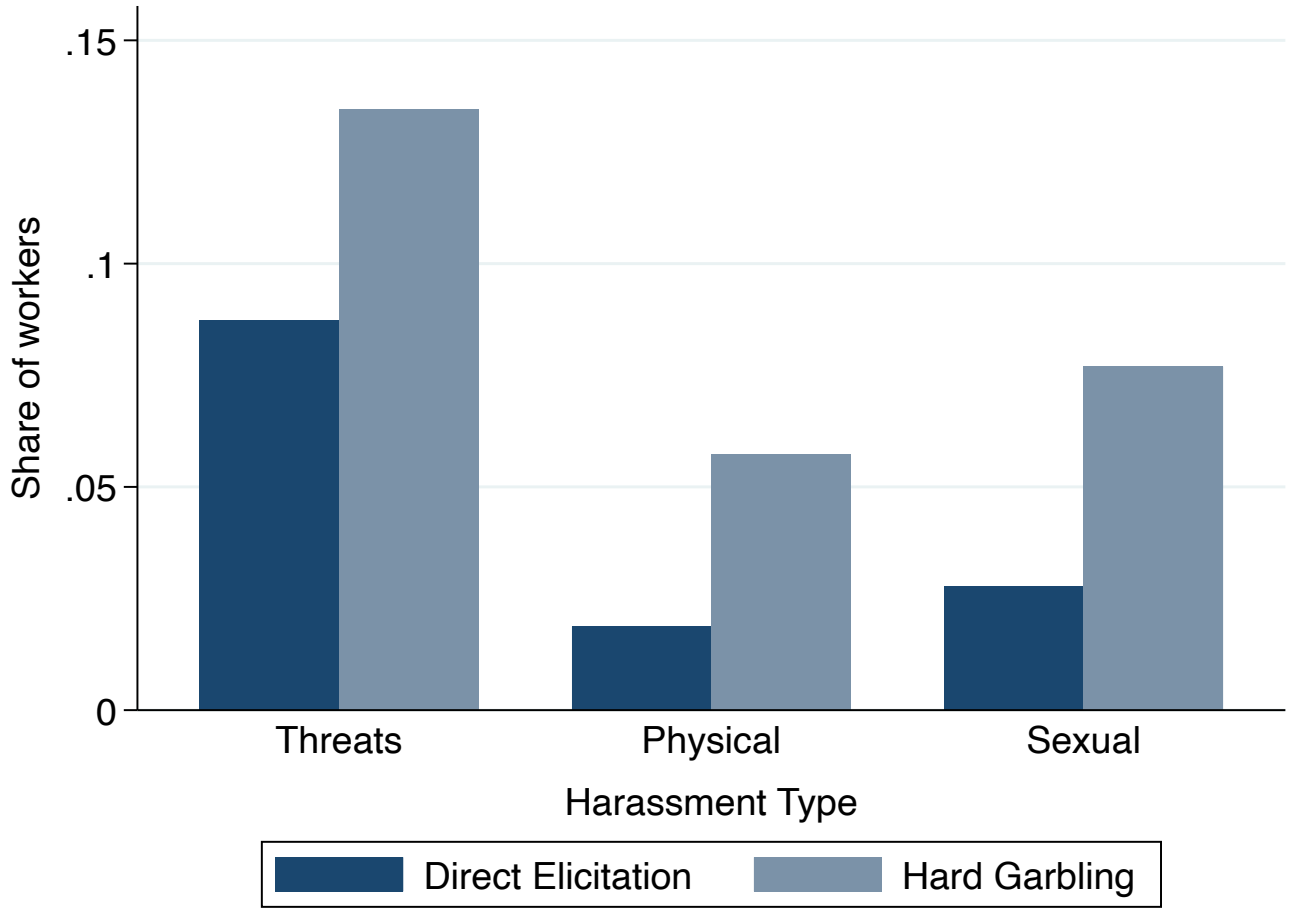
Figure: Share of workers who have been victimized (S_V)



Notes: We pool across all treatment arms, including the RB arms and the arms in which we do not collect team-level identifying information.

Harassment underdetected (DE), yet widespread (HG)

Figure: Share of workers who have been victimized (S_V)

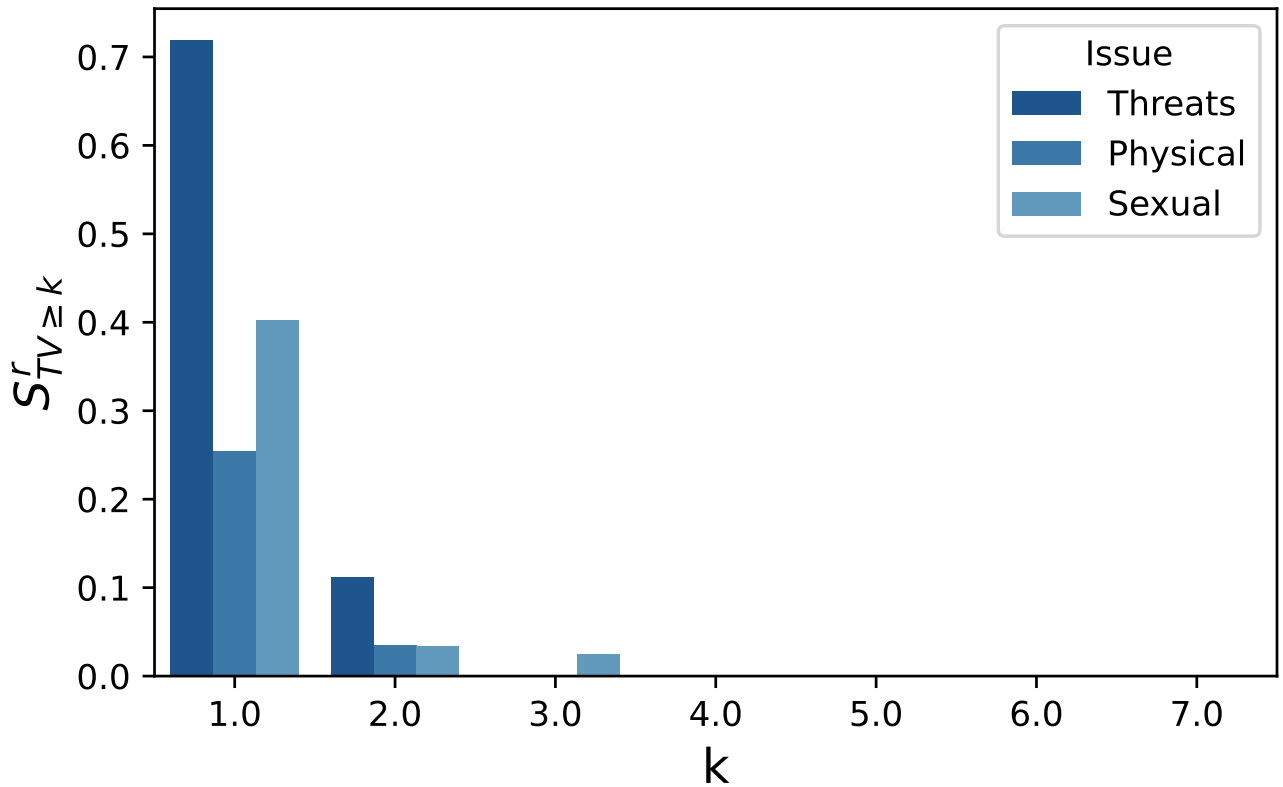


Notes: We pool across all treatment arms, including the RB arms and the arms in which we do not collect team-level identifying information.

- Had the organization known, they may have allocated more resources to the problem.

Most managers harass

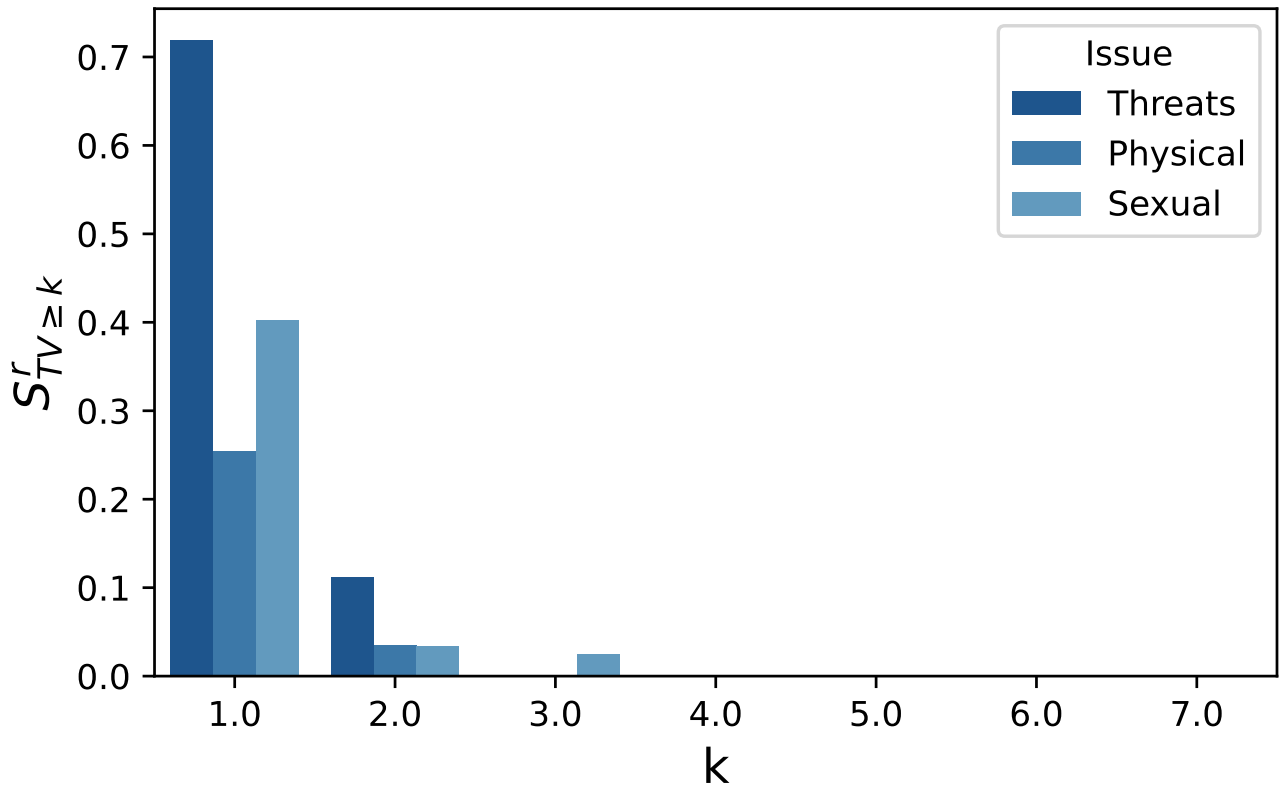
Figure: Share of teams with at least k victims ($S_{TV \geq k}$)



Notes: Figure reports the full distribution of $S_{TV \geq k}$ by issue type, computed by pooling data from arms that use HG and collect PII. Shares are calculated for teams of size 7 (112 teams), the median number of workers/team in HG/PII arms.

Most managers harass

Figure: Share of teams with at least k victims ($S_{TV \geq k}$)

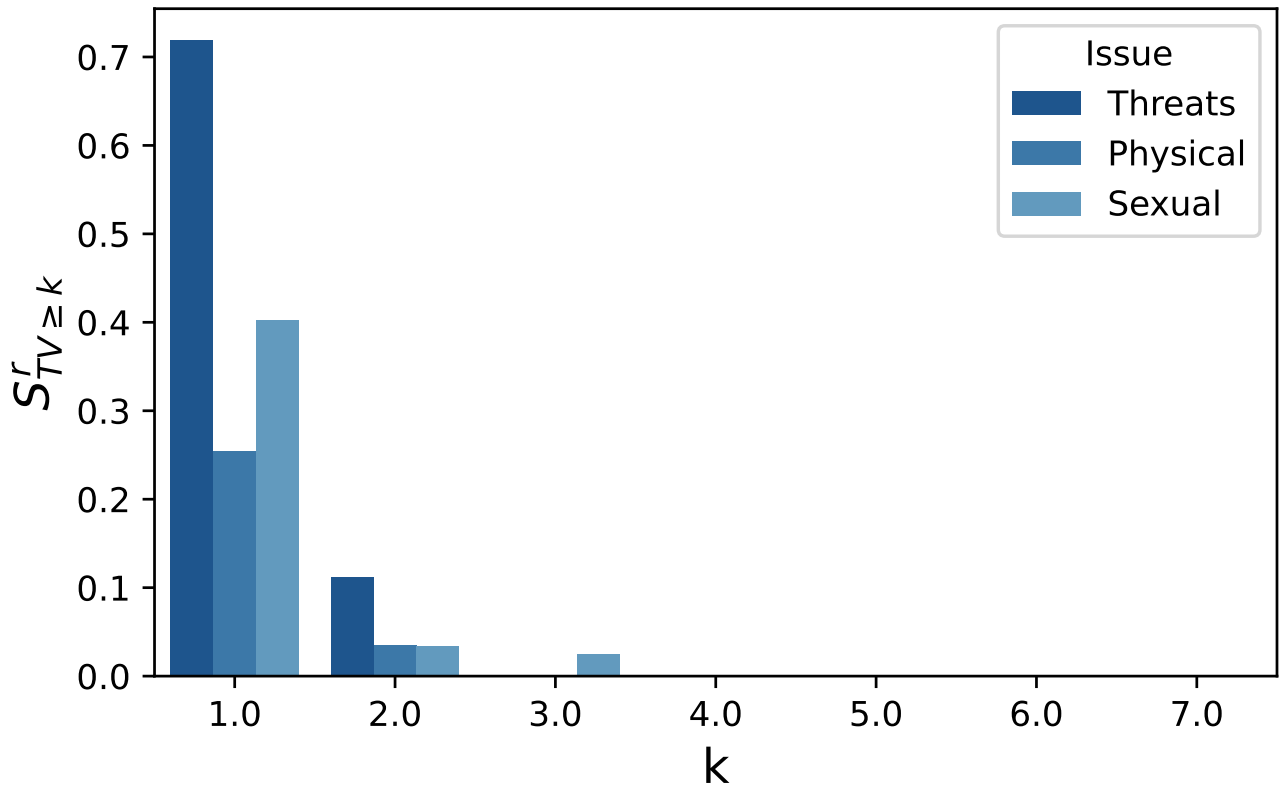


Notes: Figure reports the full distribution of $S_{TV \geq k}$ by issue type, computed by pooling data from arms that use HG and collect PII. Shares are calculated for teams of size 7 (112 teams), the median number of workers/team in HG/PII arms.

- Firing all misbehaving managers (following an investigation) would be very costly.

Most managers harass

Figure: Share of teams with at least k victims ($S_{TV \geq k}$)

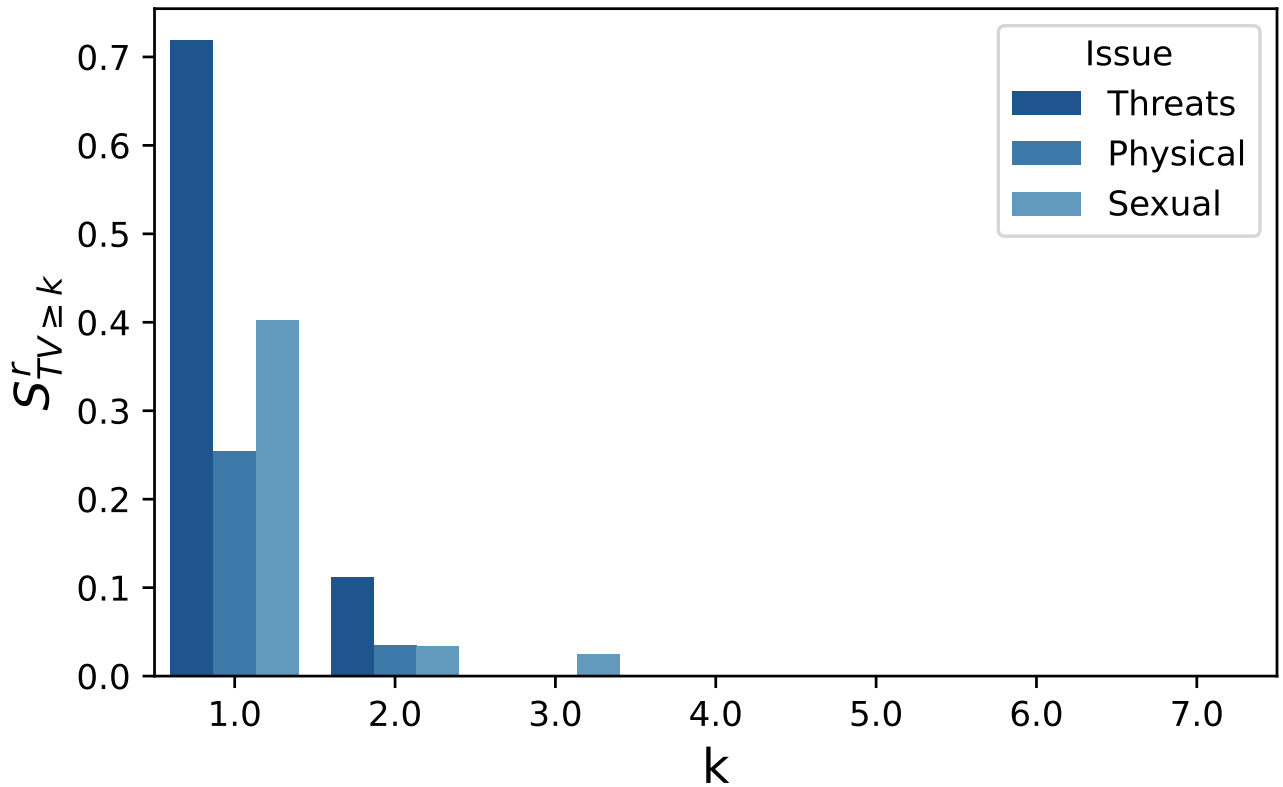


Notes: Figure reports the full distribution of $S_{TV \geq k}$ by issue type, computed by pooling data from arms that use HG and collect PII. Shares are calculated for teams of size 7 (112 teams), the median number of workers/team in HG/PII arms.

- Possible policy: Investigate most egregious managers first, setting an example with aim of a trickle-down effect.

Most managers harass, & victims relatively isolated

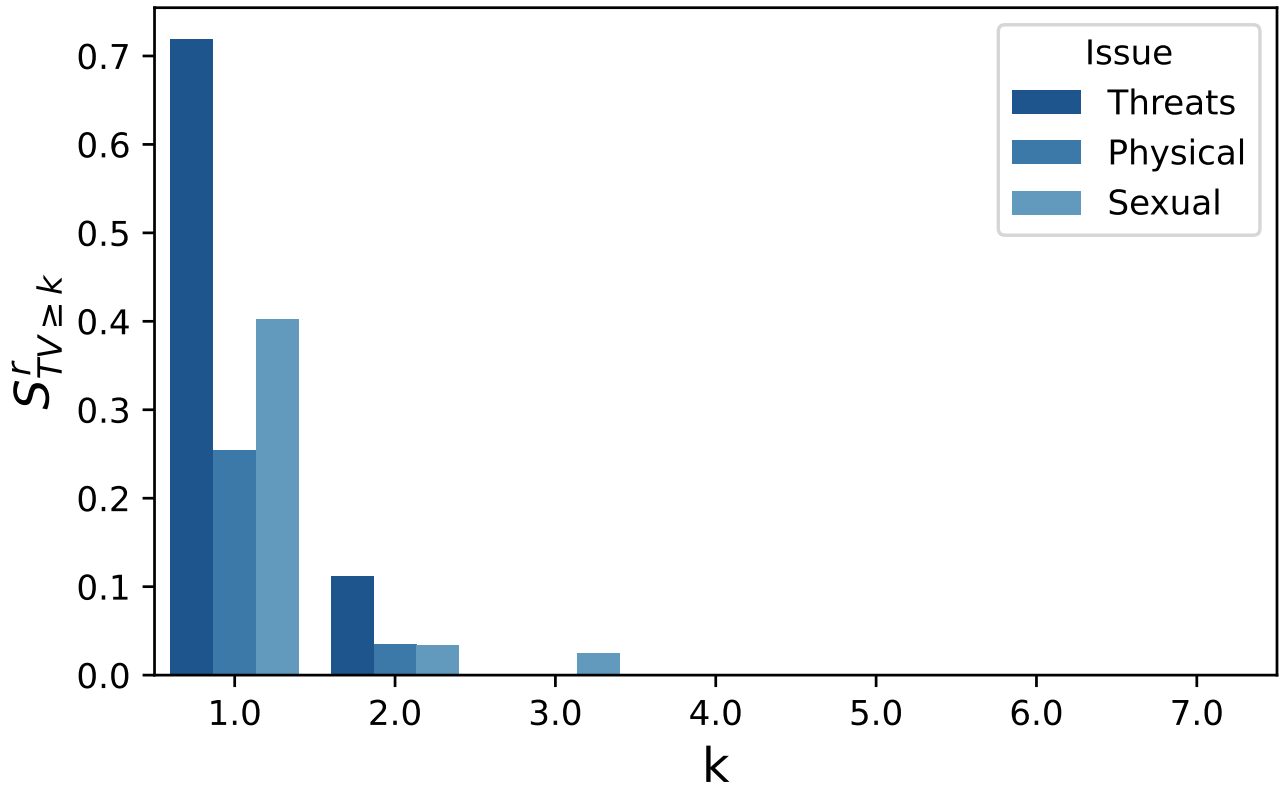
Figure: Share of teams with at least k victims ($S_{TV \geq k}$)



Notes: Figure reports the full distribution of $S_{TV \geq k}$ by issue type, computed by pooling data from arms that use HG and collect PII. Shares are calculated for teams of size 7 (112 teams), the median number of workers/team in HG/PII arms.

Most managers harass, & victims relatively isolated

Figure: Share of teams with at least k victims ($S_{TV \geq k}$)



Notes: Figure reports the full distribution of $S_{TV \geq k}$ by issue type, computed by pooling data from arms that use HG and collect PII. Shares are calculated for teams of size 7 (112 teams), the median number of workers/team in HG/PII arms.

- When victims are isolated, requiring multiple corroborating reports would miss most cases of harassment.

Understanding Harassment

Q2 Using our improved reporting data, what do we learn about the nature and scope of harassment? — **With garbling:**

1. Harassment is severly under-reported
   - HG: close to 14% of workforce reports threatening behavior by supervisor; almost 6% (8%) physical (sexual) harassment.
   - DE: close to 9% of workforce reports threatening behavior by supervisor; $< 2\%$ (3%) physical (sexual) harassment.
2. Most teams experience misbehavior
   - 72% of teams of size 7 have at least 1 worker threatened; 25% (40%) have at least 1 survivor of physical (sexual) harassment.
3. Victims are relatively isolated, expecially for phys./sex.h.
   - 11% of teams of size 7 have at least 2 workers who have been threatened; 3.5% (3.3%) have at least 2 survivors of physical (sexual) harassment.

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors
  - hard garbling — also helps us learn about extent of the prolem

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors
  - hard garbling — also helps us learn about extent of the prolem
- With widespread harassment — possible responses:

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors
  - hard garbling — also helps us learn about extent of the prolem
- With widespread harassment — possible responses:
  - change company norms, eg. training, HR reviews

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors
  - hard garbling — also helps us learn about extent of the prolem
- With widespread harassment — possible responses:
  - change company norms, eg. training, HR reviews
  - firing most egregious harassers first, with trickle down effects

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors
  - hard garbling — also helps us learn about extent of the prolem
- With widespread harassment — possible responses:
  - change company norms, eg. training, HR reviews
  - firing most egregious harassers first, with trickle down effects
- When victims are isolated, requiring multiple victims to come forward to avoid "he said, she said" situations, may miss the majority of cases — in such cases:

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors
  - hard garbling — also helps us learn about extent of the prolem
- With widespread harassment — possible responses:
  - change company norms, eg. training, HR reviews
  - firing most egregious harassers first, with trickle down effects
- When victims are isolated, requiring multiple victims to come forward to avoid "he said, she said" situations, may miss the majority of cases — in such cases:
  - focus on norm changes

Policy implications

- To address harassment we need tools that provide **plausible deniability** to survivors
  - hard garbling — also helps us learn about extent of the prolem
- With widespread harassment — possible responses:
  - change company norms, eg. training, HR reviews
  - firing most egregious harassers first, with trickle down effects
- When victims are isolated, requiring multiple victims to come forward to avoid "he said, she said" situations, may miss the majority of cases — in such cases:
  - focus on norm changes
  - facilitate workers changing production lines

Related literature and contributions back

- Barriers to reporting and design of transmission mechanisms for sensitive information in organizations.
  1. Survey elicitation mechanisms — "soft" vs "hard garbling"
     - List experiments —Raghavarao & Federer 1979, Miller 1984, Chuang et al 2021
     - Randomized response —Warner 1965, Blair et al 2015, Ljungqvist 1993,Blume et al. 2019, 2023
     - Hard garbling —Chassang & Padró i Miquel 2018; Chassang & Zehnder 2024 HG vs RR
  2. Mechanisms to monitor harassment — "reporting escrow" —Ayres & Unkovic, 2012; Cheng & Hsiaw 2022

Related literature and contributions back

- Barriers to reporting and design of transmission mechanisms for sensitive information in organizations.
  1. Survey elicitation mechanisms — "soft" vs "hard garbling"
     - List experiments —Raghavarao & Federer 1979, Miller 1984, Chuang et al 2021
     - Randomized response —Warner 1965, Blair et al 2015, Ljungqvist 1993,Blume et al. 2019, 2023
     - Hard garbling —Chassang & Padró i Miquel 2018; Chassang & Zehnder 2024 HG vs RR
  2. Mechanisms to monitor harassment — "reporting escrow" —Ayres & Unkovic, 2012; Cheng & Hsiaw 2022
     - **First field evidence on hard garbling outside of lab and in real-world organizational setting.**

Related literature and contributions back

- Barriers to reporting and design of transmission mechanisms for sensitive information in organizations.
  1. Survey elicitation mechanisms — "soft" vs "hard garbling"
     - List experiments —Raghavarao & Federer 1979, Miller 1984, Chuang et al 2021
     - Randomized response —Warner 1965, Blair et al 2015, Ljungqvist 1993,Blume et al. 2019, 2023
     - Hard garbling —Chassang & Padró i Miquel 2018; Chassang & Zehnder 2024 HG vs RR
  2. Mechanisms to monitor harassment — "reporting escrow" —Ayres & Unkovic, 2012; Cheng & Hsiaw 2022

- Workplace harassment
  - Causes of under-reporting —Basu 2003, Dahl & Knepper 2021, Cheng & Hsiaw 2022, Cullen 2023, Hersch 2024
  - Conseq. —Folke & Rickne 2022, Adams-Prassl et al 2024

Related literature and contributions back

- Barriers to reporting and design of transmission mechanisms for sensitive information in organizations.
  1. Survey elicitation mechanisms — "soft" vs "hard garbling"
     - List experiments —Raghavarao & Federer 1979, Miller 1984, Chuang et al 2021
     - Randomized response —Warner 1965, Blair et al 2015, Ljungqvist 1993,Blume et al. 2019, 2023
     - Hard garbling —Chassang & Padró i Miquel 2018; Chassang & Zehnder 2024 HG vs RR
  2. Mechanisms to monitor harassment — "reporting escrow" —Ayres & Unkovic, 2012; Cheng & Hsiaw 2022

- Workplace harassment
  - Causes of under-reporting —Basu 2003, Dahl & Knepper 2021, Cheng & Hsiaw 2022, Cullen 2023, Hersch 2024
  - Conseq. —Folke & Rickne 2022, Adams-Prassl et al 2024
  - **Evidence that raising plausible deniability through hard garbling helps in detecting harassment in organizations**.

Next steps

- **Ongoing:** What are the welfare and distributional implications of harassment for the producer, workers, and managers?
  - In this project, using 2SLS, we find large, positive, but imprecisely estimated effects of reporting harassment on workers' mental health and job satisfaction.

Next steps

- **Ongoing:** What are the welfare and distributional implications of harassment for the producer, workers, and managers?
  - In this project, using 2SLS, we find large, positive, but imprecisely estimated effects of reporting harassment on workers' mental health and job satisfaction.
- **Future:** How to scale up enforcement actions taken as a function of reports?
  - Action needs to be an acceptable, legitimate response to a noisy signal, e.g., sending manager to training, more thorough monitoring of manager, or rotating workers across teams.

Thank you!

Questions? adagt@bgu.ac.il

Appendix

Appendix

Theory:

- Short vs long-run
- HG vs other indirect response mechanisms

Experimental design:

- Summary statistics
- DE and HG Scripts
- Team-level reported harassment and survey response rate
- HG confusion or strategic misreporitng HG

Results:

- Additional results witness team-level witness reports reasons consent
- Identification of intended responses
- Treatment effects on survey duration
- ML estimation manager types

More on...

1. Context
2. Theory
3. Experimental Design
4. Results

Reporting risks: Motivating evidence from focus groups

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

Reporting risks: Motivating evidence from focus groups

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

> *"...if he gets punished or loses his job because of Fatima then he might threaten Fatima in the road. He might make Fatima scared through threatening to harm her physically or mentally."*

> *"If Bilal loses his job, everybody will accuse Fatima that Bilal lost the job because of her."*

Reporting risks: Motivating evidence from focus groups

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

> *"...if he gets punished or loses his job because of Fatima then he might threaten Fatima in the road. He might make Fatima scared through threatening to harm her physically or mentally."*
>
> *"If Bilal loses his job, everybody will accuse Fatima that Bilal lost the job because of her."*

- *Fear of retaliation*
- *Reputational costs*

More FGDs ◂ back

Theory framework: Set-up

back

- Organization consists of $m \in \mathbb{N}$ teams, each of which comprises of a manager and L workers.

Theory framework: Set-up

back

- Organization consists of $m \in \mathbb{N}$ teams, each of which comprises of a manager and L workers.
  - In total, $n \equiv m \times L$ workers and m managers.

Theory framework: Set-up

back

- Organization consists of $m \in \mathbb{N}$ teams, each of which comprises of a manager and L workers.
  - In total, $n \equiv m \times L$ workers and m managers.
- Assume that managers only harass workers under their span of control.

Theory framework: Set-up

back

- Organization consists of $m \in \mathbb{N}$ teams, each of which comprises of a manager and L workers.
  - In total, $n \equiv m \times L$ workers and m managers.
- Assume that managers only harass workers under their span of control.
- Harassment (of a specific type) charactarized by a binary value — for any manager a and worker i, denote:

Theory framework: Set-up

back

- Organization consists of $m \in \mathbb{N}$ teams, each of which comprises of a manager and L workers.
  - In total, $n \equiv m \times L$ workers and m managers.
- Assume that managers only harass workers under their span of control.
- Harassment (of a specific type) charactarized by a binary value — for any manager a and worker i, denote:

$$h_{i,a} = 1 : \text{event that manager } a \text{ harassed worker } i;$$

Theory framework: Set-up

back

- Organization consists of $m \in \mathbb{N}$ teams, each of which comprises of a manager and L workers.
  - In total, $n \equiv m \times L$ workers and m managers.
- Assume that managers only harass workers under their span of control.
- Harassment (of a specific type) charactarized by a binary value — for any manager a and worker i, denote:

  $h_{i,a} = 1$: event that manager a harassed worker i;

  $h_{i,a} = 0$: event that manager did not.

Our goal: Identify policy-relevant statistics

- Share of workers victimized:

$$S_V \equiv \frac{1}{n} \sum_{a,i \in M \times I} h_{i,a}$$

Our goal: Identify policy-relevant statistics

- Share of workers victimized:

$$S_V \equiv \frac{1}{n} \sum_{a,i \in M \times I} h_{i,a}$$

- Share of managers that have harassed at least one person:

$$S_{PM} \equiv \frac{1}{m} \sum_{a \in M} \max_{i \in I} h_{i,a}$$

Our goal: Identify policy-relevant statistics

- Share of workers victimized:

$$S_V \equiv \frac{1}{n} \sum_{a,i \in M \times I} h_{i,a}$$

- Share of managers that have harassed at least one person:

$$S_{PM} \equiv \frac{1}{m} \sum_{a \in M} \max_{i \in I} h_{i,a}$$

- Share of managers that have harassed at least k workers:

$$\forall k \in \{1, \cdots, L\}, \quad S_{TV \geq k} \equiv \frac{1}{m} \sum_{a \in M} \mathbf{1}_{\sum_{i \in I} h_{i,a} \geq k}$$

Our goal: Identify policy-relevant statistics

- Share of workers victimized:

$$S_V \equiv \frac{1}{n} \sum_{a,i \in M \times I} h_{i,a}$$

- Share of managers that have harassed at least one person:

$$S_{PM} \equiv \frac{1}{m} \sum_{a \in M} \max_{i \in I} h_{i,a}$$

- Share of managers that have harassed at least k workers:

$$\forall k \in \{1, \cdots, L\}, \quad S_{TV \geq k} \equiv \frac{1}{m} \sum_{a \in M} \mathbf{1}_{\sum_{i \in I} h_{i,a} \geq k}$$

- In paper, also consider witnesses.

Reporting experiment

- Main focus: Eliciting information about own harassment status $h_{i,a}$.

Reporting experiment

- Main focus: Eliciting information about own harassment status $h_{i,a}$.
- Our approach: Consider binary surveys in which worker i in team a can submit intended responses $r_{i,a} \in \{0, 1\}$ about own harassment status.

Reporting experiment

- Main focus: Eliciting information about own harassment status $h_{i,a}$.
- Our approach: Consider binary surveys in which worker i in team a can submit intended responses $r_{i,a} \in \{0, 1\}$ about own harassment status.
- Assume there are no false positives: $r_{i,a} \in \{0, h_{i,a}\}$.

Reporting experiment

- Main focus: Eliciting information about own harassment status $h_{i,a}$.
- Our approach: Consider binary surveys in which worker i in team a can submit intended responses $r_{i,a} \in \{0, 1\}$ about own harassment status.
- Assume there are no false positives: $r_{i,a} \in \{0, h_{i,a}\}$.
  - Suitable for our setting (motivating evidence).

The value of garbling

- Intended report $r \in \{0, 1\}$ associated with potentially random recorded report $\widetilde{r} \in \{0, 1\}$.

The value of garbling

- Intended report $r \in \{0, 1\}$ associated with potentially random recorded report $\widetilde{r} \in \{0, 1\}$.
- Survey methods:

The value of garbling

- Intended report $r \in \{0, 1\}$ associated with potentially random recorded report $\widetilde{r} \in \{0, 1\}$.
- Survey methods:
  - **Direct Elicitation (DE)**: $\widetilde{r} = r$.

The value of garbling

- Intended report $r \in \{0, 1\}$ associated with potentially random recorded report $\widetilde{r} \in \{0, 1\}$.
- Survey methods:
  - **Direct Elicitation (DE)**: $\widetilde{r} = r$.
  - **Hard Garbling (HG)**, in which

$$\begin{aligned} &\text{if } r = 1 \qquad \tilde{r} = 1 \\ &\text{if } r = 0 \qquad \tilde{r} = \begin{cases} 0 & \text{with proba } 1 - \pi \\ 1 & \text{with proba } \pi \end{cases} \end{aligned}$$

The value of garbling

- Intended report $r \in \{0, 1\}$ associated with potentially random recorded report $\widetilde{r} \in \{0, 1\}$.
- Survey methods:
  - **Direct Elicitation (DE)**: $\widetilde{r} = r$.
  - **Hard Garbling (HG)**, in which

$$\begin{aligned} &\text{if } r = 1 \qquad \widetilde{r} = 1 \\ &\text{if } r = 0 \qquad \widetilde{r} = \begin{cases} 0 & \text{with proba } 1 - \pi \\ 1 & \text{with proba } \pi \end{cases} \end{aligned}$$

where $\pi \in (0, 1)$.

The value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status,

The value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status, and it is the sum of:
  - Psychological benefit of reporting if harassed;

The value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status, and it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report;

The value of garbling

- Assume a worker's utility associated with an intended report r depends on their harassment status, and it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report;
  - Expected reputational and/or retaliation cost: $p \times \text{RC}(\widetilde{r})$:
    - p is the *subjective* probability of $\widetilde{r}$ being leaked;
    - $\text{RC}(\widetilde{r})$ cost if $\tilde{r}$ is leaked;

      it is a function of the posterior belief that the worker submitted a report of harassment,

      which depends on garbling rate π.

The value of garbling eq. lit. reasons consent FGDs

- Assume a worker's utility associated with an intended report r depends on their harassment status, and it is the sum of:
  - Psychological benefit of reporting if harassed;
  - Internalized social benefit (or cost) of a recorded report;
  - Expected reputational and/or retaliation cost: $p \times \text{RC}(\widetilde{r})$:
    - p is the *subjective* probability of $\widetilde{r}$ being leaked;
    - $\text{RC}(\widetilde{r})$ cost if $\tilde{r}$ is leaked;

      it is a function of the posterior belief that the worker submitted a report of harassment,

      which depends on garbling rate π.
- Prediction
  - A non-harassed worker sends $r = 0$
  - A harassed worker is more likely to send $r = 1$ as $p \downarrow$ and $\pi \uparrow$

The value of garbling

- **Predictions** (Prop 1):

  (i) intended reports weakly underreport true harassment;

  (ii) equilibrium reporting weakly increases with the garbling rate π;

  (iii) equilibrium reporting weakly decreases with the perceived leakage probability p.

The value of garbling

- **Predictions** (Prop 1):

  (i) intended reports weakly underreport true harassment;

  (ii) equilibrium reporting weakly increases with the garbling rate π;

  (iii) equilibrium reporting weakly decreases with the perceived leakage probability p.

- **Corollary**: Measurement errors between statistics calculated using true harassment statuses and intended reports are decreasing in π and increasing in p.

The value of garbling

- **Predictions** (Prop 1):

  (i) intended reports weakly underreport true harassment;

  (ii) equilibrium reporting weakly increases with the garbling rate π;

  (iii) equilibrium reporting weakly decreases with the perceived leakage probability p.

- **Corollary**: Measurement errors between statistics calculated using true harassment statuses and intended reports are decreasing in π and increasing in p.

- **Measurement with garbled reports**: Extend Warner (1965) estimator to recover aggregate reporting rate, but also the team-level statistics of harassment. eq.

The value of garbling (cont.)

back

Worker i's utility U_i associated with an intended report r:

$$U_i(r|h_{i,a}) = \mathrm{PB}(\mathrm{r}|\mathrm{h_{i,a}}) + \mathrm{SB}(\widetilde{\mathrm{r}}|\mathrm{h_{i,a}}) + \mathrm{p} \times \mathrm{RC}(\widetilde{\mathrm{r}})$$

The value of garbling (cont.) back

Worker i's utility U_i associated with an intended report r:

$$U_i(r|h_{i,a}) = \mathrm{PB(r|h_{i,a})} + \mathrm{SB}(\widetilde{\mathrm{r}}|\mathrm{h_{i,a}}) + \mathrm{p} \times \mathrm{RC}(\widetilde{\mathrm{r}})$$

- PB: Psychological benefit, $\mathrm{PB}(1|1) > 0$. For simplicity, $\mathrm{PB}(1|0) = \mathrm{PB}(0|1) = \mathrm{PB}(0|0) = 0$.
- SB: Social benefit from $\widetilde{r}$. For simplicity, $\mathrm{SB}(1|1) > 0$, $\mathrm{SB}(1|0) < 0$ and $\mathrm{SB}(0|1) = \mathrm{SB}(0|0) = 0$.

The value of garbling (cont.) back

Worker i's utility U_i associated with an intended report r:

$$U_i(r|h_{i,a}) = \mathrm{PB}(\mathsf{r}|\mathsf{h}_{\mathsf{i},\mathsf{a}}) + \mathrm{SB}(\widetilde{\mathsf{r}}|\mathsf{h}_{\mathsf{i},\mathsf{a}}) + \mathsf{p} \times \mathrm{RC}(\widetilde{\mathsf{r}})$$

- $p \in [0, 1]$: *Subjective* probability of $\widetilde{r}$ being leaked.
- Reputational cost or belief-based retaliation cost if $\widetilde{r}$ is leaked; $\mathrm{RC}(\widetilde{\mathsf{r}}_{\mathsf{i},\mathsf{a}}) = -\mathsf{K}(\mathrm{prob}(\mathsf{r}_{\mathsf{i},\mathsf{a}} = 1|\widetilde{\mathsf{r}}_{\mathsf{i},\mathsf{a}}))$, where K is a positive continuous strictly increasing function.

The value of garbling (cont.)

back

Worker i's utility U_i associated with an intended report r:

$$U_i(r|h_{i,a}) = \mathrm{PB(r|h_{i,a})} + \mathrm{SB}(\widetilde{\mathrm{r}}|\mathrm{h_{i,a}}) + \mathrm{p} \times \mathrm{RC}(\widetilde{\mathrm{r}})$$

- Non-harassed worker sends $r_{i,a} = 0$
- A harassed worker is more likely to send $r_{i,a} = 1$ as $p \downarrow$, $\pi \uparrow$.

Why?

The value of garbling (cont.)

back

Proposition 1 Taking as given the behavior of managers,

(i) intended reports weakly underreport true harassment: $r_{i,a} \leq h_{i,a}$;

(ii) equilibrium reporting weakly increases with the garbling rate π;

(iii) equilibrium reporting weakly decreases with the perceived leakage probability p.

Why? Short vs long-run

The value of garbling (cont.) back

- Let S^{r}_{V}, S^{r}_{PM} and $S^{r}_{TV\geq k}$ denote analogues of S_V, S_{PM} and $S_{TV\geq k}$ computed using intended reports $r_{i,a}$ instead of actual harassment status $h_{i,a}$.

Corollary 1

Measurement errors $|S_V - S^{r}_{V}|$, $|S_{PM} - S^{r}_{PM}|$ and $|S_{TV\geq k} - S^{r}_{TV\geq k}|$ are decreasing in garbling rate π and increasing in the perceived leakage probability p.

Measurement using garbled data

back

- From Warner (1965), following estimator for S_V^r is consistent:

$$S_V^{\widetilde{r}} = \frac{\frac{1}{n}\sum_{a,i \in M \times I} \widetilde{r}_{i,a} - \pi}{1 - \pi}.$$

Measurement using garbled data

back

- From Warner (1965), following estimator for S_V^r is consistent:

$$S_V^{\widetilde{r}} = \frac{\frac{1}{n}\sum_{a,i \in M \times I} \widetilde{r}_{i,a} - \pi}{1 - \pi}.$$

- We derive consistent estimators for team-level statistics of intended reports. Proposition 2

Measurement using garbled data

back

- From Warner (1965), following estimator for S_V^r is consistent:

$$S_V^{\widetilde{r}} = \frac{\frac{1}{n}\sum_{a,i \in M \times I} \widetilde{r}_{i,a} - \pi}{1 - \pi}.$$

- We derive consistent estimators for team-level statistics of intended reports. Proposition 2

- We clarify theoretically that using "blocked HG," or fixing exact share of "nos" flipped, reduces the variance of estimators. Blocked garbling

Measurement using garbled data

back

- From Warner (1965), following estimator for S^r_V is consistent:

$$S^{\widetilde{r}}_V = \frac{\frac{1}{n}\sum_{a,i \in M \times I} \widetilde{r}_{i,a} - \pi}{1 - \pi}.$$

- We derive consistent estimators for team-level statistics of intended reports. Proposition 2

- We clarify theoretically that using "blocked HG," or fixing exact share of "nos" flipped, reduces the variance of estimators. Blocked garbling

- Trade-off: Blocked HG reduces protection afforded to workers.

Questions about harassment experience

back

In the past year, has your line supervisor taken any of the following actions toward you against your will? (Yes/No)

Questions about harassment experience

back

In the past year, has your line supervisor taken any of the following actions toward you against your will? (Yes/No)

Mistreatment	**Actions read aloud to respondent:**
Threatening behavior	Threatened you; Told you that they will harm you if you do not agree to or fulfill their demands.
Physical harassment	Hit, slapped, or punched you; Cut or stabbed you; Tripped you; Otherwise intentionally caused you physical harm.
Sexual harassment	Made remarks about you in a sexual manner; Asked you to enter into a love or sexual relationship; Asked or forced you to perform sexual favors; Asked or forced you to meet outside of the factory or meet them alone in a way that made you feel uncomfortable; Touched you in a sexual manner or in a way that made you feel uncomfortable or scared; Shown you pictures of sexual activities.

Sample & stratified randomized assignment

back

Sample:

- Stratified random sampling: Production team-gender.
- Target sample size: 2,620; actual sample size: 2,140. Response rate: 63%.
  - Balanced across treatment arms.
  - Most non-response due to outdated phone numbers (reasons).
- Drop 101 surveys by enumerator who did not comply with HG protocol.

Sample & stratified randomized assignment

back

Sample:

- Stratified random sampling: Production team-gender.
- Target sample size: 2,620; actual sample size: 2,140. Response rate: 63%.
  - Balanced across treatment arms.
  - Most non-response due to outdated phone numbers (reasons).
- Drop 101 surveys by enumerator who did not comply with HG protocol.

Randomized assignment:

- Within strata, randomly assigned workers to treatment arms; required at least 1 worker per treatment arm per stratum.
  - Treatment conditions balanced.

Related literature and contributions

- Barriers to reporting and design of transmission mechanisms for sensitive information in organizations.
  - Garbling: Warner, 1965; Chassang & Padró i Miquel, 2018; Chassang and Zehnder, 2019.
  - Other mechanisms: Ayres and Unkovic, 2012; Cheng and Hsiaw, forthcoming.
  - **First field evidence on hard garbling outside of lab and in real-world organizational setting.**

Related literature and contributions

- Barriers to reporting and design of transmission mechanisms for sensitive information in organizations.
  - Garbling: Warner, 1965; Chassang & Padró i Miquel, 2018; Chassang and Zehnder, 2019.
  - Other mechanisms: Ayres and Unkovic, 2012; Cheng and Hsiaw, forthcoming.
  - **First field evidence on hard garbling outside of lab and in real-world organizational setting.**
- Workplace harassment.
  - Causes of under-reporting: Basu, 2003; Chen and Sethi, 2020; Dahl and Knepper, 2021;
  - Consequences of harassment: Folke and Rickne, 2022.
  - **Evidence that increasing plausible deniability through hard garbling helps in detecting harassment and threatening behavior in organizations**.

Reporting risks: Motivating evidence from focus groups

What would happen if a garment worker, Sumana, reported her supervisor, Mamun, for sexual harassment? What would happen if Mamun found out?

Reporting risks: Motivating evidence from focus groups

What would happen if a garment worker, Sumana, reported her supervisor, Mamun, for sexual harassment? What would happen if Mamun found out?

> *"If Mamun loses his job, he might retaliate against Sumana. Because outside of the factory, the owner of the factory can do nothing here.*
>
> *Mamun might snatch her in the middle of the road to scare her off by threatening."*

Reporting risks: Motivating evidence from focus groups

What would happen if a garment worker, Sumana, reported her supervisor, Mamun, for sexual harassment? What would happen if Mamun found out?

> *"If Mamun loses his job, he might retaliate against Sumana. Because outside of the factory, the owner of the factory can do nothing here.*
>
> *Mamun might snatch her in the middle of the road to scare her off by threatening."*

- *Fear of retaliation*

back

Reporting risks: Motivating evidence from focus groups (cont.)

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

Reporting risks: Motivating evidence from focus groups (cont.)

A garment worker, Fatima, operates a loud machine. She reports her supervisor, Bilal, for failing to provide ear plugs to her. What would happen if Bilal found out? Would Bilal retaliate?

> *"..if he remains in his job, he might pressurize Fatima and give her more work to do as a punishment. He might assign Fatima a difficult job which is beyond her ability. When Fatima fails to do the task, he might abuse her."*

> *"Fatima will not get vacation even if she needs one. Bilal will report to the manager that Fatima's work is not up to the mark."*

> *"Even after getting justice after reporting a complaint, Fatima cannot work in the same factory anymore."*

◂ back

Motivating evidence on reporting

- 2017 survey of garment workers recruited through the community;
- Conducted by BRAC Institute of Governance and Development (BIGD).

Table: Workers' reported experience of harassment (N=1500)

Variable	**Proportion who respond "Yes"**
Witnessed physical harassment	0.201
Experienced physical harassment	0.011
Witnessed sexual harassment	0.111
Experienced sexual harassment	0.001

Source: Authors' calculations using data from Kabeer, Huq, and Sulaiman (2020).

◂ Reporting & Garbling ◂ back

Why?

- Non-harassed worker better off sending $r_{i,a} = 0$:

$$U_i(1|0) = \mathsf{SB}(1|0) - \mathsf{pK}(\mathrm{prob}(\mathsf{r_{i,a}} = 1|\widetilde{\mathsf{r}}_{\mathsf{i,a}} = 1) < 0$$
$$U_i(0|0) = \pi \times [\mathsf{SB}(1|0) - \mathsf{pK}(\mathrm{prob}(\mathsf{r_{i,a}} = 1|\widetilde{\mathsf{r}}_{\mathsf{i,a}} = 1)] < 0$$

Proposition 1

Why?

- Non-harassed worker better off sending $r_{i,a} = 0$:

$$U_i(1|0) = \mathrm{SB}(1|0) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1) < 0$$
$$U_i(0|0) = \pi \times [\mathrm{SB}(1|0) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1)] < 0$$

- A harassed worker's payoff are:

$$U_i(1|1) = \mathrm{PB}(1|1) + \mathrm{SB}(1|1) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))$$
$$U_i(0|1) = \pi \times [\mathrm{SB}(1|1) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))]$$

Proposition 1

Why?

- Non-harassed worker better off sending $r_{i,a} = 0$:

$$U_i(1|0) = \mathrm{SB}(1|0) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1) < 0$$
$$U_i(0|0) = \pi \times [\mathrm{SB}(1|0) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1)] < 0$$

- A harassed worker's payoff are:

$$U_i(1|1) = \mathrm{PB}(1|1) + \mathrm{SB}(1|1) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))$$
$$U_i(0|1) = \pi \times [\mathrm{SB}(1|1) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))]$$

So a harassed worker willing to send $r_{i,a} = 1$ iff

$$\mathrm{PB}(1|1)+(1-\pi)\times[\mathrm{SB}(1|1)-\mathrm{p}(1-\pi)\mathrm{K}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))] \geq 0$$

Proposition 1

Why?

- Non-harassed worker better off sending $r_{i,a} = 0$:

$$U_i(1|0) = \text{SB}(1|0) - \text{pK}(\text{prob}(\text{r}_{\text{i,a}} = 1|\widetilde{\text{r}}_{\text{i,a}} = 1) < 0$$
$$U_i(0|0) = \pi \times [\text{SB}(1|0) - \text{pK}(\text{prob}(\text{r}_{\text{i,a}} = 1|\widetilde{\text{r}}_{\text{i,a}} = 1)] < 0$$

- A harassed worker's payoff are:

$$U_i(1|1) = \text{PB}(1|1) + \text{SB}(1|1) - \text{pK}(\text{prob}(\text{r}_{\text{i,a}} = 1|\widetilde{\text{r}}_{\text{i,a}} = 1))$$
$$U_i(0|1) = \pi \times [\text{SB}(1|1) - \text{pK}(\text{prob}(\text{r}_{\text{i,a}} = 1|\widetilde{\text{r}}_{\text{i,a}} = 1))]$$

So a harassed worker willing to send $r_{i,a} = 1$ iff

$$\text{PB}(1|1)+(1-\pi)\times[\text{SB}(1|1)-\text{p}(1-\pi)\text{K}(\text{prob}(\text{r}_{\text{i,a}} = 1|\widetilde{\text{r}}_{\text{i,a}} = 1))] \geq 0$$

where $\text{prob}(r_{i,a} = 1|\widetilde{r}_{i,a} = 1) = \frac{1}{1+\pi\frac{\text{prob}(r=0)}{1-\text{prob}(r=0)}}$.

Proposition 1

Why?

- Non-harassed worker better off sending $r_{i,a} = 0$:

$$U_i(1|0) = \mathrm{SB}(1|0) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1) < 0$$
$$U_i(0|0) = \pi \times [\mathrm{SB}(1|0) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1)] < 0$$

- A harassed worker's payoff are:

$$U_i(1|1) = \mathrm{PB}(1|1) + \mathrm{SB}(1|1) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))$$
$$U_i(0|1) = \pi \times [\mathrm{SB}(1|1) - \mathrm{pK}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))]$$

So a harassed worker willing to send $r_{i,a} = 1$ iff

$$\mathrm{PB}(1|1)+(1-\pi)\times[\mathrm{SB}(1|1)-\mathrm{p}(1-\pi)\mathrm{K}(\mathrm{prob}(\mathrm{r_{i,a}} = 1|\widetilde{\mathrm{r}}_{\mathrm{i,a}} = 1))] \geq 0$$

where $\mathrm{prob}(r_{i,a} = 1|\widetilde{r}_{i,a} = 1) = \frac{1}{1+\pi\frac{\mathrm{prob}(r=0)}{1-\mathrm{prob}(r=0)}}$.

$r_{i,a} = 1$ better if low leakage prob. p, high garbling rate π.

Proposition 1

Anonymous Apparel Producer Partner

- Among largest in Bangladesh.

Anonymous Apparel Producer Partner

- Among largest in Bangladesh.
- Performs poorly on workers' job satisfaction and lower-level managers' performance relative to competitors.

Anonymous Apparel Producer Partner

- Among largest in Bangladesh.
- Performs poorly on workers' job satisfaction and lower-level managers' performance relative to competitors.
- Senior management concerned that it may only be aware of the "tip of the iceberg."

Anonymous Apparel Producer Partner

- Among largest in Bangladesh.
- Performs poorly on workers' job satisfaction and lower-level managers' performance relative to competitors.
- Senior management concerned that it may only be aware of the "tip of the iceberg."
  - Aimed to improve its awareness of nature and scope of managers' mistreatment of workers.

Anonymous Apparel Producer Partner

- Among largest in Bangladesh.
- Performs poorly on workers' job satisfaction and lower-level managers' performance relative to competitors.
- Senior management concerned that it may only be aware of the "tip of the iceberg."
  - Aimed to improve its awareness of nature and scope of managers' mistreatment of workers.
  - Longer-term goal: Collect continuous feedback from workers and tie to managers' incentives.

back

HG compared to RR

- Key distinction between HG and RR is the nature of the garbling:
  - HG: Hard, or exogenous, garbling (i.e., surveyor rolls the die).
  - RR: Soft garbling (i.e., respondent rolls the die).
- Distinction conveys 3 types of benefits to HG relative to RR:
  1. HG allows for blocked HG designs that deliver more precise estimates than i.i.d. garbling, which is the only option under RR.
  2. Implementing RR typically relies on the availability of a randomization aid, which is not required for HG.
  3. HG does not rely on the respondent's compliance with the injunction to garble. RR (and LE) do, which is potentially problematic in an organizational setting (Chassang and Zehnder, 2019).

◂ Additional results ◂ Conclusion

Short- versus long-run effects

In long run:

- Managers may increase magnitude of retaliation in response to increased anonymity provided by HG;
- Workers may start strategically misreporting well-behaving managers.

  Makes it difficult to interpret drop in incriminating reports or increase in incriminating reports.

Chassang and Padró i Miquel (2018) show that can reach whistleblowing policies that deliver robust guarantees on underlying level of misbehavior:

1. Starting from low level of enforcement, reduce info content of reports up to a point where workers are willing to complain;
2. Keeping info content of positive reports $(\text{prob}(r = 1|\widetilde{r} = 1)/\text{prob}(r = 0|\widetilde{r} = 1))$ the same, scale up enforcement.

◂ Proposition 1 ◂ Additional results

Short- versus long-run effects

In long run:

- Managers may increase magnitude of retaliation in response to increased anonymity provided by HG;
- Workers may start strategically misreporting well-behaving managers.

  Makes it difficult to interpret drop in incriminating reports or increase in incriminating reports.

Chassang and Padró i Miquel (2018) show that can reach whistleblowing policies that deliver robust guarantees on underlying level of misbehavior:

1. **Starting from low level of enforcement, reduce info content of reports up to a point where workers are willing to complain;**
2. Keeping info content of positive reports $(\text{prob}(r = 1|\widetilde{r} = 1)/\text{prob}(r = 0|\widetilde{r} = 1))$ the same, scale up enforcement.

◂ Proposition 1 ◂ Additional results

Balanced garbling

Concern: Under i.i.d. garbling, when reporting rate is low, sampling error can dwarf the mean reporting rate $S_V^{\widetilde{r}}$.

Balanced garbling

Concern: Under i.i.d. garbling, when reporting rate is low, sampling error can dwarf the mean reporting rate $S_V^{\widetilde{r}}$.

- Beneficial to require ex ante balance (fix exact share flipped) in order to reduce variance of estimators.

Balanced garbling

Concern: Under i.i.d. garbling, when reporting rate is low, sampling error can dwarf the mean reporting rate $S_V^{\widetilde{r}}$.

- Beneficial to require ex ante balance (fix exact share flipped) in order to reduce variance of estimators.
- Can also require team-level ex ante balance to reduce errors in estimates of other moments of team-level distribution of complaints μ. "Blocked garbling" scheme.
- Trade-off: Blocked garbling reduces protection afforded to workers.

Proposition 2 | Measurement

Balanced garbling

Concern: Under i.i.d. garbling, when reporting rate is low, sampling error can dwarf the mean reporting rate $S_V^{\widetilde{r}}$.

- Beneficial to require ex ante balance (fix exact share flipped) in order to reduce variance of estimators.
- Can also require team-level ex ante balance to reduce errors in estimates of other moments of team-level distribution of complaints μ. "Blocked garbling" scheme. $\leftarrow$ **Our approach.**
- Trade-off: Blocked garbling reduces protection afforded to workers.

Proposition 2 Measurement

Proposition 2

Denote the sample distribution of profiles of intended and recorded reports across teams with $\widehat{\mu} \in \Delta(\{0,1\}^I)$ and $\widetilde{\mu} \in \Delta(\{0,1\}^I)$, respectively:

$$\forall r \in \{0,1\}^I, \quad \widehat{\mu}(r) \equiv \frac{1}{m} \sum_{a \in M} \mathbf{1}_{r_a = r} \quad \text{and} \quad \widetilde{\mu}(r) \equiv \frac{1}{m} \sum_{a \in M} \mathbf{1}_{\widetilde{r}_a = r}.$$

Proposition 2 (Identification from garbled reports)

As m grows large, the sample distribution of intended reports $\widehat{\mu}$ is identified from the sample distribution of recorded reports $\widetilde{\mu}$. Proof

back

Proof of Proposition 2

Since workers are exchangeable, the distributions μ and $\widetilde{\mu}$ are entirely described by the associated distribution of the number of positive reports: $\forall k \in \{1, \cdots, L\}$

$$p_k \equiv \text{prob}_{\mu}\left(\sum_{i \in I} r_i = k\right) \quad \text{and} \quad \widetilde{p}_k \equiv \text{prob}_{\widetilde{\mu}}\left(\sum_{i \in I} \widetilde{r}_i = k\right).$$

Under i.i.d. garbling with garbling rate π, distribution parameters $(p_k)_{k \in \{1,\cdots,L\}}$ and $(\widetilde{p}_k)_{k \in \{1,\cdots,L\}}$ are related as follows:

$$\widetilde{p}_0 = p_0(1-\pi)^L$$

$$\widetilde{p}_1 = p_0 \binom{L}{1} \pi (1-\pi)^{L-1} + p_1 (1-\pi)^{L-1}$$

$$\widetilde{p}_2 = p_0 \binom{L}{2} \pi^2 (1-\pi)^{L-2} + p_1 \binom{L-1}{1} \pi (1-\pi)^{L-2} + p_2 (1-\pi)^{L-2}$$

$$\forall k \in \{1, \cdots, L\}, \quad \widetilde{p}_k = \sum_{n=0}^{k} p_n \binom{L-n}{k-n} \pi^{k-n} (1-\pi)^{L-k}.$$

Proof of Proposition 2 (cont.)

This is a triangular system of linear equation which means we can infer p_ks using observed $\widetilde{p}_k$s using the following recursion:

$$p_0 = \frac{1}{(1-\pi)^L}\,\widetilde{p}_0$$

$$p_1 = \frac{1}{(1-\pi)^{L-1}}\,\widetilde{p}_1 - p_0\binom{L}{1}\pi$$

$$\forall k \in \{2, \cdots, L\}, \quad p_k = \frac{1}{(1-\pi)^{L-k}}\,\widetilde{p}_k - \sum_{n=0}^{k-1} p_n \binom{L-n}{k-n}\pi^{k-n}.$$

This concludes the proof that μ is identified given $\widetilde{\mu}$.

◂ back

DE Script

We are now going to ask you several questions about the way your manager treats you and other employees.

For instance: Has your manager shouted at you in the last month? Yes or No?

Each of the questions has a Yes or No answer. Your answers will be recorded as you go, but we can chat about them before we record them for good.

◂ Treatment conditions ◂ Additional results ◂ Conceptual framework

HG Script

We are now going to ask you several questions about the way your manager treats you and other employees. For instance: Has your manager shouted at you in the last month? Yes or No?

Each of the questions has a Yes or No answer. Our system is setup so that it's safe to report an issue.

If you choose to respond YES (there is an issue), our system will record it as a YES for sure.

Importantly, if someone responds NO, the system will sometimes record the response as YES.

This means that if you respond YES, we can guarantee that you won't be the only person saying YES. For every 5 responses from workers, at least 1 will be recorded as YES.

The researchers are only interested in the total number of yes/no responses from all surveys. If you respond YES, aside from me, no one will ever be able to know that this was your answer, not even the researchers. Your answers are fully protected with us.

◂ Treatment conditions ◂ Additional results ◂ Conceptual framework

Consent form — policy impacts

This study's purpose is to learn about working conditions in garment factories and about how garment workers communicate with the management at their factories about issues that they face.

This study may benefit you and other garment workers in your factory because the researchers will prepare a report on their overall picture of workers' experience, based on many workers' responses, with the [apparel producer]'s top management.

The [apparel producer]'s top management will use this information to improve its HR policies for workers.

Consent form — perceived leakage

◂ theory ◂ app

Please be assured that your responses to the surveys will be kept as confidential as possible.

To reduce the risks to confidentiality as much as possible, we will assign you a participant ID number and will separately store your survey responses and your personal information. We will store your responses with the responses of other participants.

Consent form — perceived leakage

◂ theory ◂ app

Please be assured that your responses to the surveys will be kept as confidential as possible.

To reduce the risks to confidentiality as much as possible, we will assign you a participant ID number and will separately store your survey responses and your personal information. We will store your responses with the responses of other participants.

There is a risk, though, that something happens that causes your answers to no longer be confidential. If this happens, we will tell you immediately and will do everything that we can to protect your responses. If the findings of this study are shared with others, absolutely no personal information will be used.

Consent form — perceived leakage

◂ theory ◂ app

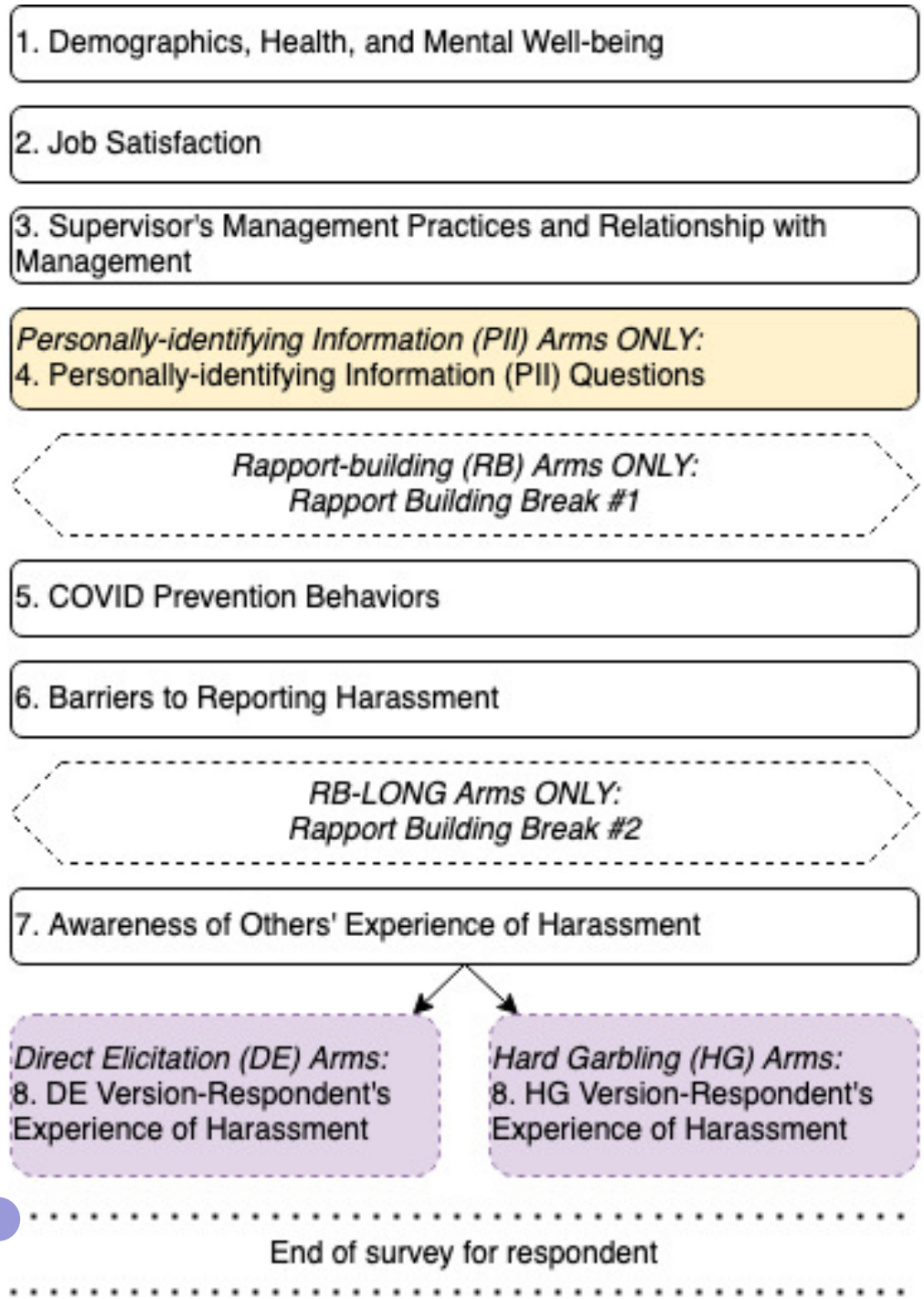
Please be assured that your responses to the surveys will be kept as confidential as possible.

To reduce the risks to confidentiality as much as possible, we will assign you a participant ID number and will separately store your survey responses and your personal information. We will store your responses with the responses of other participants.

There is a risk, though, that something happens that causes your answers to no longer be confidential. If this happens, we will tell you immediately and will do everything that we can to protect your responses. If the findings of this study are shared with others, absolutely no personal information will be used.

We will present what we find in this study to researchers and to policy makers.

When the research is finished, we will save the study records for use in future research done by us or others. The study records, with all personal information removed, will be publicly posted.


1. Demographics, Health, and Mental Well-being
2. Job Satisfaction
3. Supervisor's Management Practices and Relationship with Management
Personally-identifying Information (PII) Arms ONLY:
4. Personally-identifying Information (PII) Questions
Rapport-building (RB) Arms ONLY:
Rapport Building Break #1
5. COVID Prevention Behaviors
6. Barriers to Reporting Harassment
RB-LONG Arms ONLY:
Rapport Building Break #2
7. Awareness of Others' Experience of Harassment
Direct Elicitation (DE) Arms:
8. DE Version-Respondent's Experience of Harassment
Hard Garbling (HG) Arms:
8. HG Version-Respondent's Experience of Harassment
End of survey for respondent

HG Script: Comprehension questions

Before we begin the survey questions, we would like to check whether we have explained our survey system clearly. Can you please tell me whether the following statements are TRUE or FALSE.

a. If I respond "Yes," no one can ever know this for sure.

b. The system will record at least one out of every five workers' responses as "Yes."

Instructions to survey enumerator: Survey enumerator reports correct answers to respondent after asking both questions:

"It is true that if you respond "Yes," the system is designed so that no one can ever know this for sure. And it is also true that the system will record at least one out of every five workers' responses as yes, so we can guarantee that anyone who says yes will not be the only person saying yes."

Note that we can chat about your answers before we record them for good, but I don't know whether the system would record a NO as a YES.

◂ Treatment conditions

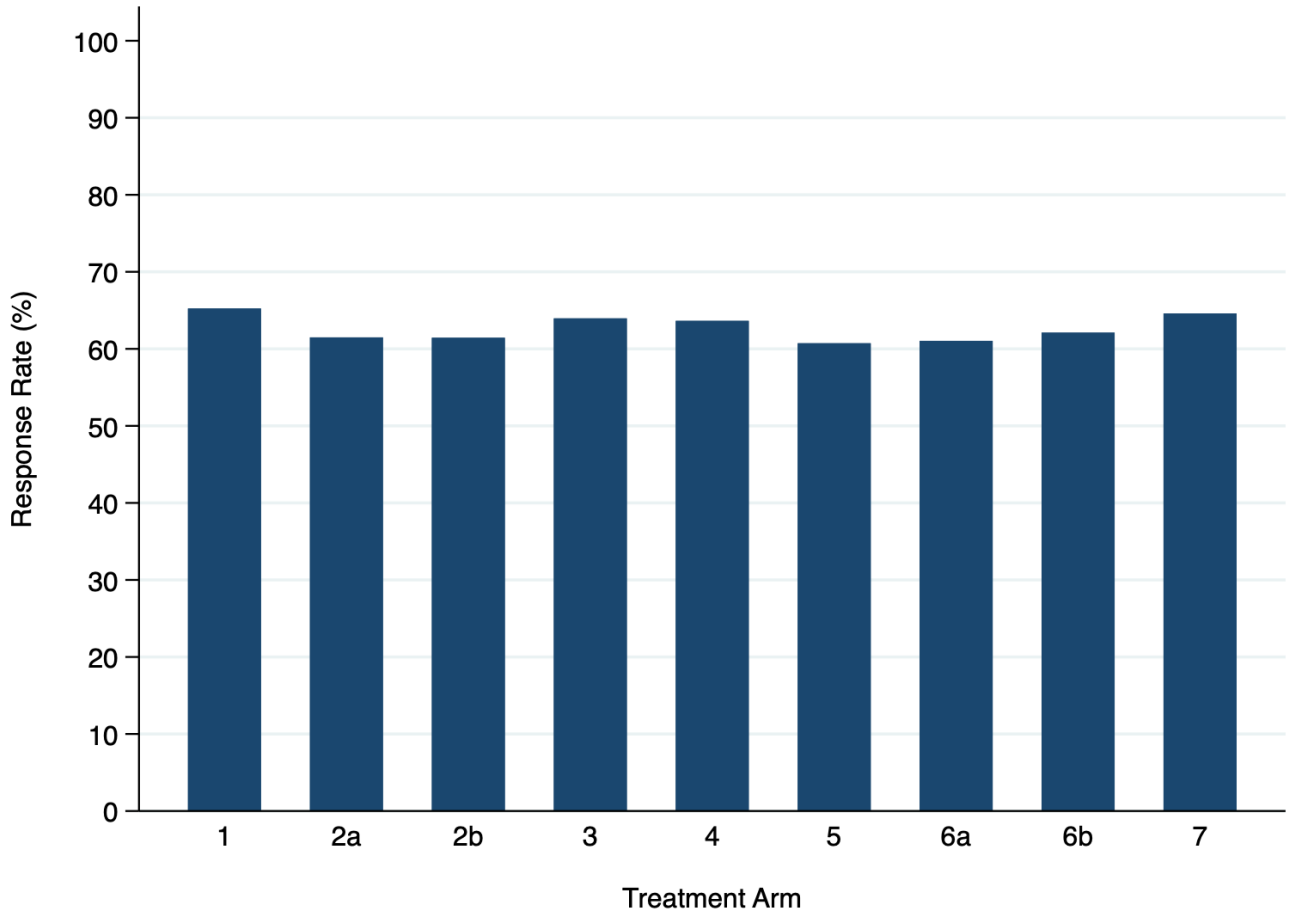
Short versus long RB conditions

- RB1: Enumerator signals care using emotional mirroring and acknowledgment.
- RB2: Extended RB section, worker has chance to ask enumerator questions. Enumerator shares a related experience.

◂ Treatment conditions

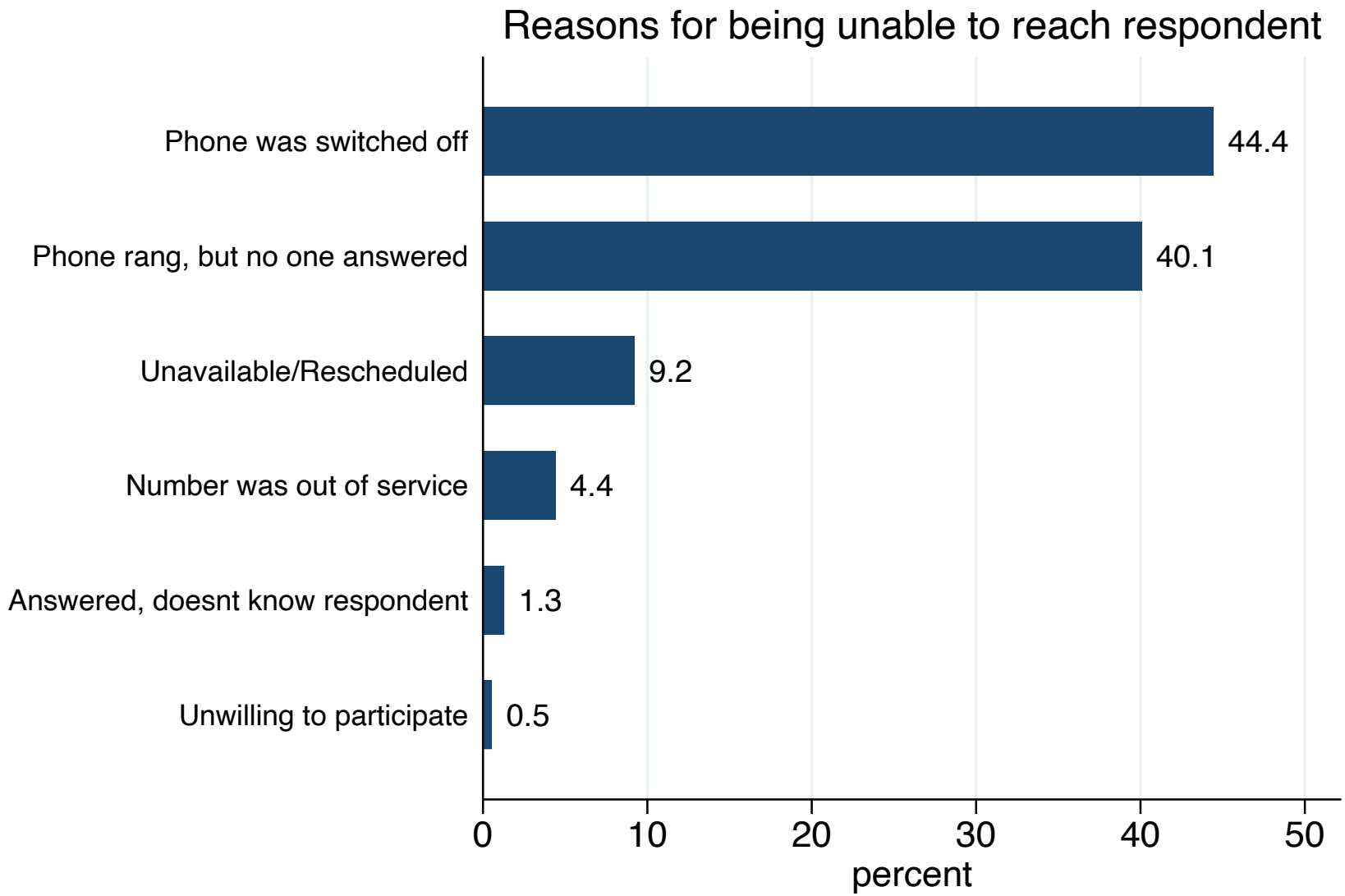
Response rate balance across treatment arms

Figure: Response rate by treatment arm



◂ Sample & Randomization

Reasons for non-response



Notes: 80% of calls have been unanswered,
but after multiple calls only 33% of callers were never reached.

◂ Sample & Randomization

Balance tests: Main treatment conditions

	Mean / (SD)						Difference in means / [p-value]		
Variable	DE	HG	No Rapport	Rapport	PII	Low PII	HG-DE	Diff Rapport	Diff PII
Female	0.811	0.816	0.815	0.812	0.815	0.809	0.007	0.005	-0.001
	(0.392)	(0.388)	(0.389)	(0.391)	(0.388)	(0.393)	[0.152]	[0.280]	[0.855]
Currently Working	0.957	0.961	0.955	0.962	0.960	0.957	0.003	0.006	-0.004
	(0.202)	(0.194)	(0.207)	(0.191)	(0.197)	(0.203)	[0.745]	[0.524]	[0.661]
Age	26.686	26.881	26.672	26.870	26.818	26.686	0.194	0.104	-0.117
	(5.042)	(5.254)	(5.060)	(5.214)	(5.210)	(4.982)	[0.371]	[0.635]	[0.616]
Experience (yrs)	5.173	5.204	5.133	5.234	5.192	5.178	-0.015	0.063	0.007
	(3.633)	(3.510)	(3.536)	(3.607)	(3.591)	(3.536)	[0.920]	[0.669]	[0.964]
Tenure (yrs)	2.880	2.900	2.868	2.907	2.900	2.864	0.033	-0.068	-0.033
	(2.431)	(2.429)	(2.431)	(2.429)	(2.420)	(2.454)	[0.704]	[0.429]	[0.732]
Years of Education	6.761	6.640	6.697	6.708	6.725	6.650	-0.097	0.047	-0.103
	(3.403)	(3.386)	(3.386)	(3.403)	(3.362)	(3.473)	[0.491]	[0.737]	[0.504]
Marital Status (1=Yes)	0.835	0.811	0.825	0.822	0.821	0.830	-0.026	-0.008	0.007
	(0.371)	(0.392)	(0.380)	(0.382)	(0.383)	(0.376)	[0.114]	[0.643]	[0.691]
Children (1=Yes)	0.738	0.744	0.743	0.739	0.740	0.744	0.004	-0.008	0.007
	(0.440)	(0.436)	(0.437)	(0.439)	(0.439)	(0.437)	[0.810]	[0.681]	[0.724]
Team Size	57.244	57.428	58.227	56.580	57.395	57.180	0.051	0.091	0.090
	(20.550)	(20.331)	(20.421)	(20.437)	(20.546)	(20.203)	[0.670]	[0.419]	[0.524]
Team's Female Share	0.807	0.813	0.810	0.810	0.810	0.811	0.001	0.001	0.002
	(0.276)	(0.271)	(0.280)	(0.268)	(0.275)	(0.271)	[0.567]	[0.192]	[0.182]
Observations	1,122	1,021	978	1,165	1,515	628	2,143	2,143	2,143
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table summarizes workers' characteristics in each treatment condition. Columns (1)-(6) report the means and standard deviations of each variable separately by treatment condition. In column (4), Rapport pools the short and long rapport conditions. Columns (7)-(9) report the differences in means between each treatment condition, estimated from a regression of the covariate on the treatment indicator and stratification variables. Robust standard errors are reported. $^{*}p$ ¡ 0.10, $^{**}p$ ¡ 0.05, $^{***}p$ ¡ 0.01.

◂ Sample & Randomization

Balance tests: No rapport, short rapport, long rapport

	Mean / (SD)			Difference in means / [p-value]		
Variable	(0) No Rapport	(1) Short Rapport	(2) Long Rapport	(1) - (0)	(2) - (0)	(2) - (1)
Female	0.815	0.820	0.795	0.006	0.003	-0.005
	(0.389)	(0.385)	(0.404)	[0.253]	[0.635]	[0.409]
Currently Working	0.955	0.965	0.956	0.008	-0.000	-0.009
	(0.207)	(0.184)	(0.205)	[0.403]	[0.991]	[0.488]
Age	26.672	26.860	26.891	0.120	0.095	-0.029
	(5.060)	(5.124)	(5.411)	[0.614]	[0.767]	[0.930]
Experience (yrs)	5.133	5.323	5.040	0.163	-0.172	-0.341
	(3.536)	(3.589)	(3.644)	[0.311]	[0.421]	[0.121]
Tenure (yrs)	2.868	2.932	2.854	-0.020	-0.184	-0.115
	(2.431)	(2.419)	(2.452)	[0.832]	[0.127]	[0.354]
Years of Education	6.697	6.683	6.762	0.028	0.113	0.069
	(3.386)	(3.430)	(3.348)	[0.854]	[0.576]	[0.745]
Marital Status (1=Yes)	0.825	0.825	0.817	-0.006	-0.011	-0.007
	(0.380)	(0.380)	(0.387)	[0.759]	[0.642]	[0.787]
Children (1=Yes)	0.743	0.746	0.724	0.001	-0.024	-0.023
	(0.437)	(0.436)	(0.448)	[0.965]	[0.367]	[0.405]
Team Size	58.227	56.673	56.377	0.087	0.091	0.037
	(20.421)	(20.280)	(20.802)	[0.511]	[0.535]	[0.823]
Team's Female Share	0.810	0.813	0.806	0.001	0.000	-0.001
	(0.280)	(0.267)	(0.271)	[0.191]	[0.490]	[0.498]
Observations	978	799	366	1,777	1,344	1,165
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table summarizes workers' characteristics in each rapport building treatment condition. Columns (0)-(2) report the means and standard deviations of each variable separately by treatment condition. The next three columns report the differences in means between each treatment condition, estimated from a regression of the covariate on the treatment indicator and stratification variables. Robust standard errors are reported. $^{*}p$ ¡ 0.10, $^{**}p$ ¡ 0.05, $^{***}p$ ¡ 0.01.

◂ Sample & Randomization

Summary statistics (N=2143)

	Mean	SD	Min	p25	p50	p75	Max
Female	0.81	0.39	0	1	1	1	1
Currently Working	0.96	0.20	0	1	1	1	1
Age	26.8	5.14	18	23	26	30	55
Experience (yrs)	5.19	3.57	0	2.83	4.42	7.17	28.8
Tenure (yrs)	2.89	2.43	0.052	0.65	2.82	4.17	17.0
Tenure in Team (yrs)† [n=1515]	2.57	2.52	0	0.50	1.83	3.92	14.5
Years of Education	6.70	3.39	0	5	6.50	9	16
Marital Status (1=Yes)	0.82	0.38	0	1	1	1	1
Children (1=Yes)	0.74	0.44	0	0	1	1	1
Sewing Section	0.49	0.50	0	0	0	1	1
Finishing Section	0.34	0.47	0	0	0	1	1
Washing Section	0.17	0.38	0	0	0	0	1
Position: Helper	0.17	0.38	0	0	0	0	1
Position: Ironing/Folding	0.086	0.28	0	0	0	0	1
Position: Operator	0.60	0.49	0	0	1	1	1
Position: Packer	0.044	0.20	0	0	0	0	1
Position: Quality	0.097	0.30	0	0	0	0	1

Notes: This table reports summary statistics on workers' characteristics. Unless otherwise noted, the sample includes 2,143 workers who participated in our survey. †This variable is available for the 1,515 respondents who were assigned to status quo PII collection treatment arms, in which we collected respondents' team id, manager name, and tenure on their team.

◂ Results | Team-level sum stats | ◂ Sample & Randomization | ◂ Additional results

Team-level summary statistics (M=112)

	Mean	SD	Min	p25	p50	p75	Max	N
Panel A: Number of workers in a team								
Team Size: Overall	53.1	20.8	17	35	54	72	98	112
Team Size: Factory 1	54.9	23.1	19	32	55.5	74.5	98	60
Team Size: Factory 2	51	17.7	17	37	47.5	69	74	52
Team Size: Sewing Section	70.9	7.75	49	67.5	72	74.5	90	48
Team Size: Finishing Section	35.8	8.98	20	30	35.5	39	65	46
Team Size: Washing Section	49.8	27.0	17	26	47	65	98	18
Panel B: Share of workers in a team who are women								
Team's Female Share: Overall	0.82	0.26	0	0.84	0.92	0.96	1	112
Team's Female Share: Factory 1	0.85	0.26	0	0.88	0.94	0.97	1	60
Team's Female Share: Factory 2	0.79	0.25	0	0.81	0.88	0.93	1	52
Team's Female Share: Sewing Section	0.95	0.033	0.86	0.93	0.96	0.98	1	48
Team's Female Share: Finishing Section	0.89	0.062	0.72	0.85	0.89	0.93	1	46
Team's Female Share: Washing Section	0.30	0.28	0	0.063	0.19	0.58	0.82	18

Notes: This table provides summary statistics on the teams that surveyed workers are employed in. In Panel A, the *Number of workers in a team* refers to the total number of workers on the production teams from which we sampled workers from to participate in our survey. In other words, they are inclusive of workers who were randomly selected to be invited to participate and workers who were not randomly selected to be invited to participate in the survey. The median team size is larger than the team size in the *Understanding Harassment* analysis because the latter is the median number of team-members in the sample included in the treatment arms with HG and PII. In Panel B, the *Share of workers in a team who are women* refers to the share of workers who are women on the production teams from which we sampled workers from to participate in our survey.

◂ Worker summary stats ◂ Additional results

Impacts of survey design

back

	Threatening behavior		Physical harassment		Sexual harassment	
	(1)	(2)	(3)	(4)	(5)	(6)
HG Treatment	0.0445***	0.0448***	0.0438***	0.0451***	0.0478***	0.0487***
	(0.0150)	(0.0145)	(0.0121)	(0.0117)	(0.0114)	(0.0111)
Rapport Treatment	0.0113	0.0140	-0.0094	-0.0082	0.0188	0.0186
	(0.0202)	(0.0195)	(0.0200)	(0.0192)	(0.0183)	(0.0176)
Low PII Treatment	0.0102	0.0097	0.0280	0.0299*	0.0045	0.0067
	(0.0245)	(0.0239)	(0.0184)	(0.0178)	(0.0203)	(0.0201)
Control Group Mean	.0992	.0992	.0153	.0153	.0178	.0178
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS lasso controls	No	Yes	No	Yes	No	Yes
Observations	2140	2140	2140	2140	2140	2140

Notes: This table reports OLS estimates of treatment effects on workers' reporting. Each column in the table reports the estimated coefficient from a separate regression. The dependent variable in each column is regressed on the treatment indicator and stratification variables. Even-numbered columns also include controls selected using the PDS lasso. Standard errors clustered by HG batch (HG respondents) or respondent (DE respondents) are reported in round brackets. *p <0.1; **p <0.05; ***p <0.01.

Impacts of survey design

back

	Threatening behavior		Physical harassment		Sexual harassment	
	(1)	(2)	(3)	(4)	(5)	(6)
HG Treatment	0.0445***	0.0448***	0.0438***	0.0451***	0.0478***	0.0487***
	(0.0150)	(0.0145)	(0.0121)	(0.0117)	(0.0114)	(0.0111)
Rapport Treatment	0.0113	0.0140	-0.0094	-0.0082	0.0188	0.0186
	(0.0202)	(0.0195)	(0.0200)	(0.0192)	(0.0183)	(0.0176)
Low PII Treatment	0.0102	0.0097	0.0280	0.0299*	0.0045	0.0067
	(0.0245)	(0.0239)	(0.0184)	(0.0178)	(0.0203)	(0.0201)
Control Group Mean	.0992	.0992	.0153	.0153	.0178	.0178
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS lasso controls	No	Yes	No	Yes	No	Yes
Observations	2140	2140	2140	2140	2140	2140

Notes: This table reports OLS estimates of treatment effects on workers' reporting. Each column in the table reports the estimated coefficient from a separate regression. The dependent variable in each column is regressed on the treatment indicator and stratification variables. Even-numbered columns also include controls selected using the PDS lasso. Standard errors clustered by HG batch (HG respondents) or respondent (DE respondents) are reported in round brackets. *p <0.1; **p <0.05; ***p <0.01.

- **HG:** Reporting of threatening behavior ↑ 45%, physical harassment ↑ 290%, sexual harassment ↑ 271%.

Impacts of survey design

back

	Threatening behavior		Physical harassment		Sexual harassment	
	(1)	(2)	(3)	(4)	(5)	(6)
HG Treatment	0.0445***	0.0448***	0.0438***	0.0451***	0.0478***	0.0487***
	(0.0150)	(0.0145)	(0.0121)	(0.0117)	(0.0114)	(0.0111)
Rapport Treatment	0.0113	0.0140	-0.0094	-0.0082	0.0188	0.0186
	(0.0202)	(0.0195)	(0.0200)	(0.0192)	(0.0183)	(0.0176)
Low PII Treatment	0.0102	0.0097	0.0280	0.0299*	0.0045	0.0067
	(0.0245)	(0.0239)	(0.0184)	(0.0178)	(0.0203)	(0.0201)
Control Group Mean	.0992	.0992	.0153	.0153	.0178	.0178
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS lasso controls	No	Yes	No	Yes	No	Yes
Observations	2140	2140	2140	2140	2140	2140

Notes: This table reports OLS estimates of treatment effects on workers' reporting. Each column in the table reports the estimated coefficient from a separate regression. The dependent variable in each column is regressed on the treatment indicator and stratification variables. Even-numbered columns also include controls selected using the PDS lasso. Standard errors clustered by HG batch (HG respondents) or respondent (DE respondents) are reported in round brackets. *p <0.1; **p <0.05; ***p <0.01.

Figure Model Cov. Short & long rapport Robustness By sex Interactions back

Impacts of survey design: Heterogeneity by gender

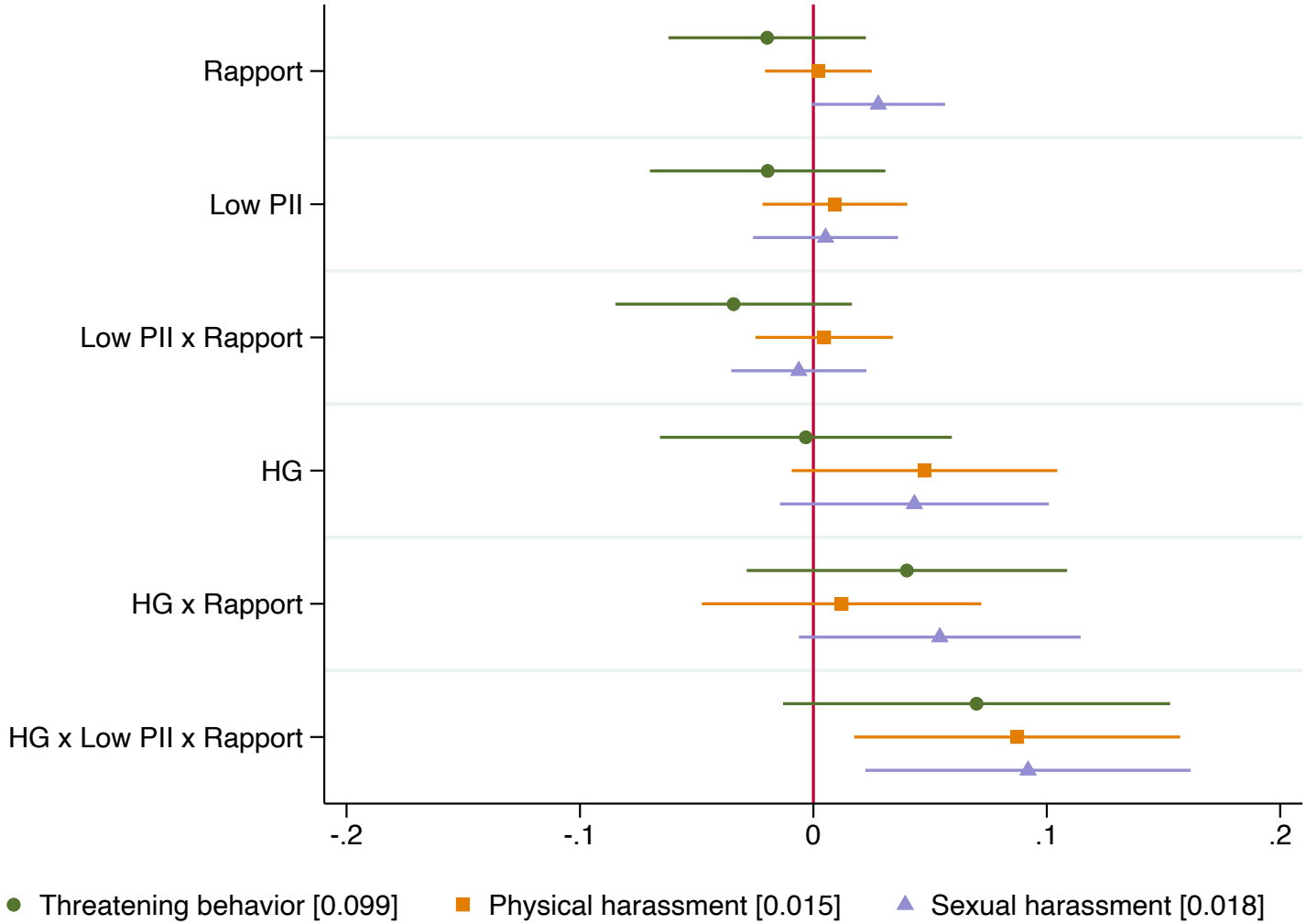
back

	Threatening behavior		Physical harassment		Sexual harassment	
	(1)	(2)	(3)	(4)	(5)	(6)
HG Treatment × Female	0.0274	0.0276*	0.0405***	0.0420***	0.0371***	0.0387***
	(0.0171)	(0.0165)	(0.0132)	(0.0127)	(0.0133)	(0.0131)
HG Treatment × Male	0.1224***	0.1199***	0.0597*	0.0587*	0.0917***	0.0928***
	(0.0418)	(0.0408)	(0.0347)	(0.0335)	(0.0351)	(0.0344)
Rapport × Female	0.0193	0.0218	-0.0173	-0.0151	0.0304	0.0305
	(0.0228)	(0.0219)	(0.0234)	(0.0225)	(0.0204)	(0.0194)
Rapport × Male	-0.0233	-0.0230	0.0243	0.0204	-0.0371	-0.0360
	(0.0467)	(0.0449)	(0.0370)	(0.0360)	(0.0460)	(0.0459)
Low PII Treatment × Female	0.0132	0.0137	0.0326	0.0343*	0.0105	0.0127
	(0.0263)	(0.0258)	(0.0208)	(0.0199)	(0.0229)	(0.0224)
Low PII Treatment × Male	-0.0067	-0.0111	0.0120	0.0140	-0.0259	-0.0245
	(0.0549)	(0.0532)	(0.0457)	(0.0455)	(0.0402)	(0.0392)
Female	-0.0900	-0.0991	-0.0211	-0.0112	0.0682	0.0886
	(0.1059)	(0.1020)	(0.0751)	(0.0750)	(0.0776)	(0.0745)
Control Mean - Female	.08	.08	.0092	.0092	.0185	.0185
Control Mean - Male	.1912	.1912	.0441	.0441	.0147	.0147
p(HGxFemale - HGxMale)	[0.045]	[0.045]	[0.614]	[0.649]	[0.175]	[0.172]
p(RapportxFemale - RapportxMale)	[0.419]	[0.374]	[0.351]	[0.414]	[0.188]	[0.190]
p(NoPIIxFemale - NoPIIxMale)	[0.735]	[0.663]	[0.689]	[0.689]	[0.421]	[0.393]
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS lasso controls	No	Yes	No	Yes	No	Yes
Observations	2140	2140	2140	2140	2140	2140

Notes: This table reports OLS estimates of treatment effects by gender heterogeneity on workers' reporting. Each column in the table reports the estimated coefficient from a separate regression. The dependent variable in each column is regressed on

Impacts of survey design: Interactions

back By sex



Notes: Omitted group is DE×PII×No rapport (control group). Whiskers are 95% CIs calculated using robust standard errors.

Impacts of survey design: Separate rapport conditions

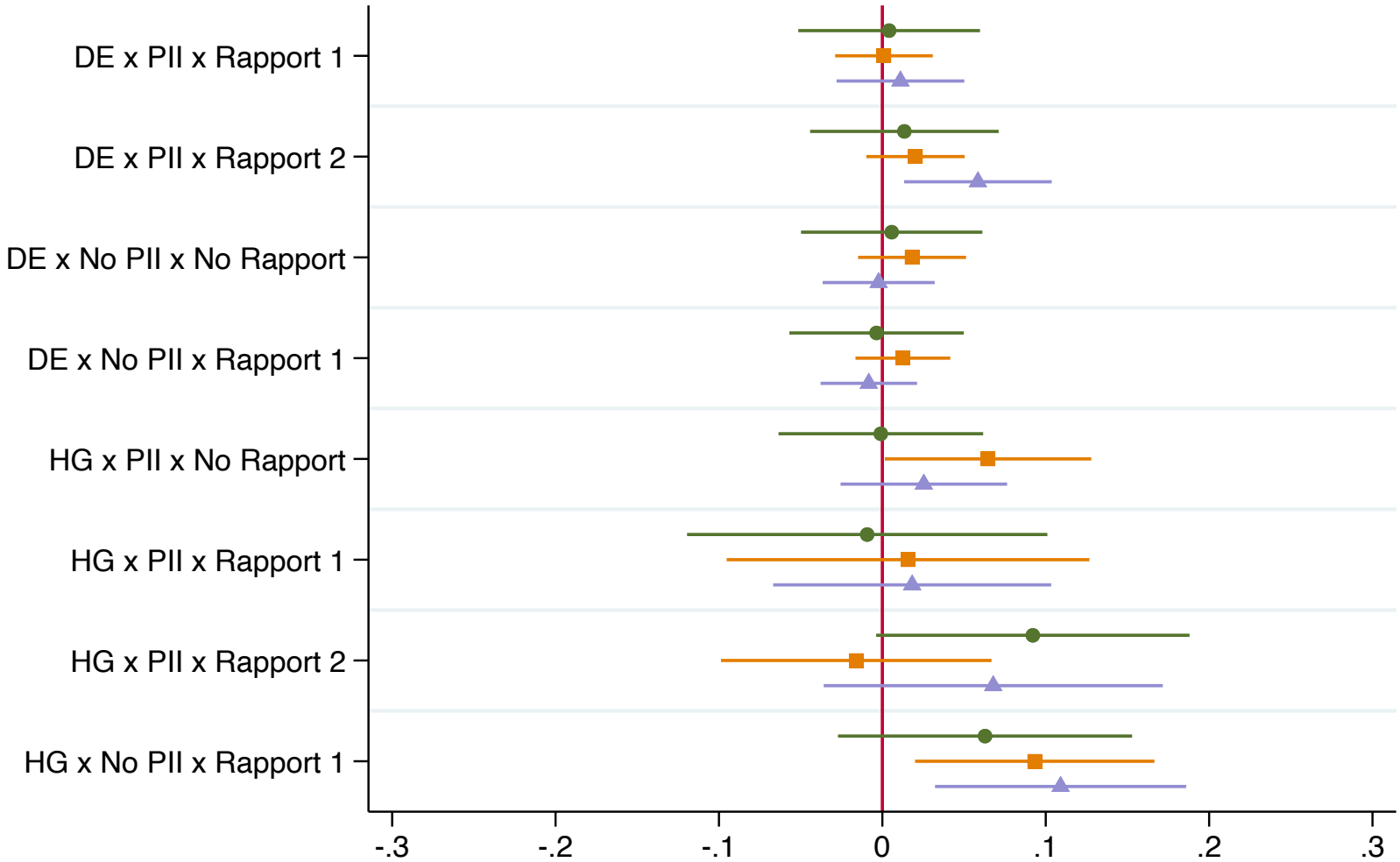
back

	Threatening behavior		Physical harassment		Sexual harassment	
	(1)	(2)	(3)	(4)	(5)	(6)
HG Treatment	0.0457***	0.0460***	0.0442***	0.0455***	0.0494***	0.0504***
	(0.0152)	(0.0147)	(0.0121)	(0.0117)	(0.0114)	(0.0110)
Low PII Treatment	0.0186	0.0182	0.0308	0.0325	0.0152	0.0185
	(0.0274)	(0.0267)	(0.0207)	(0.0198)	(0.0199)	(0.0197)
Rapport Treatment (Short)	0.0017	0.0041	-0.0126	-0.0112	0.0064	0.0050
	(0.0225)	(0.0218)	(0.0240)	(0.0231)	(0.0195)	(0.0188)
Rapport Treatment (Long)	0.0270	0.0299	-0.0042	-0.0033	0.0389	0.0406
	(0.0312)	(0.0305)	(0.0271)	(0.0263)	(0.0305)	(0.0293)
Control Group Mean	.0992	.0992	.0153	.0153	.0178	.0178
p(Long − Short Rapport)	[0.460]	[0.443]	[0.793]	[0.800]	[0.326]	[0.263]
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes
PDS lasso controls	No	Yes	No	Yes	No	Yes
Observations	2140	2140	2140	2140	2140	2140

Notes: This table reports OLS estimates of treatment effects on workers' reporting, separately estimating the effects of the short- and long-rapport building conditions. Each column in the table reports the estimated coefficient from a separate regression. The dependent variable in each column is regressed on the treatment indicator and stratification variables. Even-numbered columns also include controls selected using the PDS lasso. Standard errors clustered by HG batch (HG respondents) or respondent (DE respondents) are reported in round brackets. *p <0.1; **p <0.05; ***p <0.01.

Impacts of survey design: Interactions by sex - women

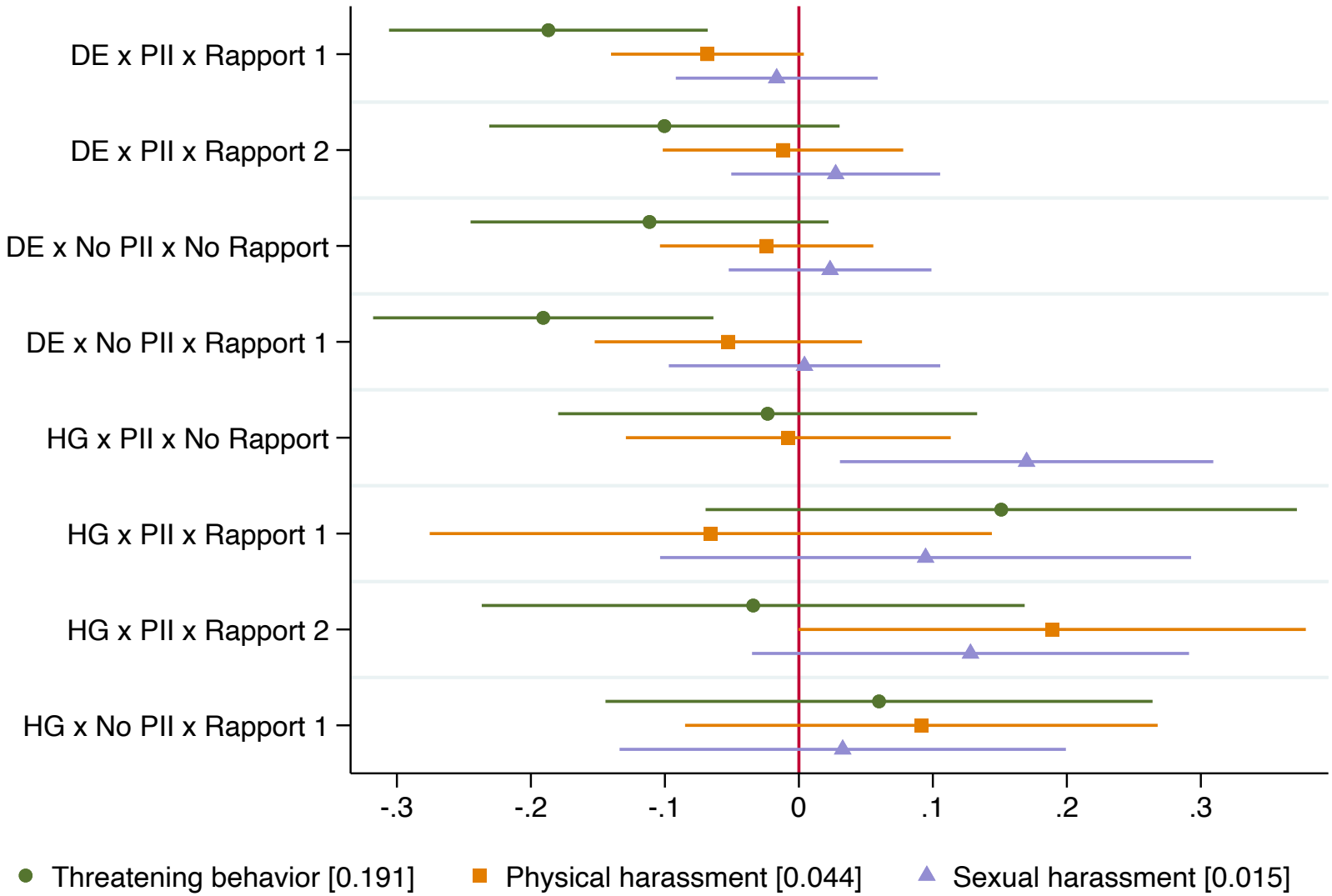
back



(Note: 95% confidence intervals, includes controls selected with double lasso)

Impacts of survey design: Interactions by sex - men

back



(Note: 95% confidence intervals, includes controls selected with double lasso)

Main regression model

Main specification:

$$\hat{r}_{is} = \alpha\, HG_i + \beta\, NoPII_i + \gamma\, Rapport_i + \mu_s + \theta X_i + \xi_{is} \qquad (1)$$

- $\hat{r}_{is}$: Transformed reporting outcome for individual i in stratum s.
- HG_i, $NoPII_i$ and $Rapport_i$: Hard-garbling, not asking for PII, and rapport building, respectively.
- μ_s: Stratum fixed-effects.
- X_i: Controls for individuals' characteristics, selected using PDS lasso (Belloni, Chernozhukov, and Hansen, 2014).
- ξ_{is}: residual term; robust standard errors reported.

Identification of intended responses ◂ back

Identification of intended responses

We observe $\widetilde{r}_i$ for individuals in the HG arms. Following Blair et al. (2015), we relate $\widetilde{r}_i$ to r_i as follows:

$$\widetilde{r}_i = r_i + (1 - r_i)(\pi + \varepsilon_i)$$

where ε_i is an error term that equals $(1 - \pi)$ with probability π and equals $-\pi$ with probability $(1 - \pi)$.

This equation can be expressed as

$$\frac{\widetilde{r}_i - \pi}{1 - \pi} = \underbrace{r_i + \frac{1 - r_i}{1 - \pi}\varepsilon_i}_{\hat{r}_i}.$$

We apply the equation on the lefthandside of this equality with $\pi = 0.2$ for the HG group and $\pi = 0$ for the DE group. $\hat{r}_i$ is the transformed outcome. The second term on the righthandside indicates that intended responses are measured with a heteroskedastic error term.

◂ Main results ◂ Additional results

2SLS effects on mental health & job satisfaction

Table: Using randomized assignment to HG as an instrument

	Mental health index				Job satisfaction index			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reported threatening behavior	0.2308				0.9155			
	(0.2324)				(0.7459)			
Reported physical harassment		0.2625				0.9913		
		(0.2615)				(0.7959)		
Reported sexual harassment			0.2033				0.7694	
			(0.1968)				(0.5735)	
Share of reports that are yes				0.2308				0.8866
				(0.2148)				(0.6238)
Control Mean	.044	.044	.044	.044	.317	.317	.317	.317
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1984	1984	1984	1984	1984	1984	1984	1984
Kleibergen-Paap Wald F	4	4	6.3	10.7	3.5	3.8	6.1	9.9

Notes: This table reports reduced form and 2SLS results for respondents' mental health and job satisfaction, measured in the follow-up survey. All columns report 2SLS results using the randomized assignment to the HG treatment as the instrumental variable. All regressions include controls for the baseline value of the dependent variable, gender, age, production section, position type, work experience, tenure, schooling, marital status, whether the respondent has children, and assignment to the RB and Low PII arms. Robust standard errors in round brackets. *p <0.1; **p <0.05; ***p <0.01.

◂ Future research

Possible Concerns with HG

1. More complicated HG mechanism may cause confusion.
   - Comprehension questions: 8.8% of HG respondents answer 1 incorrectly and 4.8% answer 2 incorrectly. No gender diff.
   - Share of respondents reporting "yes" higher among confused group.
   - Results robust to extreme value bounding and to trimming. Bounding
2. Workers may strategically misreport managers.
   - No consistent patterns of HTEs for men or women with at least minimum level of schooling required to become a supervisor. Results

◂ Main results ◂ Additional results

Confusion in HG condition

Table: Main treatment effects, estimated with response = "no" for confused respondents

	Threatening behavior		Physical harassment		Sexual harassment	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Main effects						
HG Treatment	0.0339	0.0339*	0.0333*	0.0333*	0.0359*	0.0359*
	(0.0211)	(0.0204)	(0.0187)	(0.0180)	(0.0191)	(0.0184)
No PII Treatment	0.0067	0.0067	0.0291	0.0291	0.0058	0.0058
	(0.0225)	(0.0218)	(0.0185)	(0.0179)	(0.0188)	(0.0182)
Rapport Treatment	0.0124	0.0124	-0.0126	-0.0126	0.0161	0.0161
	(0.0199)	(0.0192)	(0.0174)	(0.0168)	(0.0180)	(0.0174)
Control Group Mean	.099	.099	.0152	.0152	.0178	.0178

◂ HG Concerns ◂ Additional results

Strategic reporting checks in HG condition: Schooling

Table: HTEs, women & men by level of schooling

	Threatening behavior	Physical harassment	Sexual harassment
	(1)	(2)	(3)
HG Treatment × Female × Min Grade 8	0.0223	0.0430	0.0993***
	(0.0336)	(0.0278)	(0.0291)
HG Treatment × Female × Below Grade 8	0.0321	0.0361	-0.0056
	(0.0281)	(0.0246)	(0.0244)
HG Treatment × Male × Min Grade 8	0.0968*	0.1035*	0.0555
	(0.0573)	(0.0595)	(0.0500)
HG Treatment × Male × Below Grade 8	0.1429**	0.0224	0.1230**
	(0.0604)	(0.0550)	(0.0497)
Rapport Treatment	0.0122	-0.0093	0.0177
	(0.0203)	(0.0200)	(0.0183)
Low PII Treatment	0.0098	0.0275	0.0059
	(0.0245)	(0.0186)	(0.0203)
Control Mean-Female & Above	.0725	.0072	.0145
Control Mean-Female & Below	.0856	.0107	.0214
Control Mean-Male & Above	.2222	.0278	.0278
Control Mean-Male & Below	.1562	.0625	0
p(HGXFemaleXHigh-HGXFemaleXLow)	[0.849]	[0.880]	[0.024]
p(HGXMaleXHigh-HGXMaleXLow)	[0.582]	[0.384]	[0.343]
Strata FE	Yes	Yes	Yes
Observations	2140	2140	2140

Notes: This table reports OLS estimates of heterogeneity in treatment effects on workers' reporting by sex and by whether the respondent has at least 8 years of schooling, an informal cutoff used by garments factories to determine workers' eligibility to become a supervisor. The main effects of sex and schooling are included but not displayed. Rapport pools the short and long rapport conditions. Standard errors clustered by HG batch (HG respondents) or respondent (DE respondents) are reported in round brackets. *p <0.1; **p <0.05; ***p <0.01.

◂ HG Concerns ◂ Additional results

Intuitive characterization of managers' misbehavior

- Manager can be one of three types $\theta \in \{L, M, H\}$, with respective probabilities q_L, q_M and q_H.
- Conditional on θ, the manager harasses each worker i under their span of control independently with fixed probability ρ_θ.
- Assume that $\rho_L = 0$ and $\rho_M \leq \rho_H$. The DGP is entirely specified by the 4 dimensional vector $\gamma = (q_M, q_H, \rho_M, \rho_H)$.

$S_{TV>k}$ ◂ Additional results

Intuitive characterization of managers' misbehavior

Table: ML estimates of supervisor types, shares, and harassment rates

Parameter	Threatening Behavior (1)	Physical Harassment (2)	Sexual Harassment (3)
ρ_L	0	0	0
	–	–	–
ρ_M	0.111	0.051	0.075
	(0.028)	(0.024)	(0.026)
ρ_H	0.240	0.164	0.180
	(0.174)	(0.181)	(0.154)
q_L	0.051	0.266	0.128
	(0.045)	(0.159)	(0.096)
q_M	0.593	0.468	0.558
	(0.317)	(0.258)	(0.289)
q_H	0.356	0.275	0.314
	(0.316)	(0.242)	(0.283)

◂ Main descriptives ◂ Additional results

Reporting barriers

◂ model ◂ Additional results

Imagine tomorrow that a line supervisor at your factory slaps a coworker friend of yours / makes sexual remarks or touches them in a sexual manner...

	Mean / (SD)		**Diff. in means / [p-value]**
Variable	Physical H.	Sexual H.	Physical - Sexual H.
Would not report alone	0.274	0.213	0.060***
	(0.446)	(0.410)	[0.001]
Would not report even if another report (same sup.)	0.245	0.216	0.029
	(0.430)	(0.412)	[0.261]
Would not report even if another report (diff sup.)	0.278	0.233	0.045*
	(0.449)	(0.423)	[0.092]
Report: Fear of retaliation	0.205	0.200	0.005
	(0.404)	(0.400)	[0.776]
Report: Management would not investigate	0.068	0.074	-0.007
	(0.251)	(0.262)	[0.553]
Not reporting = accepting behavior	0.644	0.643	0.001
	(0.479)	(0.479)	[0.952]
Not reporting = blamed for behavior	0.509	0.569	-0.060***
	(0.500)	(0.496)	[0.005]
Supervisor's behavior is own fault	0.353	0.329	0.025
	(0.478)	(0.470)	[0.230]
Observations	1,093	1,050	2,143

Notes: This table summarizes workers expressed barriers to reporting. Columns (1)-(2) report the means and standard deviations of each variable separately by treatment condition. In column (3), differences for physical and sexual harassment responses are shown. Robust standard errors are reported. $^{*}p$ ¡ 0.10, $^{**}p$ ¡ 0.05, $^{***}p$ ¡ 0.01.

Enumerators' perceptions

◂ Additional results

	Comprehension		Comfort		Trust no leakage		Honesty		Patience	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
HG Treatment	-0.0303	-0.0262	-0.0001	0.0012	-0.0199	-0.0180	0.0479*	0.0467*	-0.0191	-0.0172
	(0.0358)	(0.0337)	(0.0396)	(0.0376)	(0.0374)	(0.0358)	(0.0283)	(0.0271)	(0.0406)	(0.0389)
Low PII Treatment	0.0086	0.0097	0.0791*	0.0835**	0.0366	0.0406	-0.0074	-0.0052	-0.0700	-0.0718*
	(0.0404)	(0.0381)	(0.0430)	(0.0412)	(0.0415)	(0.0397)	(0.0317)	(0.0303)	(0.0445)	(0.0425)
Rapport Treatment	-0.0031	-0.0021	-0.0170	-0.0197	-0.0125	-0.0139	0.0609**	0.0618**	0.0981**	0.1016**
	(0.0367)	(0.0348)	(0.0402)	(0.0383)	(0.0370)	(0.0356)	(0.0287)	(0.0275)	(0.0415)	(0.0397)
Control Group Mean	0	0	0	0	0	0	0	0	0	0
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDS lasso controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Enumerator FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2143	2143	2143	2143	2143	2143	2143	2143	2143	2143

Notes: This table reports OLS estimates of survey enumerators' assessment of respondents' behavior during the survey. All outcomes are standardised using the control group's mean and standard deviation, with higher values corresponding to more positive outcomes. *Comprehension*: Enumerator's assessment of how well the respondent understood the questions, *Comfort*: Enumerator's assessment of how comfortable the respondent felt answering the questions, *Trust*: Enumerator's assessment on whether the respondent trusts that the research team to not share their responses. *Honesty*: Enumerator's assessment of whether the respondent answered honestly to personal and sensitive questions, *Patience*: Enumerator's assessment of whether the respondent was rushing to finish the survey. Each column in the table reports the estimated coefficient from a separate regression. The dependent variable in each column is regressed on the treatment indicator, stratification variables, and enumerator fixed effects. Even-numbered columns also include controls selected using the PDS lasso. Robust standard errors are reported in round brackets. *p <0.1; **p <0.05; ***p <0.01.

Survey duration

◂ Additional results

Table: Effects of Survey Design on Survey Duration

	Rapport Treatment (Pooled)		Rapport Treatment	
	(1)	(2)	(3)	(4)
HG Treatment	1.6361***	1.5976***	1.7084***	1.6724***
	(0.5328)	(0.5104)	(0.5343)	(0.5115)
Low PII Treatment	-1.7307***	-1.7467***	-1.1749*	-1.1623*
	(0.5870)	(0.5638)	(0.6421)	(0.6132)
Rapport Treatment (Pooled)	6.1307***	6.1805***		
	(0.5402)	(0.5198)		
Rapport Treatment (Short)			5.4945***	5.5072***
			(0.6197)	(0.5946)
Rapport Treatment (Long)			7.1710***	7.2754***
			(0.7865)	(0.7623)
Control Group Mean	42.1471	42.1471	42.1471	42.1471
p(Long − Short Rapport)			[0.056]	[0.038]
Strata FE	Yes	Yes	Yes	Yes
PDS lasso controls	No	Yes	No	Yes
Observations	2100	2100	2100	2100

Notes: This table reports OLS estimates of treatment effects on survey duration (in minutes) which is trimmed below and above at 1 and 99 percentiles respectively. Each column in the table reports the estimated coefficient from a separate regression. The dependent variable in each column is regressed on the treatment indicator and stratification variables. Even-numbered columns also include controls selected using the PDS lasso. Robust standard errors are reported in round brackets. *p <0.1; **p <0.05; ***p <0.01.

Correlations between team-level survey response rate and reporting of harassment

Correlations	DE	HG	HG-DE
ρ(Threat, Survey Response Rate)	-0.121	-0.150	-0.053
	(0.094)	(0.084)	(0.090)
	[-0.316,0.045]	[-0.304,0.035]	[-0.213,0.140]
ρ(Physical, Survey Response Rate)	-0.097	0.008	0.045
	(0.064)	(0.093)	(0.090)
	[-0.226,0.015]	[-0.182,0.197]	[-0.142,0.217]
ρ(Sexual, Survey Response Rate)	0.069	-0.050	-0.073
	(0.107)	(0.092)	(0.093)
	[-0.126,0.303]	[-0.222,0.135]	[-0.245,0.119]

Notes: This table reports the correlation between the team-level response rate to the survey and the team-level reporting rates of harassment using arms that collect PII. Standard errors (in parenthesis) are computed from 1000 bootstrap replications, drawing samples of reporting rates at the team-level. Confidence intervals [in brackets] are bias corrected and accelerated (BCa), following **??**, implemented using Stata package **bootstrap** (**?**).

◂ Additional results

Balance tests: Witness reports

	Mean / (SD)						Difference in means / [p-value]		
Variable	DE	HG	No Rapport	Rapport	PII	Low PII	HG-DE	Diff Rapport	Diff PII
Witnessed sex. h. in team	0.206	0.225	0.224	0.208	0.211	0.224	0.038	-0.024	-0.004
	(0.405)	(0.418)	(0.418)	(0.406)	(0.408)	(0.418)	[0.203]	[0.436]	[0.908]
Ever witnessed sex. h.	0.213	0.201	0.216	0.201	0.201	0.224	-0.011	-0.015	0.025
	(0.410)	(0.401)	(0.412)	(0.401)	(0.401)	(0.417)	[0.677]	[0.600]	[0.417]
Witnessed phys. h. in team	0.161	0.168	0.159	0.170	0.162	0.170	0.023	-0.002	0.012
	(0.368)	(0.374)	(0.366)	(0.376)	(0.369)	(0.376)	[0.383]	[0.954]	[0.707]
Ever withnessed phys. h.	0.166	0.158	0.154	0.170	0.164	0.157	0.004	0.014	-0.014
	(0.372)	(0.365)	(0.361)	(0.376)	(0.370)	(0.365)	[0.857]	[0.550]	[0.587]
Observations	1,122	1,021	978	1,165	1,515	628	2,143	2,143	2,143
Strata FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table summarizes workers' witnessed harassment in each treatment condition. Columns (1)-(6) report the means and standard deviations of each variable separately by treatment condition. In column (4), Rapport pools the short and long rapport conditions. Columns (7)-(9) report the differences in means between each treatment condition, estimated from a regression of the covariate on the treatment indicator and stratification variables. Robust standard errors are reported. $^{*}p$ ¡ 0.10, $^{**}p$ ¡ 0.05, $^{***}p$ ¡ 0.01.

◂ Additional results

Correlations between team-level reporting & witnessing of harassment

Panel A: Witness Reports: Share of workers in own team witnessed being harassed

	Witnessed Sexual Harassment		*Witnessed Physical Harassment*	
Correlations	DE	HG	DE	HG
ρ(Threat, Witness Reports)	0.187	0.190	0.094	-0.032
	(0.112)	(0.083)	(0.075)	(0.081)
	[-0.016,0.428]	[0.024,0.348]	[-0.066,0.234]	[-0.199,0.117]
ρ(Physical, Witness Reports)	0.029	-0.034	0.143	0.058
	(0.071)	(0.136)	(0.122)	(0.111)
	[-0.077,0.222]	[-0.362,0.196]	[-0.048,0.473]	[-0.171,0.240]
ρ(Sexual, Witness Reports)	-0.097	0.173	0.098	-0.093
	(0.063)	(0.095)	(0.098)	(0.141)
	[-0.203,0.046]	[0.003,0.382]	[-0.071,0.334]	[-0.328,0.241]

Panel B: Witness Reports: Frequency with which other workers are witnessed being harassed

	Witnessed Sexual Harassment		*Witnessed Physical Harassment*	
Correlations	DE	HG	DE	HG
ρ(Threat, Witness Reports)	0.315	0.083	0.190	-0.108
	(0.105)	(0.089)	(0.119)	(0.086)
	[0.110,0.526]	[-0.106,0.252]	[-0.004,0.499]	[-0.266,0.068]
ρ(Physical, Witness Reports)	0.137	-0.011	0.144	0.107
	(0.092)	(0.099)	(0.147)	(0.086)
	[-0.016,0.373]	[-0.228,0.165]	[-0.098,0.513]	[-0.055,0.292]
ρ(Sexual, Witness Reports)	0.035	0.110	0.079	-0.127
	(0.087)	(0.105)	(0.100)	(0.090)
	[-0.130,0.216]	[-0.099,0.319]	[-0.100,0.287]	[-0.295,0.066]

Notes: This table reports the correlation between team-level measures of witnessed harassment and team-level reporting rates of harassment using arms that collect PII. Standard errors (in parenthesis) are computed from 1000 bootstrap replications, drawing samples of reporting rates at the team-level. Confidence intervals [in brackets] are bias corrected and accelerated (BCa), following (**??**), implemented using Stata package **bootstrap** (**?**).

◂ Additional results