

A senior doctor like me: Gender match and occupational choice

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 - ▶ key driver of persistent pay gaps (Bertrand, 2020)
- ▶ Important role for job characteristics (Goldin, 2021; Amer-Mestre and Charpin, 2021)
- ▶ Non-economic social influences on women's job choices ⇒ possible distortions to the allocation of talent (Cuberes and Teignier, 2016; Hsieh et al., 2019)

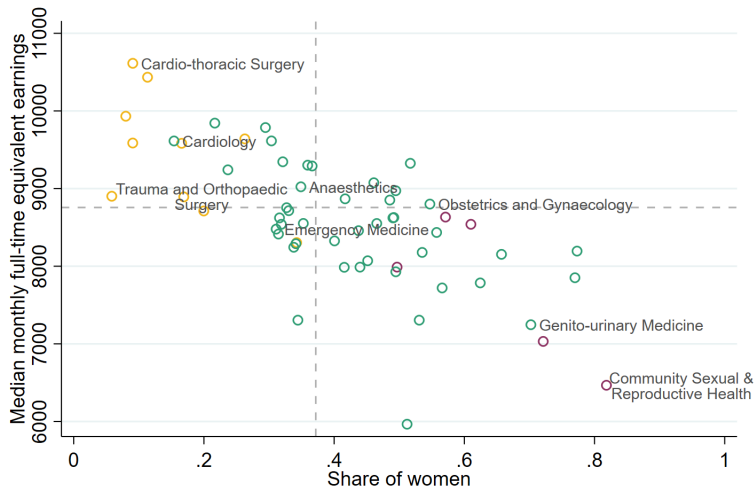
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- ▶ Our setting: medical specialty choice among doctors in the UK
- ▶ Consequential choice
 - ▶ For doctors: earnings and working conditions vary across specialties
 - ▶ For patients: patient-doctor demographic match → patient outcomes (Wallis et al., 2022; Frakes and Gruber, 2022; Kristiansen and Sheng, 2022)

Higher earnings in male-dominated specialties



Note: Senior doctors' monthly earnings 2012-2021, linearly scaled for contracted hours. Yellow = surgical specialties, purple = community specialties, dashed lines = overall averages.

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Main findings:

- ▶ Exposure to more women specialists during early career increases probability a junior doctor will choose their specialty
- ▶ Highly nonlinear relationship

Agenda

1. Motivation
2. Literature
3. Setting: Junior doctors' specialty choice
4. Identification strategy and NHS payroll data
5. Main results on specialty choice
6. Heterogeneity and mechanisms

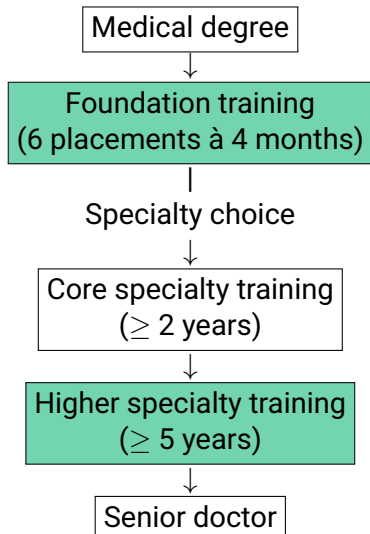
Literature

- ▶ Instructor-student gender match → occupational choice
 - ▶ Carrell et al. (2010); Mansour et al. (2021); Griffith and Main (2021)
 - ▶ extend from children/students to professionals, and from single universities to the NHS hospital sector
- ▶ Short interventions from visiting female 'role models' → university subject choice
 - ▶ Porter and Serra (2020); Breda et al. (2021); Agurto et al. (2021); Patnaik et al. (2023); Basiglio et al. (2023)
 - ▶ study a more sustained, 'natural' interaction
- ▶ Medical specialty choice
 - ▶ Jagsi et al. (2014); Arcidiacono and Nicholson (2005)
 - ▶ causal questions remain unanswered

Setting: Specialty choice of doctors in the English NHS

- ▶ Large increases in women entering medicine
- ▶ But women's participation in some specialties (surgery, cardiology, gastroenterology) stubbornly low
 - ▶ Internationally common
- ▶ Specialty choice = consequential career decision
 - ▶ both men and women make large investments
 - ▶ modest labour supply adjustments around childbirth (Kelly and Stockton, 2022)
- ▶ Potential mechanisms: taste for working with same-gender colleagues, (beliefs about) own ability, gender-specific returns to ability [Details](#)

Medical training in the NHS



← Variation: exposure to senior women

← Outcome: settled specialty choice conditionally on choosing hospital sector

Identification

- ▶ **Outcome:** Does a junior doctor choose the placement specialty, conditionally on remaining in the hospital sector?
- ▶ Identification challenge: non-random exposure to senior women
- ▶ Exploit centralised allocation of Foundation placements
 - ▶ based on preferences and national ranking
- ▶ Conditioning on hospital and specialty fixed effects
 - ▶ junior doctors cannot predict this variation at application
 - ▶ no evidence of sorting on observable characteristics [Details](#)

Data

- ▶ Electronic Staff Record: NHS payroll data 2012–2021
- ▶ Hospital, seniority, specialty, gender → variation in share of senior female colleagues that junior doctors work alongside
- ▶ Restrict to placements in short-term physical health hospitals
- ▶ 3 cohorts of doctors
 - ▶ 26,014 placements corresponding to 6,728 doctors who go on to pursue higher specialty training in the hospital sector

Main Specification

LPM that doctor i who completed a Foundation placement at hospital h in specialty s is observed in s during higher specialty training:

$$Y_{hsi} = \beta_0 + \sum_{q=1}^3 \beta_q f(wshare_{hs}) + \beta_4 \Gamma_h + \beta_5 \Delta_s + \beta_6 \mathbf{X}_i + \beta_7 \mathbf{Z}_{hsi} + \epsilon_{hsi}$$

- ▶ $Y_{hsi} = 1$ if doctor chooses the specialty
- ▶ $wshare_{hsi}$ = share of senior women during placement, linear spline with knots at 20% and 40%
- ▶ Γ_h, Δ_s = sets of hospital and specialty fixed effects
- ▶ $\mathbf{Z}_{hsi}$ = placement characteristics: order, length, starting month, senior doctors' age
- ▶ $\mathbf{X}_i$ = junior doctor characteristics incl. age, cohort, UK nationality
- ▶ ϵ_{hsi} = standard errors clustered at the junior doctor level

Summary statistics: Foundation Placements

	All placements		Stayers	
	Women	Men	Women	Men
Months in placement	4.53 (1.10)	4.54 (1.11)	4.50 (1.05)	4.54 (1.10)
Female senior doctors	4.41 (5.85)	3.93 (5.52)	4.61 (6.09)	4.07 (5.61)
Female senior doctors (share)	0.26	0.23	0.26	0.23
Share of placements with female senior doctor share				
< 20%	0.46	0.51	0.45	0.50
20% - 40%	0.29	0.29	0.29	0.30
Selected specialty shares: Surgery	0.40	0.44	0.39	0.44
Paediatrics	0.08	0.05	0.08	0.04
Emergency/Intensive/Acute	0.16	0.17	0.18	0.18
Obstetrics/Gynaecology	0.06	0.03	0.06	0.03
Cardiology	0.04	0.05	0.04	0.05
Geriatric medicine	0.12	0.11	0.12	0.11
Observations	36,691	28,132	13,860	12,154

"Stayers" are junior doctors who stay in the hospital sector after foundation training. Standard deviations in parentheses.

Probability junior doctors pursue specialty training in the placement specialty

	Women		Men	
Share female senior doctors				
Share, if <20%	0.167***	(0.049)	0.092	(0.056)
Share, if 20% - 40%	-0.013	(0.061)	-0.030	(0.063)
Share, if ≥40%	-0.053	(0.048)	-0.080 ⁺	(0.048)
R^2	0.166		0.110	
Observations	13,860		12,154	

Excludes placements in General and Acute Internal Medicine. Standard errors in parentheses, ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Observations are placements.

- ▶ Effect driven by male-dominated departments (similar results for other non-linear specifications)
- ▶ Effect size: +10pp senior women in a male-dominated department
→ 1.6pp increase = 23% of mean or 41% of the gender gap
- ▶ No impact on leaving the hospital sector

Heterogeneity

- ▶ The effect is stronger when senior women in the department:
 1. do *not* receive performance-related pay [Details](#)
 2. are younger [Details](#)
 3. tentatively: work part-time [Details](#)
- ▶ The effect is stronger
 1. in specialties where on-call duties are less important [Details](#)
 2. in more geographically dispersed specialties [Details](#)
 3. in growing departments [Details](#)

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 1. in specialties where on-call duties are less important [Details](#)
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 3. in growing departments [Details](#)
- ▶ Suggests role for relatability, access/contact time, fewer other barriers to qualified women entering the specialty
- ▶ Similar effects in more or less competitive specialty training programmes

Summary

- ▶ Exposure to senior women specialists during a junior doctor's early career increases the probability that she chooses their specialty
 - ▶ Only at low shares of senior women
 - ▶ A 10pp increase in senior women closes $\sim 40\%$ of the gender gap in specialty choice
- ▶ No impact on the probability women remain in the hospital sector
→ choices are shifted between hospital specialties
- ▶ Heterogeneity points to role for relatability, contact time and absence of other barriers to women's entry to the specialty

Thank you!

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Motivating framework: Mechanisms

- ▶ Exposure to senior women during a placement could affect
 - ▶ beliefs about the share of women in the specialty
 - ▶ many possible foundations for homophily (Akerlof and Kranton, 2005; Alan et al., 2023; Drechsel-Grau and Holub, 2023)

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 - ▶ ability or doctors’ beliefs about their own ability
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 - ▶ better teaching/mentoring/advising in matched senior-junior pairs (but mixed evidence in school settings, cf. de Gendre et al., 2023)
 - ▶ worse performance during placement under stereotype threat (Dee, 2013; Benjamin et al., 2010)

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 - ▶ worse performance during placement under stereotype threat (Dee, 2013; Benjamin et al., 2010)
- ▶ Clinical supervisors’ references not a plausible mechanism

Motivating framework

Following Delfino (2021), worker i of gender g chooses a specialty j with prospective returns:

$$U_i^j = w^j + \theta_g^j a_i^j + \alpha_i(s_g^j)$$

where

w basic wage in the specialty

θ_g gender-specific return to individual-specific ability a_i^j

- ▶ higher and more dispersed performance-related pay in surgery
- ▶ could include non-monetary returns (prestige, 'warm glow')

$\alpha_i(\cdot)$ taste for working with same-gender colleagues, whose share is s_g^j

- ▶ many possible, observationally equivalent underlying reasons: management style, information exchange, cognitive effort, identity costs, etc.
- ▶ most relevant when a specialty is very gender-imbalanced

Sorting test

Test for sorting on observable junior doctor characteristics

	Woman		Age		UK national	
Share female senior doctors						
Share, if <20%	-0.025	(0.037)	-0.031	(0.209)	-0.010	(0.022)
Share, if 20% - 40%	-0.008	(0.039)	0.072	(0.221)	-0.008	(0.022)
Share, if $\geq$ 40%	0.044	(0.028)	-0.156	(0.174)	-0.009	(0.016)
Observations	64,660		64,660		64,660	

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Each regression conditions on all covariates in the baseline specification except the outcome and the number of years observed in the late stage, including the fixed effects.

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Share of senior women and other placement characteristics

Table: Differences in placement parity and duration by share of senior women

	Duration	First year	Fourth placement	Later placement
Share female senior doctors				
Share, if <20%	0.075 (0.083)	-0.130*** (0.034)	0.061* (0.028)	0.069* (0.029)
Share, if 20% - 40%	0.041 (0.089)	0.084* (0.038)	-0.027 (0.033)	-0.056 (0.035)
Share, if ≥40%	-0.011 (0.059)	-0.199*** (0.029)	0.109*** (0.026)	0.091*** (0.027)
Observations	64,660	64,660	64,660	64,660

Standard errors in parentheses. Each regression conditions on all baseline specification covariates except the outcome and the number of years observed in the late stage, including the fixed effects.

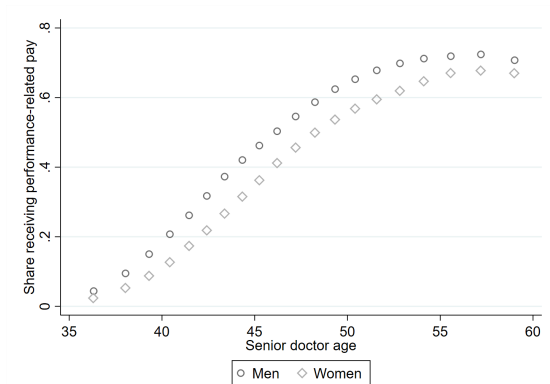
Probability that junior doctors remain in the hospital sector for higher specialty training

	Women		Men	
Share female senior doctors				
Share, if <20%	0.002	(0.046)	0.014	(0.052)
Share, if 20% - 40%	-0.046	(0.049)	-0.001	(0.059)
Share, if ≥40%	0.028	(0.035)	-0.071	(0.045)
R^2	0.046		0.059	
Observations	36,871		28,116	

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Observations are at the foundation placement level.

Performance-related pay: background

- ▶ Performance-related pay is common
- ▶ Median pro-rata award = £754 = 11% of median basic earnings
- ▶ Gender gap in performance-related pay:



- ▶ Higher and more variable in some specialties, e.g. cardiology and gastroenterology

High-performing senior women and specialty choice

	Women		Men	
No senior women	0.010	(0.014)	-0.039*	(0.017)
Share female senior doctors $\times$ no senior woman with performance-related pay				
Share if $<20\%$, no PRP	0.264**	(0.092)	-0.188	(0.103)
Share if 20%-40%, no PRP	-0.119	(0.086)	0.031	(0.083)
Share if $\geq 40\%$, no PRP	0.031	(0.070)	-0.059	(0.058)
Share female senior doctors $\times \geq 1$ senior woman with performance-related pay				
Share if $<20\%$, some PRP	0.140	(0.085)	-0.033	(0.099)
Share if 20%-40%, some PRP	0.067	(0.079)	-0.017	(0.088)
Share if $\geq 40\%$, some PRP	-0.087	(0.057)	-0.136*	(0.064)
Observations	13,757		11,881	

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. 'High' performance-related pay above median (£754) pro rata. Also conditions on junior doctor and placement characteristics and trust and specialty fixed effects.

Heterogeneity by senior doctor age

Younger versus older senior doctors: Selected coefficients

	Women		Men	
No senior women	0.004	(0.014)	-0.034*	(0.017)
Senior men older, senior women older				
Share female senior doctors if <20%	0.090	(0.102)	0.016	(0.118)
Senior men younger, senior women older				
Share female senior doctors if <20%	0.037	(0.134)	-0.149	(0.159)
Senior men older, senior women younger				
Share female senior doctors if <20%	0.191*	(0.088)	-0.051	(0.101)
Senior men younger, senior women younger				
Share female senior doctors if <20%	0.277**	(0.101)	-0.176	(0.114)
Observations	13,756		11,881	

Standard errors in parentheses clustered at the junior doctor level, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Conditions on senior doctor age, junior doctor and placement characteristics and trust and specialty fixed effects.

Part-time working female senior doctors

	Women		Men	
No senior women	0.002	(0.014)	-0.037*	(0.017)
Share female senior doctors $\times$ no part-time working senior woman				
Share, if $<20\%$ and no PT	0.159	(0.083)	-0.127	(0.097)
Share, if $20\% - 40\%$ and no PT	-0.029	(0.073)	0.090	(0.079)
Share, if $\geq 40\%$ and no PT	-0.032	(0.063)	-0.138**	(0.053)
Share female senior doctors $\times$ at least one part-time working senior woman				
Share, if $<20\%$ and PT	0.270*	(0.113)	0.058	(0.121)
Share, if $20\% - 40\%$ and PT	-0.090	(0.113)	-0.167	(0.113)
Share, if $\geq 40\%$ and PT	-0.059	(0.065)	-0.034	(0.078)
Observations	13,756		11,881	

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Part-time working senior women defined as aged 55 or younger and working 80% of full-time or less. Also conditions on junior doctor and placement characteristics and trust and specialty fixed effects

On-call duties: background

- ▶ All workers, but women especially, dislike atypical and unpredictable working hours (Mas and Pallais, 2017)
- ▶ Use composition of earnings to characterise specialties as 'high prevalence of on-call work' if in top quintile
 - ▶ of senior doctors receiving on-call allowances (81%), or
 - ▶ of on-call allowances relative to basic earnings (4.3%)
- ▶ Includes obstetrics and gynaecology, anaesthetics, some surgical specialties (but not general surgery), intensive care medicine

Prevalence of on-call duties and specialty choice

	Women		Men	
Share female senior doctors × low prevalence of on-call duties				
Share, if low and <20%	0.223***	(0.055)	0.077	(0.065)
Share, if low and 20% - 40%	-0.073	(0.067)	-0.096	(0.067)
Share, if low and ≥ 40%	-0.068	(0.051)	-0.081	(0.051)
Share female senior doctors × high prevalence of on-call duties				
Share, if high and <20%	-0.020	(0.101)	0.056	(0.108)
Share, if high and 20% - 40%	0.127	(0.153)	0.284	(0.162)
Share, if high and ≥ 40%	0.056	(0.122)	-0.062	(0.123)
Observations	13,756		11,881	

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Also conditions on junior doctor and placement characteristics and trust and specialty fixed effects.

Geographic concentration of jobs and specialty choice

- ▶ Specialty concentrated in a few specialist hospitals → less geographic flexibility for doctors
- ▶ Senior doctors in placement specialties work in up to 174 hospitals
- ▶ Specialties present in $\leq$ half those hospitals = 'geographically concentrated'
 - ▶ renal medicine, intensive care, clinical oncology, cardio-thoracic surgery, neurosurgery
 - ▶ account for just 7% of placements → most placements are in widely spread specialties

Geographic concentration of jobs and specialty choice

	Women		Men	
Share female senior doctors × geographically dispersed specialty				
Share, if disp. and <20%	0.184***	(0.050)	0.077	(0.060)
Share, if disp. and 20% - 40%	-0.061	(0.064)	-0.034	(0.067)
Share, if disp. and ≥ 40%	-0.037	(0.054)	-0.107*	(0.053)
Share female senior doctors × geographically concentrated specialty				
Share, if conc. and <20%	-0.124	(0.172)	-0.021	(0.191)
Share, if conc. and 20% - 40%	0.441	(0.236)	0.332	(0.226)
Share, if conc. and ≥ 40%	-0.107	(0.092)	-0.013	(0.108)
Observations	13,756		11,881	

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Also conditions on junior doctor and placement characteristics and trust and specialty fixed effects.

Growing departments

	Women		Men	
Shrinking department	0.000	(0.013)	0.006	(0.018)
Growing department	-0.008	(0.011)	-0.004	(0.014)
Share female senior doctors $\times$ shrinking department				
Share, if low and $<20\%$	0.123	(0.094)	0.081	(0.116)
Share, if low and $20\% - 40\%$	0.012	(0.114)	-0.120	(0.120)
Share, if low and $\geq 40\%$	0.006	(0.096)	-0.046	(0.104)
Share female senior doctors $\times$ constant-size department				
Share, if high and $<20\%$	0.093	(0.074)	-0.023	(0.084)
Share, if high and $20\% - 40\%$	0.145	(0.103)	0.143	(0.106)
Share, if high and $\geq 40\%$	-0.120	(0.070)	-0.029	(0.077)
Share female senior doctors $\times$ growing department				
Share, if high and $<20\%$	0.222**	(0.072)	0.132	(0.080)
Share, if high and $20\% - 40\%$	-0.125	(0.080)	-0.052	(0.083)
Share, if high and $\geq 40\%$	-0.016	(0.067)	-0.143*	(0.066)
Observations	13,741		11,880	

Standard errors in parentheses, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The omitted category for the dummy is a department with no change in size. Also conditions on junior doctor and placement characteristics and trust and specialty fixed effects.

- Marcos Agurto, M Bazan, S Hari, and S Sarangi. Women in engineering: The role of role models. Discussion paper, Global Labor Organization (GLO), Essen, 2021.
- George A Akerlof and Rachel E Kranton. Identity and the economics of organizations. *Journal of Economic perspectives*, 19(1):9–32, 2005.
- Sule Alan, Gozde Corekcioglu, Mustafa Kaba, and Matthias Sutter. Female leadership and workplace climate. Discussion Paper 2023/9, MPI Collective Goods, 2023.
- Josep Amer-Mestre and Agnès Charpin. Gender differences in early occupational choices: Evidence from medical specialty selection. *SSRN Electronic Journal*, 2021.
- Peter Arcidiacono and Sean Nicholson. Peer effects in medical school. *Journal of Public Economics*, 89(2-3):327–350, February 2005.
- Stefania Basiglio, Daniela Del Boca, and Chiara Daniela Pronzato. The impact of the “coding girls” program on high school students’ educational choices. Discussion Paper 15882, Institute of Labor Economics (IZA), January 2023.
- Daniel J Benjamin, James J Choi, and A. Joshua Strickland. Social identity and preferences. *American Economic Review*, 100(4):1913–1928, September 2010.
- Marianne Bertrand. Gender in the twenty-first century. *AEA Papers and Proceedings*, 110:1–24, May 2020.
- Thomas Breda, Julien Grenet, Marion Monnet, and Clémentine Van Effenterre. Do female role models reduce the gender gap in science? Evidence from french high schools. Working paper, HAL SHS, 2021.

- Scott E. Carrell, Marianne E. Page, and James E. West. Sex and science: How professor gender perpetuates the gender gap. *Quarterly Journal of Economics*, 125 (3):1101–1144, August 2010.
- David Cuberes and Marc Teignier. Aggregate effects of gender gaps in the labor market: A quantitative estimate. *Journal of Human Capital*, 10(1):1–32, March 2016.
- Jane Dacre, Carol Woodhams, Carol Atkinson, Ioannis Laliotis, Mark Williams, Jo Blanden, Sheila Wild, and Duncan Brown. Mend the gap: Independent review into gender pay gaps in medicine in England. Technical report, Department of Health and Social Care, December 2020.
- Alexandra de Gendre, Jan Feld, Nicolás Salamanca, and Ulf Zölitz. Same-sex role models in education: A meta-analysis and a super study. Working Paper 438, University of Zurich Department of Economics, June 2023.
- Thomas S. Dee. Stereotype threat and the student-athlete. *Economic Inquiry*, 52(1): 173–182, March 2013.
- Alexia Delfino. Breaking gender barriers: Experimental evidence on men in pink-collar jobs. Discussion Paper 14083, IZA Institute of Labor Economics, January 2021.
- Moritz Drechsel-Grau and Felix Holub. Are male bosses bad for women? evidence from personnel data. Discussion Paper 237, Collaborative Research Center Transregio 224 – Economic Perspectives on Societal Challenges: Equality of Opportunity, Market Regulation, and Financial Stability, 2023.

- Michael Frakes and Jonathan Gruber. Racial concordance and the quality of medical care: Evidence from the military. Working Paper 30767, National Bureau of Economic Research, December 2022.
- Seth Gershenson, Stephen B. Holt, and Nicholas W. Papageorge. Who believes in me? the effect of student–teacher demographic match on teacher expectations. *Economics of Education Review*, 52:209–224, June 2016.
- Claudia Goldin. A grand gender convergence: Its last chapter. *American Economic Review*, 104(4):1091–1119, 2014.
- Claudia Goldin. *Career and Family: Women’s Century-long Journey toward Equity*. Princeton University Press, 2021.
- Amanda L. Griffith and Joyce B. Main. The role of the teaching assistant: Female role models in the classroom. *Economics of Education Review*, 85:102179, December 2021.
- Chang-tai Hsieh, Erik Hurst, Charles I. Jones, and Peter J. Klenow. The allocation of talent and US economic growth. *Econometrica*, 87(5):1439–1474, 2019.
- Reshma Jagsi, Kent A. Griffith, Rochelle A. Decastro, and Peter Ubel. Sex, role models, and specialty choices among graduates of US medical schools in 2006–2008. *Journal of the American College of Surgeons*, 218(3):345–352, March 2014.
- Elaine Kelly and Isabel Stockton. Maternity and the labour supply of NHS doctors and nurses. Briefing Note 340, Institute for Fiscal Studies, March 2022.

- Ida Lykke Kristiansen and Sophie Yanying Sheng. Doctor who? the effect of physician-patient match on the ses-health gradient. Working Paper 5, Center for Economic Behavior and Inequality, July 2022.
- Hani Mansour, Daniel I. Rees, Bryson M. Rintala, and Nathan N. Wozny. The effects of professor gender on the postgraduation outcomes of female students. *ILR Review*, 75(3):693–715, March 2021.
- Alexandre Mas and Amanda Pallais. Valuing alternative work arrangements. *American Economic Review*, 107(12):3722–3759, December 2017.
- Laura Pagani and Giovanni Pica. A peer like me? Early exposure to high achievers in math and later educational outcomes. Technical report, Centre for European Studies, July 2021.
- Arpita Patnaik, Gwyn C Pauley, Joanna Venator, and Matthew J Wiswall. The impacts of same and opposite gender alumni speakers on interest in economics. Working Paper 30983, National Bureau of Economic Research, February 2023.
- Catherine Porter and Danila Serra. Gender differences in the choice of major: The importance of female role models. *American Economic Journal: Applied Economics*, 12(3):226–54, 2020.

Christopher J. D. Wallis, Angela Jerath, Natalie Coburn, Zachary Klaassen, Amy N. Luckenbaugh, Diana E. Magee, Amanda E. Hird, Kathleen Armstrong, Bheeshma Ravi, Nestor F. Esnaola, Jonathan C. A. Guzman, Barbara Bass, Allan S. Detsky, and Raj Satkunasivam. Association of surgeon-patient sex concordance with postoperative outcomes. *JAMA Surgery*, 157(2):146, February 2022.