

The “Glass Hurdles” for women in physics

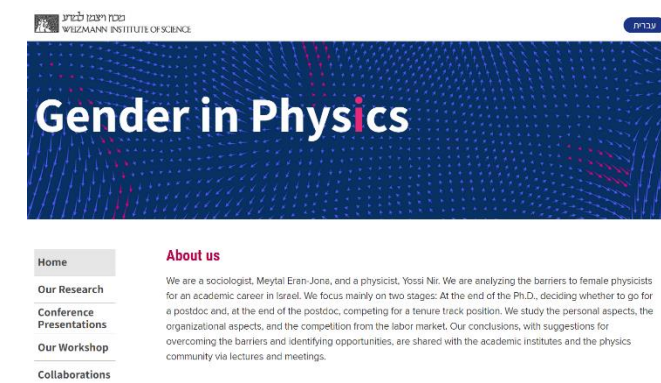
XI European Conference on Gender Equality in Higher Education

Polytechnic University of Madrid

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When sociology and physics meet

- Prof. Yossi Nir – head of the Department of Particle Physics and Astrophysics at WIS
- A five year collaboration with Dr. Meytal Eran Jona
 - Research papers, e.g. [Phys. Rev. Phys. Educ. Res. 17, 020101 \(2021\)](#)
 - [Website](#) at Weizmann: “Gender in Physics”
 - Considerable impact at WIS and in the Israeli academy
 - European collaborations to enhance gender equality, e.g. GENERA
- For me, an eye opener: the “glass hurdles” are no longer transparent to me
- I contribute the “inside look” on the culture of physics, on hiring and promotion processes, etc.

Our research

Research questions

- What are the pros and cons of an academic career?
- What is the most significant decision junction for choosing an academic career?
- What are the women's key considerations for going on a postdoc, and what role does gender play?

Methodology – mixed methods

- Nationwide PhD survey
 - Responses from 60 women (94%) and 207 men (60%)
 - Self administered, 105 questions, 12/2018-2/2019
- PhD and postdoc face-to-face in-depth interviews
 - 25 female PhD students, age 26-36, 21 married, 12 mothers
 - 13 female postdocs, age 30-46, all in relationship, 11 mothers

Choosing physics within a gendered power structure: The academic career in physics as a “deal”

Meytal Eran-Jona^{1,*} and Yosef Nir^{2,†}

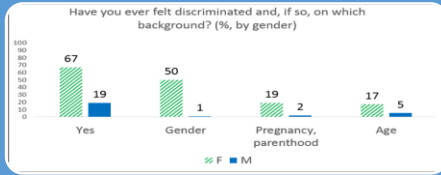
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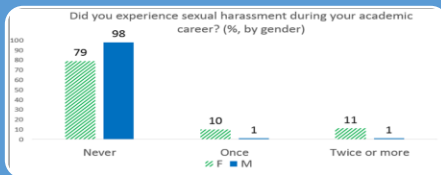
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This research focuses on the absence of women among academic staff in physics. To explore the causes of this gender imbalance, we focus on the decision-making junction between obtaining a Ph.D. diploma and pursuing a postdoctoral position. We use the mixed-methods paradigm, combining a nationwide representative survey of Ph.D. students in Israel ($n = 267$ respondents out of 404 questioned) and interviews with Ph.D. students and postdoctoral fellows ($n = 38$). The theoretical novelty that we propose is to view such career decision making as a “deal” that involves contextual, organizational, and individual variables and their intersection. Young women are examining the components of this deal: what it offers them and what prices they will have to pay, but their decision is made within a gendered power structure. Studying both context factors and agency, we reveal the multiple hidden ways in which gender operates as a power structure, putting up barriers to women's academic careers. This latent power structure influences women's decision making and experiences in several ways. In the academic field, it produces unequal competition in a male-dominated playground. In the social sphere, choosing a demanding academic career is seen as disrupting gender order. Within the family, women carry a greater burden of family work and give precedence to their husband's career and preferences. Within this social structure, women who decide to follow an academic career feel that they must excel, and this demand for “excellence” acts as a hidden mechanism within the gendered power structure that may prevent talented women from pursuing an academic career in physics.

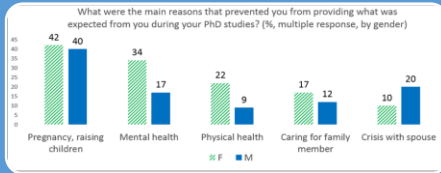
PhD in physics as a hurdle race



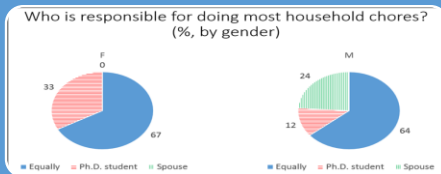
Gender-related discrimination



Sexual harassment



Physiological and psychological health issues



Pregnancy and parenthood

To postdoc or not to postdoc?



Unequal competition in physics as a masculine field



Prioritizing family and husband's career



Postdoc career path as a disruption of the gender order



Self-expectations for excellence:
A hidden component in the gender power structure

The Female Physics Postdoc Initiative

Data base on all Israeli physicist female postdocs

- Contact details; CV; List of publications

Personal communication with each, every half a year

- Asking what is new; Updates on CV and LoP; Plans to visit Israel?

Goals

- We must not miss a worthy female candidate
- We show that we care
- We advice (mentorship)
- We help (sponsorship)
- We collect data



Backup Slides

Summary

- Gender operates in multiple and hidden ways as a power structure, within the family, in physics as a male-dominated field, and within the labor market, shaping women's decisions and behaviour
- To the academic institutes, the “glass hurdes” are transparent and, consequently, they are not taking care of leveling the playing ground. They should
 - Address the problem of sexual harrassment
 - Promote discrimination-free environment for women
 - Adapt the institutional policy to the special gender-related challenges
 - Expand the availability of psychological care for students