



8th International Conference on Women in Physics



WOMEN IN PHYSICS IN YEMEN

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Abstract

In this paper, our objective was to investigate the current status of women in the field of physics within Yemeni universities. Our study focuses on analyzing the progress made by women in physics across various academic levels, including BSc, MSc/PhD students, and female faculty members. To gather comprehensive data, we collected information from the physics departments of four prominent public universities in Yemen (Taiz, Sana'a, Aden, and Ibb). The data collection spanned a period of the last three years, allowing us to assess trends and changes over time. The findings revealed that the political situation had adverse effects, discouraging many women from pursuing studies in physics. However, there were some positive developments observed. Notably, the percentage of female students enrolling in the physics BSc program showed an increase at Taiz and Sana'a universities during the investigation period, although it remained lower than previous findings. Analyzing the data further, we discovered that the average percentage of female students enrolled in the MSc program at Sana'a University stood at approximately 42% during the investigation period. Conversely, we observed a concerning trend at Taiz and Ibb universities, as almost no female students were enrolled in the physics MSc program throughout the investigation period. In the PhD level, we found that the percentage of women physicists pursuing a PhD degree experienced an increase solely at Sana'a University during the investigation period. This indicates a potential for growth and progress in the future. Despite offering scholarships to support women in qualifying for faculty positions, our study revealed a disheartening trend. Throughout the investigation period, there were very few women physicists in the academic sphere. This can be attributed to the strong preference among these students to seek better opportunities outside Yemen. Economic factors and limited prospects within the country were major contributors to this trend.

EDUCATION in LIGHT of YEMEN CRISIS

- ❖ The conflict in Yemen has hindered the education system, discouraging university enrollment.
- ❖ Yemen faces poverty and a severe humanitarian crisis, impacting the socio-economic conditions.
- ❖ The conflict has caused food shortages, infrastructure damage, and difficult living conditions.
- ❖ The physics department has declined, with closed Applied Physics programs in some universities and decreased enrollment.

STATUS of WOMEN in PHYSICS

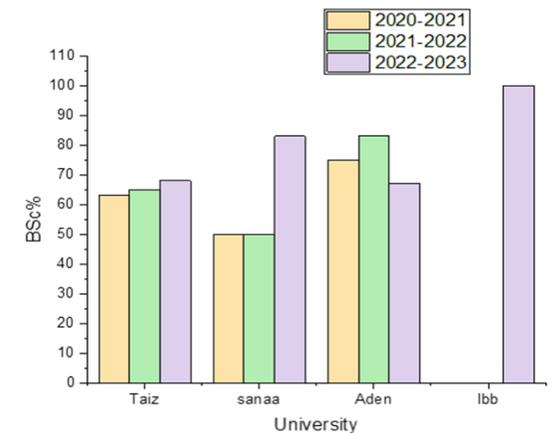
- ❖ **BSc physics programs:** a noticeable increase in the percentage of female students at Taiz and Sana'a universities through the investigation period. However, Aden University experienced a decline in female enrollment during the academic year 2022-2023. Notably, one female student was registered at Ibb University in the academic year 2023.

Table 1. BSc

enrollment in physics departments at Taiz, Sana'a, Aden, and Ibb universities

University Name	TU		SU		AU		IU	
	F/T	F (%)	F/T	F (%)	F/T	F (%)	F/T	F (%)
2020-2021	22/35	63	3/6	50	3/4	75	0	0
2021-2022	11/17	65	2/4	50	5/6	83	0	0
2022-2023	17/25	68	5/6	83	2/3	67	1/1	100

Fig.1 Percentage of female BSc students in physics at Taiz, Sana'a, Aden, and Ibb universities in the academic years (2020-2023)



STATUS of WOMEN in PHYSICS

- ❖ **MSc program:** varying trends in female enrollment. Sana'a University had fluctuating MSc enrollment with approximately 42% female students during the period of investigation, while Aden University had enrollments only in the academic year 2023.

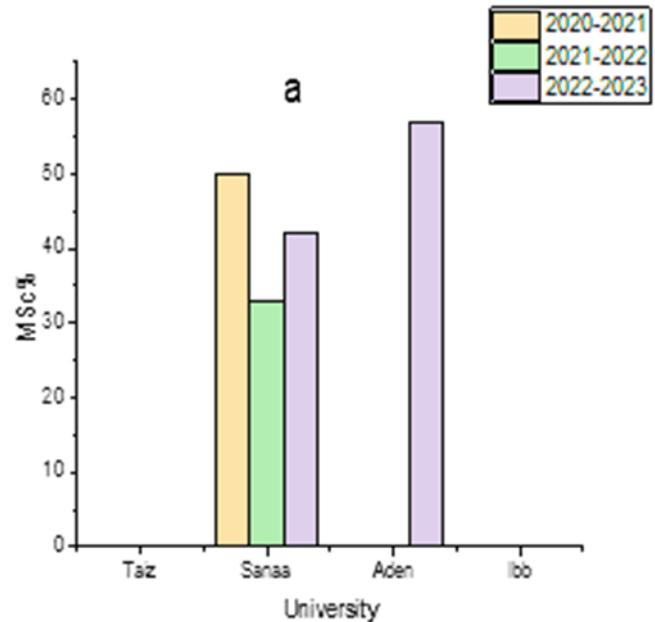


Fig.2 Percentage of female MSc physics students at Taiz, Sana'a, Aden, and Ibb universities.

STATUS of WOMEN in PHYSICS

❖ **Phd program:** Sana'a University witnessed an increase in female Ph.D. enrollment through the investigation period. Taiz and Ibb universities had a significant representation of women physicists only in the academic year 2022-2023.

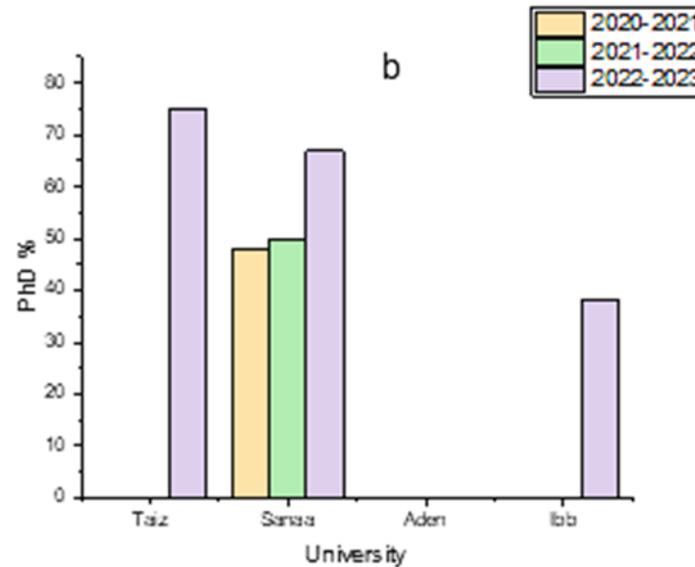


Fig.3 Percentage of female Phd physics students at Taiz, Sana'a, Aden, and Ibb universities.

STATUS of WOMEN in PHYSICS

- ❖ **Female faculty members:** Only 11% of women physicists hold permanent academic positions across the four universities during the period of the investigation.

Table 2. Number of male/female faculty members in physics departments at the four universities between 2020 and 2023

Taiz Uni.						Sana'a Uni.						Aden Uni.						Ibb Uni.					
Prof.		Assoc. Prof.		Asst. Prof.		Prof.		Assoc. Prof.		Asst. Prof.		Prof.		Assoc. Prof.		Asst. Prof.		Prof.		Assoc. Prof.		Asst. Prof.	
F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
0	1	0	4	2	3	0	2	2	5	0	4	0	0	0	0	0	3	0	0	0	2	0	6

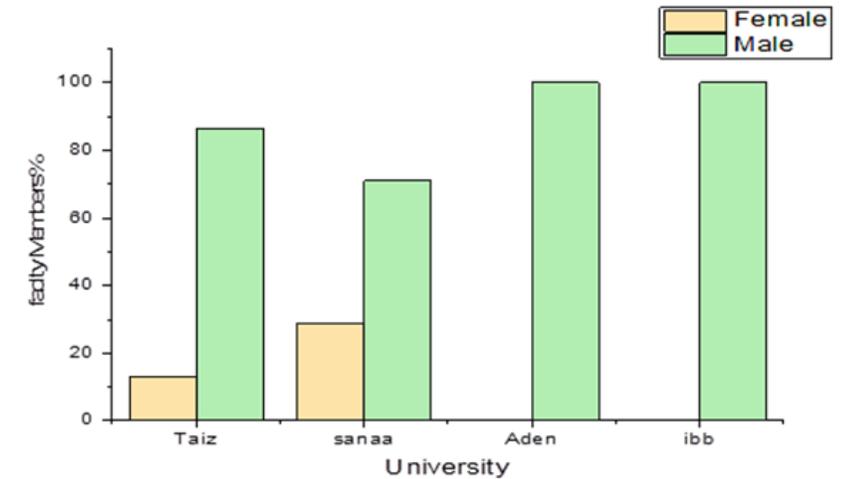


Fig 4. Faculty members in the physics department at Taiz, Sana'a, Aden, and Ibb universities between 2020 and 2023

KEY FINDINGS

- ❖ Decreased participation of women in physics due to the ongoing crisis in Yemen.
- ❖ Positive developments in BSc enrollment, particularly at Taiz University, while instability was observed at Sana'a University.
- ❖ No enrollment of female students in the MSc program at Taiz and Ibb universities.
- ❖ Growth in the number of women pursuing a Ph.D. in physics at Sana'a University, along with challenges in attracting and retaining female faculty members.

CONCLUSIONS and RECOMMENDATIONS

- ❖ The crisis in Yemen had a significant impact on women's participation in physics.
- ❖ Establishing supportive research environments through mentorship programs, research grants, and collaboration networks is crucial.
- ❖ Creating job opportunities in the field of physics will encourage active engagement and persistence among female students, leading to their professional growth and contributions to the field.

REFERENCES

Transforming Education Summit 2022 National Consultations Report June 2022, Republic of Yemen.

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THANKS