

IMPROVING WOMEN'S PARTICIPATION IN PHYSICS: A COLLECTIVE EFFORT

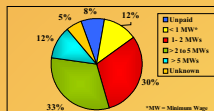
NATIONAL INDICATORS

• TOTAL POPULATION : 97 361 711

• DISTRIBUTION (%)
AVERAGE AGE (Years)

	WOMEN	MEN
AVERAGE AGE (Years)	51.7	48.3
	23.0	22.0

• POPULATION DISTRIBUTION
Urban 61.0 %
Semi-urban 13.7 %
Rural 25.4 %



• Economically Active Population : 56.3 %

• Gross Domestic Product (GDP): 574 445.1 millions of dollars

GDP assigned to education(1999, including private education): 5.6 %
GDP assigned to Science and Technology :0.42 %

• Illiterate Population aged 15 and over (PA150): 9.5 %

• PA180 with some higher levels studies : 12.1 %

INDICATORS BY GENDER

• OCCUPATION
(1995) Women earning less than 1 MW: 25.9 %
No income : 17 %
In rural zones: less than 2MWs : 70%
No income: 26%

Occupation	Women per 100 men	Wage(pesos/hr)	W	M
Professional (center)	53.87	26.70	40.94	
Teachers	155.34	32.91	32.60	
Subsistence team	102.10	10.13	13.84	
House workers	808.11	7.10	9.41	

(US \$ = 9.1 pesos)

• HEALTH
Malnutrition in children aged 5 years and less (Urban, 1995)
Girls 37.3 % Boys 33.5 %

• EDUCATION

PA150 Incomplete elementary education(%)
Women 29.9 Men 26.4

Illiteracy (%):
Women 11.3 Men 7.4

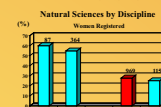
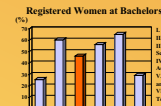
• Householders (%):
Women 20.6 Men 79.4

Age (years)	Women	Men
15-34	8.5	8.8
35-60	8.2	6.3



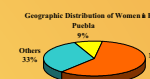
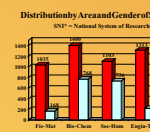
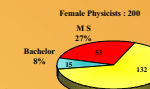
WOMEN IN PHYSICS

Staff (Universities & research centers):2369



Discipline	Men	Women
Physics	424	26.07
Chem	511	16.26

• Theoreticians 102
Experimentalists 92
Both 4
• 116 directive positions in 46 centers, only 11 held by women



THE FORUM

With the aim of analyzing the situation of Mexican women in Physics, and finding a proposal that may improve their participation, a forum was organized in Puebla City. It included the attendance of students, teachers and researchers from all over the country, mainly women. It is worth mentioning that secondary and high-school teachers and students took part.

Small groups discussed about the IUPAP Conference topics 1 to 5. Participants pointed out several factors that may cause the low participation of women. In this forum they also remarked the difficulties encountered as students or as physicists. During the closing session, some strategies were proposed to overcome the obstacles that women and physicists in general face in our society. Some of the resulting proposals will be carried out by the Mexican Physical Society.

Factors that restrict the participation of women

- Domestic work and child care are carried out by women while men are the source of income.
- Women are educated to play secondary roles and follow "properly-feminine" careers.
- Achievements and authority of women are not recognized.
- Science has no social recognition.
- Ignorance and misconception about physics and physicists.
- Education is deficient and does not promote a scientific formation.
- No coordination between different educational levels nor between scientists and basic education.
- A lack of extracurricular activities related to science.
- Infrastructure is insufficient.
- No support for studying during pregnancy and maternity.
- Programs are inflexible by demanding full-time student status.
- Law and regulations are aimed to preserve traditional roles.
- Overemphasis on academic study and research affects quality of family life.
- Most of scientific life and support is centralized around Mexico's capital.
- Scientific policy is often determined by non-scientists (mainly men).



Strategies

- Mass-media publicity
- Scientific Activities
- Creation of a national project on Physics Teaching
- Broadening scientific and cultural spectra in physicists formation
- Promoting the balance between professional and personal life.
- Monitoring women's participation in physics

What for? How?

To change the vision of society about women, physics and physicists.

In interactive museums (create them!), parks, schools, etc. Visits to laboratories and higher-level institutions (conducted by bachelors, graduate students and scientists).

Improving educational infrastructure: labs, instructional materials, etc.
To enhance analytic thought, curiosity and creativity since early ages.

Increase support for physics students to attend courses, meetings, conferences and to participate in research projects.

Making programs and regulations flexible.
To urge institutions to provide free childcare and dining rooms for students, teachers, researchers and their family.
To impel special programs for students with children.

A permanent statistical analysis and periodic meetings.

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Unless specified, all data are from the 2000 year.

CONCLUSIONS

Women in Mexico face cultural and institutional obstacles to develop their capabilities. A significant transformation is necessary. It is vital that everyone takes an active part to produce meaningful changes at every level. None of the proposals will be enough by themselves. Both, transforming ourselves and performing collective actions, will be necessary.

L. Meza-Montes (team leader)
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