

Women in Science

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National Science Day is celebrated in India on 28 February each year to mark the discovery of the Raman effect by Indian physicist Sir C. V. Raman on 28 February 1928. The event is now celebrated all over the country in schools, colleges, universities and other academic, scientific, technical, medical and research institutions. The focal theme for 2020 National Science Day is “Women in Science”. Women have made significant contributions to science from the earliest times. Historians with an interest in gender and science have illuminated the scientific endeavors and accomplishments of women, the barriers they have faced, and the strategies implemented to have their work peer-reviewed and accepted in major scientific journals and other publications. The historical, critical and sociological study of these issues has become an academic discipline in its own right.

The involvement of women in the field of medicine occurred in several early civilizations, and the study of natural philosophy in ancient Greece was open to women. Women contributed to the proto-science of alchemy in the first or second centuries AD. During the middle Ages, convents were an important place of education for women, and some of these communities provided opportunities for women

to contribute to scholarly research. While the eleventh century saw the emergence of the first universities, women were, for the most part, excluded from university education. Outside academia, botany was clearly the science that benefitted most from contributions of women in early modern times. The attitude to educating women in medical fields in Italy appears to have been more liberal than in other places. The first known woman to earn a university chair in a scientific field of studies was eighteenth-century Italian scientist, Laura Bassi.

Although gender roles were largely defined in the eighteenth century, women experienced great advances in science. During the nineteenth century, women were excluded from most formal scientific education, but they began to be admitted into learned societies during this period. In the later nineteenth century, the rise of the women’s college provided jobs for women scientists and opportunities for education.

Marie Curie, a physicist and chemist who conducted pioneering research on radioactive decay, was the first woman to receive a Nobel Prize in Physics and became the first person to receive a second Nobel Prize in Chemistry. Forty women have been awarded the Nobel Prize

between 1901 and 2010. Seventeen women have been awarded the Nobel Prize in physics, chemistry, physiology or medicine. Overall, the Scientific Revolution did little to change people's ideas about the nature of women – more specifically – their capacity to contribute to science just as men do.

According to UIS data, less than 30% of the world's researchers are women. UIS data also show the extent to which these women work in the public, private or academic sectors, as well

as their fields of research. But in order to reduce the gender gap, we must go beyond the hard numbers and identify the qualitative factors that deter women from pursuing careers in science, technology, engineering and mathematics (STEM).

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