

EXECUTIVE SUMMARY

UNESCO Science Report: Towards 2030 stated that though the global proportion of women students and graduates in higher education have increased steadily in the past decades, women are still a minority in the domain of Science, both at doctorate level as well as in the research profession. Gender equality in STEM therefore implies to encourage as well as promote further participation of women and girls throughout all levels of education, and facilitating equal opportunities for them all through their careers.

The present study was a multicentric project supported by the National Science and Technology Management Information System (NSTMIS) of Department of Science and Technology, Government of India. The general objective of the study was to evaluate the impact of women centric programmes sponsored by the government to reduce the gender gap in science, technology, engineering and mathematics (STEM) domains. This will also facilitate the policy makers to improve the women centric programmes and to identify the gap, if any. For this purpose a well designed elaborate questionnaire was prepared by all the regional principal investigators. Thereafter exhaustive and extensive field work through personal visits in universities, e-mails, and telephonically was conducted to get information about the women beneficiaries. Although during this phase of the study, many hindrances were faced by the regional principal investigator and her team. Incomplete data provided by the DST, reluctance of some women beneficiaries to give information, abrogation of article 370 in Jammu and Kashmir and lockdown due to Covid 19 pandemic were the major obstacles in gathering information of the women beneficiaries.

Data thus collected was subjected to data analysis employing Statistical Package for the Social Sciences (SPSS) version 16. To illustrate the graphs in present study, Microsoft chart wizard was used and text and tables have been made in Microsoft word and Microsoft excel. Analysis of data highlighted an increment in the number of projects sanctioned to women scientists from year 2003 to 2019. Most of the women beneficiaries had break in their career and family responsibility was the major reason for this break in all the three regions under consideration. A substantial proportion of women scientists were satisfied from their mentor's, host institutes and family

support. Women scientist from Punjab, Chandigarh and Jammu & Kashmir revealed a little mobility for transferring projects from one state to another. A significant proportion of women scientists had enhanced their educational qualification from postgraduate to doctorate during their research project.

In the present study maximum number of women scientists belonged to life sciences. Very few women scientist from Punjab represented chemical sciences (4.48%), engineering (5.97), mathematical sciences (2.99%) and engineering and technology development (2.99%) as their field of specialization. No woman scientist from Chandigarh and Jammu & Kashmir received any project in engineering and mathematical sciences. Similarly, health food and nutrition as well as earth science were not very popular among women scientist. It is clearly noticeable from the analysis that out of the total respondents a considerable percentage of the women scientist (35.82%) in Punjab and Chandigarh (42.86%), Jammu & Kashmir (20.59%) have not published even a single research paper from the projects awarded to them. A substantial proportion of women beneficiaries published one to two research papers only. It is also found that most of the projects were sanctioned to the host institute located in the regions with higher literacy rates.

Hence the present study from Punjab, Chandigarh and Jammu and Kashmir regions of north India recommended Policy makers should encourage women scientist from all backgrounds to explore scholarly and scientific careers, thereby contributing to their research excellence. Duration of the projects should be increased for better outcome of the projects. There is a disparity in terms of rules and regulations between the university and the funding institutions, so the projects should be governed by the rules and regulations of DST to avoid any hindrance in the governance of the projects. To empower women and as a matter of human rights, promoting women in Science is an overarching priority of government of India. Findings of the present study confirmed the fruitful results of the efforts of government of India in term of women centric schemes.