

Strategic mentorship to improve the representation of women in science and technology

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In light of the International Day of Women and Girls in Science on 11 February, Dr Vashnee Govender, a lecturer in Veterinary Public Health in the Faculty of Veterinary Science, details how strategic mentorship will improve the representation of women in science and technology fields.

The global under-representation of women in the fields of science, technology, engineering and mathematics (STEM) is well documented. Science and technology are fundamental to achieving the Sustainable Development Goals of the United Nations. These goals require holistic, sustainable solutions that can be constructed only through the collaboration of multidisciplinary teams, which include diverse perspectives.

Women enhance decision-making by bringing different perspectives and voices to the table, as they frequently act as caregivers and are able to multitask in running households.

Strategies for improving the representation of women in STEM fields need to be targeted from primary through to secondary and tertiary education levels. Girls need to be exposed to professions through structured mentorship programmes led by women who can be viewed as relatable role models. Such efforts will make professions in science and technology tangible to young girls who are often socially conditioned into gender stereotypes. These programmes must include support for gender-specific social issues, which inhibit the completion of education, such as child abuse, menstrual hygiene and teenage pregnancy.

Thereafter, women need continued mentorship in advancing their careers in STEM. Tragically, many women experience a workplace culture that is not conducive nor supportive of their growth in these professions. Valuable contributions from women are often dismissed because they are seen as originating from lesser individuals. Workplace harassment, maternity, the gender pay gap, gender bias and unequal growth opportunities are issues that continue to deter women from remaining in STEM professions. These issues also affect members of the LGBTQIA+ community working in STEM fields.

In 2018, the CEO of a South African engineering institute questioned the investment in women in STEM careers, suggesting that women are more suited to caring professions and part-time jobs. These types of narratives are incredibly damaging. The statement highlights the greater investment that is required to bring about equality in the workplace for women in STEM careers. Many women are balancing their careers with caring for their families; that is why policies that promote the equitable development of female employees through various support mechanisms must be implemented to retain women in these jobs. Additionally, strategic diversity and inclusion training

for men desperately needs to be instituted to identify and correct bias and discrimination in the workplace.

Although the representation of the veterinary profession has been dominated by women over the past few decades, societal norms still see male veterinarians favoured over their female counterparts. Nevertheless, much like other professions in the biological sciences, female veterinarians are significantly contributing to revolutionising a previously male-dominated profession.

These include the sectors of veterinary medicine, food safety, import control, public health, pathology, livestock production, community engagement and veterinary legislation. In the South African Veterinary Council's 90 years of existence, its first female president was appointed in 2022. Women in local communities are emerging as livestock producers, specifically with regard to poultry and small-stock production. Together with these women, female veterinarians are playing an essential role in animal welfare, food safety, food security and job creation in impoverished communities.

Transforming the way women are viewed and treated will require an overhaul of societal and cultural reform. Mentoring boys and men to understand that this sort of reform begins with them is critical. Child marriage and human trafficking are urgent concerns. The UN Office on Drugs and Crime reports that 79% of human trafficking involves the sexual exploitation of women and girls.

The International Day of Women and Girls in Science on 11 February is a platform that can demonstrate the true value and contribution of women in STEM. Under-representation and mistreatment of historically marginalised and minority groups are harmful to STEM innovation and the advancement of society. It is precisely the caring and nurturing instincts of women that are often deemed unsuitable for STEM careers that are advantageous in effecting positive change to societies served through science and technology.

Mentorship needs to span all stages of education and careers to render support to girls and women in STEM fields. There is still much work to be done until women have been established and rightfully acknowledged as equal, if not greater, contributors to science and technology.

- Author Dr Vashnee Govender, lecturer in Veterinary Public Health in the Faculty of Veterinary Science