

RESEARCH ARTICLE

Open Access

PARTICIPATION OF WOMEN AND GIRLS IN THE DEVELOPMENT OF NATURAL SCIENCES IN TASHKENT CITY STATE HIGHER EDUCATION INSTITUTIONS

Maftuna Khayrullayeva

National university of Uzbekistan, Tashkent, Uzbekistan

Abstract

This article sheds light on the invaluable contribution to science of some of the most mature women scientists working in the state higher education institutions in the field of agriculture and biology in Uzbekistan. Through a comprehensive analysis of their research, innovation, and experience, it sheds light on their remarkable achievements in the face of social challenges. Today, important initiatives are being put forward in the academic circles of the country to increase the place and position of women, to educate the new generation of young women scientists, and to encourage their promising projects. Ensuring gender equality in various aspects of public life, including in the field of education and science, is one of the priorities of the internal political concept of Uzbekistan. It aims to recognize the important role of women in the development of these areas by studying the historical context, current situation, problems and future prospects.

KEYWORDS: Agriculture, female scientist, biology, society, microbiology, state higher education institutions, soya, gender equality, strategy, gender inequality.

INTRODUCTION

Due to the attitude towards women in developed societies and the opportunities created for them, women conduct their activities in the same way as men. An educated woman is considered to be the path of development of the society, and it is she who educates children and brings them to adulthood. It forms their consciousness, outlook, and level of knowledge. In this regard, the head of our state said in his speech at the ceremony dedicated to the International Women's Day of 2020, "Therefore, if we intend to raise our children to be healthy and well-rounded people, loyal to the Motherland, first of all, science and professions for

women it is appropriate to emphasize that they have shown a special initiative, saying that we should open the career paths wide. As a result, in recent years, the number of our women who are being recognized as an example to others with their intelligence and intelligence, not only in our country, but also abroad, is increasing. February 11 is International Women in Science Day. This day has been celebrated since 2016, according to the resolution of the UN General Assembly. The aim is to focus on and support the potential of women in science. Women play an important role in the scientific and technological community. In

addition, if it is analyzed from the point of view of education and science, since the Nobel Prize was first established in 1901, a total of 61 women have been awarded Nobel Prizes in various categories. While this number shows progress towards gender equality, it is important to note that the number of women who have won the Nobel Prize is significantly lower than the number of men (more than 900). Of these, 6 women in Physics, 8 women in Chemistry, 12 women in Medicine, 16 women in Literature, 16 women in Peace, 3 women in Economics He was awarded the Nobel Prize. Scientists continue to be active in innovation research. Women in science are discovering extremely important medicines for life, exploring space, and creating new inventions in other fields of science.

At the same time, women make up less than 30% of the total number of researchers in the world. UNESCO is worried about the fact that women are currently underrepresented in the field of information and telecommunications - only 3%, and in natural sciences and mathematics - 5%. There is no doubt that their participation in science on the basis of equal rights will play an extremely important role in ensuring the diversity of scientific research, expanding the circle of people with unique talents, and achieving higher achievements in science. The resolution of the United Nations General Assembly calls on all countries in the world to focus on these existing problems, to identify the causes of gender inequality in science, technology and innovation, as well as to develop the necessary programs to attract women to the field of science.

We know that the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, in his work entitled "New Uzbekistan Strategy" stated that "the main goal of the state policy in Uzbekistan today is to pay attention and practical care to our women in a new way." , bringing to a higher level, strengthening the place and status of women in society is to ensure their rights and interests. In turn, they emphasized the need to consistently apply the belief that "Giving knowledge to women is to make the society knowledgeable, enlightened and capable" [2]. Scientific research by women

scientists makes a significant contribution to the development of production, industry, agriculture, social and cultural spheres. Since 2018, the "100 best innovative projects of Uzbek women" contest has been attended by students and schoolgirls, programmers and businesswomen in order to put rationalization proposals and innovative ideas into practice. The competition "Grants of female scientists" serves to support and encourage women in the field of science. It is possible to name hundreds of women who made a great contribution to the development of science and spirituality of our country, who left a name in the national history with their unique talent, who have high intellectual potential and a broad outlook. At the moment, the issues related to increasing the influence and place of women in scientific activity - helping scientists to solve social problems in a timely manner, creating organizational opportunities for conducting research, ending the problem of gender discrimination in scientific activity, awarding prestigious scientific awards for female scientists research grants, expanding foreign internship programs, increasing the academic mobility of scientists, commercializing innovative ideas, establishing social support projects, turning science into a driver and generator of social development in the further development of the field is an effective solution.

PURPOSE OF THE STUDY

The purpose of this pilot study was to determine women university faculty perceptions in a particular state higher education climate. Through the use of a survey instrument, female faculty perceptions were ascertained regarding their beliefs of the value of their work and productivity, possible differences in treatment based on gender, constraints put on women because of responsibilities in the home, and potential limitations on their career.

RESULTS

Today, 210 higher education institutions are operating in Uzbekistan. The largest share of higher education institutions belongs to the city of Tashkent. (There are 96 higher education institutions in total, 32 are state higher education institutions, the rest are private and foreign higher

education institutions [7]. From this we can know that the highest scientific potential is concentrated in higher education institutions of Tashkent city. There are 5 academics in the republic, 1000 more than 1500 PhD women scientists are engaged in scientific research.

Currently, the scientists of Tashkent city, who are conducting scientific research and pedagogical activities in the state higher education institutions, are leaders in their fields in the republic. Below we will get acquainted with the activities of scientists in the field of agriculture and biology related to it. One of our female scientists is Dilfuza Egamberdiyeva, who works at the National Research University "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" and D.Yo.Yormatova, a professor at the Uzbekistan State University of World Languages.

Dilfuza Egamberdiyeva is considered to be one of the quiet and genuine Uzbek scientists. Delightfully, Dilfuza Egamberdiyeva was appointed as the ambassador of the American Society for Microbiology (ASM) in Uzbekistan. It would be appropriate to say that this is confidence and encouragement to the women of our country. The activities of the American Society for Microbiology (ASM), the oldest and largest single natural science society in the world, are aimed at promoting and developing the science of microbiology [5]. This institution increases the scientific research capacity of society and helps to strengthen sustainable health systems around the world through global cooperation and educational programs. Dilfuza Egamberdiyeva's task is to ensure the activities of the American Microbiology Society in the country, to conduct scientific research in mutual cooperation. Dilfuza Egamberdiyeva graduated from the Faculty of Biology of the National University of Uzbekistan named after Mirzo Ulugbek, and in 2000 received the degree of Doctor of Science at the Humboldt University of Berlin, Faculty of Agriculture and Horticulture. He continued his post-doctoral studies at the universities of Helsinki, Manchester, Leiden, Florence and the German Agricultural Center. As they say, "Science cannot be acquired without hard work", the restless Dilfuza

Egamberdiyeva worked as a professor at the Chinese Academy of Sciences, Xinjiang Institute of Ecology and Geography in 2019. As a result of the cooperation with them, he began to lead the Uzbekistan-China joint laboratory opened under the National University of Uzbekistan. Dilfuza Egamberdiyeva's research is focused on the study of plant and soil microbiome, and currently she is cooperating with scientists from more than 20 countries of the world [6]. Our compatriot, who guides his students on the path of science, has been a member of the Global Youth Academy since 2014, and in 2017-2018 he is a member of the expert council of the German federal government on applied and humanitarian sciences. In 2018-2019, she worked as a member of the expert council of the UN Committee on World Food Security (HPLC).

D.Yo.Yormatova, a scientist known among farmers as "Sister Soybean" or "Mother of the Soybean", is a professor of the Department of Natural Sciences of the Uzbekistan State University of World Languages [3]. The scientist made an incomparable contribution to the expansion of the shadow fields. Today, soybean areas in the republic have exceeded 300,000 hectares. The scientist created five varieties of soybean and received three patents. High-yielding soybean varieties such as culture "B", "Vavilov" are planted in large areas. Even as a result of his tireless work, he created the early "Kelajak" variety of wheat, this variety has high yield, and is genetically stable in its resistance to diseases and insects. This variety is planted on large areas in a number of regions of the republic, and 83.4-90.2 centners of grain is obtained. Ertapishar "Kelajak" variety was very well received by farmers. The creation of this variety reduced the amount of wheat and flour entering the republic from Kazakhstan. Because this type of wheat contains up to 46% gluten, it is the best quality bread. This high-gluten variety was entered into the State Register in 2015 and received Patent No. NAP 2012 0008 of the Intellectual Property Committee of the Republic in 2015, and a new Patent for Culture "B" variety in 2021. He was the first to bring an environmentally friendly oil-producing olive plant to the republic, first it was tested in Oltinsoy district of Surkhondarya region and the first harvest was obtained. Collected olive

tree collections and created two new varieties named "Izumrud" and "Korakoz" and included them in the State Register of 2015. These new varieties have adapted to our soil and climate conditions, and today the agrotechnics of growing olive varieties have been developed in the republic. For the first time in the republic, starting from 2018, olives are being harvested. A scientist created olive breeding methods and made it possible to provide the population with olive oil. As a result of long-term efforts, olives in Oltinsoy district are producing 30-40 kg of olives per tree. This year, a 50-hectare olive plantation was established in Oltinsoy district. His monographs "Agrotechnics of olive cultivation" and "Olives of Uzbekistan" were published for the first time. The scientific work on olives is reflected in 70 articles and 3 monographs, the technology of planting soybeans between cotton rows is recommended by the President to increase soil fertility and obtain additional vegetable oil and animal feed, 2020 Andijan provided practical assistance to farmers in the implementation of this event in the region. Professor D.Yo.Yormatova graduated from the Samarkand Agricultural Institute, worked at the institute from an ordinary assistant to a professor until 1997, and since 1997 has been the head of the Department of Natural Sciences at the Uzbekistan State University of World Languages, and currently works as a professor of the department. is showing. He wrote and published 63 textbooks, study guides and monographs on agriculture and ecology. He published 21 books on fiction, fiction is a scholar's hobby, Turan folk writer, also publishes fiction books. His works are "Yusuf and Zulayho", "Love of Nadirabegim", "Circling love", "Love inscribed in marble" and others. The scientist considers himself a Babur scientist. He attends and attends all Babur-related meetings and lectures. The English writer Goskoin Bamber's work "The Great Baburs" was translated into Uzbek, and he collected and published all the articles related to Babur Foundation and Babur.

48% of professors and teachers at the Faculty of Biology of the National University of Uzbekistan named after Mirzo Ulugbek are women. 56% of women are scientists with a PhD, 17% with a DSc degree. Gafurova Lazizakhan Akramovna, doctor of

biological sciences, professor, was the first female soil scientist-doctor of science in the field of soil science in the Republic. She is the chairman of the expert council on "biological" sciences of the UAC under the Cabinet of Ministers. Member of the expert council of the Committee on Agrarian and Water Management of the Senate of the Oliy Majlis. Member of the Human Rights and Freedoms Commission of the Oliy Majlis of the Republic of Uzbekistan, regional representative of the Oliy Majlis on Human Rights (Ombudsman) of the Tashkent region. Gafurova Lazizakhan Akramovna is a member of the editorial board of prestigious journals - "Biological Journal of Uzbekistan", "Uzbekistan Agrarian Science Bulletin", "Soil Science and Agrochemistry", "Cotton Breeding and Grain Breeding", "Mother Earth", "Agrochemical Protection and plant quarantine" and "Vladimirsky zemledeles", "Ispolzovanie i okhrana prirodnikh resursov", "Problemy agrokhimii i ekologii" and "Vestnik Nizhegorodskoy selskohozyaystvennoy akademii". In 1998, she was the winner of the "Most active woman" republican competition in the category "Women active in the field of science". Awarded with the Certificate of Honor in the nomination of the Cabinet of Ministers in the nomination "Vice Chancellor for the most effective technology transfer" (2010), the Ministry of Agriculture and Water Management (2006, 2010), the Ministry of Higher and Secondary Special Education (2007, 2014, 2015, 2017, 2022), diplomas of the Ministry of Innovative Development (2019), Committee of Women and Girls of Uzbekistan (2006, 2012, 2016, 2020) and the Minister of Agriculture and Food of the Russian Federation Awarded with Honorary Certificate (2023).

Received the Gold Medal named after K. Timiryazev (Russia, 2019). L.A. Gafurova - elected academician of the Russian Academy of Sciences on June 2, 2022. In 1999, he received the honorary title of "Honorary Youth Coach in Uzbekistan". In 2011, "20th anniversary of the independence of the Republic of Uzbekistan", in 2017 "25 years of the Constitution of Uzbekistan", in 2022 "30 years of the Constitution of Uzbekistan" commemorative badge, in 2023 "Reputable Woman" badge, 2023 In

After defending his doctoral thesis, he wrote more than 400 scientific works, including 26 monographs, including 7 foreign ones, 3 atlases, including 1 foreign one, 17 patents and certificates, including 2 foreign ones, textbooks and educational manuals - 16, including foreign ones - 7. L.A. Gafurova's Hirsch index is h-index 4 according to "Scopus", h-index 1 according to "Web of Science", h-index 7 according to "Google Scholar" and h-index 4 according to RINS. 4 DSc, 20 PhD students defended their dissertations and received diplomas.

The reforms in the field of science and scientific activity, the practical results achieved in the development of the scientific personnel training system are a huge factor in ensuring the development of our country, in particular, in attracting more women to the field of science. In particular, if we talk about the current situation of women scientists in the field of biology in Uzbekistan, their competences in scientific, scientific and research institutions and production, the increase of intelligent women in the society is important for the upbringing of a healthy-minded, potential young generation. Our modern young female biologist scientists: Shahlo Turdiqulova, doctor of biological sciences, head of the department of genetics and biotechnology of SamSU, candidate of biological sciences, associate professor Gavhar Dushanova, Khurshida Ubaidullayeva - an internationally known scientist in genetic engineering, doctor of biological sciences. He worked on the creation of productive varieties of cotton "Polarok". Qulmamatova Dilafruz, doctor of biological sciences (DSc), senior researcher at the Institute of Genetics and Experimental Plant Biology of the Academy of Sciences of the Republic of Uzbekistan, Negmatova Surayyo Teshayevna, winner of the "Intelligent Woman" nomination of the national award "Uzbegim Ayoli - 2020", holder of the Order of Fame Our scientists such as Doctor of Economic Sciences, Senior Researcher, Doctor of Biological Sciences Artikova Hafiza Toymurodovna, Professor are constantly conducting research in science today [4].

Today, we are proud of the above-mentioned

biologists, and we try to follow them. But there are some depressing situations here. Let's talk about the challenges and obstacles faced by female biologists in Uzbekistan, as well as potential opportunities and strategies for achieving "gender equality" and success in the field.

DISCUSSION

Although there are few cases of discrimination against women in the field of science, it is a common situation. Evaluating a woman's contribution to science, creating artificial obstacles by someone in various processes of her scientific career, this is equivalent to harming not only that researcher, but also the scientific community. Because the scientific discovery or scientific research of a woman who claims to be a scientist can be useful for the society and the nation. Another problem is that although women work in fields related to modern technologies, they face serious obstacles in moving up the career ladder. For example, if someone goes on vacation because she is pregnant, someone else suffers from the unfair treatment of the management. In recent years, it has been observed that the attitude towards women in the corporate world is somewhat changing. Therefore, the leaders of most companies understand that diversifying the workforce is a convenient way to increase income. However, there are still many obstacles to the rapid progress of women in the field of science. One of such pitfalls is limited access to education.

According to UNESCO experts, women should become an integral part of the digital economy. So that in the Fourth Industrial Revolution there is no place for such an unacceptable tradition as "gender inequality".

Consequently, a strategy for achieving gender equality in the Republic of Uzbekistan by 2030 has been developed [1]. The strategy of achieving gender equality in the Republic of Uzbekistan until 2030 by the Decision of the Senate of the Oliy Majlis of the Republic of Uzbekistan No. SQ-297-IV of May 28, 2021 (Gender Strategy); The target indicators of the gender strategy have been approved[8].

For the gradual implementation of the gender strategy in 2023-2030, it is envisaged to approve

the programs of comprehensive measures each year.

One of the important measures to combat gender discrimination in the field of science is the creation of an appropriate database, taking into account the demand for scientists. The organization currently working on this information has 500 scientists in its composition. On the one hand, they are helping women to get an education and get a job, and on the other hand, they are consistently engaged in encouraging those who have achieved certain results.

Unfortunately, women still do not have a sufficient position in the fields of science and computer, informatics, technology. We will give a real example for those who interpret this situation in connection with factors such as women's "inferiority" or being entangled in the worries of children and livelihood.

Such obstacles will only make the mind dull, cause minor irritations and even coldness from science. It is the demand of today's times that women scientists should not stop scientific research. Scholars have their own spiritual and moral criteria. It is necessary to follow these criteria.

CONCLUSIONS

Briefly, in recent years, the number of our women who are being recognized as an example to others with their intelligence and intelligence, not only in our country, but also abroad, is increasing. Taking this into account, I would like to conclude with the following conclusions:

First of all, we should respond to the attention of the head of state to women in the field of science with our scientific research and discoveries.

Secondly, let the Society of Women Scientists, established under the State Committee for Family and Women, become a scientific platform where women scientists can speak their minds. It should be noted that one of the factors that serve the development of society and contribute to the development of human capital is determined by the large share of scientists in the field of science.

REFERENCES

1. "2022–2026 yillarga mo'ljallangan Yangi O'zbekistonning taraqqiyot strategiyasi to'g'risida"gi O'zbekiston Respublikasi Prezidenti Farmoni.
2. Шавкат Мирзиёев. ЯНГИ ЎЗБЕКИСТОН СТРАТЕГИЯСИ. – Тошкент: "Ўзбекистон"
3. нашриёти, 2021. 250 бет.
4. O'zbekistonning taniqli olimlari ensiklopediyasi 1-tomi, Toshkent: 2022. Science and Innovation. 342b.
5. Ўзбекистоннинг Маърифатпарвар Аёллари I-жилд , O'zbekiston Respublikasi Fanlar akademiyasi "Fan" nashriyoti davlat korxonasi Toshkent – 2021
6. <https://kun.uz/uz/news/2021/03/15/ilm-2020-yilning-eng-yaxshi-yosh-biolog-olimi-bilan-suhbat>
7. [https://uza.uz/uz/posts/dilfuza-egamberdieva-ozbekistonda-biolog-olimlarni -kopaytirish-kerak-video_559486](https://uza.uz/uz/posts/dilfuza-egamberdieva-ozbekistonda-biolog-olimlarni-kopaytirish-kerak-video_559486)
8. <https://stat.edu.uz/>
9. <https://lex.uz/ru/docs/5466673>