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Suggested citation (APA, seventh ed.)

Nuri, A. B., Asadova, A. A., Heyderova, N. A., & Mammadova, K. M. (2024). Gender issues in education. *Universidad y Sociedad*, 16(6), 272-278.

ABSTRACT

Social progress and sustainable development require gender equality and women's empowerment where education plays a critical role. Even as the crucial role of education in ensuring the development of gender equality is realized, there remains the need for in-depth analysis regarding the persistent challenges and obstacles that continue to discourage women's opportunities for education worldwide as well as a critical review of the effectiveness of current education systems at advancing gender equality. This paper reviews the literature and existing research works to provide an overview of different dimensions of gender inequality in educational contexts, assessing the global scenario of disparities in gender access to education, looking into the deterrents to women's education, and assessing how education contributes to engendering equality. Our findings indicate that everywhere in the world, socio-cultural norms, poverty, and violence against women keep girls and women out of education. Gendered division of labor, gendered career choices, and occupational segregation are important structuring factors in women's educational and career choices. Because of that, education systems now struggle to deal appropriately with inequalities between genders although progress has been made. It is indicated that specific intervention is still needed to break persistent barriers that women face in education. These results hint those factors such as economic factors, and systemic biases need to be fixed if there is to be gender parity in education.

Keywords: Gender equality, Education, Gender stereotypes, Discrimination, Inclusive education, Socio-cultural norms.

RESUMEN

El progreso social y el desarrollo sostenible requieren de la igualdad de género y el empoderamiento de la mujer, en los que la educación desempeña un papel fundamental. Si bien se reconoce el papel crucial de la educación para garantizar el desarrollo de la igualdad de género, sigue siendo necesario un análisis profundo de los desafíos y obstáculos persistentes que siguen desalentando las oportunidades de educación de las mujeres en todo el mundo, así como una revisión crítica de la eficacia de los sistemas educativos actuales para promover la igualdad de género. Este artículo analiza la literatura y los trabajos de investigación existentes para brindar una visión general de las diferentes dimensiones de la desigualdad de género en los contextos educativos, evaluando el escenario mundial de disparidades en el acceso a la educación, examinando los factores disuasorios para la educación de las mujeres y evaluando cómo la educación contribuye a generar igualdad. Los hallazgos indican que en todo el mundo, las normas socioculturales,

la pobreza, y la violencia contra las mujeres mantienen a las niñas y mujeres fuera de la educación. La división sexual del trabajo, las opciones profesionales en función del género y la segregación ocupacional son factores estructurantes importantes en las opciones educativas y profesionales de las mujeres. Debido a eso, los sistemas educativos ahora luchan por abordar adecuadamente las desigualdades entre los géneros, aunque se han logrado avances. Se indica que aún se necesitan intervenciones específicas para romper las barreras persistentes que enfrentan las mujeres en la educación. Estos resultados sugieren que es necesario corregir factores como los económicos y los sesgos sistémicos para lograr la paridad de género en la educación.

Palabras clave: Igualdad de género, Educación, Estereotipos de género, Discriminación, Educación inclusiva, Normas socioculturales.

INTRODUCTION

Education is essential for every aspect of people's development, including their socioemotional well-being and economic development. Education is considered to be the third eye which empowers people, facilitates innovative and creative thinking, and inspires individuals to dream. Education not only provides reliable information about the external world but also helps individuals think about and analyze themselves (Graham, 2023; Hermannsson et al., 2017). Educated people learn to be systematic and practical in day-to-day life. They can realize their potential and become more productive. However, basic education essentially begins at home, and the first teachers of a child are always their parents and other family members. Initially, toddlers listen and learn to utter words not from school, but rather from home or from where they spend their first few years of life. Home is the place where children learn to walk, talk, and learn basic ideas about society. Then the next level of education begins at school. Children's learning from school enables them to become more knowledgeable, rational, and skilled (Ali et al., 2024; Dutta et al., 2021).

On the other hand, gender discrimination is one of the main characteristics accepted by society as a result of established social norms, practices, attitudes, and behaviors among people in many countries. The issue of gender has now become a priority topic of discussion and intervention on a global scale (Freeman, 2004). Different concepts and approaches are applied in this field. The use of teaching strategies that promote a gender approach and sensitivity in education is essential for the professional development of teachers. Despite the establishment

of equal educational opportunities for women and men, in many parts of the world, gender inequality in the relevant professional fields is still in focus. In particular, it is still a matter of debate today that women are finding a greater place in the health and social sectors, while men are taking up professions in STEM fields. This suggests that gender stereotypes created during school years have a serious impact on students' career choices in the future (Jiang et al., 2024; Tey et al., 2024).

Throughout history, it has been a characteristic of historical education systems to reflect and reinforce broader societal norms favoring males through the systematic exclusion of females from formal education. Gender-focused reforms since the 19th century have played an important role in the better representation of women's rights and increasing their academic presence; however, significant obstacles continue to stand in the way (Freeman, 2019). Global policies in education, especially during the 20th and 21st centuries, have reiterated gender parity, especially with the turn of events from major international meetings such as the Women's Conference in Beijing, in 1995 (Manuh & Anyidoho, 2015). While progress has been made in increasing access to education, both persistent enrollment and retention and achievement gaps in education remain testimonies that this call for systemic inequalities continues to be highly relevant today. For example, as said before, girls are persistently absent in pursuing STEM career fields; this is a manifestation of the deeper sociocultural biases and barriers that ultimately discriminate against their educational and career aspirations (Monkman, 2021).

In the discussion of gender issues in education, debates persist between policies aiming at closing gaps between genders and those that can potentially address quality and relevance for all students. According to the critics, the focus on increasing enrollment, though important, largely neglects the broader educational experiences through which learning outcomes are influenced for both boys and girls (Beroíza-Valenzuela & Salas-Guzmán, 2024). Moreover, ongoing disparities are exacerbated by issues such as poverty, conflict, and traditional gender roles; as such, implementing multi-faceted strategies is important for creating inclusive and equitable educational settings. Looking ahead, filling the gaps among governments, NGOs, and educational institutions is basic to a continued focus on gender concerns within education reform. This will involve not only increased access but also enhancement in quality and relevance for both genders, with the overall view of bringing equity to society and enabling all to succeed (UNESCO, 2024).

Moreover, the professors' attitudes to gender equality may greatly affect the learning environment and the experiences of the students. It is recognized that such attitudes vary concerning many factors such as gender, personal beliefs, and institutional culture. But in general, it has been found that professors openly welcoming gender equality make the learning environment more inclusive, thus further enhancing the participation of students and the overall result of their academic work. Conversely, professors who do not think very highly of gender equality may encourage stereotypical biases in their classrooms, which would hurt young students' self-concepts. In fact, recent studies show that instructors are becoming more aware of issues concerning gender: "Professors in this study expressed more regular recognition of needs for fostering gender equality within higher education.". This reflects a greater trend within educational institutions to take seriously matters of gender inequality and to foster a more level academic playing field (Arens & Niepel, 2019).

MATERIALS AND METHODS

In conducting the research, a quantitative methodology was used in the analysis and collection of digital data to detect trends, evaluate relationships, and obtain general ideas. A survey was also used as a research method. In the study, tendencies were determined, predictions were made, and relationships were checked. The main purpose of the research is to determine the significance of a gender-oriented approach in the professional development of teachers, the importance of considering gender issues in general education through the selected method, and to develop discussions about the professional development program to be prepared. To accomplish that, the following research questions were addressed:

- What are teachers' opinions about considering gender issues in general education?
- What are teachers' opinions about considering a gender-oriented approach in their professional development?

The questions are aimed at obtaining sufficient information about the subject, in accordance with the topic of the study. The respondents answered a total of 20 open and closed questions. Gender inequality, which women face in its various forms, including discrimination, marginalization, and limited opportunities, remains a pressing global problem in many societies. Education has long been important in promoting gender equality and empowerment. It is a basic right that empowers individuals with the knowledge, skills, and tools to challenge societal norms, defend their rights, and prevail in the economic, social, and political spheres. Through education, policies,

programs, and projects can be implemented that truly promote gender equality.

The promotion of women and the elimination of gender inequality aim to comprehensively analyze the complex issues involved. Therefore, in this research, we aim to:

- To examine gender inequality in access to education
- To explore the positive outcomes of education for women's empowerment
- To critically analyze problems and gender inequality in the educational environment
- To explore strategies for promoting gender equality in education
- To critically analyze the effectiveness of interventions and identify future directions

RESULTS AND DISCUSSION

The reality is that gender inequality and discrimination continue in society today, and this discrimination is evident at all levels of education. Teachers knowingly or unknowingly practice gender discrimination and inequality. This makes it necessary to apply a gender-oriented approach in education. Gender mainstreaming in education refers to "teaching and learning processes that focus on the specific learning needs of girls and boys". In practical terms, learning materials, methodologies, content, learning activities, use of gender-appropriate language, classroom interaction, assessment, and meeting the special needs of boys and girls in classroom construction are taken into account in the teaching-learning process. This shows that their interest and success vary depending on their gender (Reinking & Martin, 2018).

According to different studies, while women are a minority in fields such as science, technology, engineering, and mathematics, men are also significantly underrepresented in health and other social sectors. Although studies show that there is few gender-oriented approaches to the motivation and success of students in pre-school preparation and elementary grades, this difference is reflected in the next stages of education, that is, in the upper grades. For this reason, they serve as an important starting point for integrating gender issues into individual subjects in schools. On the other hand, students' motivation changes dramatically when teachers teach gender-related topics in their classrooms. Both of the above-mentioned studies confirm how important it is to educate teachers on gender equality. Similarly, in many countries around the world, training and educational programs on gender equality are being developed (Blake, 2022; Farago et al., 2022).

But what are gender stereotypes? Gender stereotypes are assumptions made by society about men and women having certain characteristics (Kite et al., 2008). According to these assumptions, it is claimed that men and women will be different in terms of the fields they work in, the success they achieve, and the personal qualities they possess. At the same time, these ideas instill different characteristics in men and women. For example, men are always taught to be strong, brave, resilient, and tough in society, while women are taught to be noble, dignified, and elegant. However, spiritual qualities have nothing to do with gender. Children and youth are affected by gender stereotypes from an early age, with parental, school, teacher, and peer factors influencing the way students internalize their gender identities.

School teachers play an important role in promoting and implementing gender equality in education. Therefore, teachers should first examine their own gender stereotypes to treat boys and girls equally. In addition, teachers should be aware of gender differences in education and how to teach them so as not to discourage students from gender-related topics (Ceka & Murati, 2016). All this reflects how important it is to increase teachers' knowledge about gender equality. For this reason, it is extremely important to add and implement information on gender equality in education to the professional development program of teachers. Below we will define some important concepts and address some of their most important elements.

Gender inequality in access to education:

Gender inequality in access to education refers to girls' unequal opportunities and barriers to them. Women face less access to quality education than their male counterparts. Despite progress in recent years, significant gender gaps still exist in many parts of the world. Socio-cultural norms and practices, deep-rooted traditions, and gender roles often prioritize the education of boys over girls (Blake, 2022). This is also caused by gender stereotypes and prejudices. Poverty, economic factors, and early marriage give priority to boys' education at certain times. Girls are expected to contribute to household income or do housework. The cost of education, including school fees, school uniforms, textbooks, and private tuition, can be a prohibitive factor for families struggling with poverty.

Distance and Safety:

Geographical factors, such as long distances to schools or lack of schools, and safe transportation, disproportionately affect girls' access to education. Security issues, violence, harassment, etc., can keep them away from education. Child marriage remains a significant barrier for girl

children. Education increases women's self-confidence and self-esteem and gives them the right to be assertive, express their opinions, and be active in society. Education gives women economic independence, employment opportunities, and earning potential. By working, they contribute to the financial well-being of the family and invest in the education of children in the family. Educated women know about healthy nutrition and reproductive health, and have the knowledge to prevent certain diseases.

Education reduces maternal and child mortality and increases child health. Education is a powerful tool to challenge gender inequality. Education equips women with critical thinking skills, knowledge, and skills, giving them a greater say in important family decisions including education, career, health, and more. Thus, they participate in decision-making processes at the community level (Pm & Jayaraman, 2019). Educated women give more priority to their children's education. Educated women have more knowledge about family planning methods, which allows them to make informed choices about when and how many children to have.

Gender Stereotypes and Discrimination

Stereotypes regarding girls' academic prowess and gender norms in society can erode girls' self-esteem and ambitions, preventing them from pursuing specific subjects or careers that are viewed as "masculine" and restricting their access to further education. "Assigning certain attributes, characteristics, and roles to people based on their gender" is the definition of gender stereotyping. Gender stereotypes that are ingrained in girls' and boys' socialization might affect their expectations for their future aspirations, as well as their expectations for their schooling and career (Gunderson et al., 2012). As a result, disparities may be strengthened because many professions linked to women's traditional roles such as teaching and childcare pay less. Gender stereotypes can have a significant impact on student's educational goals and the decisions they make about their education and careers, which can hurt the job market and wider society.

Teenagers' academic performance is directly impacted by gender stereotypes. The gender-appropriate behaviors that teacher's model in the classroom can have an impact on females' academic aspirations and interests in traditionally male-dominated areas like mathematics. For instance, teachers place lower expectations on girls than on boys when it comes to math, which negatively affects girls' perceptions of their own abilities. Furthermore, research indicates that students' perceptions of their own abilities in the classroom have a big influence on their future success. Girls who are exposed to misconceptions

about mathematics may perform worse in the subject in the future, which could affect students' decisions about which courses to take in high school and college.

Adolescence brings about changes in self-confidence for both boys and girls; however, the impact on girls' self-confidence tends to be more negative than it is on boys. Girls were found to be more susceptible to these gender stereotypes than boys. Gender stereotypes exist in academics and society, and female students tend to exhibit lower levels of confidence and more depressive symptoms in school. Putnam discovered that the fear of gender stereotypes made females lose interest in and confidence in certain subjects, leading them to finally give them up and pursue other interests.

Stereotypes may lead to artificially restricted professional options. The stereotypes that students encounter often influence their career decisions (Master, 2021). People's preconceived notions about women's talents have led to their exclusion from or rejection of STEM disciplines. For example, girls may be more likely to think that their mathematical skills are indeed inferior to those of boys.

Subject preferences by gender

For example, science and mathematics are often considered more suitable for boys, while the humanities and arts are associated with girls. This can limit students' choices and reinforce stereotypes. Sometimes teachers give certain students more attention and opportunities for participation when addressing the class. Therefore, providing teacher training and support to overcome their own biases, develop gender-responsive teaching practices, and create an inclusive and equitable classroom environment. This may include training on unconscious bias, gender-sensitive pedagogy, and promoting inclusive classroom interactions. Introducing diverse role models, including women, in teaching materials, guest speakers, and class discussions can be helpful. This can help challenge stereotypes. Some of the main issues related to stereotypes and limited career options for women are:

- **Traditional Gender Roles:** Society often assigns women traditional gender roles, associating them with nurturing, caring, and domestic responsibilities. These stereotypes can influence career choices and discourage women from pursuing certain careers.
- **Occupational Segregation:** This refers to the concentration of men and women in various industries and professions. Women are often directed toward traditional occupations such as teaching, nursing, or administrative roles, as these are considered more suitable for them.

- **Lack of Role Models and Mentorship:** Limited representation of women in leadership positions and underrepresentation in certain fields can create a shortage of role models.
- **Prejudice and Discrimination:** Stereotypes and prejudices against women in the workplace can lead to discriminatory practices such as unequal pay, limited promotions, and dismissal.

If we carefully analyze textbooks, we will see that the images not only fail to promote gender equality but often depict gender inequality. Pictures and images affect children subconsciously; they take role models from them and shape their understanding of rights. For instance, in sexual reproduction lessons in biology books, teachers often refuse to teach this topic and recommend students study it at home. This sends negative messages to the students, implying that it is not appropriate to get information about sexual development. These messages also affect children's behavior. Additionally, it is a violation of gender equality to accept the notion that girls should laugh less often. Teachers should monitor and address this type of behavior.

Challenging stereotypes and encouraging young people to choose diverse careers is crucial. This involves ensuring the integration of gender equality into educational curricula, encouraging students to consider a wide range of career options, and engaging girls in STEM subjects at an early age. Empowering women through mentoring and networking is also essential. Women need support to overcome career challenges, break down barriers, and access opportunities.

It is necessary to create inclusive workplaces. There is a need to share best practices at the global level and strengthen advocacy for gender equality in education. Hands-on experiences, science fairs, coding clubs, girls' robotics workshops, and STEM-themed events should be organized to encourage and support participation in areas such as mathematics. Girls should be encouraged to collaborate with their peers in teamwork rather than compete. They should also be supported in accessing learning platforms, digital resources, and STEM-related tools. Governments should develop and implement policies to facilitate these initiatives.

Looking deeper into the problem, incorporating a gender-responsive approach into teachers' professional development programs affects students' learning experiences and achievement in positive ways. It allows students to interact and communicate with their teachers and peers in new ways, which in turn can improve their academic performance.

CONCLUSIONS

Gender inequality in education persists globally, with men predominantly focusing on STEM fields while women gravitate towards healthcare and social sciences. This disparity stems from various factors, including gender stereotypes, unequal access to education, and safety concerns for female students. In this regard, research indicates that gender stereotypes significantly impact students' academic choices and performance. These stereotypes are reinforced through socialization processes beginning in early childhood, with families playing a crucial role in shaping gender role beliefs. As children enter school, their exposure to stereotypes becomes more complex, influenced by teachers, peers, and mass media.

The impact of gender stereotypes on female students is particularly pronounced, leading to 1) lower confidence levels, 2) increased mental health issues, 3) poorer performance in certain subjects, and 4) fewer overall academic achievements. To address these issues, a multi-faceted approach is necessary:

Educators, parents, and media should encourage both genders to pursue all fields of study.

Efforts should be made to challenge and dismantle gender stereotypes in educational settings.

Equal access to education for all genders must be prioritized.

Safe learning environments for female students should be ensured.

In general, it is recognized that further research is needed to fully understand and address gender disparities in education but it is accepted that to reduce gender disparity in education, it is crucial to foster an egalitarian concept that challenges patriarchal systems and misconceptions about women's education. This approach could lead to more equitable educational opportunities and outcomes for all genders.

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