EQUAL OPPORTUNITY IN EDUCATION AND EMPLOYMENT IN SAUDI ARABIA: HEADING IN THE RIGHT DIRECTION BUT CHALLENGES REMAIN

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ABSTRACT

The aim of this study was to investigate the status of equal opportunity in education and employment in Saudi Arabia. Analyses of existing data show that the country has made a remarkable progress in educational enrollment at all levels (K-12 and higher education). However, challenges remain in terms of academic achievement for males, participation in the labor force and wage parity for females, and school access and retention for disadvantaged young people (ages 6-24 years old). To address these challenges and help achieve the sustainable development goals that the country envisioned in its "Vision 2030", it is imperative that all people, regardless of gender or social, and economic status, be treated fairly and given an equal opportunity to learn, work, prosper, and contribute to the development of Saudi Arabia and beyond.

INTRODUCTION

Equal opportunity to gain knowledge and skills to function in a society is a precondition for equal opportunity to participate in education, employment, and national development. Equal opportunity requires fairness and impartiality. Whether in education or other fields, fairness involves making sure that circumstances related to gender, socioeconomic status, and background are not impediments preventing any individual from realizing his or her potential. In an inclusive society, everyone has equal opportunities to learn and use his or her knowledge to achieve desired goals. One vehicle through which a nation helps its people achieve desired goals is a quality education that is accessible to all. Education benefits both individuals and the society as more education is associated with a higher income, a better life, and more participation in society (Field, KucZera, & Pont, 2007). Consequently, it is vital for individuals in a country to have equal access to appropriate educational services to develop their abilities and skills without limitations due to their background or circumstances. Thus, in the past decades, expanding education and making it available to all has been a priority in many countries. However, these countries still continue to face inequalities (Rice, 2015) in areas such as school access and retention, academic achievement, employment, and income. Thus, the aim of this paper is to investigate the status of equal opportunity in education and employment in Saudi Arabia to understand what has been achieved and what remains to be achieved.

BACKGROUND OF THE EDUCATION EFFORT AND SUCCESS IN SAUDI ARABIA

Saudi Arabia covers 80% of the Arabian Peninsula, making it the largest country in the Middle East. The population, as of 2018, is estimated to be 33,413,660 (19,240,956 males and 14,172,704 females), among whom 20,768,627 (10,575,895 males and 10,192,732 females) are Saudi and 12,645,033 (8,665,061 males and 3,979,972 females) are non-Saudis (Saudi General Authority for Statistics, 2019).

In the early years of its founding in 1932, Saudi Arabia was a poor country. With the blessing

of Allah, Subhanahu wa ta'ala (SWT), oil was discovered in 1936 and commercial production took off in 1938 (Al-Amri, 2011). Funds generated from this natural resource helped in developing the country and opened the door to economic prosperity and a better life for its people. As is known today, Saudi Arabia is a blessed country with rich natural resources and Islamic values. Capitalizing on these resources, Saudi Arabia has succeeded in modernizing the country and improving the life of its people and others around the world.

To continue on its development path, Saudi Arabia recognizes that a knowledge-based society in which all people have equal opportunity to learn, work, and prosper must be a priority. On this point, Alabdulmenem (2019) argued that it is through education that a knowledge-based society is created; therefore, Saudi Arabia has undertaken a massive transformation in education to prepare future generations. As education is one of the pillars through which a knowledge-based society is developed, Saudi Arabia has devoted an enormous amount of resources and effort to make education available to its people. The evolution of its spending on education is a key indicator of the government's commitment to the sector. Its spending on education went from $3.1 million (1947/1975) to $21.6 million (1954/1955), $50 million (1958/1959), $78 million (1962/1963), $92 million (1966/1967), $1billion (1974/1975), and $7.31billion (1983/1984). Under the two five-year development plans of the 1990s, the spending on education jumped to $25 billion (Rugh, 2002). According to a published national review for the Kingdom of Saudi Arabia entitled "Sustainable Development Goals" (Al Tuwaijri, 2018), $51.2 billion were allocated to education in 2018 (general education, higher education, and training), which constitutes the largest share of the 2018 state budget. These massive investments allowed Saudi Arabia to offer free education to its people. In addition to free schooling, until recently, higher education students were receiving monthly stipends from the government.

As a result of this vast investment and effort, the education sector has expanded and improved exponentially. Public education, which began in 1932 with 12 schools serving only 700 students was expanded to 365 schools serving 42,000 students by 1950. In 2000, it reached 4.11million students and, as of 2018, the K-12 sector counts more than 30,000 schools serving around 5,366,405 students. The higher education sector began with King Saud University, established in 1957 to accommodate the growing number of public-school graduates and help reduce the country's dependence on foreign higher education. Other universities were also established, notably King Fahd University (1963), King Abdul Aziz University (1967), and King Faisal University (1975) (Al-Amri, 2011; Rugh, 2002). As of 2018, Saudi Arabia was home to 30 state universities and numerous colleges and private higher education institutions (Ministry of Education, Saudi Arabia, 2018).

Many indicators of achievements and benefits exist today to support the government's commitment to the education sector. The net registration rates at elementary, intermediate, and secondary levels are 98%, 97%, and 94% respectively. For higher education, the total enrollment rate is 69%. The literacy rate in 2013 for 15 to 24-year old was estimated at 99.22% (Al Tuwaijri, 2018).

SIGNIFICANCE OF THE STUDY

In the 21st century, an era dominated by knowledge and information technologies, human knowledge is becoming more relevant than ever. Therefore, a country must utilize all its resources (natural and human) to establish itself in this world. Consequently, all citizens, regardless of their background (gender, ethnicity/race, socioeconomic status), must have an equal opportunity to learn

and utilize their knowledge to fulfill their dreams and contribute to the development of their nations and beyond. For this reason, the aim of this study is to examine the status of equal opportunity in education and employment to understand what has been achieved and what remains to be achieved in Saudi Arabia.

This study is unique from the existing literature in the sense that despite the tremendous progress in many fronts including educational enrollment at all levels (K-12 and higher education) and economic prosperity for the majority of its people in Saudi Arabia, challenges remain in terms of academic achievement for males, participation in the labor force and wage parity for females, and school access and retention for disadvantaged young people (ages 6-24 years old). As the country aims to achieve excellence and economic prosperity for all its people through a knowledge-based society, it is essential, particularly for decision makers, to know what has been achieved, what remains to be achieved, and who are left out in the area of equal opportunity in education and employment in the country. It is hoped that this study serves as an alarm to bring attention of decision makers to these issues so that they be part of the reform agenda envisioned by the country.

LITERATURE REVIEW

Equal opportunity in education and employment has received considerable attention in many countries in the last half century (Field, KucZera, & Pont, 2007). The topic has been investigated using a variety of factors and considerations. Wood et al. (2011) as cited by Zhu (2018) contended that the causes behind inequality opportunities in education and outcomes, which can be extended to other inequalities too, are many " such as gender, income, socio-economic status, ethnicity, indignity, culture, religion, language, geographical location, etc." (p.772). The author further stated that different countries use a combination of these factors to judge the extent to which their systems are equitable. For the purpose of this study, however, the focus is on education (access, retention, and achievement) and employment (income and job disparities).

Equal Opportunity in Education

To make education available to their people, Saudi Arabia and other countries in the Middle East and North Africa (MENA) in general have built schools and post-secondary institutions to facilitate access to education for their growing child and youth populations. These efforts and accomplishments deserve to be recognized and appreciated. However, it is important to avoid letting the accomplishments overshadow persistent challenges in other areas, such as the quality of education in terms of access, retention, and achievement for people from disadvantaged backgrounds. For example, Farah (2017) used TIMSS and PISA data to analyze the educational context in the MENA region. From her study, she documented that in the MENA region, students continue to drop out of school. The literature links the dropout rate to the quality of schools and excessive distance between schools and homes, which affect girls more than boys. However, according to Farah, boys are more likely to repeat grades and drop out of school than girls. The dropout rate is also attributed to the lack of accountability from parents to respect the requirement for compulsory schooling, inability of schools to make the school environment attractive to children, and the socioeconomic difficulties that some families face that force them to put their children to work. In the MENA region, about 5 million children between ages 6 and 10 and 4 million between ages 11 and 15 were out of school in 1995 and the figure was projected to increase in coming years (Akkari, 2004). Akkari (2004) further argued that those not attending formal schools are mostly the poor and those students are educated outside the formal school system. This system of education creates cultural and social gaps that

negatively affects the disadvantaged, which ultimately reduces their chances of enjoying the equal opportunities their societies have to offer. Similarly, Zhu (2018) argued that an unequal education system has negative consequences not only on the individual but also on his or her society as human potentials are being wasted.

In terms of academic achievement, students in MENA countries, Saudi Arabia included, are behind in international average achievement in comparison to the mean average of countries participating the Trends in International Math and Science Study (TIMSS) and the Program for International Student Assessment (PISA). Along gender lines, Saudi Arabia's student achievement in TIMSS (2015) shows that male students lag their female counterparts in all subjects (math and science) and domains (knowing, applying, and reasoning) (Barry, 2019; Martin, Mullis, Foy, & Hooper, 2016). A similar trend is noted in other national assessments of students attending preparatory year programs where the females' grade point average is 2.74 out of 4 in comparison to their male counterparts average score of 2.54 (Khoshaim, 2017).

Inequality does not affect education only. Whenever it prospers, the country's economy suffers, mistrust permeates the society, and the marginalized have fewer opportunities to improve their lives and contribute to the development of their countries. In such an environment, the least fortunate suffer from isolation, indignity, and discrimination. People marginalized across economic, social, and cultural sectors do not have opportunities to contribute and benefit from their economy, society, and communities (United Nations Development Program, 2016). To prevent such inequalities, educational policy makers and employment regulators must create a level playing field to ensure that appropriate educational policies are devised to reduce inequality and give young people access to both a quality education and the labor market. Access to an appropriate education increases employment opportunities and gives young people a chance to fulfill their dreams and participate in building their nations (Mihai, Titan, & Manea, 2017). Along this line, Becker (2014) used several databases to investigate the reversal of gender differences in educational attainment in West Germany for the period from late 1970s to the early 1980s. His findings showed a positive link between women's educational achievement and educational motivation through an increase in economic benefits such as return on education relative to wages and occupational positions. These factors helped women reverse the gender differences in academic attainment. He argued, however, that despite this reversal, the gender pay gap still exists as the relationship between gender and occupation and income remained constant over the examined period.

Equal Opportunity in Employment

The Saudi Ministry of Labor (2015) has documented several challenges that remain obstacles to equal opportunity in employment in Saudi Arabia. First, there is a mismatch between education output and labor market demand. The demand is either in jobs for low-skilled workers that the Saudis are not willing to accept or jobs for highly skilled workers that Saudis do not have. In addition, Saudi nationals are reluctant to take a job in the private sector as they consider the public sector the best place to work due to the wages, benefits, job security, and flexibility. Complicating these challenges is that Saudi nationals cost more for employers in terms of wages and job benefits than expatriate workers with the same skills. Therefore, employers in the private sector rely heavily on expatriate workers.

Second, youths and women make up more than half of the unemployed Saudis. Despite progress in youth employment in recent years, Saudi Arabia is among the countries with the highest

youth unemployment (41%). However, the largest disadvantaged group in terms of employment is women. Their unemployment rate is estimated to be around 74%. With respect to the few employed females (26%), education and the public sector are the principal areas of employment opportunities. Statistics show that 74% of employed females (26%) in Saudi Arabia work in schools for girls.

Last, the concentration of employees in a few domains is another concern. Some domains such as humanities and social sciences have high concentration of employees at the expense of other domains, such as in science, technology and engineering, where there is a lack of qualified Saudi graduates to meet the labor demand (Ministry of Labor of Kingdom of Saudi Arabia, 2015).

In addition to the above challenges, the social and economic backgrounds of children are also crucial factors that deserve to be considered when addressing social inequalities. The social background of a child does not encompass only education, income, and occupational prestige of his or her parents. It also includes the child's class in relation to others in his or her geographic location and culture (Parker, Jerrim, Schoon, & Marsh, 2016). Besides the social background, it is found that in Jordan, students with disabilities are not appropriately represented, for instance in textbooks, and the law mandating their inclusion in education gets very often ignored (Abu-Hamour, Al-Hmouz, & Aljarrah, 2019). As for a child's poverty level, Palmer (2014) cited Verhey (1995) who defined poverty as the lack of basic needs when confronted with life's demands. This in turn leads to injustice, domination, oppression, and lack of human rights.

CONCEPTUAL FRAMEWORK

Social justice theory is used in this study to conceptualize equal opportunity in education and employment. Social justice focuses on fairness in a good society, which helps in understanding how education systems (role of the state), the society, and people's cultural practices affect individuals and different social groups with respect to the delivery of education (Blackmore, 2013). For Calma, Baldry, Briskman, and Disney (2011, p. 2), "the concept of social justice involves finding the optimum balance between our joint responsibilities as a society and our responsibilities as individuals to contribute to a just society." The authors further explained that joint responsibilities to address inequalities, unfairness, and poverty require a fair distribution of resources, equal access to opportunities (e.g., education, employment), a fair system of law with due process, moral responsibility, workforce participation, and individual capability. Similarly, Bell (1997) argued that social justice is a combination of goal and process. On one hand, the goal focuses on the full and equitable participation of all individuals within a society. On the other, the process involves determining how to reach the goal by creating and providing an environment in which all individuals or groups of individuals within a society feel included and respected, with an opportunity, for instance, to learn, utilize their knowledge and skills, prosper, and contribute to the development of their nation without any limitation due to social considerations or circumstances.

RESEARCH QUESTIONS

The central question guiding the study is framed as follows:

What is the status of equal opportunity in education and employment in Saudi Arabia?

To help investigate this central question, three sub questions are stated.

In the context of Saudi Arabia, what is the status of equal opportunity in:

1. educational enrollment?
2. academic achievement between male and female students?
3. employment and wages based on gender, education level, and nationality?

METHODS

To investigate the status of equal opportunity in education and employment in Saudi Arabia, published documents were downloaded from two main databases—the General Authority for Statistics (GAS), Kingdom of Saudi Arabia (KSA) and TIMSS. The GAS documents consisted of reports on student (male and female) enrollment in education (K-12 and higher education), employment, wages, and reasons for not enrolling in an educational institution. The reports contain data on eligible Saudi students enrolled in education (K-12 and higher education), participation in the labor force, and employee wages as reported in 2018. Additional GAS data include factors cited as causes for non-enrollment in education among Saudi aged 6-24. These factors are labor or work, family assistance, illness or disability, marriage and pregnancy, repeated failure of grades, non-acceptance in educational institutions, difficulty in accessing a school, and desire to delay enrollment. The researcher grouped these factors into four categories—poverty (labor or work, lack of family assistance, difficulty in accessing a school), possible poverty/social (desire to delay enrollment in education, marriage, pregnancy), possible poverty/academic inability (repeated grade failure and non-acceptance), and illness or disability and other.

TIMSS documents contain reports on student (male and female) academic achievement in math and science taught in the 8th and 4th grades covering the last three TIMSS assessments (TIMSS 2007, TIMSS 2011, and TIMSS 2015). In addition to reporting the students' academic achievement for each participating country, TIMSS published reports include students' academic achievement by gender, which is the main target data for this study.

Table 1
List of Analyzed Documents and their Sources

Document type	Author (s)	Publisher
TIMSS 2015 International Results in Mathematics	Mullis, Martin, Foy, and Hooper (2016)	TIMSS & PIRLS International Study Center Boston College
TIMSS 2015 International Results in Science	Mullis, Martin, Foy, and Hooper (2016)	
TIMSS 2011 International Results in Mathematics	Mullis, Martin, Foy, Hooper, and Arora (2012)	
TIMSS 2011 International Results in Science	Martin, Mullis, Foy, Hooper, and Stanco (2012)	
TIMSS 2007 International Mathematics Report	Mullis, et al. (2007)	
TIMSS 2007 International Science Report	Martin, et al. (2007)	
Education and Training Reports (2017)	Saudi General Authority for Statistics (GAS)	Saudi General Authority for Statistics
Labor Market Data Second Quarter Reports (2018)		

The analyses of the TIMSS documents consisted of reviewing and recording group (males and females) means for each assessment (2007, 2011, and 2015) to identify trends in academic achievement between male and female students in Saudi Arabia. Students' academic achievements and achievement gaps were tabulated by grade levels (4th and 8th), subjects (math and science), year, and gender.

To analyze the General Authority for Statistics documents, the researcher reviewed and recorded the total of students' enrollment (by gender and education level), socioeconomic factors for non-enrollment in education (by gender and factors), participation in the labor force, wages, and wage gaps (by education level, nationality, and gender).

RESULTS

This section presents the results of the analyses to show what has or has not been achieved in terms of equal opportunity in education and employment in Saudi Arabia.

Equal Opportunity in Educational Enrollment

Table 2
Student Enrollment by Education Level and Gender 2017

	Level	Male	Female	Total
PK-12 Educ	Pre-primary	130,652	134,084	264,736
	Primary school	1,221,082	1,188,154	2,409,236
	Middle school	600,140	579,599	1,179,739
	High school	640,997	551,015	1,192,012
	Total (PK-12 Educ.)	2,592,871	2,452,852	5,045,723
Higher Education	Pre-University	87,631	16,087	103,718
	Bachelor's	573,110	663,818	1,236,928
	Higher Diploma	2,997	577	3,574
	Masters	10,543	7,546	18,089
	Doctorate	2,336	1,760	4,096
	Total (Higher Educ.)	676,617	689,788	1,366,405

Data source: The General Authority for Statistics (GAS), Saudi Arabia (SA)

Table 2 shows that the ratio between male and female students' enrollment in Saudi Arabia is almost equal to 1 (M/F=1.057=1 for PK-12 and M/F=0.98=1 for higher education). This result indicates evidence that males and females are enrolling in education at the same rate. This trend is noticed at all levels of education (pre-primary, primary, middle school, high school, pre-university, bachelors, higher diploma, masters, and doctorate).

Equal Opportunity in Academic Achievement Between Male and Female Students

Table 3

Saudi Arabian International Academic Achievement at the 8th and 4th Grade Levels in Math and Science by Gender and Year (2007, 2011, 2015).

		Grade Level											
		8th Grade						4th Grade					
		Math (Mean)			Science (Mean)			Math (Mean)			Science (Mean)		
Gender	Year	2007	2011	2015	2007	2011	2015	2007	2011	2015	2007	2011	2015
Male		319	387	360	383	424	368	---	402	363	---	405	352
Female		341	401	375	426	450	423	---	418	405	---	453	431
Achievement Gap		22	14	15	43	26	55*	---	16	43*	---	48	79*

Data source: Trend in International Math and Science Study (TIMSS) 2007, 2011, 2015.
*. Highest achievement gap between male and female students among all TIMSS participating countries.

---. Saudi Arabia did not take part in TIMSS at the 4th grade level in 2007.

The data in table 3 show that since 2007, the year in which Saudi Arabia began taking part in the TIMSS, female students have outperformed male students in math and science at both the 8th and 4th grade levels. As these results show, female students' scores are always higher than those of male students in all assessments (2007, 2011, 2015). Furthermore, the achievement gap in math (4th grade) and science (4th and 8th grades) between males and females in Saudi Arabia was the highest among all participating countries in TIMSS2015 assessment.

Socioeconomic Factors Affecting Equal Opportunity Enrollment in Education

Table 4

Socioeconomic Factors for Non-Enrollment in Education, 2017

Reason for non-enrollment in schools	Male	Female	Total
Poverty	442,230	204,720	646,950
Possible poverty/social	40,044	242,130	282,174
Illness/disability and other	85,524	89,885	175,409
Possible poverty/academic inability	122,220	102,502	224,722
Total	690,018	639,237	1,329,255

Data source: Data compiled from the GAS, KSA.

Poverty: Labor or work, lack of family assistance, difficulty in accessing a school.
Possible poverty/social: Desire to delay enrollment in education, marriage, pregnancy.
Possible poverty/academic inability: Repeated grade failure and non-acceptance.
Illness/disability and other: Health, physical, mental, and other.

Table 4 shows that more than one million eligible Saudi (6-24-years-old) are not enrolled in education due to socioeconomic factors. Both males (690,018) and females (639,237) are affected at almost the same rate by these socioeconomic factors. However, based on category factors, more males are affected by the poverty factor, more females by the possible poverty and / or social factor, and about the same for both males and females with respect to illness/disability and possible poverty/ academic inability.

Equal Opportunity in Employment and Wages

Table 5

Participation in the Labor Force as a Percentage of Saudi Population by Nationality and Gender, 2018.

	Nationality		
Gender	Saudi	Non-Saudi	Total
Male	63.50%	93.90%	78.7%
Female	19.60%	29.00%	24.3%
Total	41.55%	61.45%	51.5%

Data source: GAS, SA, Second Quarter 2018 data

Table 5 shows that participation in the labor force is low for Saudis (41%), particularly for women (19.60%). The same trend is noticed for non-Saudis.

Table 6

Average Monthly Wages and Wage Gap (in Saudi Riyal) by Education Level, Nationality, and Gender, 2018.

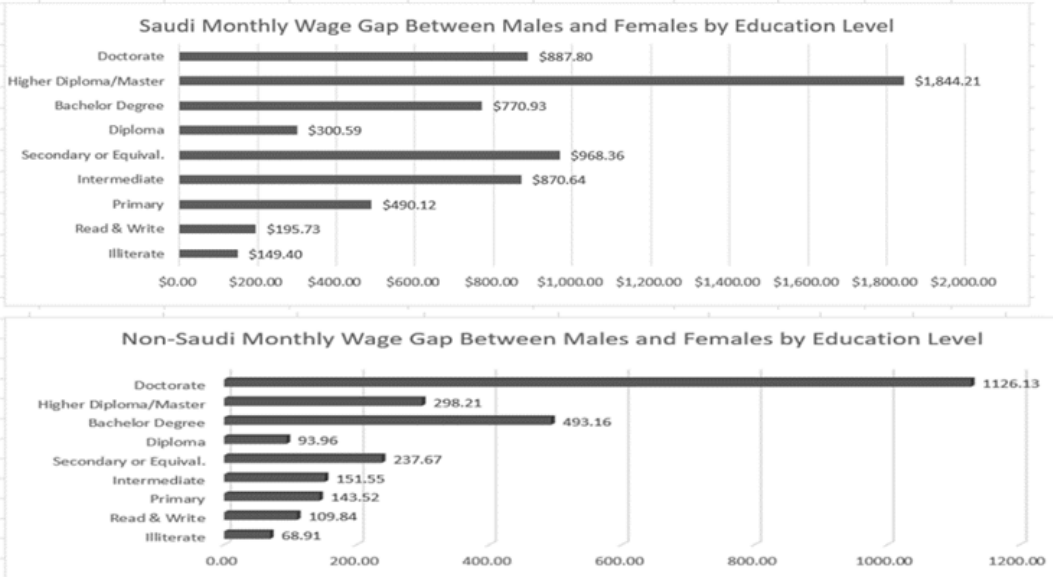
	Nationality by Gender					
Education Level	Saudi			Non-Saudi		
Gender	Male	Female	Gap	Male	Female	Gap
Illiterate	4,640	4,079	560	1,572	1,314	258
Read and Write	5,169	4,435	734	1,850	1,438	412
Primary	5,901	4,063	1,838	2,048	1,510	538
Intermediate	7,913	4,648	3,265	2,230	1,662	568
Secondary or Equivalent	8,874	5,242	3,631	2,839	1,948	891
Diploma	10,060	8,933	1,127	4,456	4,103	352
Bachelor's Degree	13,148	10,257	2,891	8,270	6,421	1,849
Higher Diploma/Master	18,720	11,805	6,916	13,559	12,440	1,118
Doctorate	26,701	23,372	3,329	17,750	13,527	4,223

Note: Exchange rate as of June 2020: $1=SAR 3.75

Table 6 shows that both Saudi and non-Saudi males make more money than women. The highest wage gap between males and females in favor of Saudi males is at the higher diploma/ master's degree level (SAR 6,916) while for non-Saudis, it is at the doctorate level (SAR 4, 223). Figure 1 displays the monthly wage gap in dollar ($) between males and females in favor of males.

Figure 1

Average Monthly Wage Gap (in dollars) in Favor of Males by Education Level and Nationality, 2018



DISCUSSION

As stated in the main research question, the aim of this descriptive study was to investigate equal opportunity in education and employment in Saudi Arabia. This section of the study discusses the results, which are divided into four parts—equal opportunity in enrollment (PK-higher education), academic achievement (math and science), socioeconomic status affecting enrollment in education (poverty, social and academic factors, and disability), and equal opportunity in employment (nationality and gender).

Regarding equal opportunity to enroll in education, Saudi Arabia's progress is excellent. The enrollment ratio between male and female students is about equal (*M/F=1.057=1* for PK-12 and *M/F=0.98=1* for higher education). This result demonstrates equal opportunity in educational enrollment between male and female students. This result, supported by other findings in the literature (Tawaijri, 2018), shows that the registration rate at different levels (98% for elementary, 97% for intermediate, 94% for secondary, and 69% for higher education) is comparable to that of advanced countries. This achievement should be maintained or even improved but the focus should shift from quantity to quality.

In terms of academic achievement, the result shows that in Saudi Arabia, females outperformed males in math and science in TIMSS assessments (2007, 2011, 2015). This finding is in line with findings in existing literature in Saudi Arabia, which documents that females outperformed males in math and science (Anderson, 2012; Barry, 2019; Martin, Mullis, Foy, & Hooper, 2016), and the national assessments with students attending preparatory year programs (Khoshaim, 2017).

Based on these findings and the literature, one can assert that males are at a disadvantage in terms of academic achievement.

Regarding the socioeconomic factors affecting non-enrollment in education, despite the progress in this area, according to the findings, more than a million eligible Saudis between the ages of 6 and 24 are not enrolled in education. The cited factors for non-enrollment in education include labor or work, lack of family assistance, difficulty in accessing schools, marriage, pregnancy, illness or disability, repeated grade failure, nonacceptance to educational institutions, and desire to delay enrollment. These socioeconomic factors noted in the context of Saudi Arabia confirm other findings in MENA countries, where similar causes are cited (Akkari, 2004). The author asserted that in 1995 about five million children between ages 6 and 10 and four million between ages 11 and 15 were not in school and these children were mostly the poor.

With respect to employment and wages, the findings show a disparity in wages and participation in the labor force. Women constitute the largest disadvantaged group, with an employment rate estimated at around 26%. Furthermore, these 26% employed women serve mostly in education (girls' schools) and this sector is the principal employer for women in the country. As supported in the literature (Becker, 2014; Field, KucZera, & Pont, 2007), the higher the education level, the higher the income (i.e., monthly wages). However, females having the same education level as males receive lower monthly wages than their male counterparts. The wage gap is noted at all levels of education. These findings confirm the challenges the Saudi Ministry of Labor (2015) noted as obstacles to equal opportunity in employment in Saudi Arabia. These obstacles include a mismatch between education output and labor market demand, low employment of youths and, particularly, women, and concentration of employees in a few domains (e.g., humanities and social sciences at the expense of other domains).

CONCLUSION

What can be concluded about the status of equal opportunity in education and employment in Saudi Arabia is that the country has made tremendous progress on many fronts, including expanding education and making it available to its people. The combination of policies, resources, and efforts has led to a net registration rate at elementary, intermediate, secondary, and higher education of 98%, 97%, 94% and 69%, respectively. Moreover, both males and females are enrolling at a comparable rate. In terms of educational enrollment, except for a few people disadvantaged by socioeconomic factors, an equal opportunity to enroll in education at various levels (elementary, middle school, high school, and higher education) is given to both males and females. However, inequalities remain in academic achievement, participation in the labor force and monthly wages between males and females. International and national assessments show that females' academic achievements are always higher than those of males. With this regard, males are at a disadvantage. As for females, despite being high academic achievers, they have fewer opportunities to participate in the labor force. Their participation is still around 26% and their employment opportunities are limited to few sectors, such as education and other public services. Moreover, females' monthly wages are always lower than males' monthly wages, even if the males and females have the same education and qualifications.

RECOMMENDATIONS FOR POLICY AND PRACTICE

In light of these findings, three recommendations for policy and practice are suggested to improve equal opportunity in education and employment in Saudi Arabia. The first recommendation is to maintain and improve what has been achieved to date. Enrollment in education (98%, 97%, 94%; and 69%) at all levels (elementary, intermediate, secondary, and higher) is comparable to that of advanced nations. Furthermore, both males and females are enrolling at the same rate. The pressing need now is to maintain the quantity but focus more on quality. As this study has shown, in Saudi Arabia, females are outperforming males in international assessments in math, science, and their domains. The same trend in favor of females exists in national assessments. Consequently, the males' persistent poor academic achievement deserves a concerted effort at the national, regional, district, and school levels to identify factors causing male students to fall behind. Responsibilities need to be situated to understand whether or not these causes are at the classroom level (teacher, teaching methods), school and school district level (leaders, leadership approach, resources), national level (policies, resources), or society level (culture, beliefs, values).

The second recommendation concerns the approximately one million of eligible Saudis ages 6-24 who are not enrolled in school due to socioeconomic factors such as labor or work, lack of family assistance, difficulty in accessing a school, marriage, pregnancy, illness or disability, repeated grade failure, nonacceptance to educational institutions, and desire to delay enrollment. It is hoped that the outstanding achievements in educational enrollment of most Saudis does not overshadow the pressing needs of disadvantaged groups. A combination of possibilities is suggested to address these issues. First, the lack of accountability from parents to respect the requirement of compulsory schooling must be addressed to prevent students from leaving the education system. Second, the schools and their leaders, in addition to making the school environment attractive to students, need a monitoring system that updates daily, weekly, or monthly. This system can be synced at the local, regional, and national levels so that students at risk of leaving the school system can be identified and supported before they actually leave the system. The more these disadvantaged people stay out of school, the higher the risk of their not coming back, and the lesser chance they have to break out of the cycle in which they are living, improve their lives and those of their children, and contribute to the development of their nation. Third, a separate assistance program (financial, material, social) is needed for people ages 6-24 who are not enrolled in education. If resources are limited to address socioeconomic factors to keep or bring them back into the regular school system, alternative or flexible educational programs (e.g., part-time classes such as once or twice a week, weekend classes, hybrid or online classes) must be created to enable them to get their education while they are living their daily lives.

The last recommendation concerns equal opportunity in employment and wages. Females in Saudi Arabia are high academic achievers, but their participation in the labor force is extremely low (26%) in comparison to their male counterparts (78.7%). An initial step to address this inequality is to open the door of employment for women in other domains rather than limiting their employment opportunities to a few domains, such as education (e.g., girls' schools, public services). In the technology era, it is possible to make such changes without harming the core values of the nation or its people. On the wage disparity between males and females in favor of males (e.g., $887.80 for a doctorate degree, $1,844.21 for a master's or higher diploma degree, $770.93 for a bachelor's degree), it is recommended to have a national pay scale policy that requires employers to provide equal pay to all their employees having the same education and qualification for the

service performed, regardless of gender and/or other social considerations. For such a policy to work, employers must be held accountable and action rather than just a policy on paper is needed.

REFERENCES

Abu-Hamour, B., Al-Hmouz, H., & Aljarrah, A. A. (2019). The representation of people with disabiloities in Jordanian basic school textbooks. *Dirasat, Educational Sciences*, *46*(2), 429-439.

Akkari, A. (2004). Education in the Middle East and North Africa: The current situation and future challenges. *International Education Journal*, *5*(2), 144-153.

Al-Abdulmenem, F. M. (2019). Country models for teacher's certification in Saudi Arabia. *Dirasat, Educational Sciences*, *46*(1), 661-677.

Al-Amri, M. (2011). Higher education in Saudi Arabia. *Higher Education Theory and Practice*, *11*(4), 88-91.

Al-Tuwaijri, M. M. (2018). *Sustainable development goals: 1st voluntary national review of Kingdom of Saudi Arabia*. Ministry of Economy and Planning, Saudi Arabia.

Anderson, E.W. (2012). *Is there a crisis for boys? Gender differences in student achievement and teacher training characteristics in the Gulf cooperation council countries* [Unpublish master's thesis]. Lehigh University.

Blackmore, J. (2013). Social justice in education. In B.J. Irby, G. Brown, R. Lara-Alecio, & S. Jackson (Eds.). *The handbook of educational theories* (pp.1001-1009). Information Age Publishing.

Barry, A. (2019). Gender differences in academic achievement in Saudi Arabia: A wake-up call to educational leaders. *International Journal of Education Policy & Leadership 15*(15). https://doi.org/10.22230/ijepl.2019v15n15a890

Becker, R. (2014). Reversal of gender differences in educational attainment: An historical analysis of the West German case. *Educational Research*, *56*(2), 184-201. https://doi.org/10.1080/00131881.2014.898914

Bell, L.A. (1997). Theoretical foundations for social justice education. In M. Adams, L.A.Bell, & P.Griffin (Eds.). *Teaching for Diversity and Social Justice: A sourcebook* (pp.3-15). Routledge.

Calma, T., Baldry, E., Briskman, L., & Disney, J. (2011). What is social justice? *National Pro Bono Resource Center*. https://www.probonocentre.org.au/wp-content/uploads/2015/09/Occ_1_What-is-Social-Justice_FINAL.pdf

Farah, S. (2017). High aspirations and limited opportunities: A comparison of education quality in the MENA region and its implications for youth. *The Muslim World*, *107*, 41-65.

Field, S., KucZera, M., & Pont, B. (2007). *No more failures: Ten steps to equity in education.* Organization for Economic Co-Operation and Development. https://www.oecd.org/education/school/45179151.pdf

Khoshaim, H. B. (2017). High school graduates' readiness for tertiary education in Saudi Arabia. *International Journal of Instruction*, *10*(3), 179-194.

Martin, M. O., Mullis, I. V., Foy, P., Olson, J.F., Preuschoff, C., Erberber, E., Arora, A, & Galia, J. (2008). *TIMSS 2007 international science report.* TIMSS & PIRLS International Study Center, Boston College. https://timssandpirls.bc.edu/TIMSS2007/PDF/TIMSS2007_InternationalScienceReport.pdf

Martin, M. O., Mullis, I. V., Foy, P., & Stanco, G.,M . (2012). *TIMSS 2011 international results in science*. TIMSS & PIRLS International Study Center, Boston College. https://timssandpirls.bc.edu/timss2011/downloads/T11_IR_Science_FullBook.pdf

Mihai, M., Titan, E., & Manea, D.I. (2017). Equal opportunity in education–The premise of social inclusion. *Journal of Social and Economic Statstics, 6*(2), 45-62.

Ministry of Education, Saudi Arabia. (2018). *Government higher education.* https://www.moe.gov.sa/en/HigherEducation/governmenthighereducation/Pages/default.aspx

Ministry of Labor of Kingdom of Saudi Arabia. (2015). Back to work in a new economy: Background paper on the Saudi labor market. Ministry of Labor, Kingdom of Saudi Arabia. https://epod.cid.harvard.edu/sites/default/files/inline-files/hks-mol_background_paper_-_full_-_april_2015.pdf

Mullis, I. V., Martin, M. O., Foy, P., Olson, J.F., Preuschoff, C., Erberber, E., Arora, A, & Galia, J. (2008). *TIMSS 2007 international mathematics report.* TIMSS & PIRLS International Study Center, Boston College. https://timssandpirls.bc.edu/TIMSS2007/PDF/TIMSS2007_InternationalMathematicsReport.pdf

Mullis, I. V., Martin, M. O., Foy, P., Hooper, M., & Arora, A. (2012). *TIMSS 2011 international results in mathematics.* TIMSS & PIRLS International Study Center, Boston College. https://timssandpirls.bc.edu/timss2011/downloads/T11_IR_Mathematics_FullBook.pdf

Mullis, I.V.S., Martin, M.O., & Foy, P. (2016). *TIMSS 2015 international results in mathematics*. TIMSS & PIRLS International Study Center, Boston College. http://timssandpirls.bc.edu/timss2015/international-results/wp-content/uploads/filebase/full%20pdfs/T15-International-Results-in-Mathematics.pdf

Mullis, I.V.S., Martin, M.O., & Foy, P. (2016). *TIMSS 2015 international results in science*. TIMSS & PIRLS International Study Center, Boston College. http://timssandpirls.bc.edu/timss2015/international-results/wp-content/uploads/filebase/full%20pdfs/T15-International-Results-in-Science.pdf

Palmer, F. M. (2014). Reformative role of fine and applied arts education in the alleviation of poverty, promotion of self-reliance and national development in Nigeria. *Journal of Visual Art Practice, 13*(2), 130-137.

Parker, P. D., Jerrim, J., Schoon, I., & Marsh, H. W. (2016). A multination study of socioeconomic inequality in expectations for progression to higher education: The role of between-school tracking and ability stratification. *American Educational Research Journal, 53*(1), 6-32.

Rice, J. K. (2015). *Investing in equal opportunity: What would it take to build the balance wheel?* National Education Policy Center. Great Lakes Center.

Rugh, W. A. (2002). Education in Saudi Arabia: Choices and constraints. *Middle East Policy, 9*(2), 40-55.

Saudi General Autority for Statistics. (2017). *Education and training survey 2017.* Saudi Arabia. https://www.stats.gov.sa/en/903

Saudi General Autority for Statistics. (2018). *Labor force survey 2018, second quarter.* Saudi Arabia. https://www.stats.gov.sa/sites/default/files/labor_market_en.pdf

Saudi General Autority for Statistics. (2019). *Population estimates.* Saudi Arabia. https://www.stats.gov.sa/en/43

United Nations Development Program. (2016). *UNDP policy and program brief: UNDP support to the implementation of the 2030 agenda for sustainable development.*UNDP.

Zhu, Y. (2018). *Equity in mathematics education:* What did TIMSS and PISA tell us in the last two decades? In G. Kaiser, H Forgasz, M. Graven, A. Kuzniak, E. Simmt, & B.Xu. (Eds.). *Invited Lectures from the 13th International Congress on Mathematical Education* (pp. 769-786). Springer.