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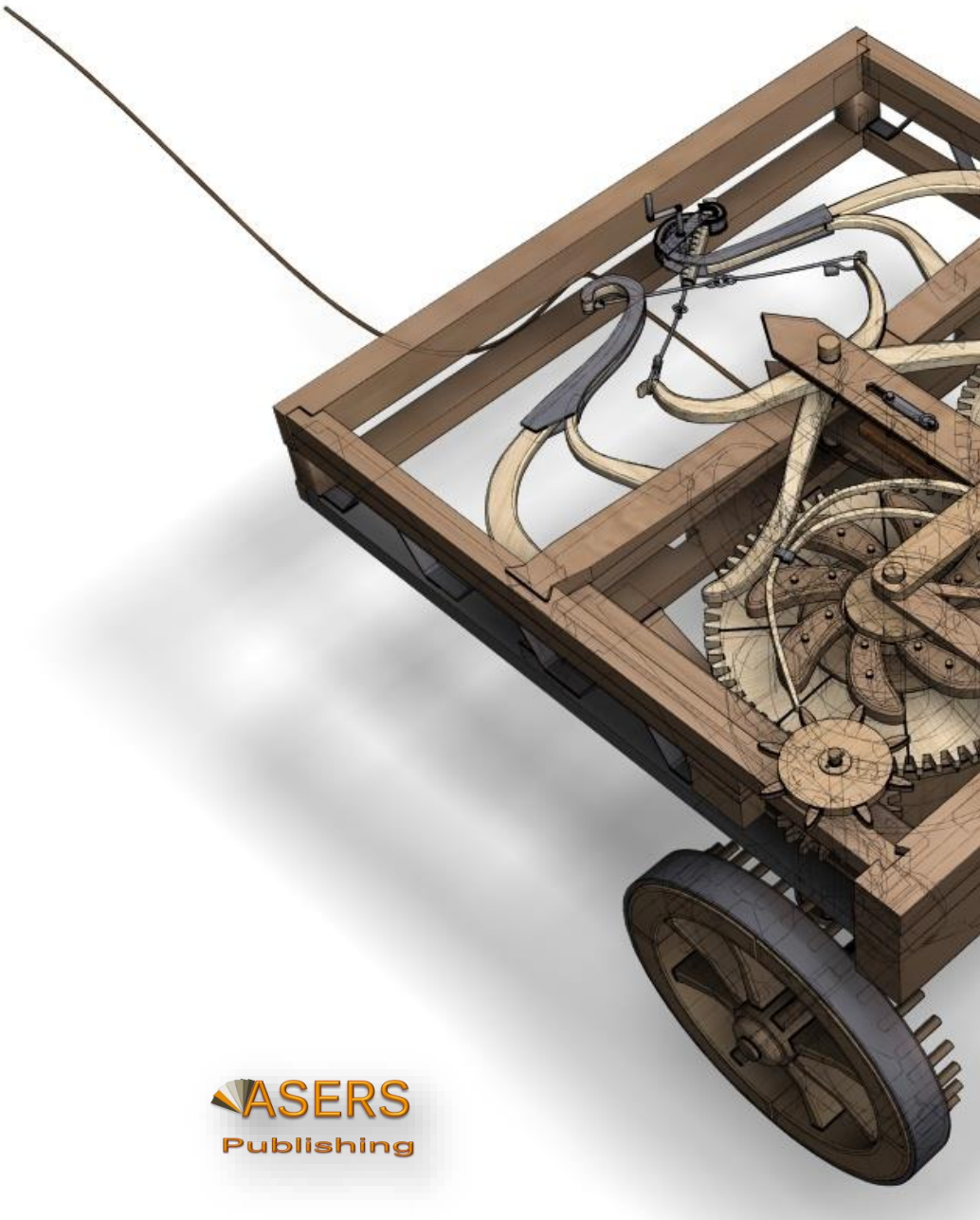

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The Journal is designed to promote scholars' thought in the field of education with the clear mission to provide an interdisciplinary forum for discussion and debate about education's most vital issues. We intend to publish papers that contribute to the expanding boundaries of knowledge in education and focus on research, theory, current issues and applied practice in this area.

The Editor in Chief would like to invite submissions for the **Volume XIV, Issue 16, 2023** of the **Journal of Research in Educational Sciences** (JRES).

The primary aim of the Journal has been and remains the provision of a forum for the dissemination of a variety of international issues, empirical research and other matters of interest to researchers and practitioners in a diversity of subject areas linked to the broad theme of educational sciences.

The aims and scope of the Journal includes, but is not limited to; the following major topics as they relate to the Educational Sciences:

- Educational Psychology;
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- Leadership in Education;
- School Improvement;
- Human Resources in Education;
- Education and Information Science;
- Global strategies in Higher Education;
- Learner's Needs in the 21st Century;
- The Role of Education in The Globalization World;
- Technology-Based Learning.

All papers will first be considered by the Editors for general relevance, originality and significance. If accepted for review, papers will then be subject to double blind peer review.

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Unraveling the Gender Gap: A Comparative Analysis of School Enrollment and Secondary Education Completion in Pakistan's Provinces

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Abstract: *This study examines the gender gap in school enrollment and secondary school completion in Pakistan using secondary data from the Pakistan Social and Living Standards Measurement Survey (PSLM) and Pakistan Education Statistics reports. A comparative analysis of the four provinces and their districts is conducted to identify regional dynamics contributing to gender disparities in education. The research investigates the relationship between students who ever attended school, those who passed secondary school, and the gender gap in enrollment. Descriptive statistics analyze school enrollment rates and dropouts across different regions. Data from the official governmental reports, including the Pakistan Bureau of Statistics and PSLM (2019-20), and education statistics reports from 2017 for Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan, serve as the foundation for this analysis. The study offers valuable insights into the complex web of causality and influence shaping the persistence of gender disparities in education in Pakistan.*

Keywords: Gender Disparity, Pakistan Social and Living Standards Measurement Survey (PSLM), dropout, enrollment, regional analysis

JEL Classification: I20; I29; K38; O57.

Introduction

Education is crucial in developing skills and human capital, ultimately contributing to increased economic growth (Abdurakhmanova, Shayusupova, Irmatova, and Rustamov 2020). Fostering human capital is essential for enhancing productivity through technological advancements, resulting in continuous, inclusive economic growth and addressing various economic challenges (Bawono 2021). Education supports a proficient and well-informed workforce while generating opportunities for the disadvantaged socio-economic segments of society (Law, 2022).

Pakistan occupies the 152nd position among 189 nations in the United Nations Development Programme's (UNDP) Human Development Index (HDI), as stated in the 2019 Human Development Report. Regrettably, Pakistan has not demonstrated progress in vital educational indicators such as literacy rates, gross enrollment ratios, and education spending compared to its regional counterparts (see Figure 1). Pakistan's literacy rate of 62.3 percent significantly trails its neighbouring nations. Furthermore, the primary school dropout rate stands at 22.7 percent (the 3rd highest in the region following Bangladesh and Nepal), a distressing statistic considering it occurs during the foundational learning phase (Human Development Report, 2019).

Figure 1. Education Indicators

Country	Literacy rate adult %age 15 years and older (2008-18)	Youth %age 15-24 years old		Population with some secondary education %ages 25 years & older (2010-18)	Gross enrolment Ratio (GER) 2013-18				Primary School Dropout rate (2007-2017)	Government Expenditure on education (% of GDP) (2013-2018)	Human Development Index (HDI) Rank
		Female (2008-18)	Male (2008-18)		Pre-Primary	Primary	Secondary	Tertiary			
	SDG 4.6				SDG 4.2	SDG 4.1		SDG 4.3			
Iran	85.5	97.9	98.3	69.8	52	108	89	69	4.0	3.8	65
Sri Lanka	91.9	99.1	98.5	82.8	101	102	98	19	1.6	2.8	71
Maldives	98.6	99.4	99.1	47.1	91	102	n/a	14	6.7	4.3	104
India	69.3	81.8	90.0	51.6	14	115	75	28	12.3	3.8	129
Bhutan	57.0	84.5	90.4	12.0	25	93	86	11	11.3	7.1	134
Bangladesh	72.9	94.5	91.5	46.7	40	111	67	18	33.8	1.5	135
Nepal	59.6	80.2	89.9	35.9	86	134	71	12	26.5	5.1	147
Pakistan	57.0	65.5	79.8	37.2	80	96	45	10	22.7	2.8	152
Afghanistan	31.7	32.1	61.9	26.1	n/a	104	55	10	n/a	3.9	170

Source: Human Development Report 2019.

Along with the literacy rate, gender inequality in education has remained a persistent issue globally, with stark disparities in school enrolment rates between boys and girls continuing to exist in many regions (Pasha 2023). Pakistan is one such country where the gender gap in education has been a significant challenge, with girls often experiencing higher barriers to accessing quality education (Zafar and Ali 2018).

Although there seems to be a significant increase in enrolment rates over the past few decades (Brollo, Hanedar, and Walker 2021). Despite this progress, however, there remain significant disparities in access to education between genders. Girls in Pakistan, particularly those living in rural areas, are often unable to attend school due to a range of social, cultural, and economic factors (Beteille, Tognatta, Riboud, and Nomura 2020). These factors include early marriage, limited mobility, gender-based violence, poverty, and cultural beliefs that prioritize boys' education over girls. The milieu of Pakistan, characterized by a tapestry of cultural, linguistic, and ethnic diversity, necessitates a comprehensive examination of the regional disparities in education (Durrani and Halai 2020). The country's four provinces, Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan, each present unique challenges and opportunities concerning gender-based educational inequalities. Additionally, the country's burgeoning population and inadequate educational infrastructure and resources investment further exacerbate the gender gap in school enrollment (Durrani and Halai 2018).

Furthermore, the gender gap in school enrolment in Pakistan must be situated within the broader context of the global commitment to gender equality in education, as enshrined in various international instruments and frameworks, such as the Sustainable Development Goals (SDGs) and the Education for All (EFA) movement (Durrani, and Halai 2018). Notwithstanding the progress achieved in recent decades in improving access to education for girls and boys alike, gender disparities in education persist in numerous countries, particularly in the developing world. Pakistan is no exception to this trend, as evidenced by the gender parity index (GPI) in primary and secondary education, which remains below the parity threshold (Dasgupta and Karandikar 2021).

As a preliminary matter, it is essential to expound upon the theoretical underpinnings of the gender gap in education, which have been posited by various scholars and researchers in the field of education, sociology, and economics (Breda, Jouini, Napp, and Thebault 2020). Among the seminal theories that have been advanced to elucidate the persistence of gender disparities in education are the human capital theory, the cultural reproduction theory, and the social capital theory (Awaworyi Churchill, Nuhu, and Lopez 2019). The human capital theory posits that individuals and families make rational decisions regarding investments in education based on expected returns and that gender disparities in education may be attributed to the differential valuation of human capital between males and females (Angrist, Djankov, Goldberg, and Patrinos 2019). The cultural reproduction theory, on the other hand, contends that cultural norms and values perpetuate social inequalities, including gender disparities in education, by shaping the expectations and aspirations of individuals and families. The social capital theory, meanwhile, emphasizes the significance of social networks and relationships in the distribution of educational opportunities and the perpetuation of gender disparities (Jæger and Karlson 2018).

A plethora of literature exists that investigates the gender gap in education from various perspectives, including economic, sociocultural, and policy-based lenses. The majority of these studies emphasize literacy comparisons across Pakistan's four provinces. However, it is urgent to concentrate on specific regions with greater gender disparities, be it urban or rural areas, to ensure targeted efforts are made to address these inequalities. Theories such as the human capital theory, gender and development theory, and social reproduction theory have been instrumental in shaping our understanding of the determinants and consequences of gender disparities in education. Nevertheless, a regional analysis of the educational gender gap in Pakistan remains relatively sparse, thereby warranting the present study's inquiry. This study employs a regional analysis to examine the extent of the gender gap in school enrolment in Pakistan. The study identifies areas where educational inequalities are most significant by examining regional disparities and developing targeted interventions to address these disparities. The study draws on data from the Pakistan Social and Living Standards Measurement Survey (PSLM), a nationally representative survey that collects data on education, health, and socio-economic conditions. The study focused on four key regions in Pakistan, including Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan. These regions represent distinct socio-cultural contexts and varying levels of economic development, providing a comprehensive understanding of the gender gap in school enrolment across different contexts. The present study answers the following research question.

1.To what extent do regional disparities contribute to the gender gap in the population that has ever attended school in Pakistan?

2.What are the differences in the percentage of the population that has completed primary level across the four provinces in Pakistan during the academic year 2019-2020?

3.What are the differences in the number of students who are out of school and GDP across each province in Pakistan?

1. Literature Review

The gender gap in school enrollment remains a focal point in contemporary academic discourse, particularly in the context of developing countries (Pasha,2023). This literature review delves into the existing body of knowledge surrounding the gender gap in education, with a focus on regional disparities in Pakistan. The review encompasses a range of perspectives, including theoretical underpinnings, empirical findings, and policy implications, aiming to provide a solid foundation for the present study.

The Education for All (EFA) report suggests that knowledge enhances an economy's human capital stock (Xu, Asiedu, and Effah 2022) and raises the likelihood of equitable resource distribution, irrespective of gender, caste, ethnicity, or geographical location (Kim *et al.* 2021). Achieving gender equality in education is vital for developing countries like Pakistan, which possess substantial human capital that can foster economic growth (Sattar, Ahmad, and Asim 2022)

Patriarchal structures, cultural norms, regional conflicts, preference for male children, and conventional perceptions of women's roles in procreation, household tasks, and early marriage have entrenched themselves within society (Ahmad, Alam, Khan, and Ullah 2023). The obstacles women encounter stem from existing gender disparities and inadequate educational investments at both the household and state levels, which also adversely affect Pakistan's economic growth (Holz and Bano 2022).

Several educational initiatives in Pakistan have shown effectiveness but have not yet achieved complete success. These include alternative learning programs (ALPs) for formal schools, digital innovation programs through partnerships between UNICEF and UNESCO targeting the attainment of Sustainable Development Goals (Ministry of Federal Education, 2022), a 5-year development program implemented in collaboration with the EU (Education Ministry of Balochistan 2021), the Ilm-PossibleFootnote1 Project for Zero OOSC (out-of-school children), and equity-based critical learning initiatives (Pasha 2023). However, 22.84 million secondary school-aged children have never enrolled in formal education (UNESCO Pakistan Country Strategic Document, 2018–2022). Furthermore, the literacy rate has dropped from 62% to 58% (World Bank Statistics, 2022), exacerbating global inequality. This situation prompts the question of whether current educational policies and projects are sufficient to address gender inequality across Pakistan's various provinces.

Several theories have been instrumental in shaping our understanding of gender disparities in education. The human capital theory posits those investments in education lead to enhanced economic growth and development (Seron, Silbey, Cech, and Rubineau 2018). This theory has been employed to argue that closing the gender gap in education can contribute to improved economic outcomes for individuals, communities, and nations (Beyer and Zeichner 2018). Gender and development theory, on the other hand, contends that gender relations and roles are socially constructed and that addressing gender disparities requires a transformation of these

societal structures (Fausto-Sterling 2019). Additionally, the social reproduction theory underscores the role of education in perpetuating social hierarchies and inequalities, including gender disparities (Zulfiqar and Prasad, 2021).

Empirical research on the gender gap in education has identified a multitude of factors that contribute to this phenomenon. Household income has been consistently found to be a key determinant of gender disparities in school enrollment, with girls from low-income families being less likely to attend school compared to boys (Batool, Anwar, and Asghar 2021). Parental education, particularly the mother's level of education, has also been shown to play a significant role in shaping gender disparities in education, with higher levels of maternal education associated with reduced gender gaps (Batool, Saqib, and Ghaffari 2019).

Sociocultural factors, such as prevailing norms and beliefs, are critical in understanding the gender gap in education in Pakistan (Kitterød and Nadim 2020). The patriarchal nature of Pakistani society, characterized by traditional gender roles and expectations, often prioritizes boys' education over that of girls. Consequently, this reduces girls' access to education, particularly in rural areas, where conservative norms and practices are more entrenched (Fakhr and Messenger 2020).

Accessibility to educational institutions and the quality of education provided have also been identified as crucial factors influencing the gender gap in school enrollment in Pakistan. Studies have revealed that a lack of schools, especially girls' schools, in remote areas limits the educational opportunities available to girls (Khan and Ali 2018). Moreover, the quality of education, encompassing aspects such as teacher quality, curriculum, and resources, has been found to have a differential impact on boys' and girls' enrollment, with girls being more vulnerable to the adverse effects of poor-quality education (Pervez and Iraqi, 2018).

Research focusing on regional disparities in education in Pakistan has concentrated mainly on differences between urban and rural areas, with rural areas generally exhibiting more significant gender gaps in enrollment (Bizenjo, 2020). However, studies examining disparities across provinces remain relatively scarce. Existing research suggests that the gender gap in school enrollment is more pronounced in provinces such as Balochistan and Sindh than in Punjab and Khyber Pakhtunkhwa (Bertocchi and Bozzano, 2020).

Governmental policies and interventions have played a significant role in addressing the gender gap in education in Pakistan. Initiatives such as the National Education Policy, the Education Sector Reforms, and the provision of financial incentives for girls' education have been implemented to promote gender parity in education (Government of Pakistan, 2009; UNESCO, 2012). However, while these efforts have resulted in some progress, the gender gap persists, indicating the need for continued and targeted policy interventions (Siddiqui, Zainal, Harun, Ghadzi, and Ghafoor 2020).

Theoretical perspectives such as human capital theory, gender and development theory, and social reproduction theory provide a foundation for understanding the broader context of gender disparities in education. Empirical research reveals the interplay of economic, sociocultural, and educational factors in contributing to these disparities, with household income, parental education, traditional norms, beliefs, access to schools, and the quality of education being particularly influential (Bizenjo 2020).

Moreover, the review underscores the importance of examining regional disparities within Pakistan, as the magnitude of the gender gap in education varies across provinces. While government policies and interventions have made some strides in addressing the gender gap, there is a need for sustained efforts and targeted approaches to achieve meaningful progress. This literature review serves as a basis for further research on the gender gap in education in Pakistan and offers valuable insights into potential avenues for policy development and implementation (Choudhry, Abdul Mutalib, and Ismail 2019).

2. Factors Affecting the Gender Gap in Rural and Urban Areas

In Pakistan, women frequently experience gender inequality. They are often perceived as sexual objects without the autonomy to make decisions for themselves or their families. Conversely, men are regarded as symbols of authority (Ali, Ali, Nadeem, Memon, Soofi, S.Madhani, and Bhutta 2022).

Several factors contribute to the gender literacy gap in both rural and urban areas across all provinces of Pakistan (Raza and Sohaib Murad, 2010). Socioeconomic and cultural factors play a significant role in perpetuating these disparities (Ahmed, Grundy, Hashmat, Ahmed, Farrukh, Bersonda, and Banskota 2022). In rural areas, patriarchal norms often place a higher value on male education, while girls' education may be considered less important or even unnecessary. Poverty and financial constraints further exacerbate the situation, as families with limited resources may prioritize boys' education over girls', believing that educated males have better employment prospects and can contribute more to the family's income (Abdullah and Zakar 2020).

Inadequate infrastructure and lack of access to quality educational facilities in rural areas disproportionately affect girls. Long distances to schools can pose safety concerns for girls, deterring parents from sending them to school (Tayyaba 2012). Furthermore, a shortage of female teachers, particularly in rural regions, can discourage families from enrolling their daughters in schools. Some parents may feel uncomfortable sending their daughters to schools with male teachers. Poor sanitation facilities in schools may also lead to a higher dropout rate among adolescent girls (Shah and Armstrong 2019).

In urban areas, while the gender literacy gap is generally smaller, disparities persist. Traditional gender roles and cultural norms can influence families' decisions regarding girls' education, often prioritizing boys' education and future careers (Khurshid 2016). Even in urban settings, a lack of quality educational facilities, an insufficient number of female teachers, and inadequate resources can hinder girls' access to education. In both rural and urban areas, early marriages and the expectation for girls to contribute to household chores can result in girls leaving school prematurely (Saleemi and Kofol 2022). Addressing these factors is critical to closing the gender literacy gap in Pakistan and ensuring equal educational opportunities for all. Gender discrimination is profoundly ingrained within Pakistani society. To counteract this discrimination, it is vital to educate the entire community, with particular emphasis on women, and to foster gender sensitivity, ultimately enhancing the social standing of women in Pakistan.

3. Methodology

In the present study Secondary data was collected from Pakistan Social and Living Standards Measurement Survey (PSLM), the Pakistan Education Statistics report. This data provided information on school enrollment rates, students ever attended the school, and students out of school disaggregated by gender and region. Furthermore, the research employs a comparative analysis of the four provinces and their districts to highlight the divergent dynamics that shape the gender gap in school enrollment across the country. This comparison allows for a more nuanced understanding of the regional specificities and the distinctive factors contributing to the persistence of gender disparities in education. Descriptive statistics were used to analyze the school enrollment rates and drop out across different regions in Pakistan.

4. Data Collection Procedure

To achieve this objective, the investigator has chosen to examine official government reports and documents to evaluate the progress of educational outcomes during the 2019-2020 timeframe. The documentation assessed for this study includes reports from the Pakistan Bureau of Statistics pertaining to the population census and the Pakistan Social and Living Standards Measurement Survey (2019-20), and Pakistan Education Statistics reports from 2017 for Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan. These comprehensive reports encompass data on female and male students from rural and urban areas across all districts within the four provinces, specifically focusing on those who attended school and those who completed matriculation or secondary school education during the specified period(see Table 1 for details).

5. Results

Table 1. Detail Population of four provinces of Pakistan Census 2017

Sr#	Province	No of districts	Urban population	Rural population	Total population
1	Punjab	37	40. 387,298 Male=20,760,984 Female=19,621,729	69,625,144 Male =35,197,990 Female=34,425,030	110012442 55958974 54046759
2	KPK	35	5,728,944 Male=2972367 Female =2756577	24793514 Male=2972367 Female=12495278	30523371 Male=15467645 Female=15054813
3	Sindh	29	24,908,232 Male= 13007937 Female = 11900295	22,975,292 Male= 11919109 Female = 11056183	47886051 Male= 24927046 Female = 22956478
4	Balochistan	34	3400,876 Male=1,793,554 Female =1,607,253	8,943,532 Male=4,690,099 Female =4,253,393	12,335,129 Male=6483736 Female =5,850,613
	Total		75,658,835 Male =39151121 Female=36507714	131,704,017 Male = 66867099 Female=64836918	207684626 Male=106018220 Female =101344632

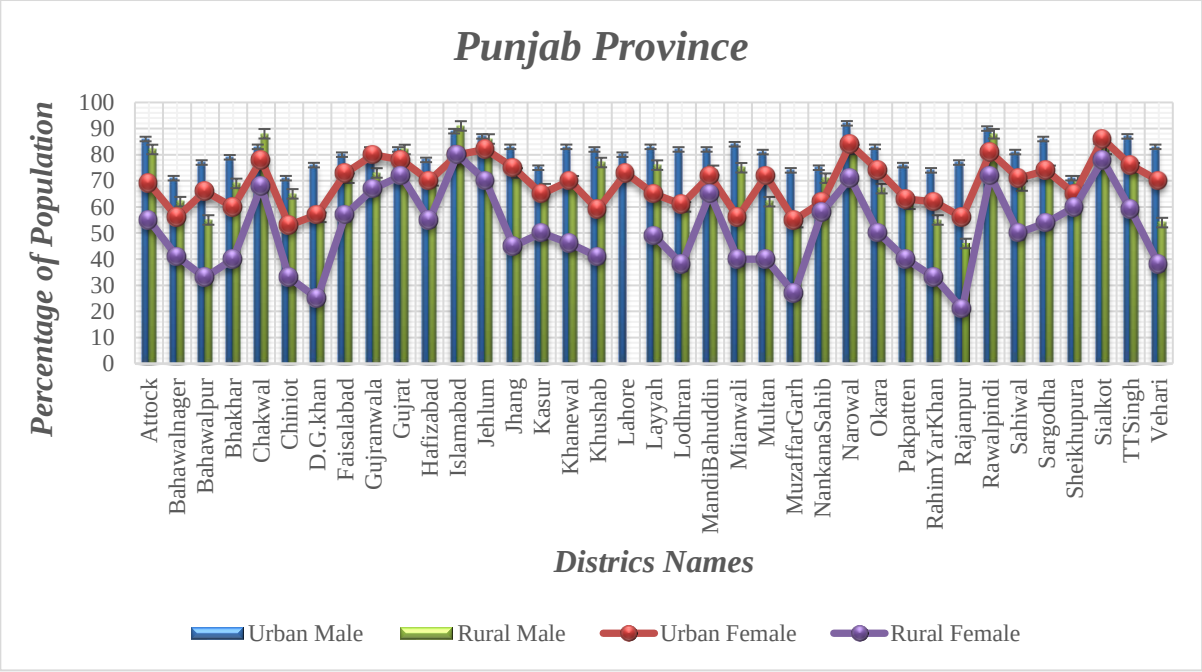
Source: www.pbs.org.pk

Table 1 summarizes demographic data across four provinces in Pakistan, including Punjab, KPK, Sindh, and Balochistan. For each province, the table lists the number of districts and the number of the male and female populations of rural and urban districts. According to the latest census of Pakistan 2017 population, **Punjab province** consists of 37 districts. The urban population is 40,387,298, with 20,760,984 males and 19,621,729 females. The rural population is 69,625,144, with 35,197,990 males and 34,425,030 females. The total population is 110,012,442, with 55,958,974 males and 54,046,759 females. **Khyber Pakhtunkhwa** Province has 35 districts. The urban population is 5,728,944, with 2,972,367 males and 2,756,577 females. The rural population is 24,793,514, with 12,473,367 males and 12,495,278 females. The total population is 30,523,371, with 15,467,645 males and 15,054,813 females. **Sindh** has 29 districts in this province. The urban population is 24,908,232, with 13,007,937 males and 11,900,295 females. The rural population is 22,975,292, with 11,919,109 males and 11,056,183 females. The total population is 47,886,051, with 24,927,046 males and 22,956,478 females. **Balochistan province** comprises 34 districts. The urban population is 3,400,876, with 1,793,554 males and 1,607,253 females. The rural population is 8,943,532, with 4,690,099 males and 4,253,393 females. The total population is 12,335,129, with 6,483,736 males and 5,850,613 females.

5.1 Percentage of the Population That Has Ever Attended School

In the Punjab province, a comparison of the urban and rural male and female population data across districts highlights certain disparities in gender and literacy rates. Notably, districts such as Narowal (92%/) and Sialkot (86%) exhibit the highest urban male and female population percentages, respectively, while Bahawalnagar (71%) and D.G. Khan (57%.) have the lowest percentages. The rural population distribution reveals that Rawalpindi (88%) has the highest male percentage, whereas Rajanpur (46%.) has the lowest. For rural females, Sialkot (78%,) has the highest percentage, while Rajanpur (21%) again has the lowest. This data suggests a significant gender gap in districts like Rajanpur, particularly in rural areas. On the other hand, districts like Sialkot showcase a relatively smaller gap in literacy percentages between males and females in urban and rural areas. In conclusion, while some districts in Punjab exhibit a considerable gender gap in terms of literacy rates, others demonstrate greater parity between the genders, emphasizing the need for targeted interventions to address these disparities (see Graph 1).

Graph 1. Gender disparities in rural and urban districts of Punjab

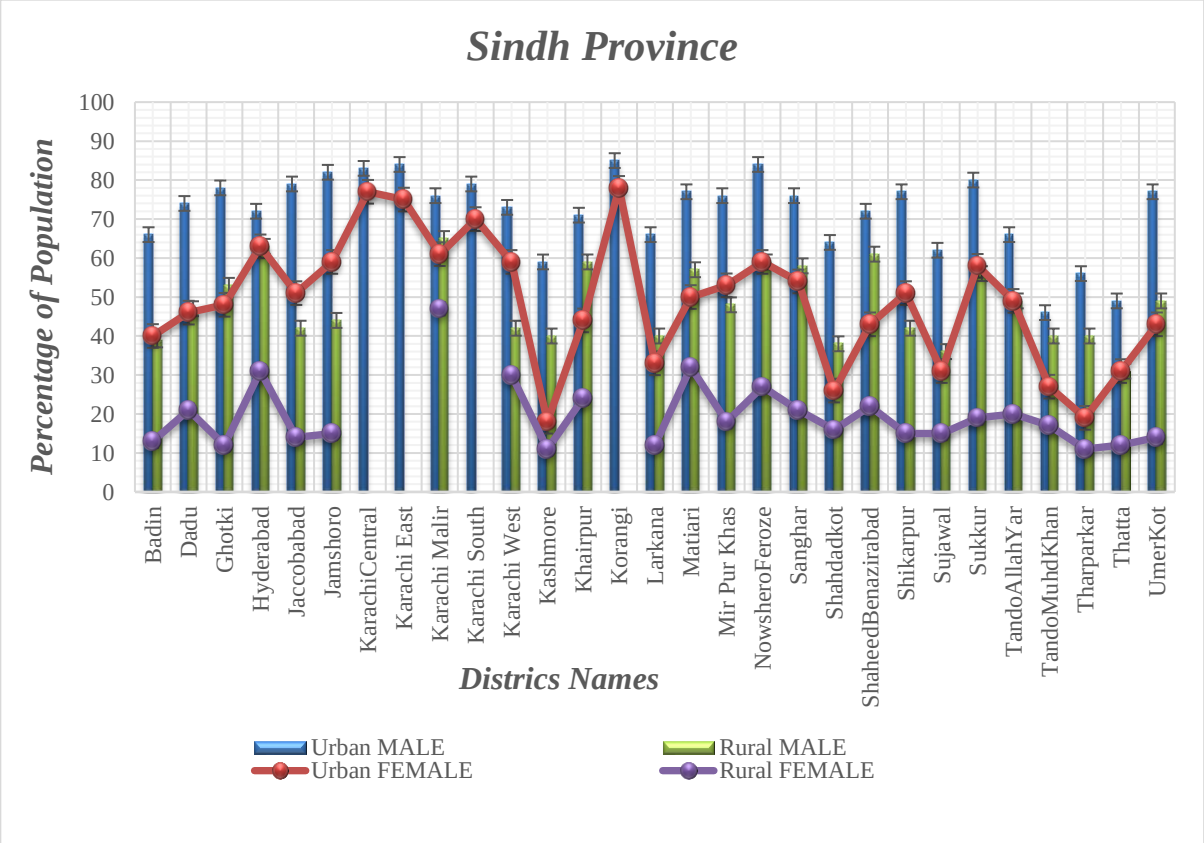


Graph 2 represents the comparison of urban and rural male and female literacy rates across various districts in the Sindh province. A notable trend emerges with regard to the gender gap in literacy rates between males and females, with females generally having lower literacy rates than their male counterparts. In the urban areas, Korangi has the highest literacy rates for both males (85%) and females (78%), while Tando Muhd Khan exhibits the lowest rates for males (46%) and Thatta for females (31%). In terms of rural areas, Hyderabad district

displays the highest literacy rate for males (63%), while Matiari has the highest for females (32%). Conversely, Kashmore has the lowest literacy rate for rural males (40%) and Badin for rural females (13%).

The gender gap in literacy rates is quite evident in some districts. For example, the urban areas of Badin show a considerable gap with 66% for males and 40% for females. Similarly, the gap is significant in the rural areas of Ghotki, with 53% for males and only 12% for females. On the other hand, some districts exhibit a smaller gender gap in literacy rates. Karachi Malir's urban area demonstrates a relatively smaller gap, with 76% for males and 61% for females. In the rural context, Karachi Malir again shows a smaller disparity, with 65% for males and 47% for females. Overall, the data indicates a persistent gender gap in literacy rates across the districts of Sindh province, with females consistently exhibiting lower literacy rates than males. The disparity is more pronounced in rural areas, highlighting the need for targeted interventions to bridge this gap and promote educational equity.

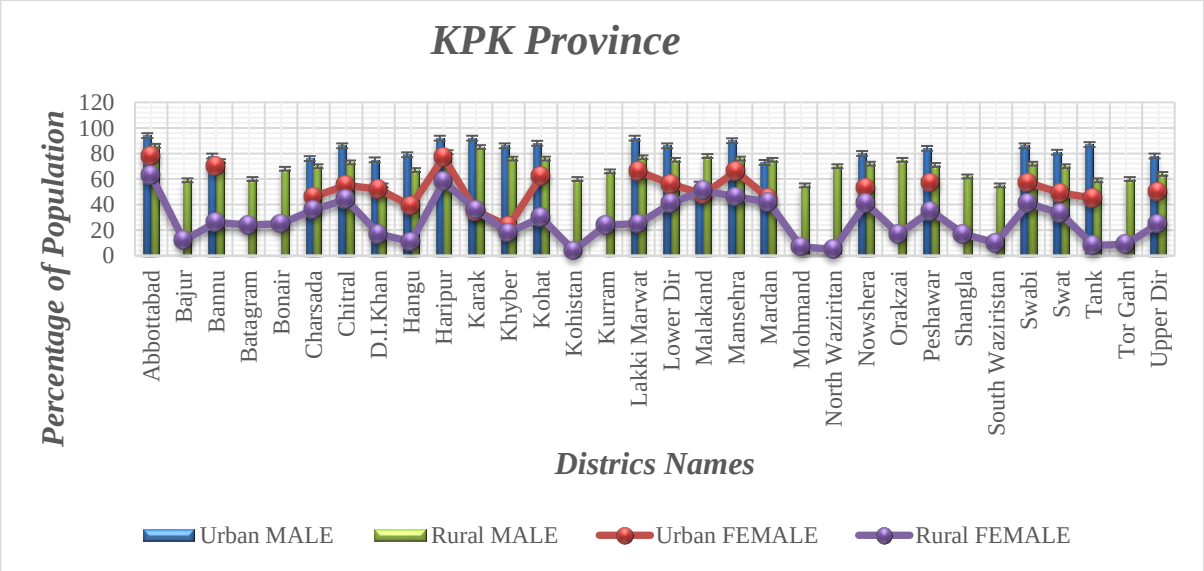
Graph 2. Gender disparities in rural and urban districts of Sindh



Graph 3 presents a comparison of urban and rural male and female literacy rates across districts in Khyber Pakhtunkhwa (KPK). A variety of trends emerge when comparing the data, highlighting disparities in literacy rates and gender gaps in both rural and urban areas. The district with the lowest overall literacy rate is Kohistan, with rural male and female literacy rates at 60% and 4%, respectively. The gender gap in literacy is particularly pronounced in rural areas, with Hangu showing a significant difference between male (67%) and female (11%) literacy rates. Similarly, in Bannu, the rural male literacy rate is 74%, while the female rate is 26%.

In urban areas, Charsada demonstrates a noticeable gender gap, with male literacy at 76% and female literacy at 46%. On the other hand, Abbottabad appears to have a relatively smaller gap in literacy rates, with urban male literacy at 94% and female literacy at 78%. The comparison of male and female literacy rates in rural and urban areas highlights disparities in educational outcomes across KPK districts. It is essential to address these differences to promote equal access to education and improve overall literacy in the province (see Graph 3).

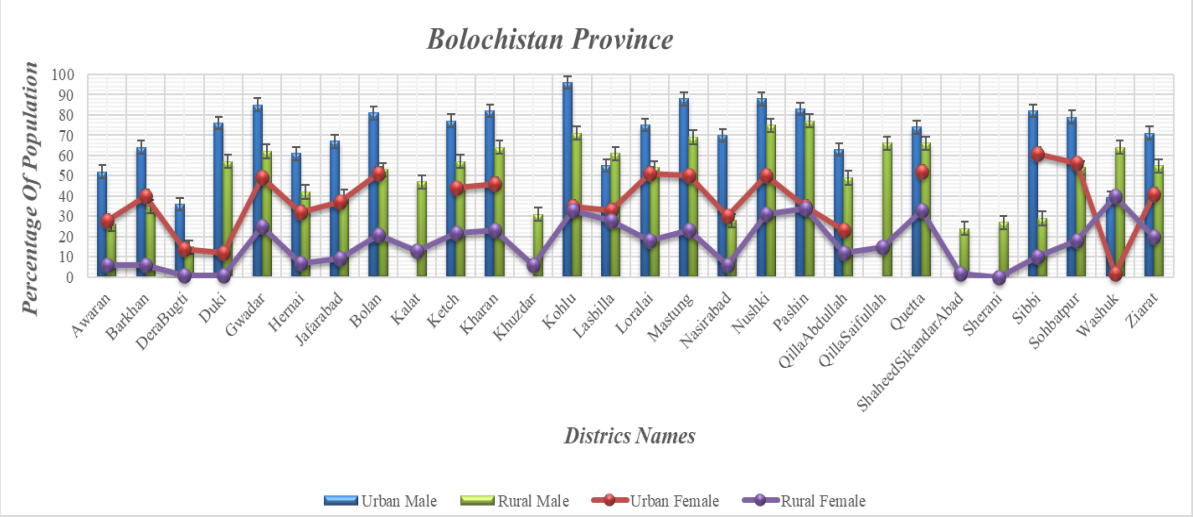
Graph 3. Gender disparities in rural and urban districts of KPK



Graph 4 provided shows a comparison of the male and female literacy rates across districts in the Balochistan province, further divided into urban and rural populations. A notable finding is that the literacy rates for males are generally higher than those for females in urban and rural areas. The district with the lowest urban female literacy rate is Washuk at 2%, while the lowest urban male literacy rate is found in Dera Bugti at 36%. In rural areas, Sherani has the lowest female literacy rate at 0%, and Dera Bugti has the lowest male literacy rate at 15%.

Significant gender gaps in literacy rates can be observed in several districts. In Duki, for example, there is a considerable gap between urban males (76%) and females (12%), as well as in rural areas, with 57% for males and just 1% for females. On the other hand, some districts exhibit a smaller gap in literacy rates, such as Quetta, where urban males have a 74% literacy rate, and females have a 52% rate, while in rural areas, the rates are 66% for males and 33% for females. In summary, the data reveals disparities in literacy rates between males and females in the Balochistan province. The gender gap is more pronounced in some districts compared to others, highlighting the need for targeted interventions to address these inequalities and improve female literacy rates in both urban and rural areas.

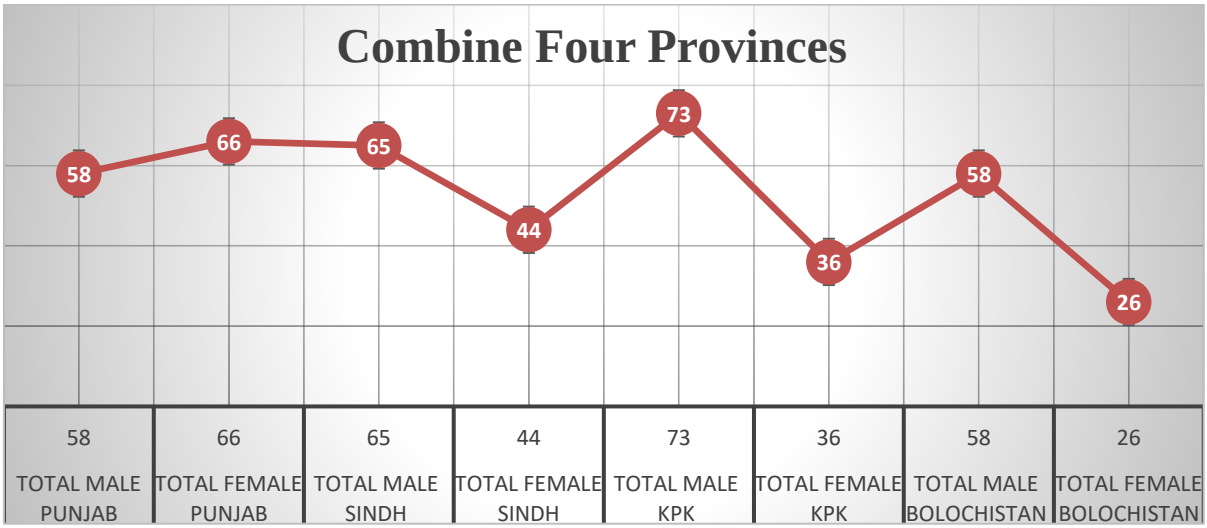
Graph 4. Gender disparities in rural and urban districts of Balochistan



In Punjab, the total male literacy rate is 58%, while the total female literacy rate is 66%. This shows a gender gap of 8% in favour of females. While in Sindh, the total male literacy rate is 65%, while the total female literacy rate is 44%. This indicates a gender gap of 21% in favour of males. In Khyber Pakhtunkhwa (KPK), the total male literacy rate in KPK is 73%, while the total female literacy rate is 36%. This reveals a gender gap of 37% in favour of males. While in Balochistan, the total male literacy rate is 58%, while the total female literacy

rate is 26%. This demonstrates a gender gap of 32% in favour of males. Comparing the gender disparities across the four provinces, it is evident that Punjab has the least gender gap, with a slight advantage for females. In contrast, the other three provinces—Sindh, KPK, and Balochistan—exhibit significant gender gaps in favour of males, with KPK having the largest gap. This comparison highlights the need for targeted interventions and policies to address the gender disparities in education, particularly in Sindh, KPK, and Balochistan (see Graph 5).

Graph 5. Gender disparities in all provinces



In order to provide a comprehensive comparison of gender literacy across all districts in the four provinces, within Punjab, Sindh, Khyber Pakhtunkhwa (KPK), and Balochistan. Based on the data it was observed that in both Punjab and Balochistan provinces, it is evident that the literacy rates for males are generally higher than those for females in both urban and rural areas. Generally, Punjab has relatively higher literacy rates compared to other provinces. However, districts like D.G. Khan and Rajanpur require attention, particularly in rural areas where significant gender gaps and low overall literacy rates are observed. Sindh has some districts with comparatively lower literacy rates, particularly in rural areas. Tharparkar and Kashmore are examples of districts that need attention, as they exhibit both low overall literacy rates and significant gender gaps. Balochistan has the lowest literacy rates among the four provinces, with several districts displaying large gender gaps and low overall literacy rates. Duki and Dera Bugti are examples of districts that require urgent attention to address the disparities in education. KPK has a mix of districts with varying literacy rates. However, districts like Kohistan and North Waziristan have significant gender gaps and low overall literacy rates, particularly in rural areas, which need attention.

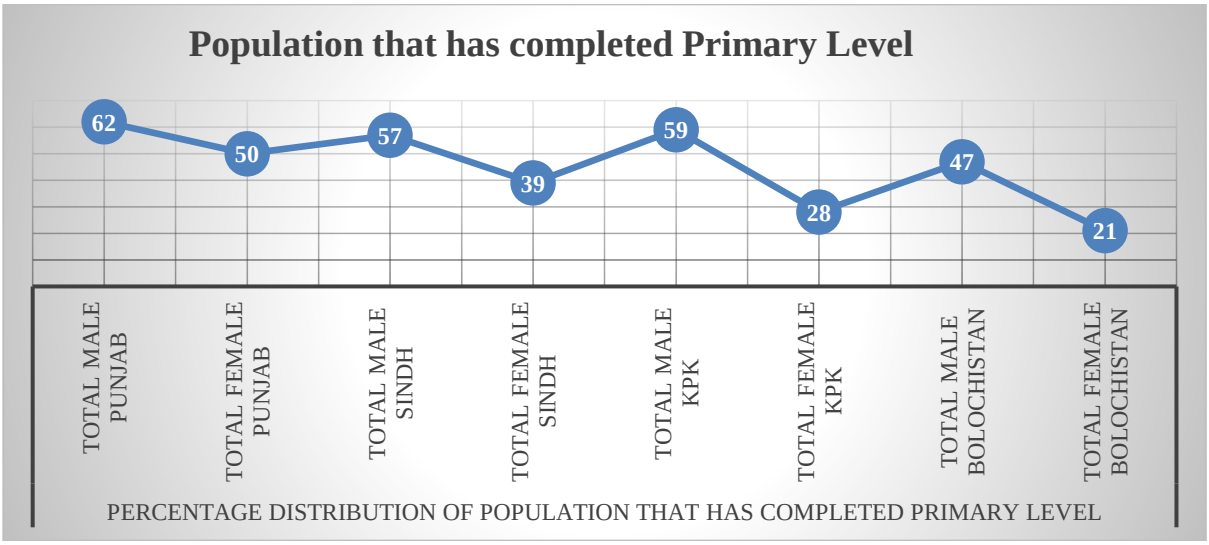
Overall, it is evident that each province has areas that require targeted interventions to improve literacy rates and bridge gender gaps. Rural areas generally have more significant challenges in terms of education disparities. Balochistan, as a whole, needs more attention compared to the other provinces due to its overall low literacy rates and substantial gender gaps. However, it is essential to address disparities in all provinces by implementing appropriate policies and strategies that cater to the specific needs of each region.

A population that has ever attended the primary level 2019-2020

According to the PSLM, the percentage of the population completed primary education in the four provinces of Pakistan between 2019 and 2020. Data showed that In Punjab, the percentage of males who have completed primary education is 62%, while the percentage of females is 50%, indicating a gender gap of 12% in favour of males. While in Sindh, 57% of males have completed primary education, compared to 39% of females, resulting in a gender gap of 18% in favour of males. On the other hand, in KPK, 59% of males have completed primary education, while only 28% of females have done so, showing a significant gender gap of 31% in favour of males. While in Balochistan, 47% of males have completed primary education, compared to 21% of females, revealing a gender gap of 26% in favour of males. The data shows KPK has the largest gender gap, followed by Balochistan, Sindh, and Punjab (see Table 6). Therefore, KPK and Balochistan need more focus and targeted interventions to address the gender disparities in primary education. However, by addressing the gender disparities and implementing targeted policies and interventions, Pakistan can progressively improve its literacy rates over time. To accelerate this process, the government and other stakeholders must prioritize education and

allocate adequate resources to ensure quality and accessible primary education for all children in the country (see Graph 6).

Graph 6. Population that has completed primary level across the four provinces 2019-2020

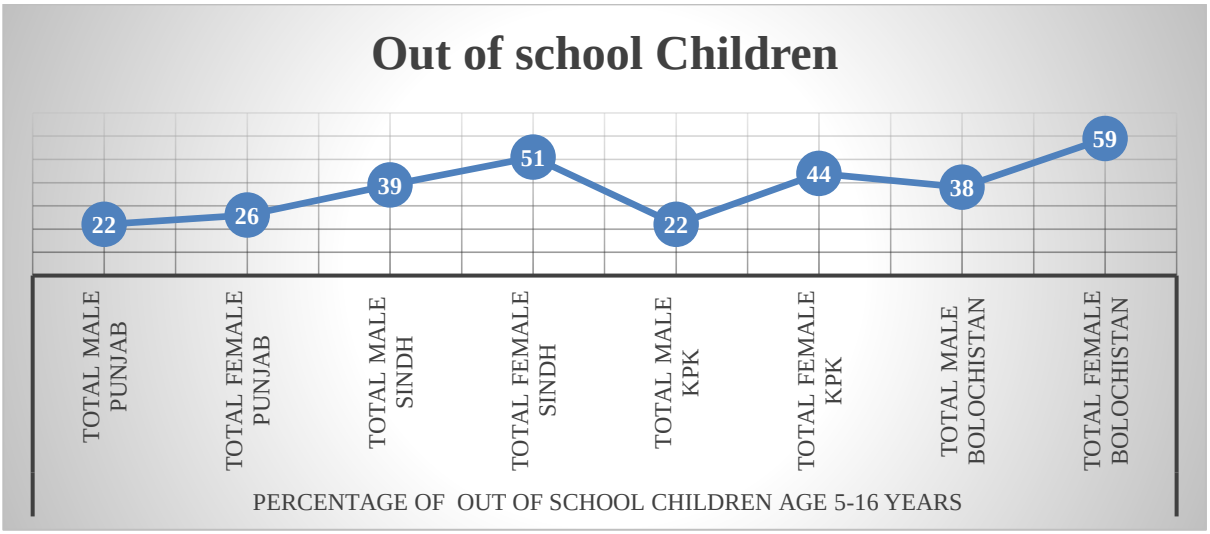


Provincial comparison of Students who are out of school

According to the PSLM data about the percentage of out-of-school children aged 5-16 years in the four provinces of Pakistan. A thorough examination of the data reveals that in Punjab, 22% of males and 26% of females are out of school, indicating a gender gap of 4% in favour of males. While in Sindh, 39% of males and 51% of females are out of school, resulting in a gender gap of 12% in favour of males. On the other hand, In KPK, 22% of males are out of school, while a staggering 44% of females are out of school, showing a significant gender gap of 22% in favour of males. In Balochistan, 38% of males and 59% of females are out of school, revealing a gender gap of 21% in favour of males. It was also observed that Balochistan has the highest overall percentage of out-of-school children (59% females and 38% males), followed by Sindh (51% females and 39% males), KPK (44% females and 22% males), and Punjab (26% females and 22% males).

Based on the data, Balochistan and Sindh require the most attention and focused interventions to address the high percentage of out-of-school children. The significant gender disparities in KPK and Balochistan also need to be addressed to ensure more equitable access to education for girls in these provinces. In conclusion, to tackle the issue of out-of-school children, the government and other stakeholders need to prioritize education, allocate adequate resources, and implement targeted policies and interventions. This includes addressing gender disparities, improving the quality and accessibility of education, and engaging with communities to promote the importance of education for both boys and girls (see Graph 7).

Graph 7. Students who are out of school across the four provinces 2019-2020

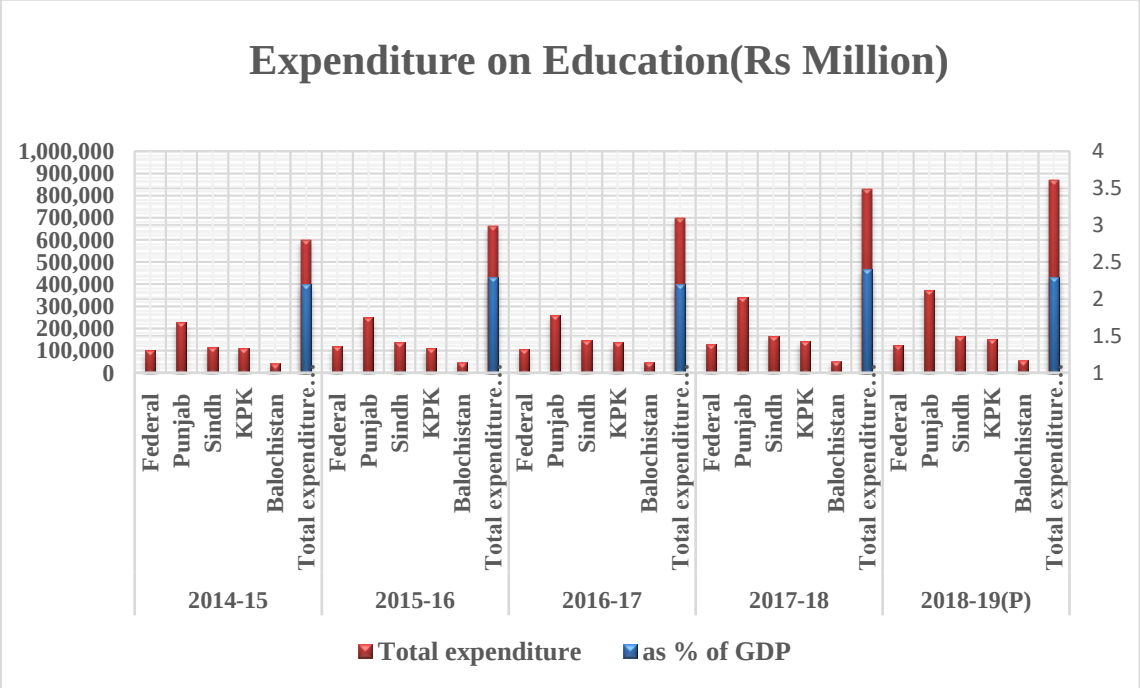


There is a need to work on education for both males and females in districts where the literacy rates are significantly low, such as Dera Bugti in Balochistan and Rajanpur in Punjab. Special attention should be given to female education, as their literacy rates are consistently lower than their male counterparts. Rural areas generally show lower literacy rates compared to urban areas, indicating a need for improved educational infrastructure, resources, and targeted programs in these regions. To make a well-informed decision about which districts in Sindh and KPK require the most attention in terms of education, it would be helpful to have specific data for each district within these provinces. so, it is essential to identify districts with the most significant gender gaps and low overall literacy rates in all four provinces. Targeted interventions and policies should be implemented to address these disparities and improve both male and female literacy rates, particularly emphasizing female education and rural areas.

Expenditure on education

Based on the Economic Survey 2019-2020, the public spending on education as a percentage of GDP was estimated to be 2.3% in 2018-2019, which is slightly lower than the 2.4% spent in the previous year. However, there has been a gradual increase in education-related expenditure since 2014-2015. In 2018-2019, there was a 4.7% rise in education-related expenditure, amounting to RS 868.0 billion. The provincial governments are also investing a significant portion of their Annual Development Plans (ADPs) in education. Punjab, for instance, has increased its spending from Rs 340.8 billion in 2017-18 to Rs 371.8 billion in 2018-19, showing an increase of 9.1%. KPK has also raised its expenditure on education to Rs 152.7 billion, a 7.1% increase from the previous year. Similarly, Balochistan has shown growth of 4.8% as its spending rose from Rs 52.8 billion in 2017-18 to Rs 55.3 billion in 2018-19. On the other hand, Sindh saw a minor decline of 2.1%, with education-related expenditure standing at Rs 162.6 billion in 2018-19 compared to Rs 166.0 billion in 2017-18. (See Graph 8).

Graph 8. Expenditure on Education (RS million) 2014-2019



Source: PRSP Budgetary Expenditures, External Finance and Policy Wing, Finance Division, Islamabad

This data shows that while there has been an overall increase in the expenditure on education in Pakistan, it still lags behind the recommended international standards of at least 4% of GDP spent on education. The data also reveal disparities between different provinces in terms of the amount spent on education, with Punjab being the highest spender and Balochistan being the lowest spender. These disparities need to be addressed to ensure that all children in Pakistan have access to quality education.

6. Discussion

The relationship between gender equality and education for women within rural Pakistani communities is an area of interest. International development paradigms view women's education as crucial for gender

empowerment and developing nations' economic, social, and political advancement. In Pakistan, women make up approximately 49% of the nation's populace. The country's Vision 2025 emphasizes Gender Equality and Women's Advancement as crucial components and acknowledges their vital role in the nation's economic future. Pakistan is dedicated to achieving the Sustainable Development Goals (SDGs), particularly Goal 5, which focuses on promoting gender equality and eradicating all types of discrimination against women and girls. The government has integrated the SDGs as national objectives. This study aimed to analyze the gender comparison of students who have completed primary education and those who are out of school across all districts of Punjab, as well as other provinces in Pakistan. The data provided highlights the varying levels of educational attainment and disparities between male and female students across different regions. The data demonstrates notable gender disparities in primary education completion rates across Punjab, with male students consistently outperforming their female counterparts. The gap between male and female students' educational attainment in rural areas is even more pronounced.

Furthermore, the data reveals that certain districts have more significant disparities than others, indicating a need for targeted intervention to address these inequalities. When comparing Punjab to other provinces such as Sindh, Khyber Pakhtunkhwa, and Balochistan, similar patterns of gender disparities in primary education completion rates are observed. However, the magnitude of these disparities varies across provinces, with Balochistan exhibiting the most significant gender gap. The differences between provinces may be attributed to various factors such as socio-economic conditions, cultural norms, and the availability of educational resources. These findings underscore the importance of tailored policies and interventions for each province to address its unique challenges effectively.

The findings from this study have several implications for education policy and practice in Punjab and other provinces in Pakistan. To address the identified gender disparities, targeted interventions such as awareness campaigns, community engagement, and financial incentives for female students could be implemented. Additionally, improving access to education in rural areas through establishing more schools and providing transport facilities could help bridge the gap between male and female students. Moreover, ensuring the quality of education provided to all students is crucial for enhancing overall educational attainment. This may involve investing in teacher training, upgrading school infrastructure, and incorporating modern teaching methods. It is essential to allocate resources strategically and collaborate with local communities to develop and implement policies that effectively address the unique challenges faced by each district and province. In conclusion, addressing the gender disparities in primary education completion rates and out-of-school children across Punjab and other provinces in Pakistan requires comprehensive and tailored policy interventions. By addressing these challenges, Pakistan can work towards achieving a 100% literacy rate in primary education, fostering a more equitable and prosperous society.

Conclusion

The data analysis on gender disparities in literacy rates across the rural and urban districts of Punjab, Sindh, Khyber Pakhtunkhwa (KPK), and Balochistan provinces reveals significant gender gaps in favor of males, particularly in Sindh, KPK, and Balochistan. Punjab exhibits the least gender gap, with a slight advantage for females. Rural areas consistently demonstrate lower literacy rates and more significant gender disparities compared to urban areas, necessitating targeted interventions and policies to address these inequalities. Addressing the gender disparities in education and improving overall literacy rates in Pakistan requires concerted efforts from the government and stakeholders. It is essential to prioritize education, allocate adequate resources, and implement targeted policies and interventions, particularly in provinces and districts with the most significant gender gaps and low overall literacy rates. These efforts should emphasize female education, especially in rural areas with the most pronounced disparities.

Furthermore, Pakistan needs to continue increasing its expenditure on education as a percentage of GDP. The provincial governments should allocate more of their Annual Development Plans (ADPs) to education. By addressing gender disparities, improving the quality and accessibility of education, and engaging with communities to promote the importance of education for both boys and girls, Pakistan can progressively improve its literacy rates and promote more significant educational equity across the country. Future research should focus on obtaining more detailed data for these provinces and investigating the underlying factors contributing to gender disparities in literacy rates.

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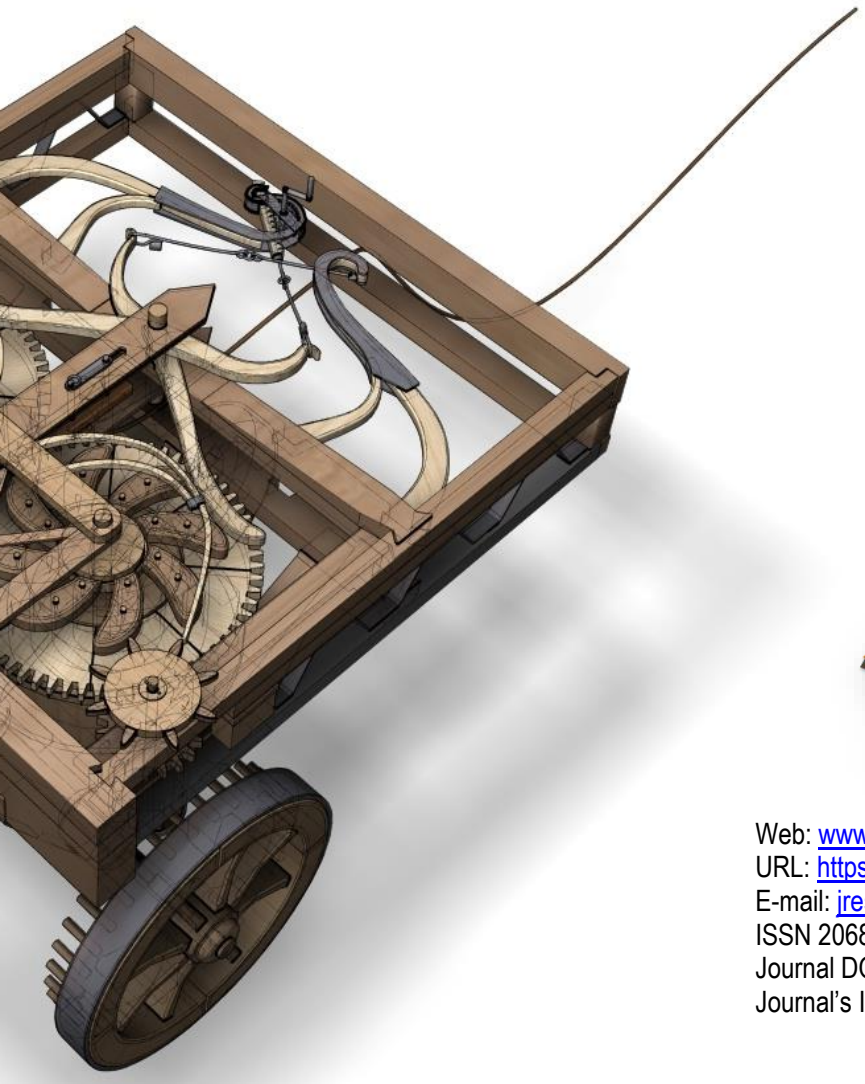

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