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Abstract

The study focused on the determinants of primary school dropout in the province of Punjab in Pakistan. The study used the MICS (2017-18) dataset. Out of the MICS (2017-2018) data set, a total of 11621 cases were selected. The selected cases were all between the ages of 5 - 17 years, who were enrolled in a primary school in the year prior to data collection. Primary school dropout was the main dependent variable of the study. Out of the 11612 selected children that were enrolled in primary school in the year prior to data collection a total of 274 (2.4%) children had dropped out. Multiple logistic regression were performed to gauge the relationship between primary school dropout and the various demographic, economic, household level and individual level variables included in the study. The study revealed that some demographic, economic and individual level variables significantly increased the odds of primary school dropout. Specifically, children from urban areas (demographic) or poor families (economic) had a significantly higher likelihood of dropping out. There is a need for a comprehensive policy that provides a holistic strategy for eliminating the incidence of school dropout at the primary level. This strategy should involve multiple stakeholders including the government, civil society, international organizations and most importantly, the communities.

Keywords: School dropout, MICS, Punjab, Pakistan

1. Introduction

A high primary school enrolment rate among children is considered a key indicator of the social and economic development of any country. Since the beginning of education for all (EFA) campaign in 1990, developing countries have experienced a remarkable increase in primary school enrollment. Studies show that the proportion of worldwide out of school children has been consistently decreasing from 26% in 2000, to 19% in 2010 and 17% in 2018 (Bhatti & Awan, 2019). Despite this progress, 258 million children were out of school in 2018 out of which, three quarter were living in South Asia and sub-Saharan Africa (Bhatti & Awan, 2019). This number is not evenly dispersed across gender as out of school girls were found to have outnumbered boys by a total 5.5 million (Bhatti & Awan, 2019).

According to UNICEF (2022), the number of out of school children is 13% at primary level, 21% in middle school, 34% in junior secondary and 47% at senior secondary level in Punjab, Pakistan. Similarly, the school dropout headcount of children is 999,000 out of which, 501,000 are male and 498,000 are female. Similarly, out of the total number of 999,000, 428,000 are urban residents and 572,000 are rural residents.

However, there is another dimension to this problem that is often ignored within national and provincial level policy discourses in Pakistan. Like many other developing countries, Pakistan not only faces the problem of enrolling the millions of children that are currently out of school but also face the challenge of keeping enrolled children in school.

Among South Asian countries, the percentage of students not reaching grade five in Nepal, India, Bangladesh and Sri Lanka is 56%, 48%, 30% and 3%, respectively. Pakistan ranks second to last among these countries, where an overall percentage of 50% of enrolled students do not reach the fifth grade (Huisman & Smits, 2009). In 2019, the GER (gross enrollment rate) for primary schools were 70%. Among those, 50% of children leave school before completion of primary education. Furthermore, this high dropout rate is not evenly dispersed across genders, as girls are 1.6 times less likely to complete primary education as compared to boys (Castillo, 2023).

The present study will focus on the determinants of primary school dropout in the province of Punjab in Pakistan. Almost half the population of Pakistan resides in Punjab and the province contributes around 59 percent to the country's total GDP. Even though, the economic situation of Punjab is better than the rest of the provinces, especially KPK and Baluchistan, the overall number of out of school children and primary school dropout rate in the province is relatively high in the province. According to MICS 2015 report, the primary attendance ratio in Punjab was 57.9% (58.9% for boys and 56.8% for girls) while 41.9% of children were out of school (Rafique, 2020). According to the same report the 34% of enrolled students dropped out before completing their primary school education in Punjab (Rafique, 2020). Statistics reported by UNICEF reinforce these findings. UNICEF reports that primary school completion rate in Punjab is around 66%, which means almost one third of the enrolled children in Punjab, drop out of school before completing their primary level education (UNICEF, 2022).

Studies that explore into the determinants primary school dropout rate in Punjab or in other parts of Pakistan consistently show that girls are more likely to drop out of school than boys (Castillo, 2023). Furthermore, according to UNICEF (2022), students that are enroll in urban areas of Punjab have a 77% completion rate of primary education while students that enroll in rural areas have a completion rate of only 60%. Poverty is also an important determinant as children from families that are in the lowest socioeconomic strata have a 33% completion rate, while children from families that are in the highest socioeconomic strata have a completion rate of 92% (UNICEF, 2022). Overall, the dynamics of school dropout in Punjab and Pakistan need

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to be explored further. An overall review of literature on the causes of school dropout in developing countries reveals that a variety of individual, familial and structural factors may contribute to primary school dropout rate.

The present study aims to explore the determinants of primary school dropout in Punjab, Pakistan, using the MICS (2017-18) dataset. The overall percentage of students who enrolled at the primary level in the year prior to data collection (N=11346) but had dropped out of school (N=274) in the next year was 2.4%. The study further employed logistic regression to identify the factors influencing school dropout. These included demographic (gender, urban/rural residence) economic (family income), household-level (household size, mother’s and father’s education, and mother’s functional disability) and individual-level (age of child, engagement in child labor and household chores, orphanhood and functional disability) factors.

The research contributes to the ongoing discourse on primary school dropout in Punjab and Pakistan, by emphasizing the significance of identifying key determinants to inform targeted interventions to achieve the overarching goal of universal primary education.

2. Literature Review

This section will explore the existing literature on school dropout around the world and in Pakistan. Poverty is possibly a major cause due to which children drop out of school at an early age. Overall, 34% of the households in Punjab are living below the poverty line (Farooq, 2013). Compared to these households, children from households in the highest socioeconomic strata are 6.75 times less likely to dropout out of schools (Farooq, 2013). Incidence of child labor is also a key determinant of primary school dropout in Punjab. Out of the total number of children that were enrolled in the primary schools of Punjab in the year 2020, 5.2% percent boys and 4.7% girls dropped out because they were involved in some form of paid or unpaid work (Khan, 2020). A similar trend can be observed with reference to girls heavily engaged in household labor (Khan, 2011). A study revealed that 9.8% girls in rural areas of Pakistan had to dropout from primary schools due to household responsibilities (Khan, 2011). Limited or difficulty access to school, especially in the rural parts of Punjab, is also a primary cause of primary school dropout among girls. One study projected that improved accessibility to school may increase female enrolment in the rural areas of Punjab by 16% (Farooq, 2013). Parental education level is also a key determinant of primary school dropout (Huisman, 2009). In Punjab, children with illiterate fathers are 36% more likely to dropout from school in comparison to children with literate fathers (Farooq, 2013). Similarly, children of employed mothers were found to be 16.7% more likely to go to school and children of women that were both employed and literate were 29% more likely to go to schools, when compared to children of unemployed and illiterate women (Farooq, 2013). Interestingly, there is indirect evidence that patriarchy increases the likelihood of primary school dropout not only for girls but also boys. Both girls and boys from female headed households in Punjab are more likely (19.6% and 14.5%, respectively) to go to school compared to children from male headed households (Rabia, 2015). Lastly, children that are enrolled late or have any health issues (physical or psychological health issues) also have a high likelihood dropping out of primary school (Azid & Khan, 2010).

3. Methodology

The study used the MICS (2017-18) dataset. The total sample size for MICS (2017-18) was 53,840 households which were selected out 2692 clusters, in Punjab. Out of these 52,765 households were occupied and 51,660 households were successfully interviewed with an overall response rate of 97.9%. Eligible respondents in the selected household includes, 79,510 women, 39,445 men, 39,799 infants (<5; Questionnaire administered to mother or caretaker) and 37,052 children (5-17; Questionnaire administered to mother or caretaker). The response rate was 93.1%, 68.7%, 93.8% and 95.8% for women, men, infants and children, respectively. Out of the MICS (2017-2018) data set, a total of 11621 cases were selected. The selected cases were all between the ages of 5 - 17 years, who were enrolled in a primary school in the year prior to data collection.

Primary school dropout was the main dependent variable of the study. Out of the 11612 selected children that were enrolled in primary school in the year prior to data collection a total of 274 (2.4%) children had dropped out. The names and univariate statistics of the demographic, economic, household-level, and individual-level independent variables that were included in the study are reported in table 1:

Table 1: Univariate statistics for Independent Variables (N=11612)

	Variable	Frequency	Percentage
Demographic Variables	Gender		
	Male	6196	(53.3)
	Female	5425	(46.7)
	Residential Area		
	Rural	8205	(70.6)
	Urban	3416	(29.4)
Economic Variables			

	Family Income (Wealth Quintile)		
	Poorest		
	Poor	2177	(18.7)
	Middle	2675	(23.0)
	Rich	2590	(22.3)
	Richest	2339	(20.1)
		1840	(15.8)
Household Level Variables	Household Size		
	2-3 members	415	(3.60)
	4-5 members	2870	(24.7)
	6-7 members	4296	(37.0)
	8-9 members	2247	(19.3)
	10 plus members	1793	(15.4)
	Mother's Education		
	None/Preschool	2645	(26.4)
	Primary	1854	(18.5)
	Middle	1731	(17.2)
	Secondary	2428	(24.2)
	Higher	1377	(13.7)
	Father's Education		
	None/Preschool	5825	(50.2)
	Primary	2369	(20.4)
	Middle	1033	(8.90)
	Secondary	1331	(11.5)
	Higher	1057	(9.10)
	Mother's Functional disability		
	Yes	553	(4.8)
	No	9672	(83.2)
Individual Level Variables	Child Labor		
	No child labor	10531	(90.6)
	Child labor	1090	(9.4)
	Hazardous work		
	Not hazardous	10895	(93.8)
	Hazardous	726	(6.2)
	Household Chores		
	Don't do HH chores	4739	(40.8)
	Do HH chores	6881	(59.2)
	Functional Disability 1: (Child uses Walking Aid)		
	No	11483	(98.8)
	Yes	125	(1.1)
	Child wears Glasses		
	No	11324	(97.6)
	Yes	284	(2.4)
	Child wears Hearing Aid		
	No	11533	(99.4)
	Yes	67	(0.6)
	Mother is Alive		
	Yes	11343	(97.7)
	No	272	(2.3)
	Mean		SD
	Child's Age	9.84	2.20
	(Range: 5 -17 Years)		

*missing values are not included.

4. Results

Multiple logistic regression were performed to gauge the relationship between primary school dropout and the various demographic, economic, household level and individual level variables included in the study. The results of the logistic regression are presented in Table 2.

Table 2: Logistic Regression results

Variable	B	St. Error	Wald	Beta
Child Labor	0.70**	0.32	4.78	2.01
Hazardous Work	0.46	0.34	1.83	1.59
Household Chores	0.31*	0.17	3.21	1.37
Residence	0.42**	0.20	4.44	1.53
Gender	0.15	0.15	0.92	1.16
Child's Age	0.37***	0.04	113.36	1.45
Father Education				
<i>None/Preschool</i>				
<i>Primary</i>	0.27	0.20	1.87	1.31
<i>Middle</i>	0.02	0.23	0.01	1.03
<i>Secondary</i>	-0.08	0.24	0.13	0.92
<i>Higher</i>	-0.56	0.37	2.27	0.57
Mother Education				
<i>None/Preschool</i>				
<i>Primary</i>	-0.05	0.20	0.06	0.95
<i>Middle</i>	-0.57	0.41	1.96	0.56
<i>Secondary</i>	0.16	0.32	0.25	1.17
<i>Higher</i>	0.06	0.45	0.02	1.06
Mother Functional Disability	-0.32	0.34	0.91	0.72
Mother is Alive	-0.02	0.75	0.00	0.98
Number of Household Members				
<i>2-3 members</i>				
<i>4-5 members</i>	0.63	0.74	0.72	1.87
<i>6-7 members</i>	0.81	0.73	1.23	2.25
<i>8-9 members</i>	0.53	0.74	0.52	1.70
<i>10 plus members</i>	0.53	0.75	0.49	1.69
Child wears Glasses	0.21	0.44	0.23	1.24
Child wears Haring Aid	0.70	0.78	0.80	2.02
Child uses Walking Aid	-0.42	0.77	0.29	0.66
Wealth Quintile				
<i>Poorest</i>				
<i>Poor</i>	-0.33*	0.20	2.78	0.72
<i>Middle</i>	-0.65***	0.24	7.04	0.53
<i>Rich</i>	-0.59**	0.28	4.31	0.56
<i>Richest</i>	-0.76**	0.39	3.81	0.47

* Significant at 0.1 level, ** Significant at 0.05 level, *** Significant at 0.01 level

The results of the logistic regression model show that social organization (Rural/Urban), household income (wealth quintile), child labor, household chores and age of child were significant determinants of primary school dropout in Punjab, Pakistan. A child's place of residence was found to be significantly related to their odds of dropping out. Specifically, children living in urban areas had 1.53 times greater odds of dropping out of primary school as compared to children living rural areas. This finding is counter intuitive as the researchers expected that the children, especially girls, living in rural areas would be more susceptible to dropping out primarily due to limited or difficult access to schools. To explore the gender dynamics of this finding, two separate regression analyses were performed. Firstly, only the male cases in the sample were selected and a logistic regression was performed. Findings revealed male children living in urban areas had significantly higher odds of dropping out (1.75 times higher), compared to male children in rural areas. Secondly, only the female cases in the sample were selected and

another logistic regression was performed. Findings revealed that there was no significant difference in the odds of dropping out for girls living in urban or rural areas.

Poverty also emerged as a significant predictor of primary school dropout. Compared to the children belonging to the poorest families, the odds of dropping out for children from poor, middle, rich and richest families were 28%, 47%, 44% and 53% less, respectively. These findings are consistent with previous literature that consistently identifies poverty as a major cause due to which children either remain out of school or drop out of school after enrollment. Similarly, consistent with prior literature child labor was also observed to be a significant predictor of primary school dropout. The odds of dropping out of primary school for children engaged in child labor were 2.01 times higher than children who were not working. This finding had an interesting gender dimension, as after controlling for gender it was found that the odds of dropping out for female child workers were significantly higher (3.15 times) compared to girls that did not work, while there was no significant difference between the odds of dropping out for male working and non-working children. Children who performed household chores had significantly higher odds (1.37 times) odds of dropping out as compared to children who did not do household work. Lastly, age was also observed to be a significant factor; as the age of a child increased by one year his or her odds of dropping out increased 1.45 times.

5. Conclusion and Recommendations

The study revealed that some demographic, economic and individual level variables significantly increased the odds of primary school dropout. Specifically, children from urban areas (demographic) or poor families (economic) had a significantly higher likelihood of dropping out. At the individual level, children that engaged in child labor or household chores daily were at a significantly higher risk of dropping out. Lastly, older children had significantly greater odds of dropping out. Interestingly, gender of the child was not found to be related to primary school dropout, but further analysis revealed that gender had an interaction effect on odds of dropping out with 1) place of residence and 2) incidence of child labor. Male children living in urban areas were significantly at a higher risk of dropping out, while female child laborers had significantly greater odds of dropping out as compared to male child laborers.

The study has multiple implications for future policy. In consonance with previous literature, low family income was found to be one of the strongest predictors of primary school dropout. This problem can be addressed at multiple levels, but it is contended in this paper that the most efficient and effective solution to this problem is 'free education' in government schools. Moreover, the government should further incentivize parents by providing free books, uniforms, lunch, and other facilities to children enrolled in primary government schools. However, recently the Punjab government has increased government school fees by 80 percent which has created a disincentive for low-income families to keep their children in school. The government of Punjab should allocate more budget and resources to primary schools, especially schools that are in backward and indigent areas. Most importantly, primary school education should be free in Punjab. Lastly, the government should formulate policies that incentivize and facilitate child laborers that are enrolled in government schools. This can be done by offering supplementary classes in the afternoon and by granting monthly stipends to working children that are enrolled in primary schools. In conclusion, there is a need for a comprehensive policy that provides a holistic strategy for eliminating the incidence of school dropout at the primary level. This strategy should involve multiple stakeholders including the government, civil society, international organizations and most importantly, the communities.

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