IDENTIFYING THE CORRELATES OF SECONDARY SCHOOL DROPOUT IN PUNJAB, PAKISTAN: INSIGHTS FROM MICS 2017-2018

Mohammad Vaqas Ali[1], Shamaila Athar[*2], Shahid Rasheed[3], Gloria Calib[4]

[1,*2.3.4]Forman Christian College (A Chartered University) Lahore

Corresponding Author: *

ABSTRACT

This article focuses on various factors of school dropout at secondary level education in Pakistan. This study in based on the secondary data analysis of Multiple Indicator Cluster Survey (MICS) Punjab dataset (2017-2018) which was collected by the Punjab Bureau of Statistics in collaboration with United Nations Children's Fund (UNICEF). The MICS dataset provides data pertaining to 51,600 households, including 37,052 children aged 5-17 years. A total of 7,322 cases that matched the inclusion criterion were selected. MICS Logistic regression was used to identify geographic, economic, household and individual level factors that could potentially influence dropout decisions as the secondary school level in Punjab. The study has shown that variables such as urban school enrollment, household size, and parental education have significantly influenced dropout rates. Additionally, gender (girls more at risk), child labor, and physical mobility issues also played significant roles. These findings highlight the multifaceted nature of factors that influence secondary school dropout.

Keywords: Secondary School, School Dropout, Child Labor, MICS Punjab

INTRODUCTION

No country can prosper without educational reform. A country without a functioning and sound education system cannot foster economic and human development. Pakistan's weak education system has been identified as a major reason for the country's consistent failure to stimulate steady economic growth over the years (Akram& Yang, 2021). Unfortunately, the educational system in Pakistan has become highly politicized (Anwar, Yahya, &Zaki, 2024). The government's negligence towards the education sector is quite evident as an estimated 11.3 million children are out of school in Punjab. UNIFEC data has clearly indicated that among school going studentson primary level the completion rate is around 77% while the rate for completion of secondary school level is even lower(UNICEF, 2022; "Punjab School Struggle to overcome problems", 2016). The literacy rate of the country in 2019 has been around 58% in total (Statista, n.d.). The lower literacy rate is alarming not only on the global level but if compared regionally Pakistan's literacy rate is found to be the lowest (Abbas &Hussain, 2021).

In this context the school dropout rate is quite alarming both on the primary and secondary school levels. The issue is a serious concern and needs immediate attention as to why the children are not attending school. The educational disparities result in a multitude of problems. Surprisingly not only at primary level, but many senior students at secondary level have decided to cut down upon their journey of education in Pakistan (Ali et al., 2021). The school drop phenomena is more evident in the public schools.

As school dropout is a complex phenomenon, in order to gauge better understanding of this it is necessary to look into various causes and consequences of school dropout. As there are various factors attributed to a student achievement, similarly there are factors impacting the dropout too. Generally speaking, the reasons associated with dropout can be broadly placed within three broad categories such as school related issues, family related or the work-related issues (Guzmán, Barragán, &CalaVitery, 2021).

Another aspect is to look into the significance of this study that why the school drop is a matter of a

concern. The answer is simple; the outcome of this dropout has not only negative consequences on the person individually but on the entire society (Samuel & Burger, 2020). The ones with lesseducation would have limited employment opportunities even if the person getsa job and it would be a low paying job (Singh &Manjaly, 2022). Eventually this would result in poverty, as their prospect of having a job are limited and so are the earning potential (Jakob&Combet, 2020).

Moreover, with lack of education there are greater chances of vulnerability to exploitation along with abuse in the labor market (Awad, 2020). Social mobility also becomes restricted due to intergenerational poverty not only for the individual but for the families too (Brown & James, 2020). When there are limited resources and opportunities the chances of getting involved in criminal activities also become higher. This does not end here as the phenomenon is related to poorer health outcomes because the access to healthcare is limited and, in many cases, they also have limited health related knowledge.

Several decades in the past, this situation wouldn't have been seen as a crisis. Back then, factory jobs offered a path to employment and advancement for young individuals who hadn't completed school. However, today, the unemployment rate among young adults lacking a secondary school certificate is alarming. Consequently, not completing high school now often leads to being trapped in the lower socioeconomic class (Ilie, Rose, &Vignoles, 2021). While this is tragic for an individual, when a significant portion of students from entire neighborhoods and communities fail to graduate, the social and economic repercussions are extensive and deeply impactful. The above-mentioned issues highlight that without education individuals are not fully equipped in contributing to the economic development of either their community or the nation as a whole.

To address the school dropout crisis, on the government level the future seems to lie in the implementation of compulsory educational measured and laws. Mandating education up to a certain level and age could help in reducing the dropout rate as this would ensure the stay of a child in school. Ensuring educational access through expansion could be another initiative as this could help the students from rural areas as well as underserved areas along with assisting them with transport. A lot could be done when it comes to the improvement of school infrastructure and the facilities through provision of adequate resources such as teaching materials and textbooks etc. (Anaman, Zottor, &Egyir, 2022). Need based financial assistance can help families in alleviating their financial barriers ultimately encouraging students to stay in school. An effort can be made towards parental involvement and community engagement that could create a supportive environment (Heers et al., 2016). There are many alternative educational pathways for e.g., the non-formal education sector or the vocational training centers that could look into catering needs of the students that are unable to cope with the traditional schools.

In short, Pakistan requires a multifaceted approach in addressing dropout rates (Hoodbhoy, 2021). This approach would combine not only infrastructure improvements, policy interventions but community engagement too (Carvalho et al., 2020). Through implementation of these initiatives Pakistan can lower the dropout rates while ensuring that all children have access to quality education hence paving path for brighter future.

The article would be looking at some of the risk associated predictors of school dropout at secondary school level such as poverty leading to child labor, the community where the child resides such as rural or urban setting, impact of parental education, gender disparities and child disability etc.

Methodology

Secondary data analysis of the MICS Punjab data (2017-2018) was carried out for this study. The data was originally collected by the Punjab Bureau of Statistics in collaboration with United Nations Children's Fund (UNICEF). To collect the data, 2692 clusters were identified in Punjab and a total of 53,840 households were selected from these clusters. Out of the selected households, 51,660 were found to be occupied and eventually respondents from a total of 51,600 households were successfully interviewed (response rate 97.8%). A cumulative total of 79,510 women, 39,052 men, 39,799 infants (less than 5 years of age; mothers or caretakers were interviewed) and 37,052 children (between 5 and 17 years; mother or caretakers were interviewed) were interviewed. The respective response rates were 93.1%, 68.7%, 93.8% and 95.8%.

A smaller dataset was extracted out of the MICS (2017-2018) dataset by selecting the cases of interest

for the present study. The criterion of case selection included all children (between 5 and 17 years) enrolled in lower or higher secondary schools in the previous year. Out of these cases, students who had successfully completed their secondary school education and had moved on to the higher education level were removed from the dataset. The resulting dataset consisted of a total of 7322 cases. A binary variable representing secondary school dropout' was created by collating the following two variables, 1) 'attending school in the previous year' and 2) attending school in the current year'. Extensive review of literature revealed various macro, micro and mezzo level factors that may influence an individual's decision to drop out of secondary or high school. Guided by the review of literature pertinent geographical, economic, household and individual level variables were identified. These variables were included as the independent variables (or the possible determinants of secondary school dropout) in the regression model that was designed to conduct this study.]

The descriptive statistics of the dependent variable and the independent variables are presented as Table 1. A multiple logistic regression was performed to determine the significance, direction and strength of the relationship between the dependent and the independent variables. Table 2 shows the results of the logistic regression.

Table 1
Descriptive statistics of Independent Variables (N=7322).

Variable	Frequency	Percentage
Dependent Variable		
Secondary School Dropout		
Attending school	6854	(94.1)
Dropped out	430	(5.9)
Geographic Variables		
Residential Area		
Rural	4719	(64.8)
Urban	2565	(35.2)
Region		
South Punjab	1541	(21.2)
Central Punjab	3901	(53.5)
Northern Punjab	1842	(25.3)
Economic Variables		
Family Income (Wealth Quantile)		
Poorest/Poor		
Middle	1963	(26.9)
Rich/Richest	1742	(23.9)
Missing Cases	3554	(48.8)
	25	(0.3)
Household Level Variables		
Household Size		
Less than 5 members	2343	(32.2)
6-9 members	4063	(55.8)
More than 10 members	878	(12.0)

Mother's Education		
None/Preschool	3385	(46.5)
Primary/Middle	2230	(30.6)
Secondary/Higher	1617	(22.2)
Missing cases	50	(0.7)
Father's Education		
None/Preschool	1395	(19.2)
Primary/Middle	1990	(27.3)
Secondary/Higher	2707	(37.2)
Missing cases	1192	(16.4)
Mother's Functional disability		
No		
Yes	4655	(63.9)
Missing cases	351	(4.8)
	2278	(31.2)
Mother is Alive		
Yes	7048	(96.8)
No	231	(3.2)
Missing cases	5	(0.1)
Individual Level Variables		
Gender		
Male	3919	(53.8)
Female	3365	(46.2)
Child Labor		
No child labor	6404	(87.9)
Child labor	880	(12.1)
Hazardous work		
Not hazardous	6532	(89.7)
Hazardous	752	(10.3)
Household Chores		
Don't do HH chores	1978	(27.2)
Do HH chores	5306	(72.8)
Functional Disability:		
Child uses Walking Aid		
No	7188	(98.7)
Yes	89	(1.2)
Missing cases	7	(0.1)
	Mean	**SD**
Child's Age	14.6	1.8
(Range: 5 -17 Years)		

Results

A multiple logistic regression was performed to gauge the influence of the selected geographic, economic, household and individual level variables on secondary school dropout rate. Table 1 provides descriptive statistics of the variables included in the model. A total of 7322 children were enrolled in a secondary school during the previous year, and out

of these 430 children or 5.9% had dropped out. According to the 'Pakistan (Punjab) Fact Sheet' (UNICEF, 2022), the dropout percentage in Punjab at the junior secondary school and the senior secondary school level is 7% and 4%, respectively. However, as per to one unconfirmed estimate the secondary school dropout rate in 2023 was between 40 to 50% in Pakistan (propakistan, n.d.). Another study used the Pakistan Demographic Health Survey (PDHS) data to calculate the rate of dropout at around 20% (Amir-ud-Din, Mahmood, Abbas & Zafar, 2021). The discrepancy between different estimates of secondary school dropout rate warrants the necessity for further data collection, so that a reliable baseline of school dropout rate can be established.

Almost two thirds of the children lived in rural areas (64.8 %) indicating that the school enrollment at the secondary level is higher in rural areas as compared to urban areas (35.2%). More than half the respondents (53.5 %) were located in the Central Punjab regions, while 21.2% and 25.3% were located in the South and North Punjab, respectively. Interestingly, almost half (48.3 %) the children were from families that were in the high-income group (rich/richer), while 23.9 % were in the middle-income group and 26.9 were in the low-income group (poorest/poor).

More than half of the children (55.8%) included in the sample were from large families (6 to 9 members), while 33.2% belonged to smaller families (5 or less members) and only 12% were from very large families (10 or more members). The comparison between the mothers' and fathers' level of education shows that fathers generally tended to be more educated. The mothers of almost half the children were uneducated (46.5%) while only 19.2% of the fathers were uneducated. The mothers of 4.8% of the children were afflicted with functional disability, while 3.2% of the children had lost their mothers.

Univariate statistics of the individual level variables reveal that the children had an average age of 14.6 years. 53.8% of the children were males and 48.3% were females. The percentage of children involved in child labor and hazardous labor was found to be fairly high. A total of 12.1% of the children were engaged in child labor, while 10.3% were involved in some type of hazardous work. Furthermore, almost three quarters (72.8%) of the children included in the study were doing household

chores on a daily basis. Lastly, 1.2% of the children suffered from a disability that required the use of a walking aid.

Table 2 shows the results of the logistic regression analysis. Children enrolled in urban secondary schools were at a significantly (at 90% confidence interval) higher risk of dropping out. Specifically, students enrolled in urban secondary schools were 1.42 times more likely to drop out compared to students enrolled in rural secondary schools. No significant difference was found between the secondary school dropout rates within north, south and central Punjab.

Interestingly the relationship between family income and dropout rate was not found to be significant. This finding is counter intuitive as the researchers expected that the dropout rate among low-income families would be higher in comparison to middle and high income families.

Children living in large households (6 to 9 members) were at a significantly higher risk (at 90% confidence interval) of dropping out compared to children living in smaller households (household with 5 or less members). Children from large households (6 to 9 members) were 1.42 times more likely to dropout compared to children from smaller households (5 or less individuals). However, there was no significant difference between the odds of dropping out among children living in smaller households (5 or less individuals) and children living in very large households (10 members or more).

Parental education emerged as the strongest determinant of secondary school dropout in Punjab. Compared to children of uneducated mothers, children whose mothers had completed the primary/middle level education were 35% less likely to drop out of secondary school (p < 0.05). Similarly, compared to children of uneducated mothers, children whose mothers had completed secondary/higher level education were 41% less likely to drop out (p < 0.05). The relationship between fathers' education and children's odds of dropping out also followed a similar trend. Children of fathers with primary/middle level education were 27% less likely (p < 0.1) to drop out as compared to children of uneducated fathers. Likewise, children of fathers with secondary/ higher level education were 42% less likely (p < 0.01) to drop out of school compared to children of uneducated fathers.

Mother's functional disability was not significantly related to the odds of dropping out of secondary

school. Previous literature indicates that the incidence of mother's disability may possibly have a greater impact on female children. In families where the mother is afflicted with some functional disability, there is a higher likelihood that mother's role of the nurturer will pass on to the female children in the household. To understand the possible moderating effect of gender on the relationship between mother's disability and secondary school dropout, another regression analysis was performed after selecting all the female cases from the sample. As expected, the results of the regression analysis showed that the daughters of women that were afflicted with some forms of functional disability were 1.98 times more likely ($p < 0.05$) to drop out of secondary school as compared to the daughters of mothers without any disability.

The independent effect of gender on secondary school dropout rate was also found to be significant ($p < 0.05$). Girls were 1.43 times more likely to dropout when compared to boys. Furthermore, the effect of child labor was also found to be significant ($p < 0.01$), as working children were 4.43 times more likely to drop out of secondary school compared to nonworking children.

The results of the logistic regression showed that performing house hold chores did not significantly influence children's odds of dropping out of secondary school. However, further exploration revealed that this was only true in the case of boys. To control for the effect of gender, separate regression analyses were performed for male and female children in the sample and the results revealed that participating in household chores significantly increased ($p < 0.05$) the odds dropping out for girls only. The odds of dropping out for girls who performed household chores were 2.47 times greater than girls who did not perform household chores.

Children with issues related to physical mobility were also more likely ($p < 0.01$) to drop out. Specifically, the odds of dropping out for children who were using a walking aid were 3.56 times higher than children without mobility issues. Lastly, the effect of age was also found to be significant ($p < 0.01$), as one year's increase in a child's age was found to be associated with 1.46 times increase in his or her odds of dropping out.

Table 2: Logistic Regression results

Variable	β	SE β	Wald's χ^2	Beta
Residence (0=Rural 1=Urban)	**0.35***	0.19	3.23	1.41
Region				
South Punjab	N/A			
Central Punjab	-0.16	0.20	0.62	0.85
Northern Punjab	0.26	0.22	1.46	1.30
Wealth Quantile				
Poorest/Poor	N/A			
Middle	0.18	0.20	0.81	1.22
Rich/Richest	-0.20	0.24	0.70	0.82
Number of Household Members				
Less than 5 members	N/A			
6-9 members	**0.34***	0.19	3.43	1.41
More than 10 members	0.08	0.29	0.07	1.08
Mother Education				
None/Preschool	N/A			
Primary/Middle	**-0.43***	0.19	5.38	0.65
Secondary/Higher	**-0.52***	0.26	4.02	0.59

Father Education

None/Preschool	N/A			
Primary/Middle	**-0.32***	.19	2.77	0.73
Secondary/Higher	**-0.55*****	0.21	6.98	0.58
Mother Functional Disability (0=No Disability, 1=Has Disability)	0.13	0.27	0.22	1.13
Mother is Alive (0=Alive, 1=Not Alive)	-0.95	1.02	0.86	0.39
Gender (0=Male, 1=Female)	**0.36****	0.17	4.60	1.43
Child Labor (0=No, 1=Yes)	**1.49*****	0.39	14.4	4.43
Hazardous Work (0=No, 1=Yes)	-1.17	0.41	0.16	0.85
Household Chores (0=No, 1=Yes)	0.13	0.19	0.49	1.14
Child uses Walking Aid (No, 1=Yes)	**1.27*****	0.44	8.36	3.56
Child's Age	**0.38*****	0.10	14.9	1.46

* Significance at 0.1 level
** Significance at 0.05 level
*** Significance at 0.01 level

Discussion and conclusion

The present study aimed to identify the factors that influenced secondary school dropout in Punjab. Several geographic, economic, household, and individual level variables were included in the model to identify key determinants. The results of the regression analysis showed that children living in urban areas were more likely to dropout out of secondary school. Contrary to expectations, family income did not influence school dropout and the study found no significant difference between the dropout rates of children from low-, middle- and high-income families. Parental education turned out to be the strongest predictor of secondary school dropout. Children of educated parents were less likely to drop out of school and the analysis showed that as the level of fathers' or mothers' education increased the odds of dropping out significantly decreased. Girls had higher odds of dropping out than boys. Furthermore, girls were also more likely to drop out of secondary school in cases where they were performing household chores, or their mother suffered from a physical disability. Lastly children engaged in child labor and older children were more likely to drop out of secondary school.

The findings of the study have several implications for future research and policy making. The problem of school dropout, especially at the middle and secondary school level, is a relatively ignored research area and is often erroneously conjoined with the issue of out of school children in Pakistan. However, the results of this analysis suggest that both problems are distinct as they may be influenced by different causal factors. Studies consistently show that structural poverty is a primary reason for parents to not enrolling their children in school. However, in the present study family income did not significantly influence secondary school dropout. It may be surmised that by the time children reach the secondary school level their families have already invested in their education for several years and facilitating them further to complete their secondary school education becomes a rational choice, even for low-income families. Similarly, studies focusing on out of school children show that rural areas have low enrollment rates as compared to urban areas. Conversely, the present study shows that compared to rural areas the incidence of secondary school dropout is higher in urban areas. These findings need further corroboration by studies that focus specifically on the issue of school dropout.

The study provides strong indications that at the household level, parental education is the strongest determinant of secondary school dropout. The results consistently show that educated fathers and mothers are more likely to keep their children in school. Future policies can leverage this finding by focusing specifically on uneducated parents. Possibly, uneducated parents discontinue their children's education because they do not have the necessary knowledgebase and experience to guide the development of their children's careers after the completion of their education. The government could devise awareness programs that a) introduce parents to the various career options that their children can opt for, and b) provide practical guidelines for career development, to help uneducated parents. This initiative could be further bolstered by providing free in-house career counseling services to students and their parents at the secondary school level. Lastly, the government could further incentivize uneducated parents by offering them free enrolment in adult education programs.

The patriarchal roots of the Pakistani society foster structural discrimination against women. Women in Pakistan are not only consistently marginalized in the social, cultural, political and economic sphere, but their marginalization is systematically garbed in domineering tradition-based and conservative ideologies. As per expectations, the results of this study also reflected the structural marginalization of women. Girls were not only found to be more likely to drop out of secondary schools, but their vulnerability was extenuated if they regularly performed household chores or if the mother in the household was afflicted with functional disability. Such deep-rooted problems can only be effectively addressed through holistic and long-term solutions. Albeit a shot term solution to the problem could be to offer scholarships and stipends to girls enrolled in the government secondary schools of Punjab, which may have the overall effect of incentivizing parents to continue with their daughters' education.

Child workers were also found to be at a higher risk of dropping out of secondary school. The government must formulate policies and programs that specifically accommodate child laborers enrolled in government run secondary schools by offering stipends and supplementary classes in the afternoons or evenings. Lastly, the government of Punjab must invest the necessary resources to ensure that all government school campuses are disability friendly. Furthermore, students with disabilities should be assigned case officer in the Punjab Welfare department who can in turn ensure that children have access to the necessary facilitative devices and technology to continue with their education.

In conclusion, the often overlooked crisis of secondary school dropout in Punjab requires immediate attention. The present study has merely scratched the surface of this complex issue. The study has shown that a web of factors contribute to this crisis. Follow-up studies should explore into the interplay of these factors in shaping household-level contexts and decisions related to discontinuation of children's education. Future studies can also facilitate the mainstreaming of this issue in the ongoing education policy dialogue in Pakistan. Lastly, it is crucial that the government take a holistic approach to address the secondary education issues and ensure that all children get the opportunity to complete their education.

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