



Socioeconomic Challenges and Factors Influencing Primary Education Dropout in District Kotli Azad Jammu and Kashmir

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Abstract

This study aims to identify the factors contributing to student dropout in district Kotli AJK. The student dropout rate in Pakistan is steadily rising, particularly at the primary level in public schools. A questionnaire is designed to gather data on the factors contributing to students' dropout rates in district Kotli Azad Jammu and Kashmir's government primary schools. The responses of households were calculated and subsequently subjected to qualitative and quantitative analysis. We used the data of 200 households of district Kotli AJK and applied the logistic regression analysis technique for data analysis. The study findings indicate that various causes, such as household characteristics, child characteristics, financial difficulties, and distance from school to home, significantly impact the high dropout rate among children in government schools in district Kotli AJK. However, the government should pay attention to giving financial support to school-going children and increasing the number of schools to deal with the far distance between school and student's houses which would reduce the dropout rate.

Key Words: *Primary Education, Logistic Regression, Socioeconomic Factor, Dropout, KOTLI AJK*

1. Introduction

Education is considered an essential right for all individuals, serving as a driving force behind both economic advancement and personal improvement (World Bank, 1993 Okidi et al., 2004). The problem of dropouts' concerns policymakers as it indicates the insufficiency of the education system in terms of both the quality and quantity of schools. It is important to note that school dropouts are often linked to consistently high levels of unemployment, low income, and negative circumstance consequences (McNeal, 1995; Pallas, 1987; Rumberger, 1987), as well as ongoing poverty among specific parts of society (Bantilan, 2024; Chernichovsky,

1985). Collectively, the repercussions of primary school dropouts at the individual level pose a significant threat to national development as they undermine attempts to foster national human capital development (Kuno et al., 2021).

Primary school dropout rates are greatly impacted by factors such as the level of education of the parents, the size of the household, and the percentage of economically active members of the home (Okumu et al., 2008). On the other way, orphanhood has a substantial impact on children's access to education, with double orphans having a greater risk of dropping out of school compared to children who have both their parents in their lives (Iritani et al., 2016; Ha et al., 2015).

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Furthermore, dropout is one of the most significant aspects of Pakistan's educational system at all levels, but it is considerably more prevalent at the primary level. Consequently, Pakistan's educational system wastes many potential human resources. A significant societal issue that has long-lasting consequences, not only on the lives of individuals but also on the lives of society, it is a problem that has major repercussions (Lloyd et al., 2009).

Specifically, AJK is classified as an underdeveloped state characterized by a low-income level, where the public education sector plays a significant role. The primary education challenges in AJK can be traced back to the country's early days when the newly formed state acquired an established school system. This system had significant weaknesses in terms of its management and categorization. Despite AJK having a better literacy rate than all provinces of Pakistan, a concerning condition in AJK basic education still requires improvement. A significant number of pupils in AJK do not pursue their education beyond the primary school level, with a dropout rate of 35% at this stage (Farooq, 2016). Nevertheless, District Kotli is highly populated in AJK, with (46,907 as of 2017) and a mixture of rural and urban areas. Therefore, we selected District Kotli AJK as our focus area to assess the dropout rate in primary schools.

Considering the high and alarming rate at which students are leaving school before completing their education in district Kotli AJK, and the severe negative consequences that result from this, it is crucial to identify and understand the socio-economic factors that contribute to the likelihood of students dropping out of school. The study aimed to address the following research questions:

RQ1: *What is the effect of socioeconomic conditions within households on the dropout rates of primary school students in district Kotli AJK?*

RQ2: *What policy options may be pursued to reduce the dropout rate among students in district Kotli AJK?*

To answer these questions, a technique known as convenience sampling was utilized to provide some new insights into the existing body of literature concerning students' dropout rates in the Kotli AJK district. We Included in this group are two hundred households from the Kotli Dis- trict. The scope of the investigation was restricted to the Kotli District exclusively. In addition, it was restricted to only the households whose children are undergoing dropout in these schools within this district. As part of the data-gathering process, a questionnaire was utilized, in addi- tion to participant observation and conversation between the participants.

The paper is structured into five sections. The first section encompasses the background infor- mation and driving force behind conducting the research. Next, the literature review section examines the research findings of comparable studies. Section III outlines the methods used, while section IV describes the data. The study's findings are presented in part V, while section VI provides conclusions and policy recommendations.

2. Literature Review

School dropout or inadequate completion rates have long been a topic of concern to academics, researchers, and policymakers in nearly all developing countries (Lloyd et al., 2009). The conclusions of different studies vary based on specific circumstances distinct to each nation. However, common factors found in all studies include the rural-urban divide, gender bias, and distance to school (Bantilan, 2024). This section provides an overview of the research findings about the rates at which students leave school at different grade levels within households.

In the context of social and economic factors, Satti and Jamil (2021) have explored that social and economic issues influence the rate of children dropping out of school. In particular, the economic situation of households plays a significant role in reducing dropout rates. If a household's economic situation is improved compared to its previous state, there is a decreased likelihood that the child may withdraw from school. Similarly, the economic climate of the household's neighborhood is another factor influencing dropout rates. If the economic condition in the community is better than it was in the past, then the likelihood of children dropping out of school is decreased.

One of the populated provinces of Pakistan is also suffering from dropout as Rafique et al. (2020) examined the socioeconomic factors affecting primary school attendance in Punjab,

Pakistan, for 5- to 9-year-olds. The Punjab Bureau of Statistics Multiple Indicator Cluster Survey 2014 data was used with 31,466 children. Data was analyzed using descriptive analysis and logistic regression. The study found that nearly half of Punjabi children are not in school. Girls are also less likely to attend school than boys. Rural children are more likely to attend school after controlling household wealth than urban youngsters.

School fees are also a key factor in dropping out of school, as Bhatti and Awan (2019) examined the socioeconomic determinants affecting poor elementary school enrolment in Bahawalpur, Pakistan. A thoroughly structured questionnaire collected 200 children's primary data. Using the ordinary least square method, they observed that school attendance drops with fee increases. Distance from school negatively correlated with enrolment. Parental occupation positively affects school enrolment. Enrolment also rises with classroom count. Higher school enrolment is linked to improved road infrastructure. This study also found that household head income and economic development positively affect school enrolment.

Islamabad, a developed city in Pakistan, also suffers from educational dropout. Naz et al. (2019) conducted a study in Pakistan that investigated the primary factors that led to many students dropping out of school in the rural parts of Islamabad. A comprehensive questionnaire was administered to 550 children between the ages of five and eighteen to obtain primary data. The students who were being analyzed were divided into two primary categories, namely those who had dropped out of school and those who were currently enrolled. The Probit model was utilized to investigate the factors that lead to children dropping out of school. A child's dropout rate can be significantly influenced by several factors, including the distance between their home and the school, the presence of financial obstacles, their father's education level, their age, and their gender. There was no correlation between the mother's education level and the dropout rate. This could be because, in rural areas of Pakistan, homes are often under the charge of male household members.

The gender of the child, the age of the child, the household income, the household wealth, the geographical location, the education level of the parents, the quality of the school, the availability of jobs, and other factors were shown to be significant contributors to school dropouts in developing nations, according to several studies (Bukhari et al., 2019). Other important factors, such as the poverty of households, the distance between homes and schools, the gender of the household head, the number of funds spent on schools, the lack of physical facilities in schools, the harsh attitudes of teachers (Hussain et al., 2011), the presence of children who assist with household responsibilities, a poor learning environment, the health of children, low quality of education, and teachers who are absent from school (Bantilan, 2024), all contribute to an increase in the number of students who drop out of school (Satti & Jamil, 2021; Bukhari et al., 2019; Mike et al., 2016).

2.1 Research Gap

However, almost all the studies investigate the factors that lead to students leaving school in many districts throughout other provinces in Pakistan. At this time, it is necessary to research the phenomenon of dropouts in AJK to determine the measures that can be implemented to prevent students from dropping out of school. The current study will investigate the factors that lead to students dropping out of primary school in the district of Kotli in the state of AJK. Furthermore, according to our best knowledge, this is the first study carried out in district Kotli AJK on socioeconomic factors of primary education dropout. The current study is confined to only the information obtained using questionnaires throughout the data collection process, even though several additional factors also contribute to the phenomenon of school dropouts.

3. Methodology

The student dropout rate from educational institutions over a specific timeframe indicates the influence of several socioeconomic conditions stemming from the students' households. The socioeconomic variables can be classified into four main categories: the pupil's pre-primary learning, the pupil's family history, the pupil's personality, and community-based factors.

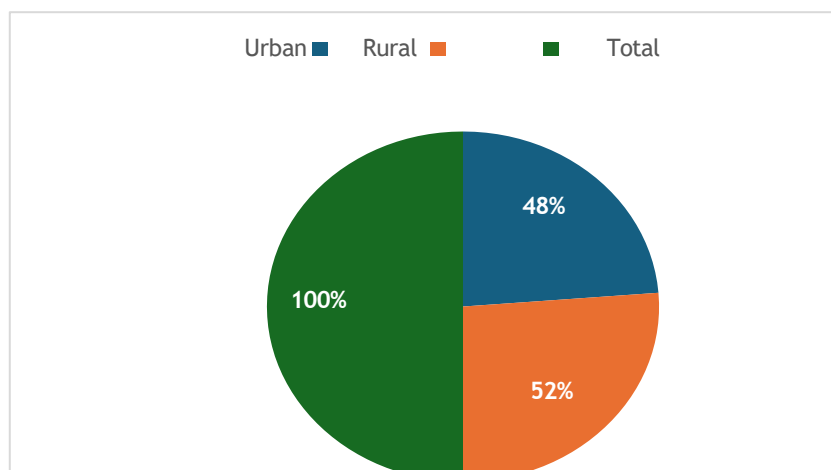
Socio-economic factors directly impact student dropout rates since they influence the decision of either the student or the parent to withdraw the student from school. The variables indirectly impact child dropout by adversely affecting their educational accomplishments in school, including attendance, learning, and academic performance in examinations. Consequently, this indirectly contributes to pupil dropout.

This approach emphasizes the intricate nature of the elements contributing to student dropout. Many of these variables are interconnected and mutually influence one another. Certain variables directly and indirectly influence dropout rates by affecting students' academic performance.

3.1 Data

Questionnaires were used to collect data for the study. Using convenient sampling, the household survey questionnaire gathered data on the social and economic factors of families in the district of Kotli, AJK, regarding primary education dropout. The group was made up of 200 households from the whole district. We Selected 95 households from urban areas and 105 households from rural areas because the district of Kotli consists more of rural areas than urban areas, as shown in Figure 1.

Figure 1: Area-wise Categorisation of Data



3.2 Estimation Method

We used logistic regression for our data analysis by following Okumu et al. (2008) because to examine two-level outcomes and adjust for various variables, logistic regression is a helpful technique that can improve results while also lowering the possibility of bias (Larget, 2008). Logistic regression is a strong method for studying the effects of independent factors on a binary outcome. Important considerations include selecting variables, meeting assumptions, and selecting an appropriate model-building strategy. Logistic regression may be used to analyze the effects of independent variables on binary outcomes (Stoltzfus, 2011).

3.3 Empirical Model

By following prior literature (Prakash et al., 2017; Mike et al., 2016; Okumu et al., 2008), we intend to analyze the factors that contribute to dropout rates; we employ a binary variable, DS_{ij} , which is assigned a value of one if the kid i from household j has dropped out of school and zero otherwise.

$$DS_{ij} = f(CC_{ij} + HC_j + DC_j + CM_{cj}) \quad (1)$$

Where DS_{ij} is the dependent variable, which is the dropout of the students, $DS_i = 1$ if a child was reported to have dropped out of school completing primary seven, else $DS_i = 0$, A set of characteristics of child i of household j is denoted as CC_{ij} . A set of household head characteristics of child i of household j is denoted as HC_j . A set of domestic characteristics of child i of household j is denoted as DC_j . CM_{cj} is a collection of community characteristics and factors in which household j is located (Bantilan, 2024; Mike et al., 2016).

$$\begin{aligned} DS_{ij} = f & (Age1 + Age2 + OrpFather + Orpmother + AgeHH + GHH + ACCFather + \\ & ACCmother \\ & + HHmarried + HHdiv + HHwid + HHSize + HHact + Fee \\ & + DIST) \end{aligned} \quad (2)$$

Equation (2) is the extension form of equation (1) in equation (2); complete regression with variables is presented. Furthermore, the details of the variables mentioned in equation (2) are presented in Table 1.

Table 1: Description of the Variables

Variables	Variable Detail	Description
DS	Dropout of Student	Dropot of the sudents, $DS_i = 1$ if a child was reported to have dropped out of school completing primary, else $DS_i = 0$
Age1 Age2	The age of chil- dren	The child's age in completed years is categorized into two categories: age1 if the pupil is between the ages of 5 and 8 and 0 otherwise; age2 if the pupil is between the ages of 9 and 12 and 0 otherwise.

Orp_Father Orp_Mother	Orphan children	<p>The orphanage of a child is the consequence of the death of both the mother and father. The index orp_fa-ther is assigned a value of 1 if the child's father has passed away and 0 otherwise. The index orp_mother is assigned a value of 1 if the child's mother has passed away and 0 otherwise.</p>
Age_hh	Age of the House- holds	Age of the household leader; Age_hh is the age of the household head in the year that has been concluded.
Gender_hh	Gender of the housholds	<p>A fictitious variable that represents the gender of the household head, g_hh, is set to 1 if the household head is male and to 0 if the household head is female</p> <p>Father and mother's educational backgrounds</p>
ACC_Father ACC_Mother	Schooling of the father and mother	<p>Acc_father represents the number of years of schooling for the father, while Acc_mother represents the number of years of schooling for the mother.</p>
HH_Marided HH_DEV HH_Wid	Marital status of housholds	<p>The three variables that capture the marital status of the household chief are as follows: If the household head is married, the value of hh_maried is 1, while it is zero otherwise. If the household head is divorced, the value of hh_dev is 1, which is zero otherwise. If the household head is widowed, the value of hh_wid is 1, and it is zero otherwise.</p>
HH_Size	Household Size	Household size: hh_size is the number of individuals in the household.
Eco_ACT	Active households	<p>The proportion of economically active members of a household; eco_act = the number of individuals between the ages of 18 and 64 in a household divided by the total number of individuals in the household.</p>
FEE	Fees	<p>The annual sum paid to the school for the child, as determined by the average amount paid per pupil in each enumeration area.</p>
DIST	Average Distance	<p>The average distance in kilometers to the nearest primary school per enumeration area is used to measure the distance to the school.</p>

4. Results and Discussion

This part shows and discusses the results of the regression analysis of factors at the household level that affect the possibility of dropping out of school. During the discussions, references are made to the tables of regression findings. We looked at the gender, location, and age groups of the primary school children to see how things at the household level affect dropping out of primary school.

Table 2. Logistic Model of Primary Education Dropout

Dependent s → Independent Variables ↓	Variable	Urban Dropout	Rural Dropout	Total Dropout
		(1)	(2)	(3)
Cons.		1.243*** (0.046)	1.248*** (0.048)	1.245*** (0.049)
Age 1		0.945*** (0.046)	1.423*** (0.018)	1.224*** (0.029)
Age 2		0.894** (0.034)	0.994** (0.037)	0.992** (0.0397)
Orp_mather		0.842** (0.542)	1.031** (0.534)	1.023** (0.556)
Orp_mother		1.351* (0.138)	1.214* (0.303)	1.282* (0.304)
Age_HH		-1.927*** (0.029)	-1.463** (0.028)	-1.664** (0.041)
Gender_HH		1.014 (0.921)	1.042 (0.981)	1.032 (0.972)
ACC_father		-1.731*** (0.041)	-1.421*** (0.046)	-1.52*** (0.036)
ACC_mother		-1.063*** (0.032)	-1.061*** (0.0328)	-1.062*** (0.032)
HH_maried		-1.012***	-1.023***	-1.032***

	(0.024)	(0.014)	(0.024)
HH_div	1.701*	1.421*	1.521*
	(0.070)	(0.086)	(0.085)
HH_wid	1.632***	1.423***	1.532***
	(0.048)	(0.039)	(0.032)
HH_size	-1.732***	-1.723***	-1.731***
	(0.048)	(0.039)	(0.032)
Eco_ACT	-1.233***	-1.225***	-1.234***
	(0.048)	(0.039)	(0.032)
	(0.048)	(0.039)	(0.032)
FEE	0.012	0.123	0.012
	(0.248)	(0.239)	(.2032)
Prob>chi2	0.0000	0.0000	0.0000
Pseudo R-squared	0.552	0.648	0.650
Obs.	95	105	200

Note. This table reports the regression results of Socioeconomic Challenges and Factors Influencing Primary Educational Dropout in District Kotli AJK. All variables are defined in Table 1. Standard errors are in parentheses below the coefficients. Sig. *** p<0.01, ** p<0.05, * p<0.1.

The child's age is positive and statistically significant in all the models as the child's age also increases the dropout. The variables of an orphan child are positively and statistically significant in all models as orphanhood also increased the primary education dropout both in rural and urban areas of district Kotli AJK. Our results of orphanhood consist of (Iritani et al., 2016; Ha et al., 2015).

The odds ratio for the age of the household head is often negative. This implies that as the age of the family head increases, the likelihood of a youngster discontinuing their education decreases. The association has statistical significance in the overall model. These data indicate that parental decisions significantly influence children's retention in schools. Elderly parents frequently recognize the significance of education and influence their children, particularly the younger ones, to remain in school (Okumu et al., 2008). However, as children mature, they gradually assume greater autonomy and parental influence tends to diminish (Garg et al., 2024).

The gender of the household head was determined to have no significant impact on any of the models. This might be because primary school education is predominantly free. As a result, even households headed by women with minimal financial resources can afford to support their children's education (Lloyd et al., 2009). The gender of a household dummy variable has no substantial impact on the marginal effects.

The marital status of the head of household also impacts the primary education dropout as the head of household is divorced and a widow then, it also boosts the primary education dropout in children (Al-Samarrai & Peasgood, 1998). Evidently, children in larger homes have a

lower likelihood of dropping out of school than children in smaller households, and these correlations are statistically significant across all models. In contrast, in smaller households, children are more prone to being assigned family tasks or serving as substitutes in the event of family crises such as illness; our result of household size is consistent with Okumu et al. (2008).

Through comprehensive investigation, a higher proportion of economically engaged individuals in a household increases the likelihood of a student dropping out of school (Garg et al., 2024). The correlation is positive and statistically significant in all the models (Okumu et al., 2008). Examining the marginal effects, when the number of economically active household members increases in a certain home, the likelihood of a child dropping out of school is 1.63 percent in rural areas. However, our results are consistent with (Mohloua& Tlale, 2020). In urban areas, the percentage is 1.62 %. This discovery indicates that a significant proportion of individuals who are part of the workforce are not contributing to the economy, therefore confirming the burden placed on households due to their dependence. This depletes the households' financial resources, making students withdraw from school. This data also indicates the current state of unemployment, particularly among the youth in Kotli AJK.

There is a positive correlation between the distance a child must travel to school and the likelihood of their dropping out of primary school. Our distance result is consistent with those of Naz et al. (2019) and Hussain et al. (2011). However, Students who commute long distances to school are more prone to dropping out. While the impact of distance on dropout rates for urban households was determined to be minor, it is often found to be considerable in rural areas. This phenomenon might be ascribed to the greater accessibility of schools in urban regions than in rural locations. The impact of proximity to school on the likelihood of dropout is particularly significant for younger males aged 5-8 and 9-12, with probabilities of 0.95 percent and 0.89 percent, respectively.

The impact of fee payments on all model criteria is positive, although it is not statistically significant. The low cost of school fees can largely be ascribed to the existence of universal primary education, which helps to alleviate the financial strain of school tuition. Our results of fees are consistent with Mike et al. (2016).

5. Conclusion

The study findings suggest that socioeconomic factors significantly influence the availability of primary education and primary school dropout. This is supported by the lack of significance of the overall average amount of school dues paid by students in affecting the dropout rate of children. Nevertheless, it is imperative for the government to closely monitor the non-school fee payments made by parents to schools, as these payments can escalate to unmanageable amounts for many households, particularly in rural regions.

The educational achievement of parents is a crucial determinant that impacts the likelihood of a kid discontinuing their education, regardless of whether they reside in rural or urban settings and regardless of their age group. Consequently, we advocate for the widespread implementation of government policies and programs for adult education nationwide. Parents' education level is crucial for promoting a shift in attitudes among illiterate and uninformed parents towards supporting their children's education.

As the number of economically active household members increases, the probability of primary school dropout also decreases, assuming all other factors remain constant (Bantilan, 2024). This suggests that a significant portion of the population who are engaged in economic activities is not contributing to productivity. This discovery highlights the necessity of broadening job prospects, particularly for the younger generation. Implementing policies and programs that improve households' productive capacities could significantly help reduce the primary education dropout ratio. This also implies that it is crucial to extend free universal primary education, as it would enable individuals who are unable to finance primary education to pursue further schooling.

Implications and Policy Recommendations

The results of this study add to the discussions about policy in the education sector, especially in primary education. The study looks at socioeconomic factors at the household level that affect a child's chances of dropping out of primary school and needs supporting policies that reduce the dropout. Even though almost all children in district Kotli are getting a primary education, dropping out of school hurts attempts to do more than just teach basic literacy. This is because getting universal education is one thing, but keeping kids in school is another. However, the government should pay attention to giving financial support to school-going children and increasing the number of schools to deal with the distance between schools and students' houses.

Furthermore, the results of this study provide valuable insights for policy deliberations, particularly in relation to the education sector as a whole and primary education specifically. This study examines how household-level factors affect a student's likelihood of leaving primary school and the resulting policy consequences. While KOTLI AJK has achieved near universal primary education, the problem of school wastage due to dropouts hinders progress toward achieving more than just basic literacy. Policymakers need to ensure universal education and maintain high enrolment rates in schools.

Limitation and Further Research Direction

This study has yielded significant insights into the determinants of primary education dropout rates, specifically in district Kotli, located in Azad Jammu and Kashmir. This study is limited to only one district of AJK. However, future research can be conducted on other districts of AJK, and future studies can focus on comparing different districts of AJK. Furthermore, future research could focus on the phenomenon of dropouts in both elementary and secondary education, as well as in higher education.

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