

# **Diverging Pathways: When and Why Children Discontinue Education in India**

Renu Singh and Protap Mukherjee



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**Young Lives**, Oxford Department of International Development (ODID), University of Oxford,  
Queen Elizabeth House, 3 Mansfield Road, Oxford OX1 3TB, UK

Tel: +44 (0)1865 281751 • Email: [younglives@younglives.org.uk](mailto:younglives@younglives.org.uk)

# Contents

<b>The authors</b>	<b>4</b>
<b>Acknowledgements</b>	<b>4</b>
<b>Summary</b>	<b>5</b>
<b>1. Introduction</b>	<b>6</b>
1.1 Reasons for discontinuing education	6
<b>2. Objectives</b>	<b>8</b>
<b>3. Data</b>	<b>8</b>
<b>4. Methods</b>	<b>9</b>
4.1 Dependent variables	10
4.2 Independent variables	10
4.3 Model specification	11
<b>5. Findings</b>	<b>11</b>
5.1 When have children discontinued education?	11
5.2 Why have children discontinued education?	12
<b>6. Conclusion</b>	<b>27</b>
<b>References</b>	<b>29</b>
<b>Appendix</b>	<b>32</b>

## The authors

**Renu Singh** has over 25 years' experience in teaching, teacher education, education policy analysis and research, both in India and abroad. Her special interests are early childhood development, teacher education, inclusion and gender. She has held a number of prestigious positions at NGOs, including Save the Children, and in university departments. She has also advised the Indian Government by serving in a variety of working groups, and on committees and boards. Currently she is the Country Director at Young Lives India.

**Protap Mukherjee** is a Quantitative Researcher at Young Lives India. He has an MSc in Geography from Banaras Hindu University, Varanasi, and an MPS (Master of Population Studies) from the International Institute for Population Sciences (IIPS), Mumbai. He also has research experience at Jawaharlal Nehru University, New Delhi. Before joining Young Lives, he worked at IIPS, the National Population Stabilisation Fund, Microsoft Corporation India and Jawaharlal Nehru University.

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### **About Young Lives**

Young Lives is an international study of childhood poverty, following the lives of 12,000 children in four countries (Ethiopia, India, Peru and Vietnam) over 15 years. [www.younglives.org.uk](http://www.younglives.org.uk)

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# Summary

Given the current commitment to the Sustainable Development Goals and the push to achieve universal secondary education by 2030, it is important to investigate at what grade or age level boys and girls are discontinuing education, as well as the key reasons for this.

This working paper examines dropping out of school from a life-course perspective, utilising an ecological model to examine factors affecting school continuity by drawing upon Young Lives longitudinal data in Andhra Pradesh and Telangana, India. Using mixed methods, the reasons cited by children are grouped into three broad categories: (i) *pulled out* (including to undertake paid jobs and family responsibilities); (ii) *pushed out* (institution and system-related factors such as distance to school); and (iii) *opting out* (disengagement with school or institution not caused by the school or institution, or outside pull factors). Listening to the voices of children, the paper analyses push, pull and opt-out factors at both the individual and community level to investigate when and why children discontinue education, and correlates of dropping out, including the role of the community.

Pull factors account for more than 60 per cent of the reasons given by children who had dropped out of school by the time they were 19 years old, while prolonged absence from school/truancy was the second most cited reason for discontinuation of education. Significant factors such as caste, maternal education, preschool attendance, and opted-out factors emerged as explanatory variables for those discontinuing education before upper-primary education as well as before secondary. However, only caste and preschool attendance were significant factors when comparing children who dropped out before and after higher secondary.

These findings provide a clear direction to formulate policies and interventions at specific ages. An interesting finding from the multinomial multilevel regression highlights community effects that, after controlling for individual factors, explain around 11 per cent of the variability in dropping out. The fact that distance to public high school is a significant predictor of leaving school, especially at the secondary level, with children being 2.7 times more likely to drop out in communities where schools are further than 5 km away, is a key point to be considered by policymakers.

# 1. Introduction

By the end of the Millennium Development Goals in 2015, the target of universal primary education had been missed, with 61 million primary school-age children (6 to 11 years old) not in school, globally (UNESCO-UIS 2016). The same report highlights that 60 million young adolescents at secondary education level and 142 million at upper-secondary level were out of school in 2014. While there has been stagnation in the global trend of the out-of-school population at primary level since 2007, South Asia showed tremendous progress by reducing the out-of-school population from 32.7 million in 2000 to 9.9 million in 2012. However, according to an UNESCO-UIS report (2016), Pakistan, India and Bangladesh are the three countries in South Asia with the largest out-of-school populations at the primary level.

The estimates of the number of out-of-school children in India vary, with the 2011 Census identifying 38 million out-of-school children in the 6-13-year-old age group, which constitutes 18.3 per cent of this age group. However, three studies commissioned by the Ministry of Human Resource Development (MHRD) from the Social and Rural Research Institute – India Market Research Bureau (SRI-IMRB 2014) revealed a huge reduction in the number of out-of-school children aged 6-13 years old, down from 13.45 million in 2005-06 to 6.04 million in 2013-14. These discrepancies in estimates are mainly due to the different definitions of out-of-school children used by different data sources. Also, while enrolment between 2000-01 and 2013-14 in secondary/higher secondary education increased from 27.6 million to 59.6 million students, more than 16 million young adolescents of lower secondary school age were not enrolled in school in India in 2011 (UNESCO-UIS 2015).

Given the current commitment to the Sustainable Development Goals and the push to achieve universal secondary education by 2030, it is important to investigate at what grade or age level boys and girls are discontinuing education, as well as the key reasons for this.

## 1.1 Reasons for discontinuing education

Many studies have highlighted the need to understand dropping out of school not as an event, but as a process (Rumberger 2011; Dupéré et al. 2015). Hunt (2008) pointed out that much of the available literature identifies one factor (or possibly more) leading to drop out, which is identified as the final push or pull out of school. What is seen less often in the literature are the processes around dropping out, the personal stories of the children, household members and teachers, their social contexts, and the competing demands on them. Johnson et al. (2011) suggested that we should view adolescents within the life course, using mixed methods and taking into consideration the complex mutual selection of person and context – that which occurs through the interplay of environment and biology and also through the agentic strivings of adolescents. In order to understand reasons for discontinuation of schooling, we need to understand long-term vulnerability as well as turning points and disruptions. Researchers using longitudinal studies have highlighted the interplay of familial circumstances as well as school factors in putting some children on a high-risk trajectory to dropping out (e.g. Alexander, Entwisle, and Kabbani 2001; Alexander, Entwisle, and Olson 2007; Duchesne et al. 2008; Jimerson et al. 2000; Porche et al. 2011). Tiblier (2007) stated that while early experiences may predispose certain individuals to dropping out of school, the reasons for leaving school are not found solely in the individual's attributes, but rather results from the interaction of individuals and the educational, family, and community contexts in which they are located. Doll et al. (2013), using longitudinal data, grouped

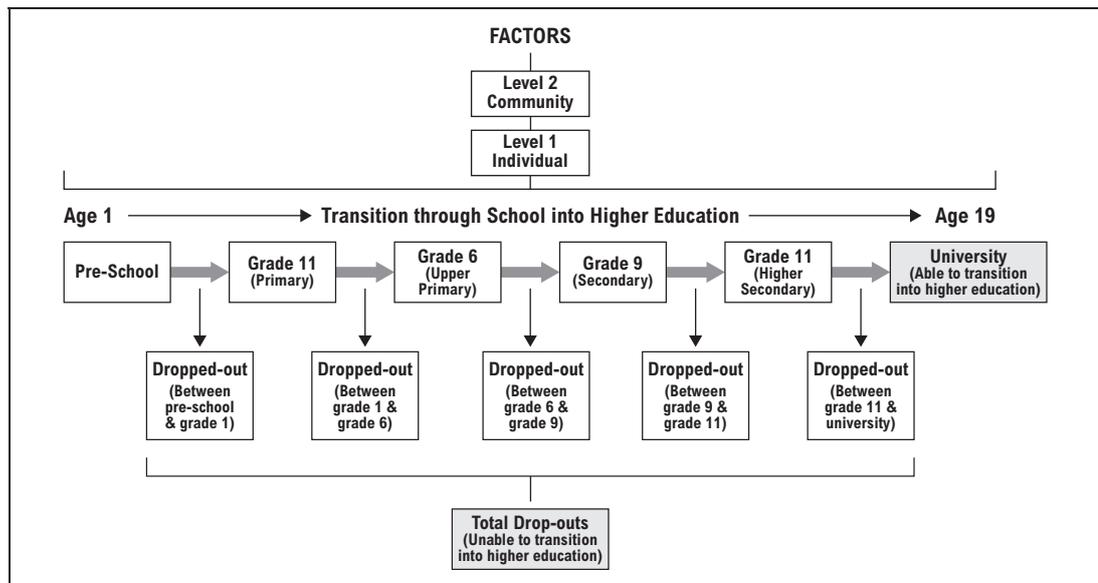
students into three categories, based on student-identified cause of dropout: (1) *pushed out*, due to poor attendance and behaviour; (2) *pulled out*, for those who feel compelled to leave school to work or to fulfil other family obligations; and (c) *falling out*, due to insufficient academic progress.

An UNICEF-USI (2014) report on out-of-school children in India found that children from Muslim, Scheduled Caste and Scheduled Tribe communities, particularly girls, make up most of the out-of-school children in India.<sup>1</sup> These children account for 67 per cent of the out-of-school population, although they only make up 40 per cent of the child population, indicating that they are disproportionately excluded from education. The study also found that girls, rural children and those belonging to lower wealth quintiles were more disadvantaged and likely to account for a much larger proportion of out-of-school children. Furthermore, the report exemplified that for the socio-economically disadvantaged groups who still face many demand-side barriers, the supply barriers add to the obstacles to school participation. Bandyopadhyay and Subrahmanian (2008) highlighted that gender inequalities interlock with other forms of social inequality, notably caste, ethnicity and religion, with girls from Scheduled Castes, Scheduled Tribes and Muslim minorities, in particular, constituting the largest population of out-of-school and dropout children.

Given that the dropout process needs to be examined from a life-course perspective, resulting from interaction of various events and factors, in this paper we utilise a mixed methods approach. The paper builds upon an ecological model of factors affecting school continuity (Singh and Mukherjee, forthcoming) to examine factors that lead to children being 'pulled out' (including to undertake paid jobs and family responsibilities), 'pushed out' (institution and system-related factors such as distance to school) or 'opting out' of educational institution (disengagement with school/institution not caused by school/institution or outside pull factors). Listening to the reasons that the children themselves attribute to dropping out of school, we analyse push, pull and opt-out factors at both the individual (termed 'Level 1') and community level ('Level 2'). Figure 1 outlines an analytical framework of various factors affecting school discontinuation at various transition points, from preschool into higher education. To overcome limitations of relying only on proximal reasons for discontinuity of schooling, we draw upon both longitudinal qualitative case studies as well as quantitative data related to the individual and community levels.

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<sup>1</sup> Caste in India is divided into four official categories. Scheduled Tribes, Scheduled Castes and Backward Classes are recognised in the Constitution of India as historically disadvantaged, while Other Castes are more privileged, and socially and educationally advantaged castes.

**Figure 1.** Analytical framework for dropout patterns

Source: Singh and Mukherjee, forthcoming.

## 2. Objectives

Our broad objective is to examine when and why children discontinue education before completing a particular educational level. In particular, this paper aims to answer the following questions:

- When are children most likely to drop out? What are the key reasons for children to discontinue education before completing a particular level of education?
- What are the other correlates of discontinuing education? Do community factors influence dropout patterns among children?

## 3. Data

This paper draws upon both quantitative and qualitative panel data from Young Lives, a longitudinal research study on childhood poverty following 3,000 children in former Andhra Pradesh (now bifurcated into Telangana and Andhra Pradesh), India.<sup>2</sup> Two cohorts of children (the Older Cohort, aged 8 years old, and the Younger Cohort, aged 1 year old, in 2002) have been followed since 2002 in four districts of Andhra Pradesh and three districts of Telangana, with four rounds of data collected at child, household and community levels in 2002, 2005, 2009 and 2013. For this study, we have used longitudinal survey data related to the 484 Older Cohort children, born in 1994–95, who had discontinued education by the age of 19 (at the time of the Round 4 survey in 2013). The rationale for choosing the Older Cohort

<sup>2</sup> For detailed information on Young Lives sampling, see Kumra (2008).

is that these children were 8 years old at the start of the study in 2002 and in Round 4 turned 19, allowing us to capture their dropout patterns across different levels of education, from primary to university levels.

The quantitative panel data provide household and child-level data related to educational history and literacy, as well as the children's own views about their well-being, which we examine through psychological constructs such as self-efficacy. Basic socio-demographic information, like gender, caste, place of residence, place in the birth order, and maternal education, were obtained from Round 1 data (in 2002). The information on the household's economic prosperity, for which the wealth index<sup>3</sup> is a proxy, and the time spent by children on domestic chores and paid work, are drawn from Round 2 data (obtained in 2006 when the children were approximately 12 years old). We also draw upon the results of the Young Lives tests in reading, and on the stunting status of children at 8 years old. The community level data has been obtained from the Round 1 (2002) survey.

The qualitative research was conducted in 2007, 2008, 2010 and 2014 in four communities with a nested sample of 50 children, their caregivers (mostly mothers, but occasionally both parents), and other key figures in the community. We also present the reasons of children dropping out of school which emerged from a sub-study funded by the Oak Foundation in 2011, which conducted interviews and group discussions with 21 boys and girls engaged in agricultural labour in two rural sites to get a deeper understanding of children's work. We draw upon case studies of children who have discontinued education at various levels of schooling and try to juxtapose their educational and life trajectories with the quantitative findings.

## 4. Methods

We selected a multilevel model for exploring when and why students discontinue education, since there is growing recognition among social scientists that along with individual factors (factors specific to a child, which also include characteristics of the household to which the child belongs), 'social' or 'neighbourhood' effects also play an important role in explaining a wide range of individual decisions regarding education (Dostie and Jayaraman 2003). As the individual and household level information of the Young Lives sample is nested within communities, the multilevel modelling strategy accommodates the hierarchical nature of the data and corrects the estimated standard errors to allow for the clustering of the observations within units. An advantage of the multilevel model is that it examines effects that vary by groups or levels and is able to estimate group level averages, whereas regular regression ignores the average variation between groups (Torres-Reyna 2007). The use of multilevel models also allows the identification of clustering of outcomes at different levels. This clustering, known as the random intercept, represents the extent to which the outcome of interest varies between each higher-order units (in this case community effects) after controlling for variables entered in the model.

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<sup>3</sup> The wealth index is a composite index that reflects the welfare of household members in terms of the quality of the dwelling (for example, the wall and roof materials), use of durable goods (whether the household owns a radio, TV, bicycle, etc.), and access to basic services (drinking water, electricity, etc.).

## 4.1 Dependent variables

We created one multinomial dependent variable that suits our purpose of studying the patterns of discontinuing education at various stages of education and employed multinomial multilevel logistic regressions to examine this variable. On the basis of dropout patterns, we identified four different educational paths by age 19: those who dropped out before completing the upper-primary examination/elementary education (coded as '1'); children who completed upper primary but dropped out before completing the secondary examination (coded '2'); children who completed secondary education but dropped out before completing the higher secondary examination (coded '3'); and children who completed higher secondary but dropped out before entering university (coded as '4') (see Figure 2).

## 4.2 Independent variables

We considered a set of predictor variables to examine the extent and differentials in discontinuing education before completing different levels of education.

### 4.2.1 Individual level predictors (Level 1)

Level 1 consists of variables related to individual characteristics and also includes household variables along with child's own characteristics. The following variables are considered: gender, place of residence, caste, birth order, wealth index, mother's educational level, stunting status at age 8, preschool attendance, and early reading skill at age 8, as well as reasons for dropping out. The analytical model classifies the reasons cited by the Older Cohort children into three broad categories:

- (1) *Push factors*, when adverse situations within the school environment lead to consequences, ultimately resulting in dropout (Jordan et al. 1994).
- (2) *Pull factors*, which are related to factors outside the school such as social and economic disadvantage that might lead to child labour (paid and unpaid), child marriage, etc.
- (3) *Opted-out factors*, including behaviour (absence from school/truancy), personal characteristics (ill health) and attitude (disinterest towards schooling, motivation, etc.).

### 4.2.2 Community level predictors (Level 2)

Hunt (2008) highlighted that while the lack of schools is more likely to affect initial access rather than dropout, there is evidence that limited school supply influences dropout. This is particularly since there are fewer secondary schools, making the transition problematic in certain contexts. Drawing upon community data available in the longitudinal study, we examined the association of community level variables with dropout patterns of children in bivariate analysis separately for four community variables at Level 2. The variables were whether a public health centre is available or functioning within the community, whether a public high school is available or functioning, the distance to the nearest public high school, and the dominant caste group in the community. Aggregate community effects were also analysed in the multivariate multilevel model.

### 4.3 Model specification

Using Stata's Generalized Structural Equation Model (GSEM) specification (Dey and Raheem 2016), we estimated the following multilevel multinomial logistic regression model:

$$t_{kij} = \log[p(t_{ij} \leq k)/1-p(t_{ij} \leq k)] = \gamma_{00} + \beta_1 X_{ij} + \delta_k + u_{0j}$$

Where  $t_{kij}$  is the log odds of  $i$ -th child in the  $j$ -th community being dropped out before completing  $k$ -th level of education;  $\gamma_{00}$  is the log odds of dropping out before secondary education relative to enrolment in universities when the predictor variables in the model are evaluated at zero;  $p(t_{ij} \leq k)$  represents the probability of dropping out at or below  $k$ -th level of the outcome variable;  $X_{ij}$  represents the child level predictors (Level 1);  $\beta_1$  is the slope coefficient corresponding to  $X_{ij}$  which measures the change in the probability of being dropped out before a given educational level;  $\delta_k$  is the difference between the  $k$ -th category and preceding one; and  $u_{0j}$  is the random error term.

The selection of a multinomial logistic regression over a binary or an ordered logistic regression was because the decision regarding dropping out before completing a particular level of education varies over the years, therefore the dropout variable has several non-ordered categories and hence a multinomial logistic regression model is used which is suitable for educational outcome studies (Herzog 2005).

Additionally, we adopted four separate binary logistic regression models to examine factors associated with dropping out before upper primary, secondary, higher secondary, and university level.<sup>4</sup> We did not consider dropout reasons in these four models as the cited reasons for dropping out are limited to the dropout children, whereas here the dependent variable is about dropping out before completing a particular level of education (categorised into 'yes' if dropped out and 'no' if not). However, we considered paid work status and hours spent on domestic chores at age 12, in addition to three community variables in the model, to account for the work-related association with leaving education at different ages.

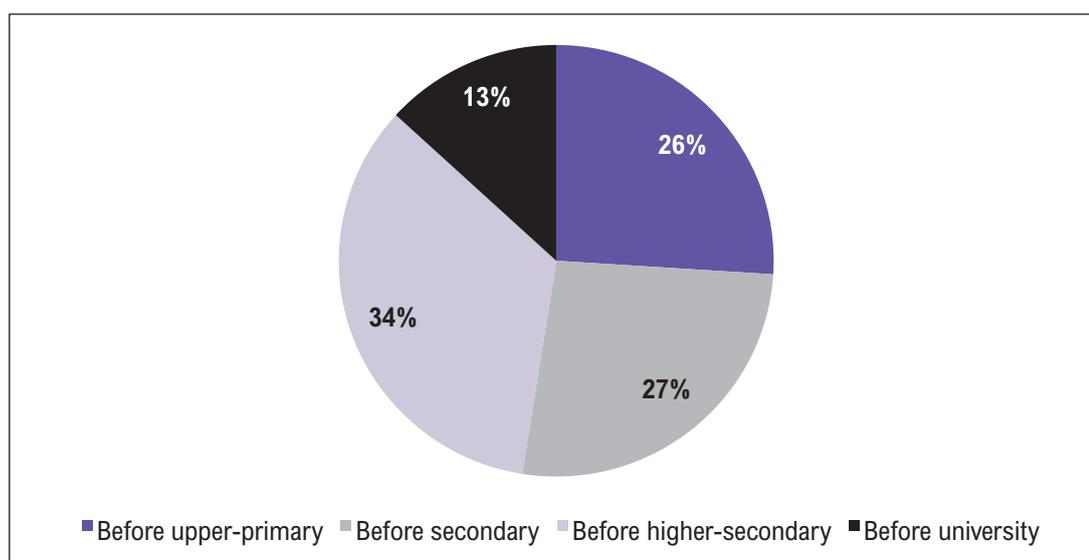
## 5. Findings

### 5.1 When have children discontinued education?

By age 19, 51.1 per cent of children had left school before completing different levels of education. Figure 2 shows that amongst all the dropout children ( $n = 450$ ), 26.0 per cent left school before completing upper primary education, while a similar proportion (26.5 per cent) discontinued schooling before completing the secondary examination. However, the highest percentage of children left school after secondary education and did not obtain the higher secondary certification (34.3 per cent). Only 13.2 per cent of children left school after completing the higher secondary examination and did not enrol for higher education. Thus, the largest number of children discontinued schooling after completing secondary education.

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4 See Appendix.

**Figure 2.** *Distribution of dropouts before completing different levels of education*

Source: Young Lives longitudinal survey (2002-13).

## 5.2 Why have children discontinued education?

### 5.2.1 *Reasons reported by children*

The reasons for children discontinuing education were categorised into push, pull, and opted-out. Table 1 presents the percentage contribution of each reason for dropout. There were 12 reasons reported in both the push and pull categories, and four reasons in the opted-out category. Pull factors were most widely cited by the children for discontinuing education and constituted 60.7 per cent of the reasons gathered across all the survey rounds, among which marriage accounted for 20.7 per cent of all dropouts. Considering the children's social context, this reason was mainly reported by girls and most of these marriages took place before completion of secondary education (43.2 per cent), with 31.3 per cent dropping out before completing higher secondary education (see Table 3). Also, 29 per cent of girls who left school before completing upper primary education also reported marriage as the reason for discontinuing studies.

Thulasi,<sup>5</sup> a Backward Class girl living in a rural area, discontinued her schooling after Grade 5 and got married two years later at the age of 14. She explained that since the upper primary school was outside the village, she did not want to travel there. Furthermore, she reached puberty and did not want to join the private school in the village since “they make us study fifth again” – she would have to repeat the same grade twice, as the private school might have tested her and thought she was not at Grade 5 standard. Thulasi also shared that while a few girls in the village continued studying, “the village here follows a lot of traditions and moreover, there is a lot of eve-teasing. The girls discontinue because they know that they have to get married and ... go to another house.” This is a reflection of son preference, which continues in light of the dowry burden that families incur while arranging daughters' marriages.

5 In this paper, the names of all the children are pseudonyms, to preserve their anonymity.

While opted out reasons accounted for 20.4 per cent of the reasons cited by children for discontinuing education, the highest reason within this category was 'absence from school' or 'truancy' (17.6 per cent). Truancy is a complex phenomenon often seen as a result of a combination of home, school and individual factors contributing to the learner's truant behaviour (Dhruv, Vedmitra and Kumar 2012). Literature reviews have concluded that the factors contributing to truancy are universal, namely students, teachers, peers and family (Ishak and Fin 2015). The Telegu version of the Young Lives questionnaire translates truancy as 'absence from school without permission' since there is no Telegu word for truancy. The next highest reason in the opted-out category was 'illness/injury' which accounted for only 2 per cent of all dropouts.

Sampathkumar, a Scheduled Caste rural boy, dropped out of school in Grade 5 and when interviewed at age 17 (Oak sub-study, 2011) shared that "he was not interested in studies at that time". When asked if anyone had asked him to drop out of school and go to work he replied that:

"No, nobody told me do so. My mother gave me a good spanking and in fact forced me to go to school but I did not listen ... I played truant. I would go to go to school, and would remain in school till interval ... but after the recess I would leave my books there and loiter about here and there. I was bunking classes with another friend ... we never went to school regularly and were loafing about all the time."

When interviewed in Round 4 Mohan, a Backward Class boy living in Poompuhar, a poor rural mandal of Telangana, explained that he dropped out of school after Grade 9 because "back then I did not go regularly to school ... then I stopped going altogether. I used to hang out with friends and neglected going to school." When questioned whether anyone had stopped him from going to school he replied that, "no, nobody told me to stop. I stopped going on my own. I preferred spending time with friends, also at that time I was not interested in school." Mohan's stepmother corroborated this and explained that the parents put him into a hostel to make sure he continued his studies:

"How much we tried! They [Mohan and his younger sister] even would run away from the hostel and come back home., saying that they won't study ... If we were angry he cried, if we scold, he sulked, what can we do – just keep silent."

These two qualitative case studies highlight how children may themselves decide to stop attending school, though they might regret their decision later on in life. At 18, Mohan wished that he could go back and study, and had bought books and started studying on his own, hoping to take the Grade 10 exam in due course through open school. It is also important to underline that opting out may also in some cases be symptomatic of push factors, such as in Ramadevi's case. Ramadevi, who dropped out after completing Grade 9, "did not feel like studying. Teachers used to beat me ... children would quarrel, take my pen and report me to the teacher who listened to their lies and punished me."

Interestingly, push factor reasons accounted for only 18.9 per cent of the total reasons why children left school, with 'banned from school because failed to get the required grade' the most important reason in this category (reported by 5.6 per cent of children), followed by 'fees too expensive' (4.7 per cent). This is interesting, since most educational interventions only focus on 'within school' factors, which according to the children were the least important in causing them to discontinue education. This may be explained by the fact that school level factors are seen as easier to address than pull or opted-out factors. Reddy and Sinha (2010) highlighted that children are often subjected to corporal punishment and many end up fearing

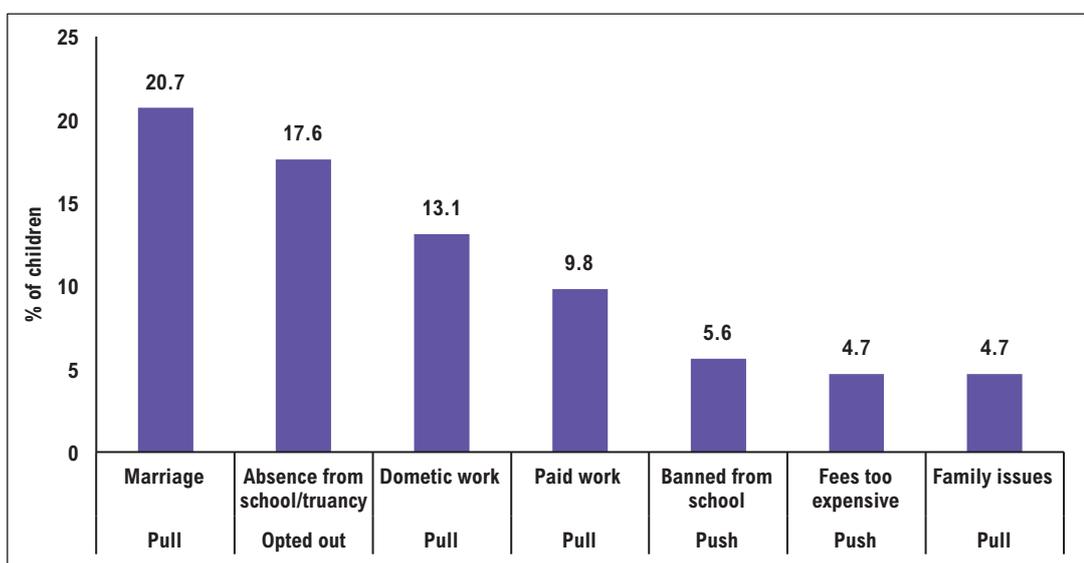
going to school. According to them, children are not dropping out of school but are being beaten out of school.

**Table 1.** *Categorisation of reasons for discontinuing education*

Push	Pull	Opted-out
(1) Fees too expensive (4.7%)	(1) Needed to stay home to look after siblings (0.4%)	(1) Absence from school/truancy (17.6%)
(2) Books and/or other supplies too expensive (1.3%)	(2) Needed for domestic and agricultural work at home (13.1%)	(2) Illness, injury (2%)
(3) Transport too expensive (0.2%)	(3) Had to do paid work to earn money (9.8%)	(3) No need for schooling for future job (0.4%)
(4) Not safe to travel to school (0.7%)	(4) Family issues, e.g. problems at home (4.7%)	(4) Completed the course of education (0.4%)
(5) Lack of transport (0.4%)	(5) Family member ill/disabled/elderly (3.1%)	
(6) Banned from school because away from school for too long (0.9%)	(6) Family function (1.3%)	
(7) Banned from school because failed to get the required grade (5.6%)	(7) Migration with parent (0.9%)	
(8) Bullying/abuse from peers (0.7%)	(8) Need to learn a trade/skill (0.9%)	
(9) Ill-treatment/abuse from teachers/principals (0.2%)	(9) It is not appropriate for girls to go to school (1.3%)	
(10) School too far from home (0.4%)	(10) Marriage (20.7%)	
(11) Quality of education at school – teaching (0.2%)	(11) Looking for work (2.9%)	
(12) Stigma and discrimination (0.7%)	(12) Need to look after children (1.6%)	
(12) Can't understand the content of the lesson (2.9%)		
N = 85 (18.9 %)	N = 273 (60.7%)	N= 92 (20.4%)

Source: Young Lives longitudinal study (2002-13).

**Figure 3.** *Most common reasons for discontinuing education by age 19*



Source: Young Lives longitudinal study (2002-13).

Figure 3 presents most common reasons cited by children for discontinuing education. Marriage was the top reason for the majority of girls leaving school, while absence from school/truancy, followed by domestic and paid work, emerge as crucial reasons for children discontinuing education. Tables 2 and 3 show desegregated data by boys and girls.

**Figure 4.** *Reasons for dropping out before completing different levels of education*

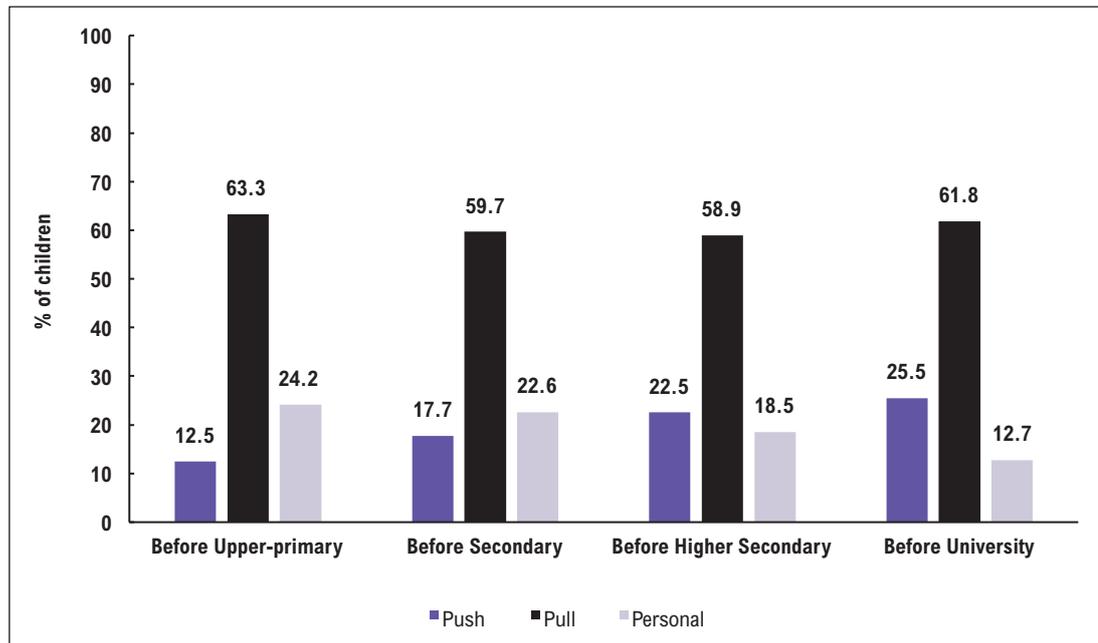


Figure 4 shows an analysis of reasons cited by children at different levels of education. For those children who discontinued education before completing upper-primary schooling, 63.3 per cent cited pull factors, followed by opted-out factors (24.2 per cent) and push factors (12.5 per cent). There was a similar pattern among children who discontinued education before completing secondary education, with 59.7 per cent citing pull factors, followed by opted-out factors (22.6 per cent), and push factors (17.7 per cent), a 5.2 percentage point increase in push factors responsible for dropping out before completing secondary schooling.

However, reasons for discontinuing education change as children move to later adolescence, with push factors being cited as the second most important factor, followed by opted-out factors. Pull factors remain the most important factors for discontinuing education even at higher secondary stage. Around 59 per cent of children said they left school before completing higher secondary education due to pull factors, followed by 22.5 and 18.5 per cent due to push and opted-out factors, respectively. After higher secondary education, pull factors emerge as the strongest reasons (61.8 per cent) cited by adolescents for discontinuing their studies and not entering university. The next important reasons at this level are push factors (25.5 per cent) followed by opted-out factors (12.7 per cent). It is interesting to note that the contribution of push factors or reasons related to the education system gradually increased as children move from elementary education (12.5 per cent before completing upper-primary education) to higher education (22.5 per cent), highlighting difficulties related to the education system, particularly fees that become prohibitive as children move to higher grades.

The qualitative case studies highlight various familial factors that hinder children continuing their education. In the case of Latha, a Backward Caste girl living in Katur, a poor mandal in the Rayalseema region, her elder brother's elopement led to her parents removing her from school after completing Grade 7. The community in which the family lived had no high school, and Latha would have had to travel to the nearest town for further education. Her parents decided not to continue her studies, and Latha's mother explained:

“after this incident, we did not send the girl to school after seventh class fearing that she too may do something like that by having friendship with boys ... we wanted to educate her up to tenth class ... she also wanted to go to school, but when this happened to my son, we feared and did not send her to school.”

Girls in particular are very vulnerable and often made to discontinue their education due to safety reasons, following puberty, particularly when high schools are located far away from their homes.

Since gender differentials exist and influence educational trajectories, we examined the reasons for discontinuing education cited by boys and girls. Table 2 presents the reasons for discontinuing education at different levels for boys. Among boys who left school before completing upper primary, the main reason of dropping out was absence from school/truancy (26.9 per cent), an opted-out reason. The next important reason involved paid work (21.2 per cent), a pull factor. For boys who left school before completing secondary education the main reason cited was once again absence from school (34.8 per cent), followed by paid work (17.4 per cent). On the other hand, the two main reasons cited for those who left school before completing higher secondary were the pull factor related to paid work (21.2 per cent), followed by the opted-out factor of 'banned from school because failed to get required marks' (20.0 per cent). The same reasons were reported by boys who completed senior secondary school but did not transition to university: 'had to do paid work' (20.0 per cent), followed by 'absence from school' (20.0 per cent).

Ranadeep, a Backward Class boy living in a poor rural mandal of Telangana, left school after failing to pass mathematics in the Grade 10 exam. He explained that only 23 students out of 43 passed the exam and joined senior secondary school. He was upset that a large number of his friends were studying in junior college (senior secondary) and look down upon him and were no longer his friends. When questioned why he and his classmates failed to pass the maths exam, Ranadeep explained that “it was because we were irregular to school ... The time we had to sow [cotton] seeds and had cultivation work on our farms, we were not able to go to school.”

Interviewer: Did all those who went for the cultivation work fail?

Ranadeep: Yes, all of them failed.

Interviewer: Didn't your uncle tell your parents not to take you to the fields and to let you to go to school; didn't he tell them your studies will be spoiled if they don't let you attend school regularly?

Ranadeep: He told them, but my parents never listened to him.

Interviewer: Why didn't they listen to him?

Ranadeep: Since we cannot afford to pay Rs.100 as wages for labour every day, they stopped me from attending school. My mother says we will not get jobs even if we study so she asked me to come to the fields and work. I told her tenth class is important and I

will be a waste if I don't complete my tenth class but she will not listen. They stopped me from going to school for a month, during which time the teachers covered most of the chapters.

As the case of Ranadeep and his peers shows, children from the poorest households are pulled into contributing to the family income and as a result of having irregular school attendance, finally discontinue schooling due to poor performance. This case demonstrates the interaction between a pull factor, where Ranadeep missed school due to the household situation, and a push factor, whereby he failed his maths exams and dropped out.

**Table 2.** *Reasons cited for discontinuing education by boys (%)*

Reasons for discontinuing education	Before upper primary	Before secondary	Before higher secondary	Before university
<b>Push factor</b>				
Fees too expensive		4.35	7.06	5.00
Books and/or other supplies too expensive			1.18	
Banned from school (away for too long)		2.17		
Banned from school (failed to get marks)		6.52	10.59	15.00
Bullying/abuse from peers	3.85			
Ill-treatment/abuse from teachers/principals		2.17		
Stigma and discrimination	1.92			
Can't understand the content of the lesson	9.62	4.35	2.35	
<b>Pull factor</b>				
Needed for domestic work	13.46	13.04	7.06	
Had to do paid work	21.15	17.39	21.18	20.00
Family issues, e.g. problems at home	9.62		4.71	5.00
Family member ill/disabled	7.69	2.17	2.35	5.00
Family function		2.17		
Marriage				5.00
Migration with parent			1.18	
Need to learn a trade/skill	1.92		2.35	
Looking for work		2.17	4.71	15.00
<b>Opted-out factor</b>				
Absence from school/truancy	26.92	34.78	20	20.00
No need for schooling for future job			2.35	
Illness, injury		4.35		5.00

Source: Young Lives longitudinal study (2002-13).

Notes: Table does not include reasons cited as 'other' and 'N/A'.

Yashwant's case highlights how poverty and a lack of adequate support and enabling environment in school combine to disrupt children's educational aspirations. When Yashwant was interviewed in 2010 (Round 3) he was studying in Grade 10 and shared that he "would like to continue my studies and join college and get a degree". He was keen to get a job so that he could help his widowed mother clear the debt that she had taken on two years ago so his sister could be married. His father had died when he was in Grade 1 and his mother had worked very hard to raise the two children. Yashwant shared that he was worried about his studies, since the:

"teacher scolds a lot and I am frightened, whether I will pass or fail [my exams]. I do not ask questions in class, since I fear my teachers ... I feel unhappy when my teachers scold or beat me ... I feel I want to study, but I can't study. Lessons are hard to understand and learn."

He explained that sometimes he missed school because his uniform was not clean and he feared that the teacher would beat him. He explained that “I have two pairs [of uniforms], sometimes mother may not [have] washed clothes due to lack of time, so I miss school”. By 2014 Yashwant had migrated to Vijaywada and was working as a mason. He had discontinued school after Grade 10, as he had failed in Telegu and was not able to pass his secondary exam. He was still hopeful that he could sit for the exam as a private candidate and become a police officer. He lamented: “I feel it would have been better if I had done my education. I regret not continuing studies.”

Table 3 shows the reasons for discontinuing education before completing different levels of education for girls. The main reasons for girls dropping out were pull factors rather than push or opted-out factors. ‘Marriage’ (28.8 per cent) and ‘needed for domestic chores at house’ (20.6 per cent) were the top two reasons of leaving school before completing upper-primary education.

Bhavana, a Backward Class girl living in Katur, a rural mandal in Rayalseema, left school after Grade 2, following the death of her father. She is the youngest in her family and has three brothers. The older two brothers did not go to school, while her third brother attended school until Grade 4. Bhavana explained that she had to leave school, since she used to accompany her family for the seasonal migration to Mumbai to do construction work. In Round 3 (2010), she complained that she had to shoulder all the responsibilities of the household and reflected:

“we are a large number of people in the household. When I was going to school, I [was only] sweeping the house premises ... now I have to do all the work ... it was good when I was going to school.”

‘Marriage’, in this case child marriage, remained the biggest contributory factor for girls discontinuing education before completing secondary schooling and accounted for 43.2 per cent of all dropouts, followed by ‘needed for domestic chores’ (11.1 per cent). Similarly, marriage accounted for 31.3 and 25 per cent of all dropouts before completing higher secondary and before university, respectively. Interestingly, only 5 per cent of boys cited marriage as a reason for not joining higher education, while it was not a reason given by boys at other levels of education (Table 2). The second-most important reasons for not joining higher secondary and higher education were ‘needed for domestic work’ (17.5 per cent) and ‘fees too expensive’ (6.8 per cent), respectively.

**Table 3.** *Reasons cited for discontinuing education by girls (%)*

Reasons for discontinuing education	Before upper primary	Before secondary	Before higher secondary	Before university
<b>Push factors</b>				
Fees too expensive	2.74	1.23	7.5	6.82
Books and/or other supplies too expensive		1.23	2.5	4.55
Transport too expensive	1.37			
Not safe to travel to school		2.47		2.27
Banned from school (away for too long)	1.37	2.47		
School too far from home		1.23		2.27
Poor quality of education	1.37			
Banned from school (failed to get marks)		3.7	6.25	4.55
Stigma and discrimination		1.23	1.25	
Bullying/abuse from peers				2.27
Can't understand the content of the lesson	2.74	1.23	1.25	
Lack of transport		1.23	1.25	
<b>Pull factors</b>				
Marriage	28.77	43.21	31.25	25
Needed to stay home to look after siblings	1.37			2.27
Needed for domestic work	20.55	11.11	17.5	4.55
Had to do paid work		1.23	2.5	
Family issues, e.g. problems at home	4.11	3.7	3.75	4.55
Family member ill/disabled/elderly	2.74	2.47		4.55
Family function	2.74	1.23	1.25	2.27
Migration with parents	1.37	2.47		
Need to learn a trade/skill				2.27
It's not appropriate for girls to attend school	2.74	2.47	2.5	
Looking for work		1.23	2.5	4.55
Need to look after children (own)	1.37	1.23	3.75	4.55
<b>Opted-out factors</b>				
Absence from school/truancy	17.81	8.64	8.75	2.27
Illness, injury	2.74	3.7	1.25	
Did not wish to study further			1.25	2.27

Source: Young Lives longitudinal study (2002-13).

Notes: Table does not include reasons cited as 'other' and 'N/A'.

When interviewed in 2008, Ameena, an urban Muslim girl, was studying in Grade 9 and keen to complete her secondary education. Her mother supported Ameena's ambitions and said that, "if she wants to study and studies well we will help her to study further. If she passes her tenth, we will make her study till Intermediate (senior secondary)." Her father was at that time working as a cook in Dubai. However, Ameena was married to her cousin at the age of 16, soon after completing secondary school. Her mother explained that:

"We never thought of marrying Ameena so soon. I have sugar and blood pressure problems and I suffer with kidney problems also. If I die who will take care of a girl? People are always ready to slander a girl if she is alone. Even if she stands at the door they would say that she is standing there to look at somebody. What happens to her if I die? Hence I married her off to my sister's son."

Clearly ill health prompted Ameena's mother to find a match for her daughter, since she wanted to see her 'safely' married. Parental gendered expectations towards girls and viewing them as 'paraya dhan' (somebody else's wealth) are undoubtedly major factors leading to

disruption of schooling. The practices of child marriage and dowry are rooted in patriarchy and gender discrimination, and the treatment of boys remains distinctly different from girls, starting from a very young age (Singh and Vennam 2016).

### 5.2.2 *Individual factors (Level 1)*

As well as the direct reasons for dropping out, we also explored the dropout patterns by children's individual characteristics to examine whether there is any significant association between the two. Table 4 presents the dropout patterns by selected individual characteristics. The findings show that gender was significantly associated with dropout patterns, and although boys and girls dropped out in almost equal numbers before completing upper-primary schooling, larger numbers of girls discontinued education before completing secondary schooling compared to boys (28.0 per cent versus 24.6 per cent), as well as after completing senior secondary (15.8 per cent versus 9.7 per cent). Singh and Mukherjee (2015) found that boys were 1.8 times more likely than girls to complete secondary schooling. However, a larger number of boys (40.6 per cent) leave school after secondary and before completing higher secondary education, than girls (29.8 per cent). Therefore, gendered dropout patterns cannot be generalised across adolescence.

Place of residence, caste, maternal education, and birth order were not found to be significantly associated with school leaving. Results show that the highest dropout among children in both rural and urban areas took place before completing higher secondary education (33.7 per cent and 37.8 per cent, respectively). Though not significant, children belonging to different caste groups show different education trajectories. The highest dropouts exist amongst Scheduled Tribe children at the upper primary level (36.5 per cent). On the other hand, more than a third of all dropouts amongst Scheduled Caste, Backward Class and Other Caste children are before completing higher secondary education. The birth order of children did not show any significant association with dropout patterns.

The wealth index of the household is significantly associated with children's dropout patterns across all levels. The results show that the highest dropout among children from the bottom wealth tercile took place at the upper-primary level (30.0 per cent), followed by before entering secondary education (29.5 per cent). On the other hand, the largest number of children from both the middle and top wealth terciles discontinued education after completing secondary education (40.2 and 38.2 per cent), since they were most likely to progress to secondary education, unlike children from the poorest households. Mother's education and child's stunting status did not show any significant association with dropout patterns.

Both boys and girls belonging to the top wealth tercile in our sample are in an advantageous position and many continue to higher education, as oppose to those belonging to poorer households. Santhi, a Scheduled Caste Girl living in a tribal mandal of coastal Andhra Pradesh, belonged to a well-off family as her father was a government teacher in an Ashram School. In 2014, she was pursuing a bachelor's degree in computer science, and said that her parents:

“want to provide us the facilities they lacked while they were growing up. They say that they want to give us everything but not to spoil us ... my father recently bought me a laptop. He says that I should study well and he will provide anything to further my studies. He says that it is alright even if I come home late as long as it is for studies.”

Children's preschool attendance was significantly associated with dropout patterns over the years. Results revealed that a higher percentage of children who had not attended pre-

school dropped out before completing upper primary and secondary education. Furthermore, around 92.1 per cent of total dropouts among children who had not attended preschool took place before they completed higher secondary schooling, compared to 82.7 per cent amongst preschool attendees. Singh and Mukherjee (2017) state that age of entry and attendance of preschool have a significant positive effect on both the learning outcomes and subjective well-being of children at a later age. Results also showed that more than 53.3 per cent of children who were engaged in domestic chores for three or more hours, left school before completing upper-primary education, compared to only 24.8 per cent of children who did not spend any time in domestic chores. Most of the dropouts took place before completing higher secondary education among children with a higher self-efficacy level (45.3 per cent) whereas around 29, 26 and 31 per cent dropouts were observed before completing upper primary, secondary, and higher secondary, respectively, among children with low self-efficacy index. Early reading skills at age 8 showed significant association with timing of discontinuing education, with most early dropouts, before completing upper-primary education (34.7 per cent), among children with poor early reading skills.

**Table 4.** *Dropout patterns by individual variables (%)*

Independent variables	Dropout before completing			
	Upper primary	Secondary	Higher secondary	University
<b>Gender **</b>				
Male	25.1	24.6	40.6	9.7
Female	26.5	28.0	29.8	15.8
<b>Place of residence</b>				
Urban	29.3	17.1	37.8	15.9
Rural	25.3	28.5	33.7	12.6
<b>Caste</b>				
SC	25.2	26.8	34.2	13.8
ST	36.5	19.2	28.9	15.4
BC	24.2	28.3	35.8	11.7
OC	25.4	25.4	33.8	15.5
<b>Birth order</b>				
One	16.2	28.8	36.0	18.9
Two	25.9	25.9	34.7	13.6
Three	29.7	29.7	33.3	7.2
Four and above	31.6	22.2	33.3	12.8
<b>Wealth index **</b>				
Bottom	30.0	29.5	27.6	12.9
Middle	20.1	28.7	40.2	10.9
Top	27.5	16.7	38.2	17.7
<b>Mother's education</b>				
No formal education	26.6	29.2	32.7	11.5
Primary	19.1	14.3	40.5	26.2
Middle	11.1	18.5	51.9	18.5
Secondary and above	27.3	9.1	45.5	18.2
<b>Stunting status</b>				
No	26.2	24.3	36.6	12.9
Yes	25.4	30.8	30.2	13.6
<b>Pre-school attendance**</b>				
No	29.4	28.5	34.1	7.9
Yes	23.2	25.0	34.6	17.3

Independent variables	Dropout before completing			
	Upper primary	Secondary	Higher secondary	University
<b>Domestic chores at age 12***</b>				
None	24.8	24.8	36.2	14.3
One hour	17.4	26.0	42.0	14.6
Two hours	32.5	27.4	28.2	12.0
Three hours and above	53.3	31.1	8.9	6.7
<b>Paid work at age 12***</b>				
No	16.2	29.8	37.5	16.5
Yes	48.3	19.1	27.2	5.4
<b>Early reading skill at age 8***</b>				
Unable to read word fully	34.7	27.9	28.3	9.1
Able to read words fully	18.7	25.5	39.3	16.5
<b>Self-efficacy**</b>				
Up to three positive traits	28.7	26.1	31.3	14.0
Four and more positive traits	16.0	28.3	45.3	10.4
<b>Overall</b>	<b>13.2</b>	<b>34.4</b>	<b>26.5</b>	<b>25.9</b>

Source: Young Lives longitudinal study (2002-13).

Notes: Significance level: \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

### 5.2.3 Community factors (Level 2)

This section discusses the association between community factors and dropout-related factors. Table 5 presents the dropout patterns by selected community variables, and shows the availability and functioning of Integrated Child Development Services (ICDS) in the community is significantly associated with dropout at different ages. Communities without an ICDS facility had more children leaving school before completing upper-primary education (40.7 per cent), compared to communities with an ICDS facility (24 per cent), and only 8.5 per cent dropouts before entering university. The availability and functioning of a public health centre in the community did not show any significant association with dropout patterns.

The availability of a public high school was also significantly associated with dropout patterns at different school-leaving ages. Results show that communities with a public high school had relatively fewer dropouts before completing upper-primary education (17.8 per cent), compared to communities without a public high school (30.8 per cent). Distance to a public high school also emerged as significant in the bivariate analysis, where more dropouts are observed before completing secondary education in communities where a public high school is more than 5 km away (36.4 per cent), compared to communities where the school was closer (23 per cent). Communities with large disadvantaged population (where Scheduled Castes and Scheduled Tribes were the majority population) were significantly associated with a higher percentage of children leaving school at upper primary (31.4 per cent) and secondary level (30 per cent).

**Table 5.** *Dropout patterns by selected community variables*

Community variables	Dropout before completing			
	Upper primary	Secondary	Higher secondary	University
<b>Whether ICDS services available and functioning**</b>				
Yes	24.0	26.7	35.6	13.7
No	40.7	27.1	23.7	8.5
<b>Whether public health centre available and functioning</b>				
Yes	26.2	27.2	33.3	13.3
No	25.8	26.5	34.8	12.9
<b>Whether public high school available and functioning***</b>				
Yes	17.8	26.7	40.6	15.0
No	30.8	27.1	30.1	12.0
<b>Distance to nearest public high school***</b>				
Less than 5 km	23.2	25.7	36.4	14.7
5 km and above	37.3	29.4	23.0	10.3
<b>Whether SC/ST is the largest community**</b>				
No	24.2	25.8	37.9	12.1
Yes	31.4	29.7	22.9	16.1

Source: Young Lives longitudinal study (2002-13).

Notes: Significance level: \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

Harika, a Backward Class rural girl living in Poompuhar in southern Telangana, had completed her senior secondary schooling at a government hostel and was keen to join a college, but did not secure admission to the college of her choice. Harika shared that:

“I have applied for degree but I could not get admission. It is very inconvenient to commute in the bus to Gadwal every day. I would have joined in Gadwal College if there is girl’s hostel there. There is no hostel for girls in Gadwall. It is very difficult to stay all alone in a rented room. That’s why I could not continue studies.”

She also complained about teachers in senior secondary school:

“[The] teachers just go through the subject. They conduct classes for intermediate students from morning till afternoon and in intermediate we were 180 students in one section. The teachers never paid any attention to students. They just take the lesson and leave. We have to study on our own. They did not even divide us into sections so that the number of students per class would be less ... The teachers never bothered about teaching or cared about the students. We have to study on our own.”

The quality of teaching as children move into higher grades is clearly a reason for students not being able to secure admission in higher education.

#### 5.2.4 *Multilevel multinomial logistic regression*

Table 6 presents the relative risk ratios from the multilevel multinomial logistic regression model. In the case of multinomial logistic regression, the dependent variable is categorical in nature and the relative risk ratio compares the likelihood of dropping out before completing different educational levels with ‘dropping out before entering into university or dropping-out after higher secondary’ as the base. It enables us to understand the different probabilities associated with the other three educational outcomes compared to this base: (1) the likelihood of leaving education before higher secondary versus leaving education after

completing higher secondary; (2) the likelihood of leaving education before secondary versus leaving education after completing higher secondary; and (3), the likelihood of leaving education before upper primary versus after completing higher secondary. For ease of interpretation, this paper henceforward uses the phrases 'dropping out after completing the higher secondary' as the base, and 'before higher secondary', 'before secondary' and 'before upper primary' as other categories of the dependent variable, with a clear connotation that all these categories are related to dropout children before reaching specific educational levels.

The findings show no significant difference observed on comparing the relative risk of leaving education before completing higher secondary versus before joining university. In other words, there are not many significant predictors that are found to be associated with leaving education before completing higher secondary compared to those who discontinued education before joining university. Only Backward Class children and those who attended preschool showed significant association when comparing dropout rates between these two levels. Compared to Scheduled Caste children, Backward Class children were 2.3 times more likely to leave education before higher secondary relative to dropping out before joining university. This may be because of a lack of an adequate number of scholarships and other educational incentives available for Backward Class children compared to other socially marginalised groups. Preschool attendance, on the other hand, emerged as the significant negative predictor of leaving education, with those who attended preschool 54 per cent less likely to leave education before higher secondary relative to discontinuing education after completing senior secondary. Though the reasons for dropping out cited by children did not emerge as a significant explanatory factor here, the relative risk ratios of pull and opted-out factors compared to push factors showed that children belonging to pull and opted-out categories were 1.3 and 2.1 times more likely to leave education before higher secondary education relative to after completing higher secondary.

On comparing the relative risk of leaving education before secondary versus after higher secondary, more predictors emerged as significant, including reasons cited for dropping out and maternal education, in addition to caste and preschool attendance. Although children citing both pull (1.5 times) and opted-out (3.1 times) reasons showed more likelihood of leaving school compared to those who cited push factors, only the opted-out reason emerged as significant at this level. Backward Class children were at a higher relative risk (2.3 times) of discontinuing education before completing secondary education, compared to Scheduled Caste children. Children whose mothers had primary education were 73 per cent less likely to leaving school before completing secondary education relative to after completing higher secondary, compared to those whose mothers had no formal education. Preschool attendance still showed significant negative association with dropping out before completing secondary education, with children who attended preschool 57 per cent less likely to leave education compared to those who did not attend preschool.

The relative risk for leaving education before the completion of upper-primary versus after completing higher secondary showed six significant predictors that are responsible for the earliest dropouts among Young Lives children. These are being Backward Class children, a birth order of third or above, mothers with primary education, preschool attendance, early reading skills (at 8 years old), and both pull and opted-out factors. Children who reported pull and opted-out factors, compared to push factors, as reasons for dropping out were 2.5 and 5 times more likely to leave education before completing elementary education. This finding has huge policy implications as poor children at an early age may not get the requisite familial and institutional support that is so important to provide a sound foundation for lifelong learning.

Backward Class children and children who are third and above in the birth order were positively associated with a higher relative risk of leaving education early, before completing upper primary. Findings show that compared to Scheduled Caste children, Backward Class children are 2.4 times more likely to leave education before upper primary, while children who are third and above in the birth order are 5.1 times more likely, compared to first-borns.

Govindh resided in a hostel until Grade 10 and was keen to get a place at the polytechnic in Grade 11 (senior secondary/junior college). However, he was disappointed at being unable to realise his aspirations. He explained that he went to Visakapatnam to join a private junior college and was able to pay school fees, but other expenditures like accommodation and food were too high for him. Govindh recalled a very sad moment in his life when his parents told him that they would not be able to afford the expenses. He then joined a nearby government institution, combining schooling with work on a farm (not his own). Govindh stated that, like all other children in his area from Backward Class and Scheduled Castes, he works in the morning and attends junior college in the afternoon (Singh and Khan 2016).

For children who have discontinued education before completing upper primary, we found that predictors such as a mother with primary education, preschool attendance, and better early reading skills at age 8 have significant negative association with early dropout. Compared to mothers with no formal education, children with mothers that have primary education are 77 per cent less likely to leave school before completing upper-primary education. As found earlier, children who attended preschool are 57 per cent less likely to leave education, while those with better early reading skills are 69 per cent less likely to discontinue before completing elementary school.

Dreze and Kingdon (1999) highlighted that among village variables, distance from nearest road, the village development index, and the presence of women's associations in the village were found to impact on school participation. The community level effect emerging from the multilevel multinomial logistic regression model showed a substantial standard deviation, indicating that the likelihood of dropping out at different levels is dependent and varies across communities, even after controlling for other variables. The likelihood of early dropouts, before completing upper primary versus later dropouts varies across communities, and an intra-class correlation (ICC) test revealed that nearly 11.22 per cent of the variation in children's dropping out before completing different educational levels can be explained by community level effects alone. This is an important finding and illustrates the need to do further research on community factors.

**Table 6.** *Relative risk ratios (RRR) predicting likelihood of leaving education before completing a particular level of education versus dropping out after completing higher secondary education*

Predictors	Dropped-out before higher secondary		Dropped-out before secondary		Dropped-out before upper primary	
	RRR*	Standard Error	RRR	Standard Error	RRR	Standard Error
<b>Perceived reasons for dropping out</b>						
Push <sup>(Ref)</sup>						
Pull	1.280	0.549	1.455	0.654	2.509*	1.220
Opted-out	2.049	1.267	3.118*	1.982	5.027**	3.342
<b>Gender</b>						
Male <sup>(Ref)</sup>						
Female	0.637	0.237	1.032	0.399	0.818	0.323
<b>Caste</b>						
SC <sup>(Ref)</sup>						
ST	1.174	0.720	0.974	0.618	2.495	1.547
BC	2.317*	1.021	2.342*	1.051	2.422*	1.145
OC	1.068	0.616	1.585	0.931	1.434	0.885
<b>Place of residence</b>						
Urban <sup>(Ref)</sup>						
Rural	0.987	0.705	1.007	0.780	0.571	0.433
<b>Birth order</b>						
One <sup>(Ref)</sup>						
Two	1.109	0.495	0.970	0.447	2.046	1.044
Three and above	1.956	0.871	1.742	0.797	5.058***	2.526
<b>Wealth index</b>						
Bottom <sup>(Ref)</sup>						
Middle	1.663	0.712	1.213	0.527	0.866	0.398
Top	0.889	0.554	0.416	0.279	0.754	0.506
<b>Mother's education</b>						
No formal education <sup>(Ref)</sup>						
Primary	0.582	0.320	0.270**	0.172	0.228**	0.155
Middle	1.525	1.106	0.833	0.677	0.430	0.391
High school and above	2.366	3.145	0.981	1.579	2.118	2.936
<b>Stunting status at age 8</b>						
No <sup>(Ref)</sup>						
Yes	0.558	0.205	0.788	0.293	0.574	0.224
<b>Preschool attendance</b>						
No <sup>(Ref)</sup>						
Yes	0.456**	0.179	0.434**	0.175	0.429**	0.178
<b>Early reading skill at age 8</b>						
Unable to read words fully <sup>(Ref)</sup>						
Able to read words fully	0.770	0.288	0.567	0.216	0.305***	0.120
<b>Constant</b>	<b>3.196</b>	<b>3.058</b>	<b>2.720</b>	<b>2.742</b>	<b>1.887</b>	<b>1.933</b>
<b>Community effect</b>						
Variance	0.397					
Standard deviation	0.613					
ICC <sup>#</sup>	11.22%					
<b>Model fit</b>						
log likelihood	-530.656					

Source: Young Lives longitudinal survey (2002-13).

Notes: Dependent variable: Dropping-out pattern = (1) after completing higher secondary (base), (2) before completing higher secondary, (3) before completing secondary and (4) before completing upper primary.

Significance level: \*\*\*p<0.01, \*\*p<0.05, \*p<0.1. <sup>Ref</sup> = Reference category. <sup>#</sup> = ICC; Interclass correlation coefficient provides an assessment of how much variability in responses lies at the community level. \* = Relative risk ratio (RRR).

In order to analyse which factors at the community level are significant we added a binary logistic regression analysis (see Appendix, Table A1), including: (1) public high school available and functioning; (2) distance to nearest public high school; and (3) whether SC/ST is largest population in the community. The results show that distance to the public high school in a community is a significant predictor of leaving school, especially before upper primary and secondary level. Children who went to schools that are between 1-5 km from the community were 2.2 times more likely to drop out before both upper primary and secondary level than children at schools within 1 km. Furthermore, children with schools 5-10 km from the community were 2.7 times more likely to drop out both before upper primary and secondary level. The findings also show that children from communities where Scheduled Castes/Scheduled Tribes are the largest population are more likely to leave schools before upper primary and secondary level. The relationship was not significant for those who dropped out at later stages, before higher secondary and university level. These findings are very important and highlight that community factors must be taken into account by policy planners when addressing the issue of student retention in education.

## 6. Conclusion

This paper considered dropping out from education as an event that depends on the levels of education and varies considerably from individual to individual. In the Indian context, dropping out starts during elementary education, but the majority of students discontinue education after completing upper primary. The reasons for dropping out before completing a particular level of education vary considerably. The likelihood of dropping out before completing secondary education for one group may not hold valid for the next level of education. Much remains to be discovered as to why and when children discontinue education. Utilising the hierarchical structure of the Young Lives longitudinal data, where children are nested within 98 communities, this paper adopted a multilevel multinomial modelling approach, accounting for both individual as well as community variables, thereby allowing us to study effects that vary by groups and so be able to estimate group-level averages. The paper throws lights on why and when the Young Lives children who we have followed since primary school discontinue education, by examining predictor variables at the individual, household and community level.

Listening to the voices of children, this paper grouped perceived reasons for discontinuing education into three categories: push, pull and opted-out factors. The reasons put forward by children are myriad and also related to specific stages of adolescence, such as puberty, agency, as well as household circumstances and school factors such as bullying by peers or rejection by schools, which in turn are influenced by both proximate and distance elements of the environment (including social stratification system) in which the individual is embedded (Singh and Mukherjee, forthcoming). We also examined which reasons were more predictive of children discontinuing education at a particular level of schooling. The fact that pull factors account for more than 60 per cent of all those who dropped out needs to be seriously considered in future policy formulation. Educational interventions should not be confined only to focusing on 'school quality', although this also needs attention. Pull factors which are often ignored while discussing education need to be given due priority, particularly in light of Sustainable Development Goal 4 which aims that 'no child left behind'. Gendered differences, such as marriage as a key reason for discontinuing education, also need to be

taken into consideration. Universalisation of secondary education, with safe transport facilities, and residential facilities at secondary and higher education level, may be necessary to ensure that girls from the most remote and disadvantaged locations continue in education. Absence from school/truancy, the second most cited reason for discontinuation of education, also needs to become a focus for future research, especially as absenteeism has been reported to be more frequent amongst students from lower-income families or specific cultural backgrounds (Romero and Lee 2007). The most disadvantaged families must be provided with social security so that children are not pulled into work (both domestic and paid) at an early age, with negative long-term consequences.

The finding that Backward Class children were more likely to dropout at all levels compared to Scheduled Caste children also requires needs policy attention. Backward Class students do not get scholarships and educational incentives in the same magnitude as other socially disadvantaged groups. Given that 46 per cent of the Young Lives sample is Backward Class and 67 per cent belong to the bottom and middle terciles (of a pro-poor sample), programme initiatives such as conditional cash transfers (CCT) to poor households, contingent on children attending school regularly and girls not being married before completing senior secondary education, may be considered. As preschool and early reading skills have significant association with late drop-outs, it is also critical that both the Ministry of Women and Child Development and the Ministry of Human Resource Development build the capacity of preschool teachers to provide quality stimulation and early literacy skills.

Significant factors such as caste, maternal education, preschool attendance and opted-out factors emerged as explanatory variables for those discontinuing education before upper primary as well as before secondary. However, only caste and preschool attendance were significant factors when comparing children who dropped out before and after higher secondary. These findings provide a clear direction to formulate policies and interventions at specific ages.

An interesting finding from the multinomial multilevel regression pertains to community effects that, after controlling for individual factors, explain around 11 per cent of the variability in dropping out. The fact that distance to the public high school in a community is a significant predictor of leaving school, especially at the secondary level with children being 2.7 times more likely to drop out in communities with schools further than 5 km away, must be seriously taken into consideration. Scheduled Caste/Scheduled Tribe-dominated communities also need to be targeted to ensure that families are provided financial incentives, as well as educational institutions within reasonable distance, to enable the increased retention of disadvantaged students within the education system. In order to attain SDG Goal 4 (United Nations 2015), ensuring that all children complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes by 2030, there is an urgent need to focus on reducing dropouts of school and ensuring that children transition smoothly to higher education. This may require formulating interventions targeting push, pull and opted-out factors that result in children discontinuing education, keeping local contexts and community resources in mind.

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# Appendix

**Table A1.** Odds ratio from binary logistic regression models predicting the likelihood of dropping-out at different stages

Predictors	Before upper primary		Before secondary		Before higher secondary		Before university	
	Odds Ratio	Standard Error	Odds Ratio	Standard Error	Odds Ratio	Standard Error	Odds Ratio	Standard Error
<b>Gender</b>								
Male <sup>(Ref)</sup>								
Female	1.565*	0.416	1.546**	0.291	0.783	0.133	1.110	0.199
<b>Caste</b>								
SC <sup>(Ref)</sup>								
ST	1.333	0.585	0.695	0.230	0.911	0.283	0.691	0.232
BC	1.483	0.493	1.387	0.322	1.002	0.224	0.942	0.234
OC	2.327**	0.985	1.582	0.474	0.858	0.230	0.798	0.227
<b>Place of residence</b>								
Urban <sup>(Ref)</sup>								
Rural	0.190***	0.094	0.382***	0.131	0.562**	0.151	0.786	0.213
<b>Birth order</b>								
One <sup>(Ref)</sup>								
Two	2.358**	0.875	1.384	0.337	0.940	0.192	0.939	0.197
Three	2.834***	1.086	1.856**	0.481	1.223	0.283	1.427	0.351
4 and above	3.099***	1.196	1.686**	0.446	1.535*	0.377	1.885**	0.504
<b>Wealth index</b>								
Bottom <sup>(Ref)</sup>								
Middle	0.664	0.194	0.727	0.151	0.714	0.146	0.715	0.161
Top	0.570	0.267	0.369***	0.121	0.619*	0.166	0.632	0.177
<b>Mother's education</b>								
No formal education <sup>(Ref)</sup>								
Primary	0.869	0.385	0.558*	0.179	0.505***	0.128	0.577**	0.147
Middle	0.604	0.351	0.518*	0.201	0.644	0.186	0.552**	0.162
High school and above	0.362	0.253	0.255***	0.134	0.339***	0.112	0.356***	0.112
<b>Stunting status at age 8</b>								
No <sup>(Ref)</sup>								
Yes	1.249	0.319	1.398*	0.260	1.209	0.214	1.292	0.246
<b>Preschool attendance</b>								
No <sup>(Ref)</sup>								
Yes	0.826	0.209	0.825	0.151	0.581***	0.098	0.575***	0.106
<b>Paid work at age 12</b>								
No <sup>(Ref)</sup>								
Yes	8.152***	2.354	2.736***	0.588	2.437***	0.560	1.907**	0.487
<b>Hours spent on domestic chores at age 12</b>								
0 hour <sup>(Ref)</sup>								
1 hour	0.784	0.248	0.953	0.211	1.546**	0.296	1.694***	0.336
2 hours	1.199	0.436	1.245	0.329	1.601**	0.390	1.813**	0.468
3 hours and more	4.749***	2.166	3.939***	1.529	4.302***	1.874	3.070**	1.450

Predictors	Before upper primary		Before secondary		Before higher secondary		Before university	
	Odds Ratio	Standard Error	Odds Ratio	Standard Error	Odds Ratio	Standard Error	Odds Ratio	Standard Error
<b>Early reading skill at age 8</b>								
Unable to read words fully (Ref)								
Able to read words fully	0.352***	0.087	0.485***	0.088	0.423***	0.075	0.467***	0.091
<b>Public high school available and functioning</b>								
Yes (Ref)								
No	0.922	0.327	0.694	0.174	0.965	0.204	1.056	0.231
<b>Distance to nearest public high school</b>								
< 1 km (Ref)								
1-5 km	2.205*	0.924	2.178***	0.620	1.336	0.303	0.995	0.233
5-10 km	2.721**	1.332	2.696***	0.940	1.582	0.508	1.199	0.417
>10 km	1.770	1.080	2.881**	1.264	1.437	0.618	1.637	0.848
<b>SC/ST is the largest community</b>								
No (Ref)								
Yes	1.864*	0.644	1.888***	0.464	0.878	0.206	1.229	0.320
Constant	0.074	0.051	0.419	0.200	4.238	1.780	4.679	2.080
<b>Model fit</b>								
log likelihood		-237.721		-406.874		-474.662		-435.122

Source: Young Lives longitudinal survey (2002-13)

Notes: Significance level \*\*\*p<0.01, \*\*p<0.05, \*p<0.1. <sup>Ref</sup> = Reference category.

# Diverging Pathways: When and Why Children Discontinue Education in India

Given the current commitment to the Sustainable Development Goals and the push to achieve universal secondary education by 2030, it is important to investigate at what grade or age level boys and girls are discontinuing education, as well as the key reasons for this.

This working paper examines dropping out of school from a life-course perspective, utilising an ecological model to examine factors affecting school continuity by drawing upon Young Lives longitudinal data in Andhra Pradesh and Telangana, India. Using mixed methods, the reasons cited by children are grouped into three broad categories: (i) pulled out (including to undertake paid jobs and family responsibilities); (ii) pushed out (institution and system-related factors such as distance to school); and (iii) opting out (disengagement with school or institution not caused by the school or institution, or outside pull factors). Listening to the voices of children, the paper analyses push, pull and opt-out factors at both the individual and community level to investigate when and why children discontinue education, and correlates of dropping out, including the role of the community.

Pull factors account for more than 60 per cent of the reasons given by children who had dropped out of school by the time they were 19 years old, while prolonged absence from school/truancy was the second most cited reason for discontinuation of education. Significant factors such as caste, maternal education, preschool attendance, and opted-out factors emerged as explanatory variables for those discontinuing education before upper-primary education as well as before secondary. However, only caste and preschool attendance were significant factors when comparing children who dropped out before and after higher secondary.

These findings provide a clear direction to formulate policies and interventions at specific ages. An interesting finding from the multinomial multilevel regression highlights community effects that, after controlling for individual factors, explain around 11 per cent of the variability in dropping out. The fact that distance to public high school is a significant predictor of leaving school, especially at the secondary level, with children being 2.7 times more likely to drop out in communities where schools are further than 5 km away, is a key point to be considered by policymakers.



An International Study of Childhood Poverty

## About Young Lives

Young Lives is an international study of childhood poverty, involving 12,000 children in 4 countries over 15 years. It is led by a team in the Department of International Development at the University of Oxford in association with research and policy partners in the 4 study countries: Ethiopia, India, Peru and Vietnam.

Through researching different aspects of children's lives, we seek to improve policies and programmes for children.

## Young Lives Partners

Young Lives is coordinated by a small team based at the University of Oxford, led by Professor Jo Boyden.

- *Ethiopian Development Research Institute, Ethiopia*
- *Pankhurst Development Research and Consulting plc, Ethiopia*
- *Centre for Economic and Social Studies, Hyderabad, India*
- *Save the Children India*
- *Sri Padmavathi Mahila Visvavidyalayam (Women's University), Andhra Pradesh, India*
- *Grupo de Análisis para el Desarrollo (GRADE), Peru*
- *Instituto de Investigación Nutricional, Peru*
- *Centre for Analysis and Forecasting, Vietnamese Academy of Social Sciences, Vietnam*
- *General Statistics Office, Vietnam*
- *Oxford Department of International Development, University of Oxford, UK*

## Contact:

### Young Lives

Oxford Department of  
International Development,  
University of Oxford,  
3 Mansfield Road,  
Oxford OX1 3TB, UK

Tel: +44 (0)1865 281751

Email: [younglives@younglives.org.uk](mailto:younglives@younglives.org.uk)

Website: [www.younglives.org.uk](http://www.younglives.org.uk)