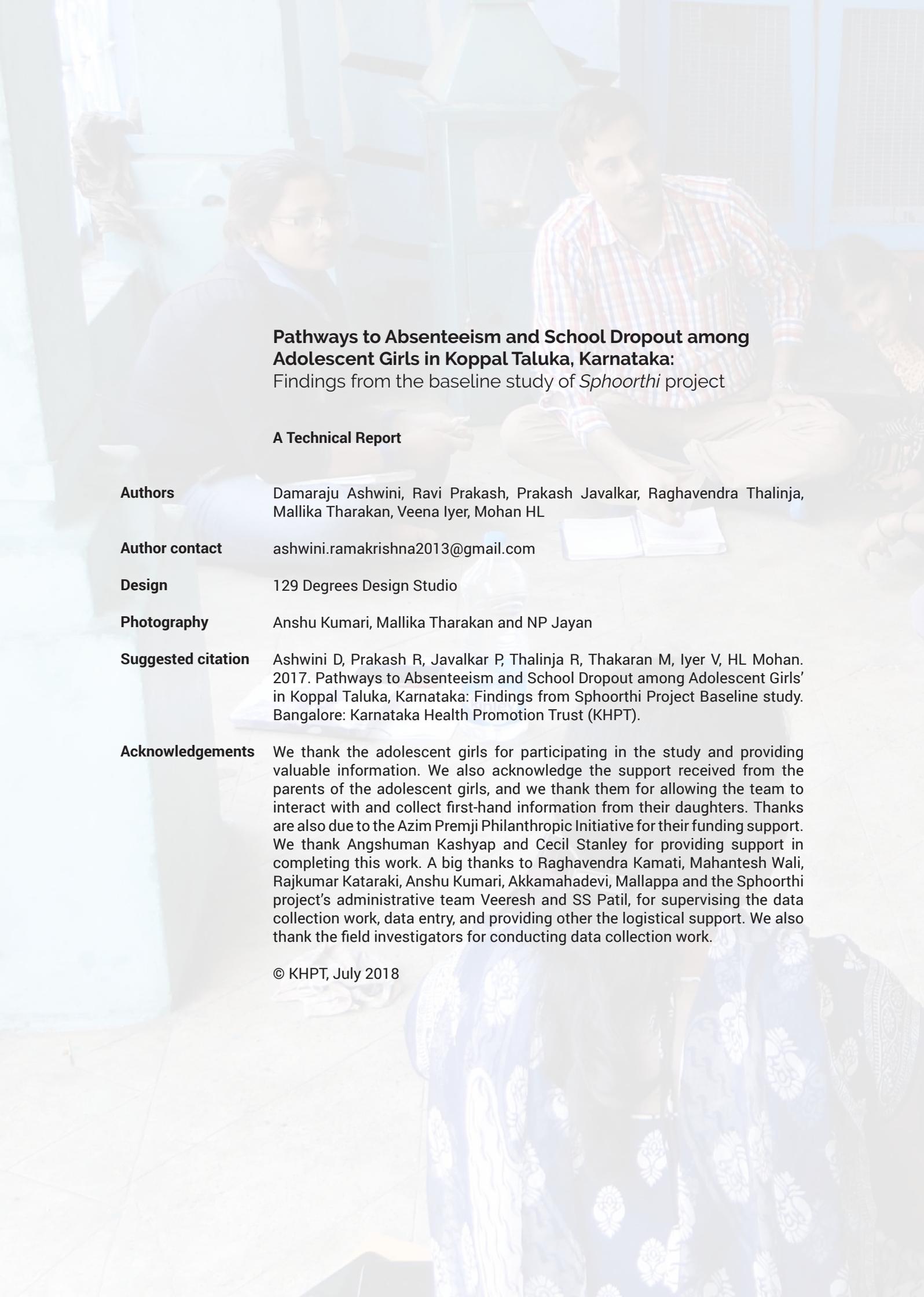




## Pathways to Absenteeism and School Dropout among Adolescent Girls in Koppal Taluka, Karnataka

Findings from the baseline study of *Sphoorthi* project



## **Pathways to Absenteeism and School Dropout among Adolescent Girls in Koppal Taluka, Karnataka:**

Findings from the baseline study of *Sphoorthi* project

### **A Technical Report**

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# ABBREVIATIONS

<b>AG</b>	Adolescent Girls
<b>AOR</b>	Adjusted Odd Ratio
<b>CI</b>	Confidence Interval
<b>DHS</b>	Demographic Health Surveys
<b>DM</b>	Decision Making
<b>DMI</b>	Decision Making Index
<b>EAG</b>	Empowered Action Group
<b>HIV</b>	Human Immunodeficiency Virus
<b>OBC</b>	Other Backward Classes
<b>OR</b>	Odds-Ratio
<b>PCA</b>	Principal Component Analysis
<b>PDR</b>	Parent-Daughter Relationship
<b>PDRI</b>	Parent-Daughter Relationship Index
<b>SC</b>	Scheduled Class
<b>SE</b>	Self Esteem
<b>SEM</b>	Structural Equation Modeling
<b>ST</b>	Scheduled Tribe
<b>UNICEF</b>	United Nations International Children's Emergency Fund



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# ABSTRACT

## Background

Education of a girl is an essential part for the development of any society. Many girls in India still remain disadvantaged in this area. As per the 2011 census, Karnataka stood slightly above the eight EAG states. In northern Karnataka, 60 percent of the girls are out of school. To address the issues of girls' participation in school, it's necessary to understand the pathways which leads to their dropping out or remaining absent from school.

The present study has been carried out to explore the pathways of absenteeism and school dropout of adolescent girls residing in Koppal taluka, Karnataka, using the baseline data for project "Sphoorthi" which is an intervention being implemented by KHPT to empower the adolescent girls using a peer role model approach. The findings of the study are expected to inform and strengthen the interventions of "Sphoorthi".

## Method

The sample consisted of **1037 adolescent girls** who were selected from the enumerated list of the households from the **51 intervention villages of Koppal taluka**. The data analysis was done in three stages.

**STAGE 1** The first stage involved descriptive statistics in order to understand the profile of the adolescent girls in terms of their demographic, individual, household and school level characteristics.

**STAGE 2** To assess the girls' relationship with their parents, the extent of their participation in decision making and their level of empowerment, a summary index were formed individually for each of these components which formed the second stage.

**STAGE 3** The third stage involved structural equation modeling to examine the pathways leading to absenteeism and school dropout.

## Results

It was found that more than half of the girls experienced weak parent-daughter relationship and reduced participation in decision making. More than 60 percent of the girls had high self-esteem (girl being confident of her own worth or value), but low self-efficacy (girl believing in her ability to succeed in a specific situation or accomplish a task). The structural equation modeling results on school dropout showed that each of the proximal components was more likely to reduce the school dropout independently. The pathway from parent-daughter relationship influenced the girls' self-esteem which significantly reduced the dropout, whereas the findings of absenteeism showed that the girls who were highly participating in decision making were less likely to remain absent from the class.

## Conclusion

It is essential to work with parents with the objective of improving their relationship with their daughters and sensitizing them about the importance of girls' education and consequences of early marriage. Any successful intervention for adolescent girls will need to address negative gender norms and improve parent-child relationships within families.



CHAPTER

1

INTRODUCTION

---

Education is the basic requirement for human development. It is the principal instrument in awakening the child to cultural values and is the systematic process of building the necessary skills through knowledge to be a productive member (Khan, 2014). It is the strongest force in the development and growth of a child in preparing him/her to be responsible, intelligent, strong and healthy citizen. It plays a vital role in shaping the future leaders (Maithly & Saxena 2008).

Adolescence is a phase of rapid growth and development during which physical, psychological and behavioral changes occur. This is the phase where adolescents face issues like identity crisis, emotional immaturity, independence, heterosexuality and difficulty in maintaining relationships (Pathan 2011). It is not only a time of opportunity, but also vulnerable to risky behavior which can have long term consequences on education, career and health. The adolescents are in the need of social and secure life given by their parents'. Adolescents constitute more than 1.2 billion of global population, and about 21% of Indian population (Sharma et al. 2007). School constitutes a major part in adolescent's life. Difficulties in almost any area of life manifests as the school problem like fear of going to school, remaining absent from the school for no particular reason, academic underachievement and finally dropping out of school (Evangelou et al. 2008).

Studies have shown that 1.8 million children's lives in developing countries would have been saved if the girls' would have completed secondary school (Olmos 2011). India has the highest number of out of school adolescents in the world. Global Education Monitoring report 2016 has found 47 million adolescents in India have not progressed to upper secondary school (UIS & EFA 2015). Dropout is a universal phenomenon of the education system in India across all socioeconomic groups of population. It's much higher in educationally backward states and districts. There is a growing body of literature, which shows that the rate of absenteeism is higher among girls than boys. Failure to complete high school not only results in negative outcomes for an individual but also widens social inequalities (Sivagurunathan et al. 2015). Many studies have reported that frequent missing of the classes/absenteeism leads to dropping out of school (Nekatibeb 2002).

As per Census 2011, the Karnataka state stood at the 23rd rank for overall literacy; just above the eight EAG states and three north eastern states. In the northern part of Karnataka, children are out of school at higher rates than children elsewhere in the state largely because of the regions lag in development (Suresha & Mylarappa 2013). Koppal taluka in Koppal district has been ranked third in terms of the education index. It has a total population of 70,698 as per 2011 census. The district has a sex ratio of 982 per 1000 males and overall literacy rate of 68.1 percent (female literacy rate 57.5 Percent). The male-female literacy gap in the district is 21%, which is higher than the state (14%). The school dropout rate of girls is an issue in this district. Koppal district consists of four talukas i.e. Koppal, Gangavathi, Kushtagi and Yelburga (Census 2011).

Despite the government's efforts, millions of students remain out of school for various reasons and irregularity of attendance at classes among students continues to be a significant policy and programmatic issue of girls.

**Figure 1.a:** Map of Koppal district



## 1.2 The importance of educating an adolescent girl

Global economics paper by Goldman Sachs shows that girls' education yields some of the highest returns of all development investment and both private and social benefits (Lawson 2008). Educating girls positively effects the health of future generations. Educated girls are more likely to be knowledgeable about their child's nutritional requirement, adopt effective sanitation practices and seek medical care (Alderman & Headey 2017). Studies show that women with post primary education is more likely to protect herself and her family from infectious disease like HIV (UNAIDS 2017). It is estimated that just one year of schooling can reduce fertility by 10 percentage (McCrary & Halli 2011). Educating women is economically beneficial as it results in women's participation in the labor force. The returns of educating women are also high in agricultural sector. A 63-country study shows that increase in female education accounted for 43 percent of the decline in malnutrition between 1970 and 1995 (Olmos 2011). Educated women are more empowered and informed. They also have the ability to bargain for resources within the family. They are more likely to send their children to school and support their education than an uneducated woman. They also serve as role models and raise their voice for advocating the values of school (Sperling & Winthrop 2016).

Women's vulnerability to domestic violence decreases as educated women are more likely to participate in the household decisions and take a stand for her. It also raises a sense of self-worth and confidence and broadens the girls' perceptions (Olmos 2011).

## 1.3 Parent-daughter relationship and its influence on education

The most crucial relationship over the course of our lifespan is "parent-daughter relationship". The primary influences in the early child development phase are parents. The parent's personality and self tend to be reflected in the child's first year after birth, especially in forming this crucial relationship. Family involvement at home and school have been found to influence academic performance, school attendance and pursuit of higher education (Chavkin 1994). Supportive relationship aids in the internalizing self-worth and efficacy and also influences the adolescent girl to take part in decision-making that affects her life (Palica 2007). Parental involvement plays a major role in developing patterns of higher academic achievement. The relationships with family members requires work and effort to make it strong and successful. Parenting is a tough job and having open communication and maintaining close relationship with daughters helps bring individuality and a sense of self-worth in them. The quality of the parent daughter relationship is affected by factors like the parent's age, experience and self-confidence, the stability of the parents' marriage and the unique characteristics of the child compared with those of the parents' (Lal 2013).

## 1.4 Adolescent girls' participation in decision making & empowerment

Studies have shown that the nation's economic growth and health would significantly increase when there is closure of the gender gap in adolescence education (Onarheim et al. 2016). This brings a positive outlook, increases the self-esteem and identity among adolescent girls. Empowering adolescent girls helps build their self-confidence and can have a powerful impact on enrolling more girls to school (DFID 2005).

## 1.5 Project Sphoorthi

KHPT, Bengaluru began the project "Sphoorthi" in 2015 with aim to empower the adolescent girls' through role model approach in Koppal Taluka of Koppal district. The objective of the project is to increase the secondary school completion rates by 80 percent, increase the nutrition level of girls' by 50 percent and to decrease the proportion of married girls' by 50 percent. The Villages covered under project "Sphoorthi" is shown in Figure 1.b (KHPT 2015). This study employed the data collected for project "Sphoorthi" with an aim to identify the pathways which leads to school dropout among the adolescent girls and understand reasons for absenteeism. The results of the study was beneficial for the host organization to invest and work on specific components, which seemed to influence the absenteeism and school dropout of adolescent girls in the region.





CHAPTER

2

# REVIEW OF LITERATURE

---

An appreciation of the involution of a dropout phenomenon over the years has emerged in relevant literature. Considerable research has been undertaken to study the wastage in education caused by absenteeism and school dropout. A review of the studies indicates that parents, teachers and peers play a crucial role in the overall development of the child. Chimombo observes that though enrollment in schools is almost same for girls and boys (Chimombo 1999), boys have a higher likelihood of continuing school compared to girls (BCES, 2016). Holmes also found that girls, overall, attain less education and tend to drop out earlier as compared to boys (Holmes 1999). The final decision of girls to drop-out of school comes from variety of sources such as within household, school related factors, socio-cultural factors, peers influence and individual characteristics like interest in schooling, health factors etc. (Bhagavatheeswaran et al. 2016, Chugh 2011).

## 2.1 Background

Review of studies have shown that the highest number of school dropouts are in the age group of 14-15 years and the school dropouts rates show an increasing trend by age and reaches maximum for the age group of 14-15 years (Sathish Mali 2012). There are a set of studies in India which attempts a rigorous empirical analysis of socioeconomic determinants of school dropouts. Dreze and Kingdon found that household factors (including wealth status) and the choices made by the parents are most important in seeing that their children are in school. They have noted the relationship between parents' education/literacy and children's participation in school. Thus, children belonging to different social groups (like the scheduled castes and tribes and minorities) may have differential access to school mediated by their differentiation socioeconomic status (Drèze 1999). The fact that the dropout rate of Muslims is higher in India has been borne out by the analysis carried out by Bhat and Zavier. They argued that communities that took to education earlier had the advantage that was passed on to the next generation. Higher illiteracy or educational backwardness of Muslims is a legacy of the past (Bhat & Zavier 2005). Consequently, in urban India, following independence, upper caste Hindus were in a better position to take advantage of the opportunities for secondary education than Muslims who lagged behind in primary education and literacy. A study conducted by Gouda and Sekher showed that 6 percent of girls in rural areas and 2 percent in urban areas are out of school and the reason being stated is early marriage (Gouda & Sekher 2014). Child marriage and the reluctance to send girls to school after attaining puberty was cited in a study conducted in Yadgir district (Azim Premji Foundation 2013).

## 2.2 Household characteristics

Low levels of parental education, occupation, income and deprivation are mainly responsible for the poor performance at school. The other roadblocks to schooling includes parental attitude towards girls' education, lack of parental support in meeting adolescent girls' needs, lack of motivation and poor self-esteem of the child (Samal 2012). High parental income makes it convenient for parents to provide resources for their children like providing access to good quality schools, private tuitions, more support for learning at home (MDE 2011). Poverty affects the daughters' development, parent-daughter interaction and family functioning. It also plays the major role in girls dropping out of school (Samal 2012). The size of the household has an impact on the girl dropping out of school due to cultural beliefs of early marriage and the perceived role of girls to care for their younger siblings. The level of education of the parents has a greater influence on their involvement in their child's education both at home and in school (Bayisenge 2011). Mothers education has a positive impact on education and achievement (Feinstein 2006). Working parents' who engage themselves in the work and not pay much attention to their children, especially in their critical period of growth and development can lead to child developing a loss of interest towards their school and other beneficial activities (Goldstein 2012). A study done by Sen showed that the odds of being in school significantly reduced for children whose mother had a child at a very early age and for those children whose mother have a preference for boys (Sen 1992).

## 2.3 School characteristics

Studies have shown that the teacher's attitude at school which favours boys over girls, verbal abuse, lack of female staff at school, etc. has an impact on girls dropping out of school (B & M Development Consultant PLC

2008). Safety issues in schools bring fear in the adolescent girl and her parents leading to absenteeism and dropping out of school (Chugh 2011). The quality of education is linked with availability of human resources and school resources. Lack of confidence about subject content, lack of commitment to teaching, favouring certain students on the basis of religion, caste etc.; physically or verbal abusing students and gender biased teaching can negatively affect the learning process and decrease the child's interest in studies (Dislen 2013). A pilot study conducted by Varghese and Nagaraj at Palakkad district in Kerala showed lack of proficiency in English language as a major obstacle to continuing education. The fear of learning a foreign language which is a criteria rather than an option for higher classes (Varghese & Nagaraj 2013) demotivates children.

## 2.4 Parent daughter relationship and its impact on education

Studies on parent-adolescent interaction have shown that good parenting reflected in healthy parent-child relationships is a critical pathway leading to positive child outcomes. It also has a strong association with the wellbeing of adolescents (Hoskins 2014). Warm, sensitive and responsive caregiving supports the healthy brain development and increases the likelihood of success in the school (Khan 2014). Children whose parents have happier relationships are better engaged in the schools (Moore et al. 2011). Early interaction with non-responsive and insensitive parents develops feelings of insecurity and unworthiness in adolescent girls. This prevents them from exploring the environment and shying away from beneficial activities. It also has a powerful impact on their emotional wellbeing, basic coping and problem solving abilities and building positive relationships with others (Bowlby 1988). The relationship built with their peers in the adolescence phase of life depends on the interaction with their parents and the environment at home. Positive relatedness with parents creates a feeling of safety and often has an impact on peer relationships, school performance, relationship with teachers and other community members and helps build self-esteem and autonomy among adolescent girls (Moretti 2004). The trend of having parents as role models comes from the autonomy and individualization of parents. Insecure parent daughter relationships have less success in developing autonomy and leads to dependency on peers and idolizing them (Samal 2012). Negative communication between parents and girls is likely to lead to difficulties when growing up as it is an important factor in determining the process by which a child develops his/her patterns of cognition, knowledge, attitude towards the external world (Moitra 2012). Studies show that open communication between parents and adolescents develops moral reasoning, academic achievement and self-esteem (Hoskins 2014). The parents' response to their daughter's needs can also vary with gender. Mothers and fathers influence their children's social development and future academic success in unique ways. There are very few studies that have explored gender of the parent as a construct which might contribute to an understanding of how differential parent-daughter relationship, from both genders influence school dropout (Marks et al. 2009).

## 2.5 Participation in decision making and empowerment

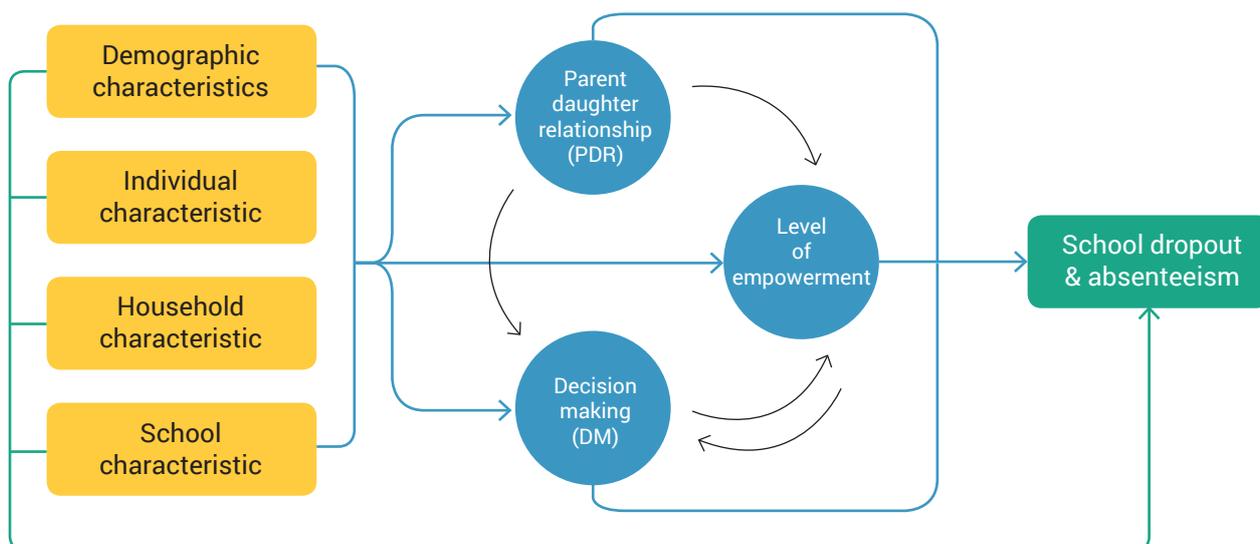
Studies have shown that resources not only financial and productive assets, but also opportunities, capabilities, social networks and other environmental factors are the primary component of empowerment (ICRW 2010). An adolescent girl when exposed to quality education, develops cognitive skills which help her in securing high paying jobs and makes her better equipped to compete in a labour market (Sperling & Winthrop 2016). Girls with knowledge, skills and experience coupled with familial and community support are more informed and able to make their own decisions for their lives (Reinhard et al. 2008). School and environment at home plays an important role in strengthening the girls' capabilities and giving them the opportunities to participate in decision making which affects their lives (DFID 2005). Participation in decision making gives them the opportunity to identify problems and find solutions which in turn increases their self-confidence and encourages them to value themselves. Through active participation in decision making, girls can develop their own identity, sense of belonging and feelings of usefulness (UNICEF 2003).

The above factors found in the literature review can be considered as important contributors or considerations for completion of schooling among girls.

## 2.6 Conceptual framework

From the literature review, it was found that there are certain demographic, individual, household and school level factors which lead to absenteeism and school dropout among the girls. Low levels of parental education, occupation, income and deprivation are mainly responsible for poor performance at school. The roadblocks to schooling include parental attitude towards girls' education, lack of parental support in meeting adolescent girl needs, lack of motivation and poor self-esteem of the child (Rafiq 2013). High parental income makes it convenient for parents to provide access to good quality schools, private tuitions, more support for learning at home. Poverty affects the child's development, parent daughter interaction and family functioning. It also plays the major role in girls dropping out of school (Chugh 2011).

**Figure 2.a:** Conceptual framework



The size of the household has an impact on girls dropping out of school due to cultural beliefs of early marriage and girls' role in caring for their younger siblings. Studies have shown that the teacher's attitude at school, favourism towards boys, verbal abuse, lack of female staff at school etc. has an impact on girls dropping out of school (Hunt 2008). The safety issues in schools bring fear in the adolescent girl and her parents leading to the absenteeism and dropping out of the school. Insecure parent daughter relationships have less success in developing autonomy and leads to dependency on peers and idealizing them. Studies show open communication between parent and adolescent helps develop moral reasoning, academic achievement and self-esteem among children and they are more likely to jointly make decisions for their lives (Nicole.H, 2012). The parents' response to their daughters need can also vary with the gender. Mother and father influence their children's social development and future academic success in unique ways (Cook, G. A., Roggman, L. A., & Boyce, L. K. (Cook et al. 2011). The girls' who are more confident and believe in their abilities have a powerful impact on remaining in schools.

**Parent daughter relationship**

The relationship between the parents and their daughter in terms of their communication, interaction and parental support for her education and overall wellbeing.

**a) Interaction**

It is a two-way channel of conveying a message.

**b) Parent daughter interaction**

Discussion between both the parents and the daughter about matters affecting the adolescent girls' life.

**c) Communication**

It is a one-way form of conveying a message.

- **Parent daughter communication**

Parent sharing information about matters affecting the adolescent girls' life with their daughters

- **Daughter parent communication**

Daughters sharing information with their parents about the matters affecting her life.

**Parental support**

Support given by parents to daughters for their overall wellbeing and providing equal importance to their daughters as they would to their son.

**Participation in decision making**

Adolescent girls participating in decision making independently or jointly with parents about the matters affecting her life.

**Empowerment**

An adolescent girl who is confident and believes in her abilities to accomplish a task, having a good social support network and an access to certain entitlements.

It is assessed by power within, power with and power over.

- a) Power within - having the sense of self-worth and confidence.
- b) Power with - building collective strength based on mutual support.
- c) Power over - having access to certain entitlements.

**Self efficacy**

An adolescent girl believing in her ability to succeed in a specific situation or accomplish a task.

**Self esteem**

An adolescent girl being confident of her own worth or value.

**School dropout**

An adolescent girl who leaves the school due to any reason other than death.

**Absenteeism**

An adolescent girl who remains absent from the class for more than three days consecutively in a month.

**Proximal components**

In this study, it is used to simultaneously state three factors which are parent daughter relationship, girls' participation in decision making and level of empowerment.



## CHAPTER

# 3

# METHODOLOGY

---

The aim of the study was to identify the factors and pathways leading to absenteeism and school dropout among adolescent girls of Koppal taluka. This chapter discusses the methods that were used to achieve the objectives of the study. It discusses the study design, study population, tools used and procedure followed for data analysis.

### 3.1 Study design

The present study identified the factors that have the greatest degree of association with absenteeism and school dropout among adolescent girls of Koppal taluka. It employed secondary data analysis of the cross-sectional data of project “Sphoorthi” which was collected in the months of December, 2015 to March, 2016.

### 3.2 Study population and sample size

The study population consisted of adolescent girls belonging to Koppal taluka in Koppal district. The sample of 1037 adolescent girls in the age group of 13 to 16 years was systematically selected from the list of households enumerated in the 51 intervention villages of the project in Koppal taluka.

### 3.3 Tools

The data was collected by face to face interview through questionnaire involving closed-ended and pre-coded questions. Questionnaire was initially developed in English language and translated into local language (Kannada). It was piloted, revised and back translated into English and local language (Kannada). The questionnaire covered the socio-demographic profiles of the adolescent girls and possessed questions on the following areas – Sense of self-worth, individual efficacy and improved sense of safety and wellbeing; level of critical thinking, gender, violence and social norms to gauge the awareness the adolescent girl had regarding her rights.

### 3.4 Data analysis

The baseline data of project “Sphoorthi” was examined; cleaned and analyzed using STATA version 12. The variables used in the study are shown in Table 3.1.

**Table 3.1:** Variables used in the study

Domain	Sub Domain
<b>Profile of adolescent girls'</b>	
Demographic characteristics	Age, Caste, Religion, Marital status
Individual characteristics	Aspirations of girls for to complete secondary school, to have steady employment, importance of marriage before the age of 18, health issues faced by girls, experience of misbehavior by anyone in last 12 months, adolescent girls reaching puberty stage
Household characteristics	Type of family, wealth quintile, selected parental and sibling characteristics
School characteristics	Facilities present in school, measures for teachers attitude and practices in class, experience of misbehavior at school

## Parent daughter relationship

### Interaction

Parent daughter interaction	Interaction about matters related to schooling, friendship, growing up issues like puberty and body changes, teasing/bullying
-----------------------------	---

### Communication

Adolescent girl communication with parents'	Communication on matters related to schooling, friendship, marriage, future work prospects, day to day happenings in the community, personal problem, menstrual related problems, quality at school, harassment by boys, household chores
---	---

Parent communication with adolescent girls'	Communication on schooling and menstruation related issues
---	--

### Parental support

Support provided by parents' to their daughter	Daily home and outside chores, parents involving their daughters in household related decisions, parents giving importance to their daughters' education, provision of money by parents to their children
--	---

## Decision making

Extent of adolescent girls' participation in decision making	Participation in decisions on schooling, marriage, future work prospects, mobility within and outside village, Interaction in the community, Purchasing clothes and Going out for vacations
--	---

## Level of empowerment

Power within	Measures of self-esteem, measures of self-efficacy and measures for Individual agency
--------------	---

Power with	Support from anyone during conflict, support from family, support from friends
------------	--

Power over	Access to Sneha clinics, Access of IFA and albandazole tablets, Participation in Kishori groups
------------	---

The data analysis was carried out in three stages.

### 3.4.1 FIRST STAGE

It included the descriptive analysis to estimate the frequencies, percentages of the available variables. This helped in understanding the profile of the adolescent girls who participated in the survey.

### 3.4.2 SECOND STAGE

The second stage included the formation of different indices using interpretable components. Variable reduction techniques like principal component analysis (PCA) were employed to form the wealth index. The other indices like Parent daughter relationship index, Decision making index and Level of empowerment which was measured by girls' self-esteem and self-efficacy were formed using factor analysis which is used to assess the validity. Also, Cronbach's alpha statistics used for measuring the reliability coefficient. It also employed the bivariate and multivariate analysis to estimate the odds ratios adjusted for independent variables.

#### 3.4.2a Formation of wealth index

Household economic status was measured using a wealth index composed of data on household assets which includes ownership of selected durable goods as well as data on access to a number of amenities. The wealth index was constructed by allocating the scores to a household's reported assets or amenities. The index score was constructed using principal component analysis which is used to reduce the number of correlated variables into a smaller set of important independent variables.

#### **3.4.2b Parent-daughter relationship index (PDRI)**

The parent-daughter relationship was assessed by constructing a summary index of Parent daughter relationship with three components 1) Parent-daughter interaction, 2) Communication-a) Adolescent girl's communication with parents, b) Parents' communication with adolescent girls and 3) Parental support. The PDRI was constructed by allocating scores to parent-daughter interaction, communication and parental support. Its validity was measured by factor analysis followed by measuring its reliability by Cronbach's Alpha statistics. The final categorization of parent-daughter relationship into a) strong, b) medium, c) weak was done by dividing the alpha scores by percentiles.

#### **3.4.2c Decision making index (DMI)**

The adolescent girls' participation in decision making either on their own or jointly with their parents was measured by constructing a summary index of decision making. The DMI was constructed by allocating the scores to components (on different aspects which affects the adolescent girls' lives) of decision making. The same procedure followed to form the PDRI was employed here as well. The validity and reliability of decision making were assessed by factor analysis and Cronbach's Alpha statistics. The alpha scores were divided into three categories by percentiles into a) low, b) medium and c) high.

#### **3.4.2d Measure for level of empowerment**

The level of empowerment of adolescent girls was examined by the power framework, i.e. "power within", "power with", and "power over". The factors with highest variation were assessed using factor analysis and their reliability was measured by Cronbach's Alpha statistics. The factors with highest factor loadings were found to be "self-esteem" and "self-efficacy" and therefore these were considered as separate variables and were used as a measure to assess the girls' level of empowerment.

### **3.4.3 THIRD STAGE**

It included the structural equation modeling (SEM), which was used to understand the structural relationship between the measured variables and latent construct of school dropout and absenteeism of adolescent girls. The SEM was performed separately for absenteeism and school dropout.

#### **3.4.3a School dropout**

The significant predictors of dropout were found by bivariate analysis by performing logistic regression. The predictors with p-value up to 0.15 which were in terms of individual, household and school level were considered for multivariate analysis. The multivariate analysis was performed to obtain adjusted odds ratio. The significant predictors of dropout with p-value less than equal to 0.05 were considered for performing structural equation modeling.

#### **3.4.3b Absenteeism**

The stepwise regression was performed for absenteeism. The predictors of absenteeism with p-value less than 0.05 were considered for performing structural equation modeling.



CHAPTER

4

RESULTS

This chapter describes the profile of the adolescent girls of Koppal taluka who participated in the survey in terms of their demographic, individual, household and school characteristics. Parents' relationship with their daughters is described in detail which consists of the interaction and communication between parents and daughters on various aspects which affects adolescent girls' lives. It also includes the findings on parental support to their daughters with respect to education, daily chores, involvement in household related decisions and giving money to their children. There is a detailed section on the extent of girls' participation in decision making and her level of empowerment in terms of her self-esteem and self-efficacy. The last section comprises of the reasons for absenteeism and school dropout and describes the pathway which leads to girls' remaining absent from class and dropping out of school.

## 4.1 Profile of adolescent girls

### 4.1.1 Household characteristics

The household characteristics of the adolescent girls were described in terms of the household living standards, the type of family they belonged to and selected parental and sibling characteristics.

The household living standard was measured using wealth index computed in Demographic Health Surveys (DHS). This was composed from household asset data on the ownership of selected durable goods including the access to a number of amenities. The wealth index was constructed by allocating scores to a household's reported assets and access to amenities (for more details on wealth index refer Appendix A). Results show that majority of the adolescent girls were from other backward class (57.3%) and over 90 percent of them belonged to Hindu religion. More than 50 percent of the adolescent girls co-resided with their parents and 85 percent of girls had both their parents alive. Findings on the educational attainment of the parents showed that almost half of the girls participated in the survey had both the parents non-literate (45%). The literacy level differed greatly between the parents with 23 percent girls reported only their fathers were literate and 9 percent girls reported only their mothers were literate. In terms of employment, 65 percent of the girls had both parents employed and mainly worked in the agriculture sector, while 19 percent girls reported only their fathers were employed/self-employed and just 14 percent girls reported only their mothers had paid work experience as seen in Table 4.1.



**Table 4.1:** Percentage distribution of adolescent girls by their selected household characteristics, Koppal taluka, 2016. (N=1037)

Characteristics	Percentage	
<b>Profile of adolescent girls'</b>		
<b>Caste</b>	30.5	
SC/ST	57.3	
OBC	12.2	
General/Others	91.7	
<b>Religion</b>	8.3	
Hindu	53.6	
Non Hindu	46.4	
<b>Type of family</b>	1.0	
Nuclear	10.0	
Non-nuclear	89.0	
<b>Parents living status</b>		
Both parents not surviving	1.0	
Only Father/Mother surviving	10.0	
Both parents surviving	89.0	
<b>Parents literacy status</b>		
Both parents illiterate	45.0	
Only father literate	23.0	
Only mother literate	8.6	
Both parents literate	23.4	
<b>Working status of parents</b>		<b>(N=1027)</b>
Not working	2.6	
Only mother working	13.6	
Only father working	19.1	
Both working	64.7	
<b>Parents occupation status</b>		
	<b>Father(N=935)</b>	<b>Mother (N=1015)</b>
Cultivator/Agricultural laborer/Non-agricultural laborer	79.1	71
Business/Salaried employment	12.9	8.2
Housework/Unemployed/Others	8.0	20.8

Note: The missing cases have been excluded; The number in parenthesis represents the number of respondents

#### 4.1.2 Demographic characteristic

The adolescent girls surveyed for the project “Sphoorthi” were in the age group of 13 to 16 years. On an average, the girls were aged 14.5 years and almost all girls (98%) were never married. More than 80 percent of the girl had started menstruating. Misbehavior such as teasing/bullying or sexual harassment by anyone in their village in last 12 months was experienced by 4 percent of the adolescent girls.

The survey also measured the health status of girls through two broad indicators, namely, Hemoglobin and BMI. As shown in Table 4.2, majority of girls were found anaemic (88.1%) and underweight (76.7%) having BMI less than 18.5.

**Table 4.2:** Percentage distribution of adolescent girls by their demographic and individual characteristics, Koppal taluka, 2016 (N=1037)

Characteristics	Percentage
<b>Age of the respondents</b>	
13	20.8
14	30.1
15	27.3
16	21.8
Mean age (in years)	14.5
<b>Marital status</b>	
Never married	98.0
Ever married*	2.0
<b>AG reached puberty (started menstruating)</b>	84.0
<b>Misbehavior by anyone in last 12 months@</b>	4.2
<b>Health issues</b>	
Anaemia	88.1 (227)
Underweight	76.7 (208)

Note:

\* Ever married is defined as girls' who have been engaged/currently married/married but gauna not performed.

@ Misbehavior by anyone in last 12 months is defined as girls' have experienced teasing/sexually harassed by anyone in last 12 months. Number in parenthesis represent number of respondents.

### 4.1.3 Sibling characteristics

Table 4.3 shows the distribution of girls by their sibling characteristics. Over 55 percent of adolescent girls had more than one brother and sister, more than three-fourth of adolescent girls had siblings aged less than 18 years, and 4 percent had male siblings less than 6 years of age. Comparing the siblings' education, one-fourth of the male siblings were continuing education beyond secondary school and 13 percent of female siblings had dropped out of school. None of the male siblings dropped out of school.

**Table 4.3:** Percentage distribution of adolescent girls by their selected sibling characteristics, Koppal taluka, 2016. (N=1037)

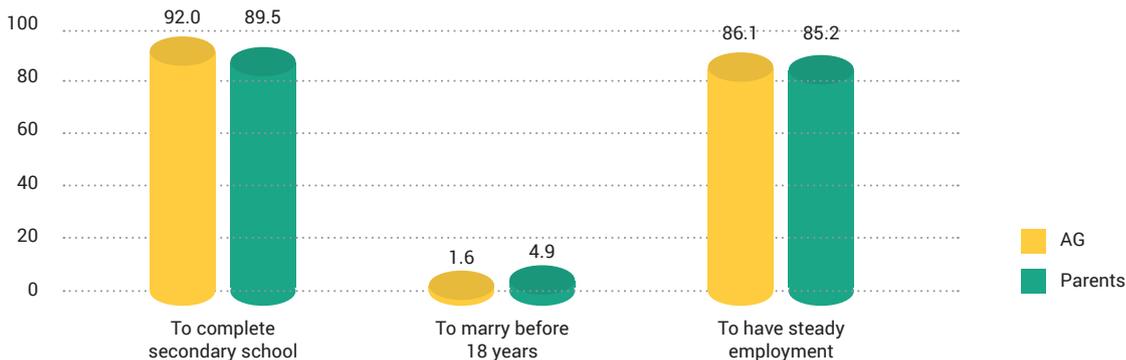
Characteristics	Percentage
<b>Sibling composition</b>	
No siblings	3.1
Only brothers	24.4
Only sisters	15.7
More than 1 brother and sisters	56.8
<b>Age of siblings</b>	
Sibling <18 yrs. age	79.6
Male sibling <6 yrs. age	3.5
<b>Continuing education beyond secondary school</b>	
Male sibling	25.1
Female sibling	18.6
<b>Dropped out of school</b>	
Male sibling	0.0
Female sibling	13.1



#### 4.1.4 Aspiration of AG and parents about schooling, marriage and employment, and reported reasons for marriage before the age of 18

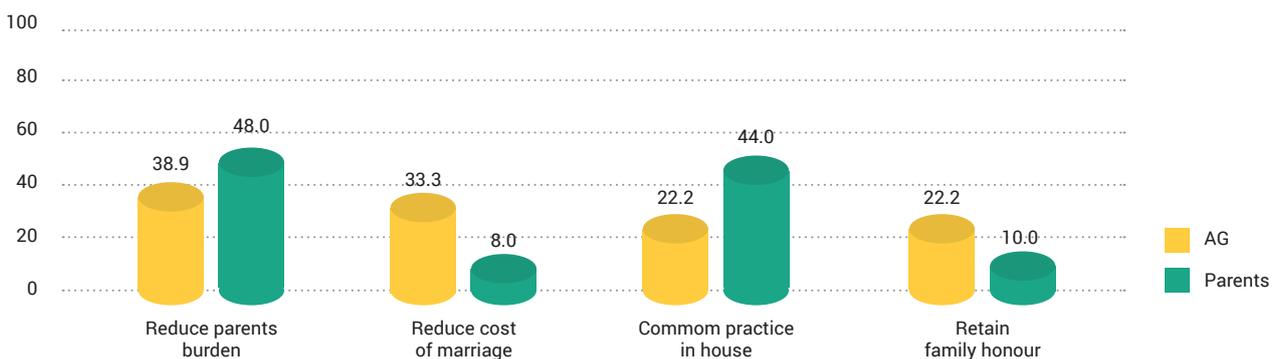
In the baseline survey, girls were asked about their aspirations for completing secondary school, their opinions on the importance of marriage before the age of 18 years, having steady employment, and also their parent’s perspectives on the same. Figure 4.a shows that most of the girls had aspirations for completing secondary school (92%) and to get engaged in steady employment (86%). The parents’ perspectives as reported by the girls and the girls’ opinions were found to be similar. As reported by girls, 5 percent of their parents had aspirations of getting them married before the age of 18 which was slightly higher than the girls’ opinion (2%).

**Figure 4.a: Percentage of AG and parents by different aspirations about schooling, marriage and employment**



The commonly cited reasons by adolescent girls to be married before the age of 18 years was to reduce parents’ burden (39%) followed by reducing the cost of marriage (33%). This was found to be similar to the perspective of parents as reported by the girls on marrying them off before the age of eighteen to be easing their burdens (48%) and reducing the cost of marriage (8.0%). The girls also reported that parents felt it was a common practice in the family (44%) and essential to retain the family honor (10%) as shown in Figure 4.b.

**Figure 4.b: Percentage of AGs and parents by reported reasons of marriage before the age of 18**



#### 4.1.5 School characteristics

The school characteristics were intended to understand the basic facilities provided at school, teachers attitudes and practices in class, and experience of misbehavior by anyone in school. The facilities provided at school were measured in terms of availability of 1) comfortable classrooms which was assessed by the availability of desks and benches for seating that enabled them to hear the teacher clearly, to write comfortably and to see the blackboard clearly in the class, 2) textbooks provided in class 3) toilet facility at the school and 4) health services provided at school. Almost all adolescent girls reported that they had been provided with these facilities at school. At the same time, 6 percent girls reported that they were not provided proper toilet facility in the school.

**Table 4.4:** Percentage distribution of adolescent girls by their school characteristics, Koppal taluka 2016. (N=1031)

Characteristics	Percentage
<b>Facilities provided in the school</b>	
Comfortable classroom	97.9
Were you provided textbooks in your school	95.3
Provided health services at your school	93.4
School toilet give a person adequate privacy	85.0
School with no toilet facilities	6.0
<b>Teachers attitudes and practices</b>	
<b>Teachers displaying positive behavior in class</b>	<b>(N=968)</b>
Teachers praise boys more than girls	3.0
Teachers praise girls more than boys	35.2
Equally praise both boys and girls	61.2
<b>Gender based comments made by the teacher in class</b>	
"Girls should be helping mothers at home"	53.4
"Boys should concentrate on their studies"	57.4
<b>Teacher favoring students</b>	<b>4.8</b>
<b>Experience of misbehavior at school</b>	<b>4.2</b>

Note: Comfortable class room is defined based on the class room crowding, availability of blackboard, and facilities for students to write comfortably; Misbehavior is defined as girls' who had been teased/looked/touched in a wrong manner at school; Teacher favoring student is defined as the students favored in school for being rich, by their religion and caste. Missing cases have been excluded; The number in the parenthesis represents number of respondents.

The teacher's attitude and practices were measured using four indicators reflecting the extent to which the teacher displays positive, respectful, non-discriminatory attitude and practices toward students. The first indicator assessed whether the teacher provided positive feedback to students, in terms of praising the pupils in doing their work well. The second indicator captured whether the teachers had treated students with respect which included refraining from punishing the students by hitting them with the cane when they did not understand the lessons taught in class. The third indicator assessed whether the teachers had discriminated the students on the basis of economic status, religion, caste and gender. The fourth indicator included whether the teacher made gender insensitive comments in the class and discouraged girls from participation in the study activities. With regard to teacher's attitude and practices at school, girls reported that their teachers equally praised both boys and girls (61.2 %), and 35.2 reported that teacher praised them more than boys in class. However, 4.8 percent of girls believed that their teachers favor other students for their caste, religion and economic status. When asked about the teachers' comments in the school about the gender roles i.e. teachers ever commented that girls should be helping their mothers at home and boys should concentrate on their studies, findings showed that more than 50 percent of girls accepted that the teachers commented in this manner. Four percent of girls also reported that they experienced misbehavior at school as reported in the Table 4.4.

## 4.2 Parent-daughter relationship

The measure of parent daughter relationship was predetermined to understand the level of parents' involvement in their daughters' lives. The relationship between the parent and daughter was assessed in terms of interaction and communication between adolescent girl and parents on various aspects of the life of adolescent girls as well as parental support in girls' education and overall wellbeing. The communication involves two-way exchange of ideas between adolescent girls and their parents, i.e., adolescent girl communicating with parents on matters related to schooling, friendship, marriage, future work prospects, personal hygiene and health issues and vice-versa. The parent-daughter relationship was also assessed in terms of support provided by parents to their daughter with regard to education, daily chores, involvement in household related decisions by parents, giving money to their children and ensuring equal treatment to their daughters as their son on the same factors.

### 4.2.1 Interaction between adolescent girls and parents

The level of interaction between the adolescent girls and their parents was assessed by the responses obtained by girls about their discussion with the parents related to schooling, friendships, the more delicate issues on growing up like puberty and eve teasing/bullying in the baseline survey.

**Table 4.5:** Percentage distribution of adolescent girls by their interaction with parents, Koppal taluka, 2016. (N=1027)

Components	Interaction with parents			
	No interaction	Only mother	Only father	Both parents*
Talk/play/fun	6.5	12.5	0.6	80.4
Schooling	12.0	7.2	1.5	78.3
Friendship	12.3	17.9	1.2	67.6
Growing up issues	17.7	66.1	0.3	15.0
Teasing/bullying (N=36)	38.9	27.8	5.6	27.8

Note: Schooling is defined as interaction between parents' & daughters about their school performance and continuing education; Growing up issues is defined as interaction with parents' and daughters about puberty and body changes; Talk/play/fun is defined as parents' and daughters spending time for talking/chatting or playing or having fun.

The findings presented in the Table 4.5 shows that a large of proportion of girls were found to be interacting with both the parents on the issues like schooling (78%) and friendship (68%). More than three quarters of girls had reported that they spend time with their parents by talking on various issues or playing or having fun with them. However, they reported that when it comes to issues like puberty and eve teasing, they only interacted with the mother as reported by 66 percent and 27.8 percent, respectively. Over 35 percent of adolescent girls do not interact about eve teasing with their parents as compared to the other mentioned matters. It is observed that there is less than 6 percent of interaction only with their fathers on these issues.

### 4.2.2 Communication

To capture the extent of communication between the adolescent girls and their parents, the adolescent girls have been asked several questions in the baseline survey regarding their communication with parents. Results presented in Table 4.6 show that about 65 percent girls discussed about schooling. Mothers were found to be more confidante to girls while communicating more sensitive issues related to related (79%), harassment by boys (54%), any other personal problems (60%) and issues related to household chores (38%).

#### 4.4.2a Adolescent girls' communication with parents

**Table 4.6:** Percentage distribution of adolescent girls by their communication with parents, Koppal taluka, 2016. (N=1027)

Components	Communication of AG with parents			
	No communication	Only mother	Only father	Both parents
Schooling	18.8	12.2	3.2	64.9
Household chores	24.8	37.5	2.2	34.5
Personal problem	10.9	60.3	3.4	24.5
Harassment by boys	11.7	53.5	4.4	29.4
Quality at school	51.2	14.2	9.6	24.1
Day to day happenings	54.4	16.9	8.2	19.6
Friendship	59.7	19.6	5.8	14.0
Menstrual problem	9.6	79.4	0.2	9.9
Work prospects	93.2	2.1	1.0	1.8
Marriage	97.9	0.7	0.3	0.2

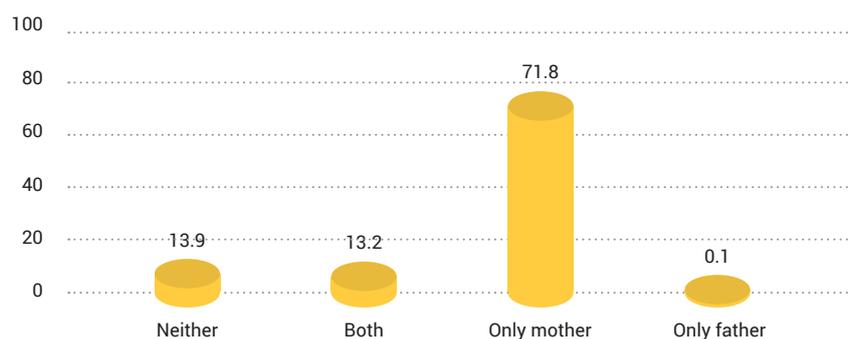
Note: Schooling is defined as communication of adolescent girls' with their parents' about her performance in class and study materials; Household chores is defined as communication of adolescent girls' with their parents' about the cooking or household work; Quality at school is defined as girls' communication with her parents' about her teacher's behavior & facilities present at school.

The measure of parent-daughter relationship was predetermined to understand the level of parents' involvement in their daughters' lives. The relationship between the parent and daughter was assessed in terms of interaction and communication between adolescent girl and parents on various aspects of the life of adolescent girls as well as parental support in girls' education and overall wellbeing. The communication involves two-way exchange of ideas between adolescent girls and their parents, i.e., adolescent girl communicating with parents on matters related to schooling, friendship, marriage, future work prospects, personal hygiene and health issues and vice-versa. The parent-daughter relationship was also assessed in terms of support provided by parents to their daughter with regard to education, daily chores, involvement in household related decisions by parents, giving money to their children and ensuring equal treatment to their daughters as their son on the same factors.

#### 4.4.2b Parents communication with their daughters

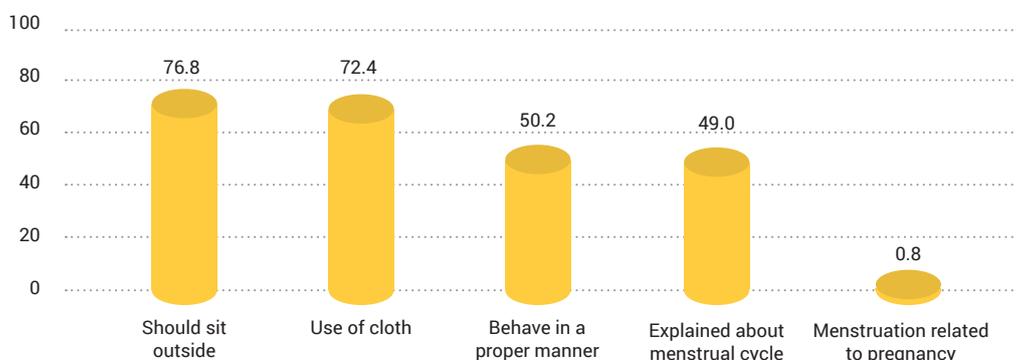
This study also assessed the communication of parents with their daughters on menstruation which was reported by the girls during the survey. The Figure 4.c shows that it is mainly mothers who communicate about menstruation with their daughters.

**Figure 4.c:** Percentage of AGs reported the communication with parents on menstruation



As shown in Figure 4.d, the contents discussed about menstruation with adolescent girls involved the do's and don'ts of menstruation. Over 75 percent of adolescent girls reported that they had been asked to sit outside during menstruation. Almost half of the girls had been explained about menstrual cycle and were asked to behave properly during menstruation. Less than one percent of girls knew that it is also related to pregnancy.

**Figure 4.d: Percentage of AGs by contents of menstruation discussed with the parents**



### 4.2.3 Parental support for girls' education and overall well being

Several questions were posed in the baseline survey to assess parental support for their daughter's development and wellbeing. To explore the gender differences in parental support (seen through differential treatment of sons and daughter), the adolescent girls were also asked questions regarding parental support for their brothers' education and other activities. Only less than half of the parents found to be supporting both their son and daughter equally for education (41%), around one third have given money, or involved them both in household related decisions (Table 4.7). Majority of the girls (66%) reported that parents have asked both their son and daughter to take care of household chores. However, another 28 percent girls reported that parents' asked them to perform the household chores.

As shown in Table 4.7, girls participated in baseline survey were found to be reporting that their brothers have been involved more in household related decisions (33%) or have given more money (28%) or asked to do chores outside the house (27%) when compared to them (girls). It is noted that parents have asked girls to take care of household chores more than the outside chores which may be due to strict gender norms followed in the region.

**Table 4.7:** Percentage distribution of adolescent girls by their parental support, Koppal taluka, 2016. (N=836)

Components	Support by parents			
	AG	Brother	AG & brother	Neither
Parents giving importance to education	26.9	17.8	40.8	14.5
Parents giving more money	25.4	28.2	35.5	10.9
Parents involving in household related decisions	23.0	32.8	28.7	15.6
Parents asking to do HH chores	28.2	2.6	65.8	3.8
Parents asking to do outside chores	5.9	27.0	55.1	11.8

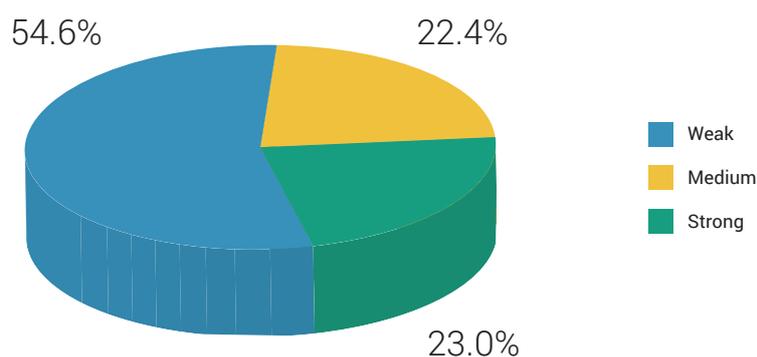
Note: The number of respondents considered is 836 as 10 respondents do not have their parents' alive & 195 do not have male sibling

#### 4.2.4 Parent-daughter relationship index (PDRI)

The summary index of parent-daughter relationship was computed to assess the level of parent-daughter relationship comprising of parental interaction with and support provided to the girls. The index does not include parental communication with daughters as the data was only limited to parental communication on menstruation. While factor analysis was used to construct the index, Cronbach's alpha was used as a measure to assess the reliability of the index (Refer Appendix B for detailed information).

Results show that more than half of the adolescent girls have weak parent-daughter relationship (55%) while almost equal proportion of girls had moderate (22%) or strong (23%) relationship with their parents (Figure 4.e).

**Figure 4.e:** Percentage distribution of adolescent girls' by parent daughter relationship



#### 4.2.5 Predictors of a strong parent-daughter relationship

To identify the factors associated with parent-child relationship, we used logistic regression analysis. The categorical variable of parent-child relationship index (PDRI) was converted into a binary variable (Strong PDRI=1, Otherwise=0) and unadjusted as well as adjusted odds-ratio (OR) were computed for each theoretical variable hypothesized to be associated with outcomes (Table 4.8).

**Table 4.8:** Results of logistic regression for adolescent girl with strong PDR, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Caste</b>				
SC/ST ( <i>Ref</i> )	316	37.7		
OBC	594	47.5	1.50(1.13-1.98)**	1.25(0.90-1.73)
General/others	127	55.1	2.03(1.34-3.09)***	1.91(1.16-3.13)**
<b>AG ASPIRATIONS</b>				
<b>Complete Secondary school</b>				
No ( <i>Ref</i> )	89	12.4		
Yes	948	48.5	6.68(3.51-12.73)***	7.76(2.80-21.52)**
<b>Employment</b>				
No ( <i>Ref</i> )	144	20.1		
Yes	893	49.5	3.89(2.53-5.96)***	2.13(1.12-4.05)**

### Participating in various groups

No (Ref)	588	38.9		
Yes	449	53.9	1.83(1.43-2.35)***	1.45(0.99-2.13)**

### Parents' survival

Single parent (Ref)	114	89.5		
Both alive	923	40	0.08(0.04-0.14)***	0.02(0.01-0.04)***

### Parents' literacy

Both/single parent illiteracy (Ref)	796	43.2		
Both literate	241	52.7	1.46(1.10-1.95)**	1.62(1.14-2.30)**

### Siblings

No siblings (Ref)	32	31.3		
Only brothers	253	55.7	2.77(1.26-6.09)**	7.74(2.50-23.99)***
Only sisters	163	27.6	0.84(0.37-1.91)	1.54(0.49-4.91)
More than one brother and sister	589	46.7	1.93(0.90-4.14)*	7.46(2.45-22.73)***

### PARENTS' ASPIRATIONS FOR GIRLS

#### Complete secondary school

No(Ref)	101	17.8		
Yes	936	48.4	4.32(2.56-7.31)***	2.20(0.97-5.01)**

#### Marry before 18 years

No(Ref)	978	46.6		
Yes	59	25.4	0.39(0.21-0.71)**	0.44(0.20-0.94)**

Note: \*\*\*P<0.001, \*\*P<0.05, \*P<0.10, Ref- Reference category

Results show that the girls from general or other castes were more likely to have a strong parent-daughter relationship compared to girls from SC/ST caste. The girls having both parents alive and those who had aspirations of marrying their daughters off before the age of 18 were less likely to have strong PDR. However, the girls whose parents are literate, have only brothers, and have more than one brother and sister were more likely to have strong PDR. Further, those parents and girls both having aspirations for completion of secondary school were more likely to have strong PDR. The girls having hopes to be employed in future also favored the same (Refer Appendix F for all the variables considered for logistic regression).

## 4.3 Girls' participation in decision making

This section describes the extent of adolescent girls' participation in decision making, on matters affecting her life, either by herself or jointly with her parents and her level of empowerment. To assess the extent of adolescent girls' participation in decision making, questions were posed to them in the baseline survey about who the final decision maker was in their family on issues related to marriage, work, schooling, community interactions, going out on vacation or outing, and buying clothes.

### 4.3.1 Participation of girls in decision making processes

The findings presented in the Table 4.9 show that girls' individual decision making was only restricted to the purchasing of clothes (88%) and deciding a place to visit during the vacations (74%). However, most of the important decisions related to her life were taken by the parents. For example, decisions related to marriage, mobility within or outside the village, schooling and work were largely taken by the parents. Less than 10 percent of the girls had any say in making these decisions.

**Table 4.9:** Percentage distribution of adolescent girls by their participation in decision making affecting her life, Koppal taluka,2016.(N=1027)

Components	AG	Decision making at home				
		Father	Mother	Both parents'	AG & parents'	Others
Marriage	1.4	15.3	15.5	52.3	7.6	8.0
Mobility	2.2	15.5	23.6	40.4	9.6	8.7
Schooling	6.0	26.2	18.4	26.9	8.9	13.6
Work	18.3	17.5	23.5	26.7	6.4	7.6
Interact in the community	36.8	10.1	24.6	22.7	1.8	4.0
Purchasing clothes*	88.1	Nil	Nil	Nil	Nil	Nil
Vacation*	74.1	Nil	Nil	Nil	Nil	Nil

Note: Mobility is defined as the decisions taken at home about the visits within or outside village; Schooling is defined as decisions taken at home about continuation of school or type of school or level of education; Marriage is defined as decisions taken at home about when & whom to marry; Interaction in the community is defined as decisions taken at home about whom to interact in the community.

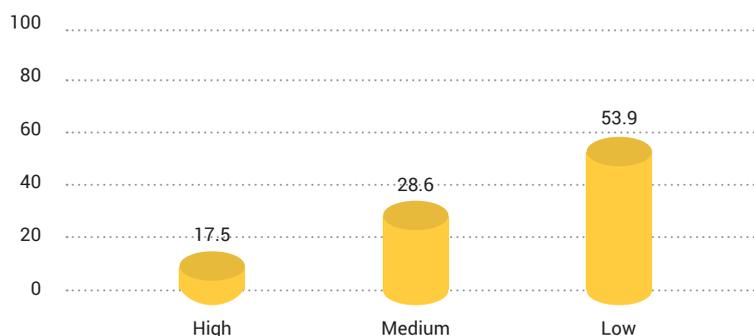
\*The questions on girl's participation in decision making related to purchasing the cloths and going on vacation was binary in nature, and therefore, the responses of other family members was not captured.

### 4.3.2 Decision making index

The different components of decision-making processes were clubbed together to generate a summary index of adolescent girls' participation in decision making. The process of generating the decision making index followed the approach similar to PDRI. The decision-making index was categorized into three components - low, medium and high using percentiles (Refer Appendix C for more details).

The Figure 4.f shows the extent of adolescent girls' participation in decision making. It is noted that more than half of adolescent girls (54 percent) have low level of decision making followed by medium (29 percent). Only 17 percent of girls exhibit high level of participation in decision making.

**Figure 4.f:** Percentage distribution of AG by their extent of participation in decision making



### 4.3.3 Predictors of high participation in decision making by girls

Logistic regression analysis was performed to understand the predictors of high levels of participation in decision making by the girls. For the analysis purpose, medium and strong categories of decision making were combined together.

The results presented in the Table 4.10 show that older girls, those belonging to OBC caste, those belonging to Hindu families, and having nuclear family structures had high level of participation in decision making. The adjusted analysis shows that girls having aspirations for completing secondary education were two times (AOR: 2.38, 95% CI: 1.33-4.25) more likely to participate in decision making (Refer Appendix G for all the variables considered for logistic regression).

**Table 4.10:** Results of logistic regression for high level of participation in decision making by girls, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Age</b>				
13 (Ref)	216	41.2		
14	312	43.3	1.09(0.77-1.55)	1.17(0.82-1.67)
15	283	53.7	1.66(1.16-2.37)**	1.82(1.26-2.62)**
16	226	45.1	1.17(0.81-1.71)	1.44(0.98-2.14)*
<b>Caste</b>				
SC/ST (Ref)	316	41.8		
OBC	594	48.1	1.29(0.98-1.70)*	1.32(0.98-1.76)*
General/others	127	47.2	1.25(0.83-1.89)	1.04(0.67-1.60)
<b>Religion</b>				
Hindu (Ref)	951	47.0		
Non Hindu	86	36.0	0.64(0.40-1.00)**	0.56(0.35-0.90)**
<b>AG ASPIRATIONS</b>				
<b>Complete secondary school</b>				
No(Ref)	89	25.8		
Yes	948	48.0	2.65(1.62-4.33)***	2.38(1.33-4.25)**
<b>Family Type</b>				
Nuclear (Ref)	555	48.6		
Non-nuclear	481	43.2	0.80(0.63-1.03)*	0.76(0.59-0.98)**

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

## 4.4 Level of Empowerment

The level of empowerment of adolescent girls was intended to be measured by power framework having the three core elements of “power within”, “power with” and “power over”. Factor analysis was performed to generate independent indices on three elements of empowerment. The factor analysis depicted low factor loadings for the variables considered for measuring “power with” and “power over” indicating that girls who participated at the baseline had low levels of empowerment while considering all the three components of empowerment together. However, the variables considered to measure “power within” revealed highest factor loading and have grouping of variables that denoted “self-esteem” and “self-efficacy” separately. Hence, the final variable on empowerment measured just two elements of “power within” denoted by self-esteem and self-efficacy (Refer the details in Appendix D). Table 4.11 shows the levels of self-esteem and self-efficacy and revealed that more than 65 percent of girls valued themselves as worthy (self-esteem) but just 45 percent believed in their abilities to succeed in specific situations or accomplish a given task (self-efficacy).

**Table 4.11:** Percentage distribution of adolescent girls by their self-esteem and self-efficacy, Koppal taluka, 2016 (N=1037)

	Percentage
<b>Self esteem</b>	
Low	32.88
High	67.12
<b>Self-efficacy</b>	
Low	55.35
High	44.65

### 4.4.1 Predictors of high self-esteem

Binary logistic regression analysis was performed to understand the characteristics of adolescent girls associated with the high levels of self-esteem and results are presented in Table 4.12.

**Table 4.12:** Results of logistic regression for girls with high self-esteem, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Age</b>				
13 ( <i>Ref</i> )	216	66.7		
14	312	69.6	1.14(0.79-1.66)	1.50(0.97-2.31)*
15	283	71.4	1.25(0.85-1.83)	1.91(1.20-3.04)**
16	226	58.8	0.72(0.49-1.05)*	1.12(0.69-1.80)
<b>Caste</b>				
SC/ST ( <i>Ref</i> )	316	56.6		
OBC	594	70.9	1.86(1.40-2.48)***	1.36(0.95-1.93)*
General/others	127	75.6	2.37(1.49-3.76)***	1.44(0.83-2.50)

## Religion

Hindu ( <i>Ref</i> )	951	66.0		
Non Hindu	86	79.1	1.94(1.14-3.32)**	2.00(1.06-3.81)**

## AG ASPIRATIONS

### Complete secondary school

No ( <i>Ref</i> )	89	15.7		
Yes	948	71.9	13.74(7.63-24.73)***	4.29(2.09-8.82)***

### Marriage before 18 years

No ( <i>Ref</i> )	1,007	67.6		
Yes	30	50.0	0.48(0.23-0.99)**	0.96(0.36-2.53)

## Employment

No ( <i>Ref</i> )	144	20.8		
Yes	893	74.6	11.15(7.26-17.13)***	4.45(2.46-8.06)***

## Participating in different groups

No ( <i>Ref</i> )	588	58.8		
Yes	449	78.0	2.47(1.87-3.26)***	1.50(1.07-2.09)**

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

Findings revealed significantly higher levels of self-esteem among girls who were older, who were non-Hindu and who belonged to other backward castes compared to their counterparts. Further, the girls who had high aspirations for completing secondary school and have steady employment in future had higher self-esteem (Refer Appendix H for variables used for logistic regression).

### 4.4.2 Predictors of high self-efficacy

In order to understand the social background of adolescent girls with high self-efficacy, binary logistic regression analysis was performed. Multivariate analysis was also performed to compute the adjusted odds ratio for each of the independent variables. The results presented in the Table 4.13. show that self-efficacy increases in girls having higher aspirations for steady employment in future (AOR:1.81) and having high self-esteem (AOR:4.33). In contrary, girls whose parents had aspirations for getting them married before the age of 18 years had low self-efficacy. The same was also true for girls having aspirations for marrying before 18 years of age (AOR:0.37) (Refer Appendix I for variables used in Logistic regression).

**Table 4.13:** Results of Logistic regression for girls having high self-efficacy, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>AG ASPIRATIONS</b>				
<b>Marriage before 18 years</b>				
No ( <i>Ref</i> )	1,007	45.5		
Yes	30	16.7	0.24(0.09-0.63)**	0.37(0.13-1.10)*

### Self esteem

No ( <i>Ref</i> )	341	18.5		
Yes	696	57.5	5.96(4.36-8.15)***	4.33(3.08-6.09)***

### Wealth Quintile

Poor/Poorest ( <i>Ref</i> )	415	37.1		
Middle	208	40.9	1.17(0.83-1.65)	0.96(0.66-1.39)
Rich/Richest	414	54.1	2.00(1.51-2.64)***	1.34(0.97-1.86)*

### PARENTS' ASPIRATIONS FOR GIRLS

#### Marry before 18 years

No ( <i>Ref</i> )	978	46.4		
Yes	59	15.3	0.21(0.10-0.43)***	0.44(0.20-0.97)**

#### Get employed after study

No ( <i>Ref</i> )	153	17.6		
Yes	884	49.3	4.54(2.94-7.02)***	1.81(0.99-3.29)**

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

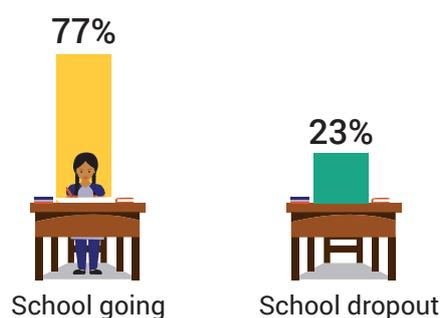
## 4.5 Levels of school dropout and absenteeism among adolescent girls

Retaining girls in school till they complete secondary school is one of the key outcomes of the Sphoorthi project. The baseline data was used to analyze the levels of dropout and absenteeism among girls and the reasons associated with it. The project also intends to understand the factors associated with the school dropout and absenteeism so that the project could focus on those factors that hinder the girls' schooling. The structural equation model is used to understand the pathways through which girls either miss the classes or drop out of school.

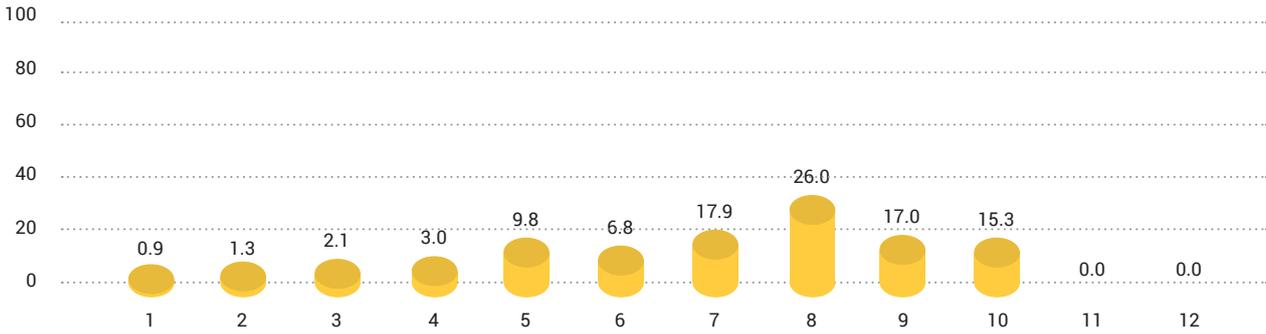
### 4.5.1 Levels of schooling and dropout among girls

Findings reveal that about 23 percent of the girls were out of the school at the time of baseline, whereas, remaining 77 percent were continuing their studies (Fig 4.g). While analyzing the completed years of schooling among the dropout girls, it was observed that the most of the dropout among girls took place after completing the class 8th (26%) or 7th (18%), i.e., just before entering into the secondary education. In addition, a significant proportion of girls' school dropout was also observed while continuing the secondary education (Class 9th) and after completing the same (Class 10th). The Figure 4.g. shows that almost one fifth of the adolescent girls had dropped out of school.

**Figure 4.g: Percentage of girls by school continuation status**



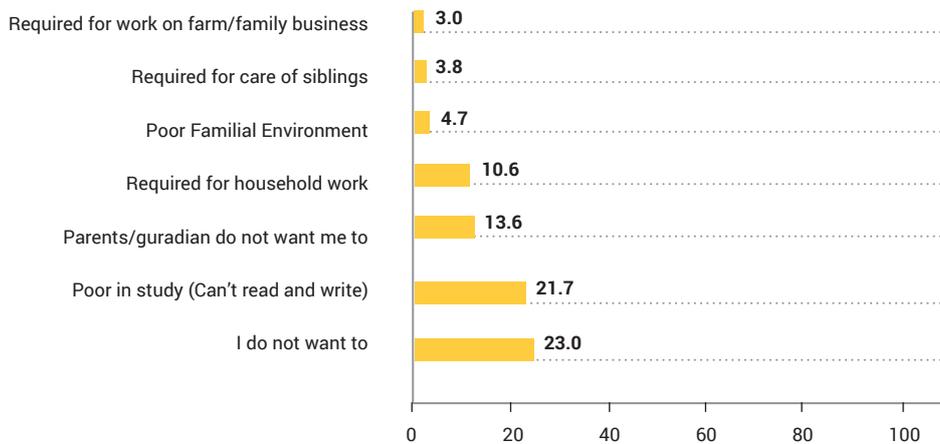
**Figure 4.h: Percent distribution of dropped out girls by completed years of schooling**



#### 4.5.2 Reported reasons for school dropout

The girls who dropped out were asked for the reasons for dropping out of school in the baseline survey. Nearly one in four girls reported that they had dropped out of school due to lack of interest in studies (23%) or poor performance in academics (22%) as seen in Figure 4.i. Household factors were observed to be the other common reasons for dropping out of school. Lack of support from the parents and girls' requirement for household work were other reasons reported by 14 and 11 percent of girls respectively. Few girls also reported reasons like poor familial environment (5%), required to care for their younger siblings at home (4%) and to work in the farms (3%) as the main reasons of school dropout.

**Figure 4.i: Percentage of girls by reported reasons for school dropout**



#### 4.5.3 Percentage of girls by levels of absenteeism

Analysis was also done to understand the levels of absenteeism among the girls participated in the survey. A girl was considered as absent from the school if she had missed school for more than three days in a month. Figure 4.j shows that about 9 percent of girls reported being absent from the school in the one-month period preceding the survey.

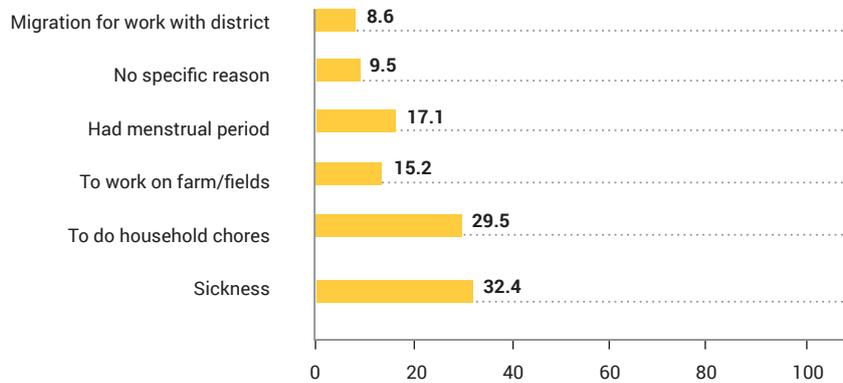
**Figure 4.j: Percentage of girls' by reported levels of absenteeism**



#### 4.5.4 Reasons reported by girls for absenteeism

The reasons for school absenteeism are shown in Figure 4.k. Findings suggest that nearly one third of girls reported sickness as the major reason for missing classes followed by their requirement at home to do household chores (30%). It was also found that 17 percent of the girls missed during menstruation and another 15 percent girls missed classes to work on a farm/field. Some girls remained absent from class due to migration for work within the district (9%) and 10 percent did not have any specific reason to miss classes.

**Figure 4.k: Percentage of girls by reported reasons of absenteeism**



#### 4.5.5 Structural model

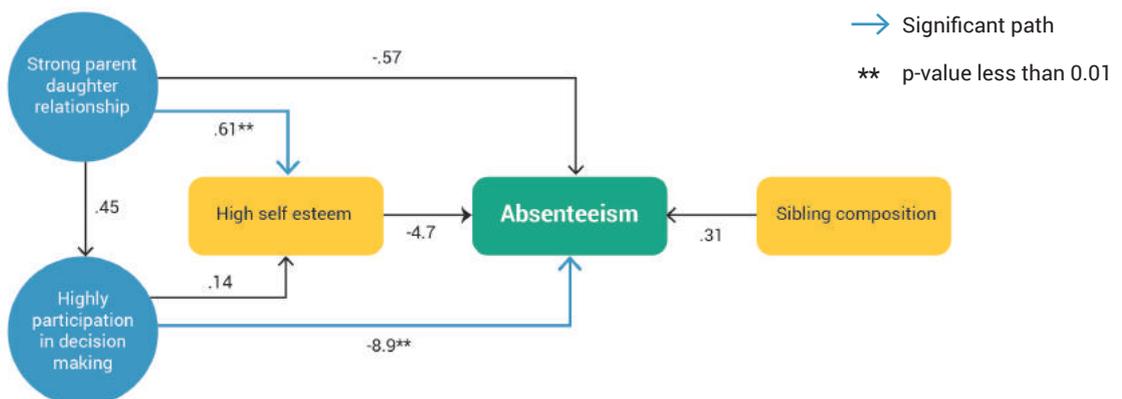
Structural Equation Modeling (SEM) was performed to understand the pathways leading to absenteeism and school dropout (Refer Appendix E for details). Before performing the SEM, the predictors of absenteeism and school dropout were identified in separate regression analyses of school dropout and absenteeism. The predictors of school dropout with p-value less than 0.15 from bivariate analysis were further considered to measure the adjusted odds ratio in the multivariate analysis. The significant predictors of school dropout with p-value less than 0.05 obtained from multivariate analysis were considered for performing SEM. Similarly, the predictors of absenteeism were obtained before performing SEM using stepwise regression and the variable with p-value less than 0.05 were considered for SEM.

##### 4.5.6a Absenteeism

Figure 4.l shows the regression coefficients depicting the pathways of association between the three key predictors- parent-child relationship, decision-making, and self-esteem- with absenteeism. Results show a direct negative association between high participation in decision-making with absenteeism (as shown by regression coefficient). On the contrary, an indirect association was found between parent-child relationship through high self-esteem. These results suggest that girls who are able to take decisions about their own life, either alone or jointly with parents, have lower chances of being absent. At the same time, girls having better relationship with their parents are likely to have better self-esteem and, thereby, lower chances of remaining out of school for a shorter period of time.

**Figure 4.l: Structural equation modeling depicting results of Absenteeism**

PDR > DM > SE > Absenteeism



#### 4.5.6b School dropouts

Table 4.14 summarizes the SEM results which confirm the direction and magnitude of the pathways to school dropout from (i) parent-daughter relationship, (ii) girls' participation in decision making and (iii) self-esteem. These predictors were independently significant in reducing school dropout. However, when combined, PDR impacted self-esteem which then led to decrease in dropout. The girls' participation in decision making was insignificant with parent-daughter relationship and self-esteem, indicating that the parents are majorly involved in making decisions for their daughters' lives and do not involve/approach their daughters while making major decisions which affect her life. However, self-esteem was found to be significant with parent-daughter relationship which indicates that when parents provides support to their daughters and interact/ communicate with them on various matters which affect her life, it could make the girl more confident and increase her self-esteem. This would in turn decrease the chances of girl dropping out of school.

**Table 4.14:** Regression coefficients of pathways leading to school dropout

Sl.No	Pathway	Total effect
1	PDR->Dropout	-1.10000***
2	DM->Dropout	-8.70000***
3	SE->Dropout	-9.70000***
4	PDR->SE->Dropout	-0.59170***
5	PDR->DM->Dropout	-0.03915
6	DM->SE->Dropout	-0.01358
7	PDR->DM->SE->Dropou	-0.00061

Note: \*\*\* p-value less than 0.001

Figure 4.m. depicts the structural equation modeling of school dropout. The model was constructed by taking into consideration the predictors of school dropout obtained from multivariate analysis. It can be noted that as age increases and girls who are engaged/ married were more likely to drop out from the school. The same has been observed for girls who were having male siblings aged less than six years of age. On the contrary, girls who had high aspirations for completing secondary school or to have steady employment in adulthood, and those who were participating in various group activities were less likely to drop out from the school. It is also noted that the girls who had both the parents alive and those with parents who were willing to let their daughters pursue higher education were less likely to drop out from the school. The direct path coefficient from proximal components i.e. parent-daughter relationship, girls' participation in decision making and levels of self-esteem were statistically significant with dropout from school, while the indirect path from parent-daughter relationship affecting the girls' self-esteem was found to be significant.

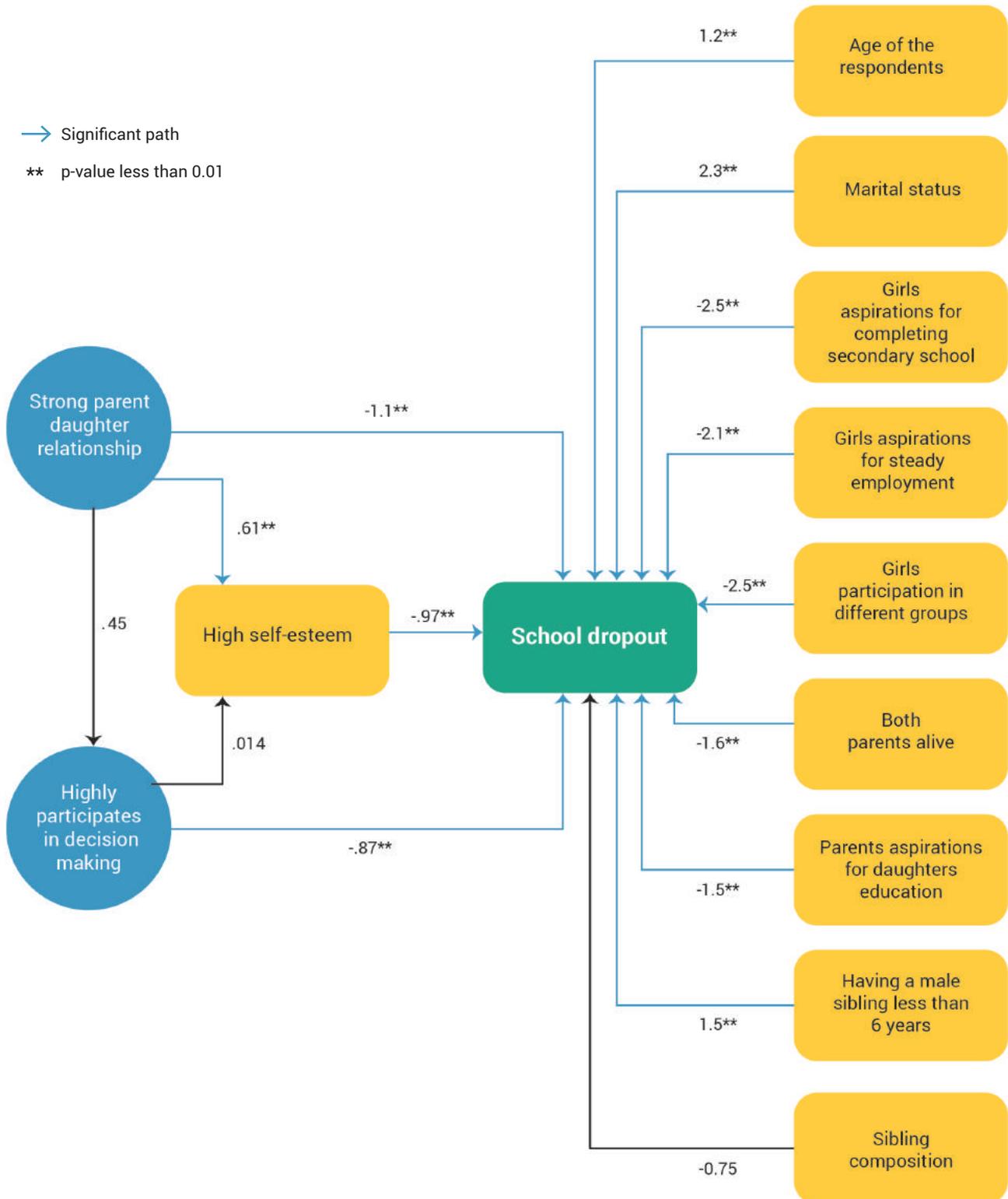
(Refer Appendix J for details on Predictors of school dropout)

**Figure 4.m: Structural equation modeling depicting results for school dropout**

PDR > DM > SE > School dropout

→ Significant path

\*\* p-value less than 0.01





CHAPTER

5

DISCUSSION

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Gender inequality remains strong in Koppal taluka (Koppal district) and gender roles are socially constructed which limits the adolescent girls' mobility, aspirations, expression, participation in decision making on matters that are crucial to her life and livelihood (Siddheshwar 2016). According to literature, girl child education gets affected by socioeconomic, cultural and school level factors, attitude of parents towards their daughters and extent of family support (Samal 2012).

In the study, it was found that 22.8 percent of girls had dropped out of school and 8.9 percent of girls had been missing their classes for more than three consecutive days in a month. School dropout was positively linked with increase in the age of the girls, presence of younger male siblings (less than six years of age) at home and girls getting engaged/married before the age of 18 years. On the contrary, girls with high self-esteem, who have high levels of participation in decision making on their own or jointly with the parents, girls who are a part of different groups (sports /youth/life skill /Bhajana /dance music /study /Kishori group) and who have high aspirations for completing secondary school and steady employment were more likely to remain in school. A study done by Nabbil Khattab in England shows that students having high aspirations or higher expectations have higher school achievement than those with both low aspirations and low expectations (Khattab 2015). It was also found that girls who have both parents alive and who share a strong relationship with them and also those girls who have parents with high aspirations for their daughter's education are more likely to continue their education. Absenteeism (missing classes for more than three days in a month) was less likely to happen when the girls had high levels of participation in decision making.

Girls were more likely to drop out of school as they advance in age and as they get engaged or married early. It could be because of traditional practices like child marriage which often go unquestioned and have been a part of community life and norm for a very long period of time. Getting their daughters married reduces parents' burden as they would have one less person to feed, clothe and educate in their families. This tradition is also followed in order to retain family "honor" in the community. A study done by Bhagavatheesvaran (2016) in north Karnataka shows that the girls getting married/engaged beyond 18 years of age was seen as undesirable to the community (Bhagavatheeswaran et al. 2016). Another study done by UNICEF in Nepal, 2001 showed that the parents get their daughters married early as there is increased pressure among them to safeguard their virginity which often leads to early marriages during their puberty (UNICEF 2001).

The findings from logistic regression revealed that older girls were more likely to participate in decision making and have high self-esteem, but the parents who have high aspirations for their daughters' marriage before the age of 18 were less likely to interact with and support their daughter on different matters affecting her life. Major decisions involving the girls' lives such as marriage i.e. "when and whom to marry" and "continuing the education" lay mostly with parents. This was similar to the findings of the study done by Jennifer Roest, 2016 which showed that girls whose caregivers had low educational aspirations for their daughters were more likely to get them married before the age of 18 than those whose caregivers had higher educational aspirations for their daughters (Roest 2016). The most commonly cited reason for school dropout is that the girls are not interested in studies or academics. This attitude could be multilayered as explained by Lalitha Bhagavateesvaran in her study which states that the girls compromise on school to reduce the economic burden of their family and also to retain the family honor by following the parents' decisions (Bhagavatheeswaran et al. 2016). Compared to the school dropout girls, the school going girls, who also had high levels of participation in decision making were less likely to miss their classes. It could be possible that the girls might be making short term decisions and would still be managing both household chores and their classes well.

Another finding from the study which showed a positive link with dropout was having younger male siblings (less than six years of age) at home. As majority of both the parents are agricultural laborers/cultivators and working in the farms, girls might be required to take care of their younger sibling when parents are out for work. A study by Reeta Sonawat, 2001 shows that financial constraint could be one of the reasons for both the parents to work in field as they are daily wagers. The head of the family migrates to other places in search of better jobs so that they can provide for the family and at the same time the mothers, to meet the daily household expenses work locally. Hence the girls are required to take care of their younger siblings at their homes (Sonawat 2001).

Changes in family structure and absence of a parent in a family environment disrupts its balance and puts the children in unfavorable and undesired conditions as compared to the children of a two-parent family. This study showed that better parent-daughter relationships help in building self-esteem. Study by Selman R L, 2001 shows adolescent-parent attachment has profound effects on cognitive, social and emotional functioning (Selman 1980). Parental attunement and appropriate responsiveness give rise to secure

attachment, marked by a view of the self as worthy of care and competent in mastering the environment. The findings revealed that the girls and parents having high aspirations for higher education were more likely to remain in school. It was also found that the parents who interact, communicate and support their daughters are more likely to encourage their daughters to participate in different groups (sports, dance/music, life skill, *bhajana*, youth, and Kishori group) at or outside the school which also helps in building self-esteem of girls. Both mother and father have separate roles in building a strong relationship with their children. The interaction and communication between father and the daughter was found to be less than 10 percent. A study done by Asbah Zia, 2015 shows that fathers participation play a significant role in building daughters self-esteem and academic growth (Zia et al. 2015). Although self-efficacy was insignificant with dropout, it was found from the logistic regression that girls with high self-esteem were also more likely to have high self-efficacy. Study done by Michal Mann, 2014 shows self-esteem has an effect on mental health and wellbeing of the individual (Mann et al., 2004). High self-esteem among girls will help in building a stronger livelihoods in future and better negotiating power. Better parent-daughter relationships help in building the girls' self-esteem which will lead to girls continuing their education. A study by Rimm-Kaufman, Pianta, Cox, & Bradley showed that parents' positive attitudes towards education and school were associated with the child's increased academic performance (Sara et al. 2010).

From the results it was found that the likelihood of girls dropping out of school decreases when they have a strong parent-daughter relationship. However, there could be additional factors that influence school dropout even with strong parent-daughter relationship, stronger decision-making power and high self-esteem. For example, it is important to note that despite all facilities being provided in the school, the girls had still dropped out of school. This indicates that providing all facilities in school alone may not be able to help retain girls in school due to interplay of other factors for drop out. The commonly cited reason for drop out by girls who had dropped out is that they were not interested in studies or were poor in academics. This could be attributed to the quality of education provided in the school, the teacher's attitude and the practices followed in class.

Hence working with parents to make them aware about the importance of educating girls and the consequences of early marriage is essential. It is of utmost importance that efforts are made to create a supportive environment for the girls within homes by building positive parent- daughter communication. This will eventually build the girls' self-esteem further increasing their self-efficacy. These factors will help increase the duration of the girl in school, and hence contribute to shaping her as role model for other girls and parents in the community.





CHAPTER

6

CONCLUSION

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There could be various reasons associated with absenteeism and school dropout but there is relatively little research into determining the proximal causes of absenteeism and dropout. One could agree that school dropout is a phenomenon caused due to variety of reasons but none of them is a watertight compartment. More number of studies are required to explore the proximal causes of dropout and absenteeism in India. Ultimately, successful interventions will need to address negative gender norms, foster equitable family environments and improve communication within relationships at the family level.

## 6.1 Recommendations

The following recommendations are made for interventions aimed at reducing drop out and absenteeism among adolescent girls:

1. Strengthen relationships between parents and daughters by fostering trust and improving communication. Parents who encourage girls to have open discussions on sensitive matters, which girls often fear to talk about helps improve mental well-being among girls.
2. Sensitize parents about the importance of educating the girl child beyond high school, financial independence and delayed marriage.
3. Improve girls' awareness and access to information on alternative educational and course options such as vocational training.
4. Sensitize and train school authorities and teachers to build a girl child friendly and gender sensitive atmosphere within classrooms and schools.
5. Set up systems that track cases of harassment of children in schools. Safety protocols for protecting children and punishing harassers.
6. Ensure proper toilet facilities for children in school to ensure retention.

## 6.2 Programme Implication

Findings of this study revealed several important results that have programmatic implications. It is clear that the quality of parent – daughter relationships plays a role in determining the adolescent girl's overall personality development. Therefore, the role of parents is very important and crucial in shaping girls as confident and independent individuals. This, in turn affects their aspirations to study further and have a career. And those with high aspirations are less likely to drop out of school. Results also show that girls remain absent from school due to household chores and other familial responsibilities like caring for the younger siblings. Parents, once sensitized can ensure that these norms are discontinued in their families and girls have equal opportunities as boys to study and attend school.

These findings suggest a multilayered intervention for improving school attendance among adolescent girls. There are several barriers that girls encounter at several levels. Examination of these barriers indicate the groups with whom intervention is important and the types of intervention needed to initiate the sequence of preconditions that would culminate in the impact we aim to achieve. It is, therefore, vital to intervene at the level of girls, their families, boys and community groups.

Intervention with role model and peer girls should focus on strengthening their self-esteem and awareness to enable them to make informed choices and empower them to collectively confront and overcome the issues they face. Interventions with families need to help in creating an enabling environment for role model girls to pursue education single mindedly and foster gender equity. This would further get reflected in decisions made within families along with girls to delay marriage and child bearing and financial planning that considers educating daughters as a priority for spending.

Interventions with boys can transform their attitudes towards girls in general and more specifically within their families and classes, emphasizing the right of adolescent girls to a life free of violence and abuse. It will achieve positive changes in boys' attitudes and behaviours and promote adolescent girls' participation and retention in schools. At the same time, community level interventions should spread the larger understanding on the importance of educating girls, tackling negative gender norms, consequences of early marriage, teenage pregnancy, child bearing, etc., with the objective of building popular support for education of girls in the society.

The project should continue to create platforms that encourage girls to collectively demand changes in attitudes, services, and justice systems. Organizing adolescents as a strong force will help them negotiate with local governing bodies and exercise their rights. 'Champions of change' or role model girls can be identified and assisted to form support groups in their respective villages. These groups can be strengthened to engage with families and others in the community and negotiate necessary changes in attitudes, behaviours, actions, and services at the community and district level.

### 6.3 Limitation of the study

1. The finer details of communication between parent and daughter were not included in PDRI as the data was available only for communication on menstruation.
2. The level of empowerment could not be measured as the components considered for it had skewed distribution.
3. The parental perception on schooling, marriage and other aspects might not have been captured accurately as the data was collected only from adolescent girls.



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# APPENDIX A

## Calculation of Wealth Index

Household economic status was measured using a wealth index composed of household asset data on ownership of selected durable goods as well as data on access to a number of amenities. The wealth index was constructed by allocating the following scores to a household's reported assets or amenities.

Sl.No	Assets and amenities	Scores
1	Own house	0 – No 1 –Yes
2	<b>Type of house:</b> a) Kuccha ; b) Semi pucca ; c) Pucca	0 – No 1 -Yes
3	<b>Person per room:</b> a) Two per room; b) Four per room; c) Five per room	0 – No 1 -Yes
4	<b>Having toilet facility</b> a) No toilet facility; b) Own toilet; c) Shared toilet; d) Public toilet; e) Others	0 – No 1 -Yes
5	<b>Having agricultural land</b>	0 – No 1 -Yes
6	<b>Land size:</b> a) No land; b) Marginal; c) Small; d) Medium	0 – No 1 -Yes
7	<b>Source of lighting:</b> a) Electricity; b) Kerosene	0-Kerosene 1-Electricity
8	<b>Fuel:</b> a) Wood/Crop residue/Dung cakes/Coal/Charcoal; b) LPG; c) Other	0 – No 1 -Yes
9	<b>Main source of drinking water:</b> a) Well covered; b) Open well; c) Surface water	0 – No 1 -Yes
10	<b>Household assets:</b> a) Electricity; b) Electric fan; c) Bicycle; d) Motorcycle/Scooter; e) Cot/Bed; f) Radio/Transistor; g) B&W Television; h) Colour Television; i) Landline/Mobile; j) Sewing machine; k) Computer/Laptop; l) Refrigerator; m) Watch/Clock; n) Animal drawn cart; o) Car/Truck; p) Water pump; q) Thresher; r) Tractor	0 - No 1 -Yes
11	<b>Owning animals:</b> a) Cows/Bulls/Buffalo; b) Camel; c) Horses/Donkeys/Mules; d) Goats; Sheeps; e) Chickens/Duck	0 - No 1 -Yes
12	<b>Having a Bank account</b>	0 - No 1 -Yes

The index score was constructed using principal component analysis. The score ranged from -5.1 to 8.9 which were divided into five equal parts.

# APPENDIX B

## Calculation of Parent-Daughter Relationship Index

The parent daughter relationship was measured by constructing a summary index of Parent daughter relationship .The parents' perception on adolescent girls' schooling and marriage was excluded from PDRI as the distribution was skewed. The PDRI was constructed by allocating the following scores to Interaction, Communication and Support.

Sl.No	Components	Scores
1	<b>Interaction:</b> a) Schooling; b) Friendship; c) Growing up issues; d) Teasing/bullying; e) Talk/fun/play	0- No interaction; Only father; Only mother 2- Both the parents'
2	<b>Communication:</b> a) Schooling b) Quality at school; c) Friendship; d) Personal problem; e) Bothered by boy; f) Interact in the community; g) Day to day happenings; h) Menstrual problem; i) Work prospects; j) Marriage	0- No interaction; Only father; Only mother 2- Both the parents'
3	<b>Support:</b> a) Education; b) Given more money; c) Involved in HH decisions; d) Asked to do HH chores; e) Asked to do outside chores	<b>Education; Given more money; HH related decisions</b> 0 - Brother; Never; N/A 2 - Adolescent girl; Adolescent girl and brother  <b>Chores outside and inside house</b> 0 - Brother; Never; Adolescent girl 2- Adolescent girl and brother

PDRI was calculated by using Cronbach's alpha which a measure to test the internal consistency is. The reliability coefficient was 0.6538 and the covariance found to be 0.0745992. The alpha score were divided into three categories by percentiles. Scores up to 50th percentile were categorized as Weak, 50 to 75th percentile as Medium and more than 75th percentile as Strong.

# APPENDIX C

## Calculation of Decision Making Index

The adolescent girls' participation in decision making was measured by constructing a summary index of Decision making. The DMI was constructed by allocating the following scores to components of decision making.

Sl.No	Components	Scores
1	Schooling	0 - Only father; Only mother; Both parents'; someone else 1 - Adolescent girl; Adolescent girl jointly with parents'
2	Marriage	0 - Only father; Only mother; Both parents'; someone else 1 - Adolescent girl; Adolescent girl jointly with parents'
3	Mobility (Within & outside village)	0 - Only father; Only mother; Both parents'; someone else 1 - Adolescent girl; Adolescent girl jointly with parents'
4	Work	0 - Only father; Only mother; Both parents'; someone else 1 - Adolescent girl; Adolescent girl jointly with parents'
5	Interaction in the community	0 - Only father; Only mother; Both parents'; someone else 1 - Adolescent girl; Adolescent girl jointly with parents'
6	Purchasing clothes	Adolescent girl 0- No; N/A 1-Yes
7	Vacation	Adolescent girl 0- No; N/A 1-Yes

DMI was calculated by using Cronbach's alpha statistics. The reliability coefficient was 0.6933 and the covariance was found to be 0.0213333. The alpha scores were divided into three categories by percentiles. Scores up to 50th percentile were categorized as "Low", 50 to 75th percentile as "Medium" and more than 75th percentile as "High".

# APPENDIX D

## Level of empowerment

The level of empowerment of adolescent girls was considered to be measured in terms of “Power within”, “Power with” and “Power over”. The indicators considered for measuring these were the following:

<b>POWER WITHIN</b> (Individuals believe in his/ her abilities and value their own worth)	<b>POWER WITH</b> (Support from others which has a positive impact on bringing out the person's individuality)	<b>POWER OVER</b> (Having access to or owning certain entitlements)
Self esteem	Count on friends	Access to IFA tablets and albandazole
Self-efficacy	Support during conflict	Access to Sneha clinic
Individual agency	Support from family members	Participating in Kishori group

Factor analysis was performed to check for the factors contributing highest to the level of empowerment followed by Cronbach's alpha statistics which was used to check the internal consistency. The only variables found to have highest factor loadings were “self-esteem” and “self-efficacy” and therefore these were considered as separate variables.

## Calculation of Self-esteem and Self efficacy

The baseline survey had possessed some of the statements which were ought to measure adolescent girls' self-esteem and self-efficacy. The statements regarding self-esteem were the following-

- a) I feel I am as important as other sibling of my family.
- b) If I work hard I feel capable of achieving my goals.
- c) I can express my ideas well in school.
- d) I feel as intelligent as most other people in my age.
- e) I do not have hopes for my future.
- f) I am optimistic that I will have a better life than my parents'.

Factor analysis was performed to check the statements with highest factor loading and were also checked for reliability using Cronbach's alpha statistics. The statement c and d were found to have highest factor loading which were included to measure girls' self-esteem. The reliability coefficient was 0.6748 and the covariance was found to be 0.0922843. The alpha score were divided into two percentile. Score up to 50th percentile was categorized as low and more than 50th percentile as high.

Similar procedure was followed to measure self-efficacy of girls. The statements regarding self-efficacy were the following-

- a) I feel able to talk to my parents' about my hopes and aspirations.
- b) I can stand up for my right to be treated with the same respect as my brother.
- c) I can express my views on marriage even if they differ from those of my parents'.
- d) I can ask my parents' to support my completion of secondary education.
- e) I feel willing and able to speak out in support of girls' education.
- f) I feel willing and able to speak out against child marriage.
- g) I feel willing and able to speak out against eve teasing.
- h) I feel able to seek help from others to achieve my goals.

The statements e, f and g were found to have highest factor loadings, hence these three statements were considered to measure self-efficacy. The reliability coefficient was 0.8088 and the covariance was found to be 0.1397098. The alpha score was divided into two percentile. Score up to 50th percentile was categorized as low and more than 50th percentile as high.

**Note:** The level of empowerment of adolescent girls could not be measured using different components of empowerment considered earlier and therefore the self-esteem and self-efficacy were considered as separate variables.

## APPENDIX E

### Examining the relationship of different characteristics (individual, household and school factors) with dropout and absenteeism using SEM

#### a. School Dropout

Step1: The significant predictors of dropout with p-value up to 0.15 in terms of individual, household and school level were selected (Refer the details of predictors in Appendix J).

Step 2: Multivariate analysis was performed with the significant predictors of dropout and the predictors with p-value less than 0.05 were selected for performing structural equation modelling.

#### b. Absenteeism

Stepwise regression was performed for absenteeism with p-value limit up to 0.15 (Refer Appendix K for details of predictors of absenteeism). Absenteeism was considered here as the girls' remaining absent from the class in general. The predictors with the p-value up to 0.05 were selected for SEM.

# APPENDIX F

## Predictors of strong PDRI

### Results of logistic regression for adolescent girl having strong PDR, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Age</b>				
13 ( <i>Ref</i> )	216	48.1		
14	312	47.1	0.96(0.68-1.36)	
15	283	44.5	0.86(0.61-1.23)	
16	226	41.6	0.77(0.53-1.12)	
<b>Caste</b>				
SC/ST ( <i>Ref</i> )	316	37.7		
OBC	594	47.5	1.50(1.13-1.98)**	1.28(0.92-1.77)
General/others	127	55.1	2.03(1.34-3.09)***	1.90(1.16-3.12)**
<b>Religion</b>				
Hindu ( <i>Ref</i> )	951	45.2		
Non Hindu	86	47.7	1.10(0.71-1.72)	
<b>Marital status</b>				
Never married ( <i>Ref</i> )	1,016	45.8		
Ever married	21	28.6	0.47(0.18-1.23)	
<b>Misbehavior by anyone in last 12 months</b>				
No ( <i>Ref</i> )	994	45.3		
Yes	43	48.8	1.15(0.63-2.13)	
<b>AG ASPIRATIONS</b>				
<b>Complete secondary school</b>				
No ( <i>Ref</i> )	89	12.4		
Yes	948	48.5	6.68(3.51-12.73)***	8.83(3.17-24.57)***
<b>Marriage before 18 years</b>				
No ( <i>Ref</i> )	1,007	46		
Yes	30	26.7	0.43(0.19-0.97)**	0.55(0.21-1.46)

### Employment

No ( <i>Ref</i> )	144	20.1		
Yes	893	49.5	3.89(2.53-5.96)***	2.20(1.16-4.16)**

### Self esteem

No ( <i>Ref</i> )	341	35.5		
Yes	696	50.3	1.84(1.41-2.40)***	1.06(0.74-1.51)

### Self-efficacy

No ( <i>Ref</i> )	574	39.7		
Yes	463	52.5	1.68(1.31-2.15)***	1.29(0.95-1.76)

### Participating in various groups

No ( <i>Ref</i> )	588	38.9		
Yes	449	53.9	1.83(1.43-2.35)***	

### Decision Making

Low ( <i>Ref</i> )	559	44.9		
Medium	297	46.8	1.08(0.81-1.43)	
High	181	44.8	0.99(0.71-1.39)	

### Wealth Quintile

Poor/Poorest ( <i>Ref</i> )	415	38.1		
Middle	208	46.2	1.39(1.00-1.95)**	1.12(0.75-1.66)
Rich/Richest	414	52.4	1.79(1.36-2.36)***	1.19(0.84-1.67)

### Parents' survival

Single parent/No parent ( <i>Ref</i> )	114	89.5		
Both alive	923	40	0.08(0.04-0.14)***	0.02(0.01-0.04)***

### Parents' literacy

Both/single parent illiteracy ( <i>Ref</i> )	796	43.2		
Both literate	241	52.7	1.46(1.10-1.95)**	1.64(1.16-2.33)**

### Family Type

Nuclear ( <i>Ref</i> )	555	46.7		
Non-nuclear	481	44.1	0.90(0.70-1.15)	

### Parent working

Not working ( <i>Ref</i> )	373	57.9		
Both working	664	38.4	0.45(0.35-0.59)***	1.03(0.74-1.44)

## Siblings

No siblings ( <i>Ref</i> )	32	31.3		
Only brothers	253	55.7	2.77(1.26-6.09)**	7.91(2.56-24.45)***
Only sisters	163	27.6	0.84(0.37-1.91)	1.59(0.50-5.05)
More than one brother and sister	589	46.7	1.93(0.90-4.14)*	7.53(2.48-22.89)***

## Male sibling aged less than 6 years

No ( <i>Ref</i> )	1,001	45		
Yes	36	58.3	1.68(0.86-3.30)	

## More Female sibling dropped before 7th standard

No ( <i>Ref</i> )	901	45.7		
Yes	136	43.4	0.91(0.63-1.31)	

## Female sibling continuing education beyond secondary school

No ( <i>Ref</i> )	844	45.7		
Yes	193	44	0.93(0.68-1.28)	

## PARENTS' ASPIRATIONS

### Complete Secondary school

No ( <i>Ref</i> )	101	17.8		
Yes	936	48.4	4.32(2.56-7.31)***	2.42(1.07-5.47)**

### Marriage before 18 years

No ( <i>Ref</i> )	978	46.6		
Yes	59	25.4	0.39(0.21-0.71)**	0.52(0.24-1.13)*

### Employment

No ( <i>Ref</i> )	153	28.1		
Yes	884	48.4	2.40(1.65-3.50)***	0.78(0.42-1.43)

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

# APPENDIX G

## Predictors of girls highly participating in decision making

### Results of logistic regression for girls' participating highly in decision making, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Age</b>				
13 ( <i>Ref</i> )	216	41.2		
14	312	43.3	1.09(0.77-1.55)	1.17(0.82-1.67)
15	283	53.7	1.66(1.16-2.37)**	1.82(1.26-2.62)**
16	226	45.1	1.17(0.81-1.71)	1.44(0.98-2.14)*
<b>Caste</b>				
SC/ST ( <i>Ref</i> )	316	41.8		
OBC	594	48.1	1.29(0.98-1.70)*	1.32(0.98-1.76)*
General/others	127	47.2	1.25(0.83-1.89)	1.04(0.67-1.60)
<b>Religion</b>				
Hindu ( <i>Ref</i> )	951	47		
Non Hindu	86	36	0.64(0.40-1.00)**	0.56(0.35-0.90)**
<b>Marital status</b>				
Never married ( <i>Ref</i> )	1,016	46.3		
Ever married	21	38.1	0.71(0.29-1.74)	
<b>Misbehavior by anyone in last 12 months</b>				
No ( <i>Ref</i> )	994	45.9		
Yes	43	51.2	1.24(0.67-2.28)	
<b>AG ASPIRATIONS</b>				
<b>Complete secondary school</b>				
No ( <i>Ref</i> )	89	25.8		
Yes	948	48	2.65(1.62-4.33)***	2.38(1.33-4.25)**
<b>Marriage before 18 years</b>				
No ( <i>Ref</i> )	1,007	46.6		
Yes	30	30	0.49(0.22-1.08)*	0.54(0.24-1.23)

### Employment

No ( <i>Ref</i> )	144	34		
Yes	893	48	1.79(1.24-2.59)**	1.21(0.73-2.03)

### Self esteem

No ( <i>Ref</i> )	341	45.7		
Yes	696	46.3	1.02(0.79-1.32)	

### Self-efficacy

No ( <i>Ref</i> )	574	44.8		
Yes	463	47.7	1.13(0.88-1.44)	

### Participating in different groups

No ( <i>Ref</i> )	588	44.9		
Yes	449	47.7	1.10(0.85-1.41)	

### Wealth Quintile

Poor/Poorest ( <i>Ref</i> )	415	43.9		
Middle	208	48.1	1.19(0.85-1.66)	
Rich/Richest	414	47.3	1.15(0.88-1.51)	

### Parents' survival

Single parent/No parent ( <i>Ref</i> )	114	46.5		
Both alive	923	46	0.98(0.66-1.45)	

### Parents' literacy

Both/single parent illiteracy ( <i>Ref</i> )	796	44.3		
Both literate	241	51.9	1.35(1.01-1.81)**	1.24(0.91-1.69)

### Family Type

Nuclear ( <i>Ref</i> )	555	48.6		
Non-nuclear	481	43.2	0.80(0.63-1.03)*	0.76(0.59-0.98)**

### Parent working

Not working ( <i>Ref</i> )	373	47.2		
Both working	664	45.5	0.93(0.72-1.20)	

### Siblings

No siblings ( <i>Ref</i> )	32	50		
Only brothers	253	47.4	0.90(0.43-1.88)	
Only sisters	163	50.3	1.01(0.47-2.16)	
More than one brother and sister	589	44.1	0.79(0.39-1.61)	

<b>Male sibling aged less than 6 years</b>	1,001	46.5		
No ( <i>Ref</i> )	36	36.1	0.65(0.33-1.31)	
Yes				
<b>More Female sibling dropped before 7th standard</b>				
No ( <i>Ref</i> )	901	45.3		
Yes	136	51.5	1.28(0.89-1.84)	
<b>Female sibling continuing education beyond secondary school</b>				
No ( <i>Ref</i> )	844	44.7		
Yes	193	52.3	1.36(0.99-1.86)**	1.26(0.91-1.74)
<b>Parent daughter relationship</b>				
Weak ( <i>Ref</i> )	566	45.6		
Medium	232	43.1	0.90(0.66-1.23)	
Strong	239	50.2	1.20(0.89-1.63)	
<b>PARENTS' ASPIRATIONS</b>				
<b>Complete Secondary school</b>				
No ( <i>Ref</i> )	101	36.6		
Yes	936	47.1	1.54(1.01-2.36)**	0.69(0.39-1.23)
<b>Marriage before 18 years</b>				
No ( <i>Ref</i> )	978	45.6		
Yes	59	54.2	1.41(0.83-2.40)	
<b>Employment</b>				
No ( <i>Ref</i> )	153	34.6		
Yes	884	48.1	1.75(1.22-2.50)**	1.42(0.85-2.37)

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

# APPENDIX H

## Predictors of girls with high self esteem

### Results of logistic regression for girls with high self-esteem, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Age</b>				
13 ( <i>Ref</i> )	216	66.7		
14	312	69.6	1.14(0.79-1.66)	1.50(0.97-2.31)*
15	283	71.4	1.25(0.85-1.83)	1.91(1.20-3.04)**
16	226	58.8	0.72(0.49-1.05)*	1.12(0.69-1.80)
<b>Caste</b>				
SC/ST ( <i>Ref</i> )	316	56.6		
OBC	594	70.9	1.86(1.40-2.48)***	1.36(0.95-1.93)*
General/others	127	75.6	2.37(1.49-3.76)***	1.44(0.83-2.50)
<b>Religion</b>				
Hindu ( <i>Ref</i> )	951	66		
Non Hindu	86	79.1	1.94(1.14-3.32)**	2.00(1.06-3.81)**
<b>Marital status</b>				
Never married ( <i>Ref</i> )	1,016	67.5		
Ever married	21	47.6	0.44(0.18-1.04)*	0.94(0.28-3.14)
<b>Misbehavior by anyone in last 12 months</b>				
No ( <i>Ref</i> )	994	66.9		
Yes	43	72.1	1.28(0.65-2.52)	
<b>AG ASPIRATIONS</b>				
<b>Complete secondary school</b>				
No ( <i>Ref</i> )	89	15.7		
Yes	948	71.9	13.74(7.63-24.73)***	4.29(2.09-8.82)***
<b>Marriage before 18 years</b>				
No ( <i>Ref</i> )	1,007	67.6		
Yes	30	50	0.48(0.23-0.99)**	0.96(0.36-2.53)

## Employment

No ( <i>Ref</i> )	144	20.8		
Yes	893	74.6	11.15(7.26-17.13)***	4.45(2.46-8.06)***

## Self-efficacy

No ( <i>Ref</i> )	574	51.6		
Yes	463	86.4	5.96(4.36-8.15)***	4.42(3.13-6.24)***

## Participating in different groups

No ( <i>Ref</i> )	588	58.8		
Yes	449	78	2.47(1.87-3.26)***	1.50(1.07-2.09)**

## Decision making

Low ( <i>Ref</i> )	559	66.9		
Medium	297	65.7	0.95(0.70-1.27)	
High	181	70.2	1.16(0.81-1.67)	

## Wealth Quintile

Poor/Poorest ( <i>Ref</i> )	415	57.6		
Middle	208	66.3	1.45(1.03-2.05)**	1.09(0.72-1.64)
Rich/Richest	414	77.1	2.47(1.83-3.34)***	1.32(0.91-1.92)

## Parents' survival

Single parent/No parent ( <i>Ref</i> )	114	64		
Both alive	923	67.5	1.17(0.78-1.75)	

## Parents' literacy

Both/single parent illiteracy ( <i>Ref</i> )	796	63.3		
Both literate	241	79.7	2.27(1.61-3.21)***	1.32(0.87-2.00)

## Family Type

Nuclear ( <i>Ref</i> )	555	67		
Non-nuclear	481	67.2	1.01(0.78-1.30)	

## Parent working

Not working ( <i>Ref</i> )	373	72.1		
Both working	664	64.3	0.70(0.53-0.92)**	0.88(0.62-1.24)

## Siblings

No siblings ( <i>Ref</i> )	32	71.9		
Only brothers	253	72.3	1.02(0.45-2.32)	
Only sisters	163	73	1.06(0.45-2.46)	
More than one brother and sister	589	63	0.67(0.30-1.47)	

**Male sibling aged less than 6 years**

No ( <i>Ref</i> )	1,001	66.9		
Yes	36	72.2	1.28(0.61-2.70)	

**More Female sibling dropped before 7th standard**

No ( <i>Ref</i> )	901	66.1		
Yes	136	73.5	1.42(0.95-2.13)*	1.21(0.52-2.79)

**Female sibling continuing education beyond secondary school**

No ( <i>Ref</i> )	844	65.3		
Yes	193	75.1	1.61(1.13-2.29)**	1.14(0.55-2.39)

**Parent daughter relationship**

Weak ( <i>Ref</i> )	566	61.1		
Medium	232	71.6	1.60(1.15-2.23)**	0.91(0.61-1.35)
Strong	239	77	2.13(1.51-3.00)***	1.09(0.72-1.66)

**PARENTS' ASPIRATIONS****Complete Secondary school**

No ( <i>Ref</i> )	101	28.7		
Yes	936	71.3	6.16(3.91-9.69)***	0.89(0.45-1.75)

**Marriage before 18 years**

No ( <i>Ref</i> )	978	68.8		
Yes	59	39	0.29(0.17-0.50)***	0.58(0.29-1.18)

**Employment**

No ( <i>Ref</i> )	153	32.7		
Yes	884	73.1	5.59(3.87-8.09)***	1.12(0.62-2.03)

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

# APPENDIX I

## Predictors of girls with high self-efficacy

### Results of Logistic regression for girls having high self-efficacy, Koppal taluka, 2016

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Age</b>				
13 ( <i>Ref</i> )	216	44.4		
14	312	40.7	0.86(0.60-1.22)	
15	283	49.1	1.21(0.85-1.72)	
16	226	44.7	1.01(0.69-1.47)	
<b>Caste</b>				
SC/ST ( <i>Ref</i> )	316	38.9		
OBC	594	46.8	1.38(1.05-1.82)**	0.97(0.71-1.33)
General/others	127	48.8	1.50(0.99-2.27)**	0.88(0.55-1.41)
<b>Religion</b>				
Hindu ( <i>Ref</i> )	951	44.6		
Non Hindu	86	45.3	1.03(0.66-1.61)	
<b>Marital status</b>				
Never married ( <i>Ref</i> )	1,016	44.9		
Ever married	21	33.3	0.61(0.25-1.53)	
<b>Misbehavior by anyone in last 12 months</b>				
No ( <i>Ref</i> )	994	44.2		
Yes	43	55.8	1.60(0.86-2.95)	
<b>AG ASPIRATIONS</b>				
<b>Complete secondary school</b>				
No ( <i>Ref</i> )	89	15.7		
Yes	948	47.4	4.82(2.69-8.65)***	1.22(0.59-2.52)
<b>Marriage before 18 years</b>				
No ( <i>Ref</i> )	1,007	45.5		
Yes	30	16.7	0.24(0.09-0.63)**	0.37(0.13-1.10)*

### Employment

No ( <i>Ref</i> )	144	17.4		
Yes	893	49	4.58(2.92-7.19)***	0.96(0.52-1.80)

### Self esteem

No ( <i>Ref</i> )	341	18.5		
Yes	696	57.5	5.96(4.36-8.15)***	4.33(3.08-6.09)***

### Participating in different groups

No ( <i>Ref</i> )	588	38.3		
Yes	449	53	1.82(1.42-2.33)***	1.21(0.91-1.60)

### Decision making

Low ( <i>Ref</i> )	559	43.3		
Medium	297	43.8	1.02(0.77-1.35)	
High	181	50.3	1.32(0.95-1.85)	

### Wealth Quintile

Poor/Poorest ( <i>Ref</i> )	415	37.1		
Middle	208	40.9	1.17(0.83-1.65)	0.96(0.66-1.39)
Rich/Richest	414	54.1	2.00(1.51-2.64)***	1.34(0.97-1.86)*

### Parents' survival

Single parent/No parent ( <i>Ref</i> )	114	40.4		
Both alive	923	45.2	1.22(0.82-1.81)	

### Parents' literacy

Both/single parent illiteracy ( <i>Ref</i> )	796	41.7		
Both literate	241	54.4	1.66(1.25-2.22)**	1.08(0.77-1.51)

### Family Type

Nuclear ( <i>Ref</i> )	555	43.2		
Non-nuclear	481	46.4	1.13(0.89-1.45)	

### Parent working

Not working ( <i>Ref</i> )	373	50.1		
Both working	664	41.6	0.71(0.55-0.91)**	0.86(0.64-1.15)

### Sibling composition

No siblings ( <i>Ref</i> )	32	40.6		
Only brothers	253	53	1.65(0.78-3.48)	
Only sisters	163	46.6	1.28(0.59-2.76)	
More than one brother and sister	589	40.7	1.01(0.49-2.07)	

<b>Male sibling aged less than 6 years</b>	1,001	44.6		
No ( <i>Ref</i> )	36	47.2	0.65(0.33-1.31)	
Yes				
<b>More Female sibling dropped before 7th standard</b>				
No ( <i>Ref</i> )	901	45.2		
Yes	136	41.2	1.28(0.89-1.84)	
<b>Female sibling continuing education beyond secondary school</b>				
No ( <i>Ref</i> )	844	44.4		
Yes	193	45.6	1.36(0.99-1.86)**	1.26(0.91-1.74)
<b>Parent daughter relationship</b>				
Weak ( <i>Ref</i> )	566	38.9		
Medium	232	50	0.90(0.66-1.23)	
Strong	239	53.1	1.20(0.89-1.63)	
<b>PARENTS' ASPIRATIONS</b>				
<b>Complete Secondary school</b>				
No ( <i>Ref</i> )	101	13.9		
Yes	936	48	1.54(1.01-2.36)**	0.69(0.39-1.23)
<b>Marriage before 18 years</b>				
No ( <i>Ref</i> )	978			
Yes	59		1.41(0.83-2.40)	
<b>Employment</b>				
No ( <i>Ref</i> )	153			
Yes	884		1.75(1.22-2.50)**	1.42(0.85-2.37)

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

# APPENDIX J

## Predictors of school dropout

Results of Logistic regression showing the predictors of school dropout in terms of their individual characteristics

Background characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Age</b>				
13 ( <i>Ref</i> )	214	7.5		
14	312	12.8	1.27(0.53-3.02)	1.16(0.43-3.12)
15	282	25.9	3.92(1.72-8.97)***	6.13(2.33-16.09)***
16	223	47.5	11.39(4.99-26.03)***	23.10(8.68-61.49)***
<b>Caste</b>				
SC/ST ( <i>Ref</i> )	313	32.9		
OBC	591	19.8	0.71(0.43-1.16)	0.83(0.47-1.47)
General/others	127	11.8	0.44(0.20-0.97)**	0.47(0.18-1.24)~*
<b>Religion</b>				
Hindu ( <i>Ref</i> )	946	22.9		
Non Hindu	85	21.2	1.45(0.68-3.08)	
<b>Marital status</b>				
Never married ( <i>Ref</i> )	1,010	21.8		
Ever married	21	71.4	14.04(3.35-58.87)***	8.30(1.71-40.38)**
<b>Misbehavior by anyone in last 12 months</b>				
No ( <i>Ref</i> )	988	22.9		
Yes	43	20.9	1.19(0.46-3.07)	
<b>AG reached puberty stage(started menstruating)</b>				
No ( <i>Ref</i> )	166	7.2		
Yes	865	25.8	2.60(1.03-6.52)**	2.12(0.79-5.72)~*
<b>Self esteem</b>				
No ( <i>Ref</i> )	335	44.8		
Yes	696	12.2	0.43(0.26-0.70)***	0.51(0.29-0.89)*

### Self-efficacy

No ( <i>Ref</i> )	569	29.7		
Yes	462	14.3	0.92(0.57-1.48)	

### AG ASPIRATIONS

#### Complete secondary school

No ( <i>Ref</i> )	83	94		
Yes	948	16.6	0.04(0.01-0.12)***	0.08(0.02-0.27)***

#### Marriage before 18 years

No ( <i>Ref</i> )	1,001	22.3		
Yes	30	40	0.40(0.10-1.65)	

#### Employment

No ( <i>Ref</i> )	141	80.9		
Yes	890	13.6	0.06(0.03-0.12)***	0.15(0.06-0.35)***

#### Participating in groups

No ( <i>Ref</i> )	226	56.6		
Yes	805	13.3	0.18(0.11-0.29)***	0.18(0.10-0.31)***

#### Wealth Quintile

Poor/Poorest ( <i>Ref</i> )	409	31.8		
Middle	208	24	0.95(0.59-1.54)	1.06(0.55-2.04)
Rich/Richest	552	13.3	0.59(0.38-0.93)**	0.59(0.31-1.10)*

#### Family Type

Nuclear ( <i>Ref</i> )	478	23.2		
Non-nuclear	414	22.4	0.80(0.55-1.17)	

#### Parents' survival

Single parent/No parent ( <i>Ref</i> )	112	33		
Both alive	919	21.5	0.24(0.11-0.49)***	0.28(0.12-0.65)**

#### Parents' literacy

Both/single parent illiteracy ( <i>Ref</i> )	790	27.1		
Both literate	241	8.7	0.58(0.33-1.03)*	0.69(0.32-1.51)

#### Parent working

Not working ( <i>Ref</i> )	371	22.6		
Both working	660	22.9	0.80(0.51-1.27)	

## Siblings

No siblings ( <i>Ref</i> )	32	31.3		
Only brothers	253	17.8	0.80(0.29-2.22)	0.39(0.11-1.47)
Only sisters	162	18.5	0.46(0.16-1.30)~*	0.23(0.06-0.92)**
More than one brother and sister	584	25.7	0.84(0.31-2.25)	0.33(0.09-1.18)*

## Male sibling aged less than 6 years

No ( <i>Ref</i> )	995	22.1		
Yes	36	41.7	3.03(1.22-7.53)**	5.02(1.37-18.37)**

## More Female sibling dropped before 7th standard

No ( <i>Ref</i> )	895	23.8		
Yes	136	16.2	0.77(0.23-2.55)	

## Male sibling continuing education beyond secondary school

No ( <i>Ref</i> )	771	25.7		
Yes	260	14.2	0.51(0.29-0.87)**	0.67(0.35-1.26)

## Female sibling continuing education beyond secondary school

No ( <i>Ref</i> )	838	24.6		
Yes	193	15	1.24(0.42-3.64)	

## High participation in decision making

No ( <i>Ref</i> )	556	28.4		
Yes	475	16.2	0.48(0.33-0.71)***	0.40(0.24-0.68)***

## AG with strong PDR

No ( <i>Ref</i> )	562	31.9		
Yes	469	11.9	0.20(0.12-0.33)***	0.36(0.20-0.68)***

## PARENTS' ASPIRATIONS

### Complete Secondary school

No ( <i>Ref</i> )	97	89.7		
Yes	934	15.8	0.07(0.03-0.15)***	0.08(0.03-0.24)***

### Marriage before 18 years

No ( <i>Ref</i> )	972	21.5		
Yes	59	44.1	1.06(0.49-2.29)	

## Employment

No ( <i>Ref</i> )	150	70		
Yes	881	14.8	0.23(0.14-0.40)***	0.51(0.21-1.24)

Note: \*\*\*P<0.001, \*\*P<0.05, \*P<0.10, ~\*P<0.15, Ref- Reference category

## Contd. Results of Logistic regression showing the predictors of school dropout

School characteristics	Number of respondents	%	OR (95%CI)	
			Unadjusted	Adjusted
<b>Comfortable classroom</b>				
No ( <i>Ref</i> )	21	57.1		
Yes	1,010	22.1	0.15(0.05-0.45)***	0.20(0.04-1.09)*
<b>Provided with textbooks</b>				
No ( <i>Ref</i> )	48	8.3		
Yes	983	23.5	6.72(2.15-21.00)***	4.03(0.90-18.09)*
<b>Toilet facility gives adequate privacy</b>				
No ( <i>Ref</i> )	96	32.3		
Yes	876	20.7	0.51(0.31-0.85)**	0.57(0.25-1.29)
No toilet facility at school	59	39	1.07(0.52-2.21)	1.14(0.32-4.03)
<b>Provided health services at school</b>				
No ( <i>Ref</i> )	68	38.2		
Yes	963	21.7	0.37(0.21-0.65)***	1.55(0.51-4.67)
<b>Teacher favors student</b>				
No ( <i>Ref</i> )	982	22.4		
Yes	49	30.6	1.37(0.70-2.69)	
<b>Hit with cane</b>				
No ( <i>Ref</i> )	913	21.5		
Yes	118	33.1	1.92(1.23-2.99)**	1.09(0.52-2.29)
<b>Misbehavior at school by anyone</b>				
No ( <i>Ref</i> )	988	22.2		
Yes	43	37.2	1.82(0.92-3.58)*	1.31(0.41-4.17)
<b>GENDER BASED COMMENT BY TEACHER</b>				
<b>Girls' should be helping their mothers at home</b>				
No ( <i>Ref</i> )	481	26.8		
Yes	550	19.3	0.84(0.57-1.23)	
<b>Boys should concentrate on studies</b>				
No ( <i>Ref</i> )	439	26.4		
Yes	592	20.1	0.67(0.46-0.97)*	0.76(0.44-1.33)

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, ~\*p<0.15, Ref- Reference category

# APPENDIX K

## Predictors of absenteeism

### Results of step-wise regression showing the predictors of absenteeism

Individual characteristics	Number of respondents	%	Coefficient (95% CI)
<b>Age</b>			
13 ( <i>Ref</i> )	198	11.1	
14	272	8.8	0.82(0.44-1.53)
15	209	9.1	0.96(0.49-1.88)
16	117	3.4	0.30(0.10-0.91)
<b>Caste</b>			
SC/ST ( <i>Ref</i> )	210	9.5	
OBC	474	8.4	
General/others	112	8	
<b>Religion</b>			
Hindu ( <i>Ref</i> )	729	8.8	
Non Hindu	67	7.5	
<b>Marital status</b>			
Never married ( <i>Ref</i> )	790	8.7	
Ever married	6	0	
<b>Misbehavior by anyone in last 12 months</b>			
No ( <i>Ref</i> )	762	8.7	
Yes	34	8.8	
<b>AG reached puberty stage(started menstruating)</b>			
No ( <i>Ref</i> )	154	9.1	
Yes	642	8.6	
<b>Self esteem</b>			
No ( <i>Ref</i> )	185	12.4	
Yes	611	7.5	0.60(0.35-1.05)

### Self-efficacy

No ( <i>Ref</i> )	400	8.8	
Yes	396	8.6	

### AG ASPIRATIONS

#### Complete secondary school

No ( <i>Ref</i> )	5	20	
Yes	791	8.6	

#### Marriage before 18 years

No ( <i>Ref</i> )	778	8.7	
Yes	18	5.6	

#### Employment

No ( <i>Ref</i> )	27	18.5	
Yes	769	8.3	

#### Participating in groups

No ( <i>Ref</i> )	98	6.1	
Yes	698	9	

#### Wealth Quintile

Poor/Poorest ( <i>Ref</i> )	279	10.4	
Middle	158	8.9	
Rich/Richest	359	7.2	

#### Family Type

Nuclear ( <i>Ref</i> )	424	9.9	
Non-nuclear	371	7.3	

#### Parents' survival

Single parent/No parent ( <i>Ref</i> )	75	6.7	
Both alive	721	8.9	

#### Parents' literacy

Both/single parent illiteracy ( <i>Ref</i> )	576	9.4	
Both literate	220	6.8	

#### Parent working

Not working ( <i>Ref</i> )	287	10.1	
Both working	509	7.9	0.36(-0.02-0.73)*

## Siblings

No siblings ( <i>Ref</i> )	22	9.1	
Only brothers	208	6.3	
Only sisters	132	7.6	
More than one brother and sister	434	10.1	

## Male sibling aged less than 6 years

No ( <i>Ref</i> )	775	8.6	
Yes	21	9.5	

## More Female sibling dropped before 7th standard

No ( <i>Ref</i> )	682	8.2	
Yes	114	11.4	2.67(0.50-14.19)

## Male sibling continuing education beyond secondary school

No ( <i>Ref</i> )	573	9.2	
Yes	223	7.2	0.93(0.49-1.79)

## Female sibling continuing education beyond secondary school

No ( <i>Ref</i> )	632	8.5	
Yes	164	9.1	0.54(0.12-2.47)

## High participation in decision making

No ( <i>Ref</i> )	398	9.5	
Yes	398	7.8	0.80(0.48-1.35)

## AG with strong PDR

No ( <i>Ref</i> )	383	10.2	
Yes	413	7.3	

## PARENTS' ASPIRATIONS

### Complete Secondary school

No ( <i>Ref</i> )	10	10	
Yes	786	8.7	

### Marriage before 18 years

No ( <i>Ref</i> )	763	8.5	
Yes	33	12.1	

## Employment

No ( <i>Ref</i> )	45	15.6	
Yes	751	8.3	

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category

## Contd. Results of step-wise regression showing the predictors of absenteeism

School characteristics	Number of respondents	%	Coefficient (95% CI)
<b>Comfortable classroom</b>			
No ( <i>Ref</i> )	9	0	
Yes	787	8.8	
<b>Provided with textbooks</b>			
No ( <i>Ref</i> )	44	6.8	
Yes	752	8.8	
<b>Toilet facility gives adequate privacy</b>			
No ( <i>Ref</i> )	65	6.2	
Yes	695	8.6	
No toilet facility at school	36	13.9	
<b>Provided health services at school</b>			
No ( <i>Ref</i> )	42	14.3	
Yes	754	8.4	-1.28(-2.82-0.26)
<b>Teacher favors student</b>			
No ( <i>Ref</i> )	762	8.9	
Yes	34	2.9	
<b>Hit with cane</b>			
No ( <i>Ref</i> )	717	8.4	
Yes	79	11.4	
<b>Misbehavior at school by anyone</b>			
No ( <i>Ref</i> )	769	8.3	
Yes	27	18.5	2.18(0.78-6.13)
<b>GENDER BASED COMMENT BY TEACHER</b>			
<b>Girls' should be helping their mothers at home</b>			
No ( <i>Ref</i> )	352	10.5	
Yes	444	7.2	
<b>Boys should concentrate on studies</b>			
No ( <i>Ref</i> )	323	9.6	
Yes	473	8	

Note: \*\*\*p<0.001, \*\*p<0.05, \*p<0.10, Ref- Reference category





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