Chapter-5

# **Results and Discussion: The Empirical Study**

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Results and Discussion is the most important chapter that presents the whole gamut of empirical studies in support of the concept and objectives of the study by providing field data, classified, catalogued and analysed through befitting tools, techniques and methods.

This chapter has got two components. *Component I* is presenting the statistical and analytical contents where as *Component II* is presenting the success stories and case studies.

#### **Component I**

- **A. Descriptive Statistics** have been placed for presenting the quantitative information and statistical character of all the variables; dependent and independent in terms of their vertical and horizontal distribution.
- **B.** Co-efficients of correlation to estimate the degree of independence between set of dependent/predicted variables vize. Nature of drop out (Y), Age at drop out (Y<sub>1</sub>) and level of drop out (Y<sub>2</sub>) and twenty eight independent predictor variables as follows :

Father's Education  $(X_1)$ Father's Age (X<sub>2</sub>) Total land acquired  $(X_3)$ Irrigation Index (X<sub>4</sub>) Nature of holding  $(X_5)$ Cropping intensity  $(X_6)$ Days utilized as family labour by boys in a season  $(X_7)$ Days utilized as family labour by girls in a season  $(X_8)$ Expenditure towards Health care  $(X_9)$ Expenditure towards Education  $(X_{10})$ Per capita family expenditure  $(X_{11})$ Monthly family income  $(X_{12})$ Family size  $(X_{13})$ Social interaction value  $(X_{14})$ Perceived reason of drop-out  $(X_{15})$ Fertility status  $(X_{16})$ Key institutional interaction  $(X_{17})$ Distance Matrix  $(X_{18})$ Recreational facility index  $(X_{19})$ 

Mother's age  $(X_{20})$ Mother's Education  $(X_{21})$ Hours mother engaged in household activity  $(X_{22})$ Girl's age  $(X_{23})$ Hours girl engaged in household activity  $(X_{24})$ Access to text  $(X_{25})$ Family Education Score  $(X_{26})$ Calorie Intake volume  $(X_{27})$ Information use index  $(X_{28})$ Nature of drop-out (Y)Age at drop-out  $(Y_1)$ Level of drop-out  $(Y_2)$ 

- C. Regression Analysis for the estimating the efficacy of causal factors on consequent factors through i) Regression Co-efficient ( $\beta$ ), ii) Step down Regression.
- **D.** Factors Analysis for deriving the principal components vis-à-vis factors, by creating a functional conglomeration of different variables based on factor loading.
- **E.** Path Analysis has been administered for decomposing the co-efficient of correlation into direct, indirect and residual impacts of the antecedent independent variables on the consequent variable.
- F. Discriminant Analysis for isolating the factors having higher discriminant function for making difference between, what we call, the high and low level of performance of consequent characters *i.e.* Nature of drop out (Y), Age at drop out (Y<sub>1</sub>) and level of drop out (Y<sub>2</sub>).
- **G.** Canonical Analysis for selectively elucidating the set of dependent and independent (Left side and Right side) variables.

# **Component II**

It has got two sets of presentation : i) The Success Stories, ii) Some case studies with a taste and stench of real life experience of the girls drop out.

# **Component I**

A. Descriptive statistics : General distribution of the variables in terms of sample respondents (Table5.1).

Table 5.1 presents the detail quantitative distribution of both the predictor and predicted characters of the respondents of the study area. This would present a general quantitative character of the respondents and help derive some subjective evaluation pattern of the respondents and the setting surrounding them.

# Father's education (X<sub>1</sub>)

It has been found that education of father of the drop out girls has got a distribution ranging one year schooling to maximum twelve years of schooling. The mean value has been 4.087, that is, average educational experiences of the fathers of the school drop out is four years of schooling. The C.V has been 62.43per cent so that the distribution pattern of the variable has been more on less consistent.

# Father's age (Y<sub>1</sub>)

Fathers of the drop out are having an age profile, a distribution of the minimum of 30 years to maximum 70 years. The average age of the fathers' stand at 49 years, S. D. is 8.04 and C.V. is 16.12per cent so the distribution pattern of the variable has been fairly consistent.

# Total land owned (X<sub>1</sub>)

It has been found that total land owned by the respondent family is minimum 1 cotta to maximum 148 cotta of land. The average land owned by the respondent family is 29 cotta (i. e. 1.5 bigha approx). S. D. 33.07 and C.V. 113.72 So, the distribution pattern of the variable has been enough consistent.

# Irrigation index (X<sub>4</sub>)

It has been found that irrigation intensity level followed by the farmers is ranging from 96.8 to minimum 38.15. The S. D. is 33.07 and the C.V. is 105.03per cent. So, the distribution pattern of the variable has been more on less consistent.

## Nature of holding (X<sub>5</sub>)

It has been found the land owned by pattern of ownership by the respondent is maximum 4 and average nature of holding stands at 3.7. S. D. 0.40 and C. V. is 10.64 per cent. So, that the distribution pattern of the variable has been highly consistent.

# Cropping intensity (X<sub>6</sub>)

It has been found that the cropping intensity is maximum 292.7, minimum is 158.48, S. D. is 89.87 and C.V. is 56.70per cent So the distribution pattern of the variable has been more on less consistent.

## Days utilised as family labour by boys in a season (X<sub>7</sub>)

It has been found that the days utilised by girls as family labour are maximum 350 days, minimum value is 198.76, S. D. is 78.89 and C. V. is 53.77per cent. Therefore the distribution pattern is more or less consistent.

## Days utilised as family labour by girls in a season $(X_8)$

It has been found that the days utilised by girls in a season are maximum 300 days and minimum value is 146.7 and S. D. is 78.89 and C.V. is 53.77 per cent. This engagement in season go a long way in with drawing the girls from formal educational process, a staggered absence during the peak hours of cropping season have potential threat on distorting the schooling process. So the distribution pattern of the variable has been more on less consistent.

## Expenditure towards health care (X<sub>9</sub>)

It has been found from the table that family expenditure ranges in between maximum Rs. 5000/- to minimum Rs. 300/-. Mean value is 1502.66 and S. D. is 849.63 and C. V. is 56.54 per cent. This is enough to indicate that even the families of marginal resources have to incur a substantive amount after their health care. So the distribution pattern of the variable has been more on less consistent.

## **Expenditure towards education** (X<sub>10</sub>)

It has been found from the table (5.1) that expenditure towards education is Maximum Rs.3600/- and the minimum just 1.0 with an average expenditure is Rs. 741.33/-. S. D. is 525.45 and C. V. is 70.87 per cent. This also indicates that expenditure after education per family per month stands at a miniscule amount. The distribution pattern of the variable has been more on less consistent.

# Per capital family expenditure (X<sub>11</sub>)

It has been observed that the per capita family expenditure, to support and sustain education, health care and nutrition, ranges in between a maximum of Rs. 9385.7 to minimum Rs. 1091.67. S. D. is 1575.48, C. V. is 40.2per cent. So the distribution pattern of the variable has been enough consistent.

#### Monthly family income (X<sub>12</sub>)

It has been found from the table that monthly family income ranges in between maximum of Rs. 5000, minimum of Rs 1000. Average income is 2244.00, S. D. is 839.58 and C.V. is 37.41 per cent respectively. So, the distribution pattern of the variable has been fairly consistent.

#### Family size (X<sub>13</sub>)

The family size is an important determinent to decide both per capita expenditure and per capita income generated in the family. It has been found from the table that may 12 members to minimum 2 members in a farm family. The mean value is 7, S.D. is 1.94 and C. V. is 27.69per cent. So the distribution pattern of the variable has been highly consistent.

#### Social interaction value (X<sub>14</sub>)

It has been found from the table that social interaction value ranges from 6 to 2. The mean value is 4.2, S. D. is 0.92 and C. V. is 21.89 per cent. So, the distribution pattern of the variable has been highly consistent.

#### Perceived reason of drop out (X<sub>16</sub>)

It has been found from the table (5.1) that the value of perceived reasons of drop out ranges between 0.8 to 0.093. S. D. is 0.11, and C.V. is 52.97 per cent. So the distribution pattern of the variable movies to be consistent somehow.

#### Fertility status (X<sub>17</sub>)

It has been found from the table that fertility status of the mother ranges in between 0.3 to 0.030. Mean value is 0.149, S. D. is 0.05 and C. V. is 33.81 per cent. So the distribution pattern of the variable has been more on less consistent.

#### Key institutional interaction (X<sub>18</sub>)

It is discernible from the table (5.1) that the maximum interaction value is 554. Mean value is 222 and S. D. is 111.83, the C. V stands at 50.16 per cent. So the distribution pattern of the variable has been more on less consistent.

#### **Distance matrix** (X<sub>19</sub>)

It has been found from the table (5.1) that the maximum distance from school 16 km, while distance is 11 km, S. D. is 2.07 and C. V. is 18.29 per cent. So the distribution pattern of the variable has been amply consistent.

## Mother's age (X<sub>20</sub>)

It has been found that mother's age is one of the reason which invites the motivational and psychological influence on the drop out child. Here the maximum age of the mother is 58, minimum age of the mother is 25 years, average age of the mother is 40 years. S. D. is 6.91 and C. V. 17.06 per cent. So the distribution pattern of the variable has been highly consistent.

## Mother's education (X<sub>21</sub>)

It is noted that the mother inculcate aspiration for educational achievement in the girl child. Here, the schooling years of mother is maximum classes VIII, S. D. is 1.6 and C. V. is 81.82 per cent. So the distribution pattern of the variable has been more on less consistent.

# Mother's engaged in household activity (X<sub>22</sub>)

It has been elicited that mothers engagement in household activities has directly deprived the child affection and care to be unleashed by a mother. The maximum hours of mothers engagement in household activity stands at 19 hours. Average hours of engagement is 8, S. D. is 3.97 and C. V. is 46.73 per cent. So the distribution pattern of the variable has been highly consistent.

# Girls age (X<sub>23</sub>)

It has been elicited from the table that maximum age of the drop out is 18 years to a min. of 8 years. Average age is 12 years. S. D. is 1.88 and C.V. is 14.50 per cent. So the distribution pattern of the variable has been more on less consistent.

#### Girls engaged in household activity (X<sub>24</sub>)

It has been elicited from the table that max. hours girl engaged in household chores is 17 hours. Average hours of activity is 8. S. D. is 3.97 and C. V. is 46.733 per cent. So, the distribution pattern of the variable has been highly consistent.

#### Access to text (X<sub>25</sub>)

It could be inferred that the transition from gross learning to analytical learning or perceptual learning needs ample access to text. The agony of not understanding anything which is apparently discernible, has got a psychomotor complexity and resultantly the very learning process gone wilted. The max. value is found from the table is 2.8, average value is 1.9. S. D. is 0.43 and C. V. is 21.75 per cent. So, the distribution pattern of the variable has been moderately low.

## Family education (X<sub>26</sub>)

Family having relatively higher education level could entailed the progress of education to a higher extent. The max. education of the family is 7, average education score is 3. S. D. is 1.26 and C. V. is 39.22 per cent. So the distribution pattern of the variable has been enough consistent.

## Calorie intake ((X<sub>27</sub>)

It has been elucidated from the table (5.1) that the max. calorie intake value 3411.66 to min. 982.44 intake by the drop out. S. D. is 486.1163 and C. V. is 25.39per cent. So the distribution pattern of the variable has been highly consistent.

#### Information use index (X<sub>28</sub>)

It has been elicited from the table (5.1) that the maximum information use index is 23 with the minimum value being 4 the S. D. is 486.11 and C. V. is 28.67per cent. So, the distribution pattern of the variable has been found highly consistent.

#### Nature of drop out (Y)

It has been found from the table (5.1) that the maximum level of the nature of drop out has been 50 and minimum value stands at 5, while the mean value has been 21.64, the c.v. has been 45 per cent which indicates that distribution of variable has been fairly consistent and the mean value suggests that the average respondent are suffering from a drop out recession to the extent of 21 months. So, average girl drop out have fairly been out of the track of the schooling process

## Age at drop out (Y<sub>1</sub>)

It has been found from the table that maximum age at drop out girl has been 15 years and minimum age at drop out is 7 years. The mean value has been 11 years. So it is discernible that the average girls drop out is at the peripheral age for attaining school education at primary levels what we call, the standard age cohort for primary education i.e. 5-11 yrs.

# Level of drop out (Y<sub>2</sub>)

The table depicts that the maximum level of drop out, quite logically, has been 4 and the minimum being 1, while the average level of drop out has been 3.8 i.e. most of the girls are dropped out after finishing almost 4 years of schooling. The C.V. being 28.1 per cent, it is to say that the variable has got a consistent distributive pattern of distribution.

B. Co-efficient of correlation between nature of drop-out (Y) and independent variable (X1-X28)

This table (5.2) shows the co-efficient of correlation between nature of drop-out (Y) and twenty eight independent variable  $(X_1-X_{28})$  that are characterizing the predicted variable.

# Hours mother engaged in household activity :

Hours mother engaged in house hold activity have recorded negative and significant correlation with the nature of drop-out. It implies that the mother herself has taken over substantially the stress of household activity and has let the girl child go relaxed of the stress to enjoy a buffer period to carry forward her education at best. Mother's withdrawal from the household activity, engaged elsewhere, leaves a mounting pressure on the girl child expected otherwise to continue her pristine schooling days. Moreover, mother's engagement in extra household, economic and productive functions create an incongenial home environment wherein it is difficult for a girl child to continue her study. In the absence of her mother she becomes, a "sudden adult woman", for which she herself has not been that prepared, biologically and psychologically, to take care of the siblings, animal rearing, cooking of the food for other adult member of the family at a time when she even found herself hungry.

# Girl's age and nature of drop-out

Girl's age has been found to be positively and significantly correlated with the nature of drop-out. Age has got a positive impact on the temporal topography of drop-out for the girl child. Psycho-somatic maturity has rather got an inelastic motivation for the continuity of education for the girl when compared with a boy undergoing the same level of educational process. *That is why a girl child becomes inevitably vulnerable to drop-out menace within a shorter frame of chronological age, within which choices for revamping her education has gone scant by this time for her.* After attaining a threshold level of maturity, especially beyond optimal age, most of the ephemeral drop-out turns to be a perennial discontinuity of education or a permanent drop-out.

Variable	Variable Label	r-value
$X_1$	Father's Education	058
$X_2$	Father's Age	.078
$X_3$	Total land acquired	037
$X_4$	Irrigation Index	.014
$X_5$	Nature of holding	037
$X_6$	Cropping intensity	.065
$X_7$	Days utilized as family labour by boys in a season	023
$X_8$	Days utilized as family labour by girls in a season	075
$X_9$	Expenditure towards Health care	.028
$X_{10}$	Expenditure towards Education	.137
$X_{11}$	Per capita family expenditure	034
$X_{12}$	Monthly family income	.004

Table 5.2: Co-efficients of correlation	(Y vs X <sub>1</sub> -X <sub>28</sub> )
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X <sub>13</sub>	family size	018
$X_{14}$	Social interaction value	.016
X <sub>15</sub>	Perceived reason of drop-out	142
X <sub>16</sub>	Fertility status	.003
$X_{17}$	Key institutional interaction	.099
$X_{18}$	Distance Matrix	005
$X_{19}$	Recreational facility index	071
$X_{20}$	Mother's age	.087
$X_{21}$	Mother's Education	.003
$X_{22}$	Hours mother engaged in household activity	198*
X <sub>23</sub>	Girl's age	.474**
$X_{24}$	Hours girl engaged in household activity	037
X <sub>25</sub>	Access to text	.017
X <sub>26</sub>	Family Education Score	.013
X <sub>27</sub>	Calorie Intake volume	020
$X_{28}$	Information use index	043
(*) indiant	as a scalar is significant at 0.05 level (2 toiled)	

"\*" indicates r-value is significant at 0.05 level (2-tailed)

"\*\*" indicates r-value is significant at 0.01 level (2-tailed)

Coefficient of correlation between age at drop-out  $(Y_1)$  and independent variable  $X_1$ - $X_{28}$ 

The table (5.3) presents the co-efficient of correlation between age at drop-out  $(Y_2)$  and twenty eight  $(X_1 - X_{28})$  independent variables that are characterizing the predicted variable. The following variables, father's age  $(X_2)$ , recreational facility of drop-out $(X_{19})$ , mother's age  $(X_{20})$ , girl's age  $(X_{23})$ , are being found to possess significant influence on the dependent variable, age at drop-out.

## Father's age and age at drop-out

The chronological age of father has been found to predict significant and positive influence on age at drop-out. Father's age might have had motivational and emotional impact on the performance of girl child. Also, the distancing age and perception between father and the girl child has had substantial influence on the in-school performance which might culminate the educational process into a perennial drop-out.

## Recreational facility and age at drop-out

In our society, girl children are knowingly or unknowingly thrown into a morbid and sultry environment, both at home and at school. Learning is not that joyful, specially for a girl child. That's why inadequate recreational facility and drop out consequences have been found strongly tuned together. Gender disparity, ruthless indifference inflicted on the health care, extreme male domination, imposition of restriction on enjoying playful moments, are cumulatively creating a dull and drab environment in which a girl child finds herself a socially dejected entity as in the worst consequence.

# Mother's age and age at drop-out

Mother's age has been found to elicit positive and decisive influence on the level of age at which the girl child is dropped out. The disparaging age level between the mother and child invites an emotional and motivational non-compliance as well as in-compatibility. Emotional support from an aged mother to a budding child of tender age is not that easy to provide and to accord.

# Girl's age and age at drop-out

As the results show, chances of drop-out for the girls having the upper age level have been high. The inconsistency of performance and increase of absenteeism, if occur at a high frequency for the higher age category of a girl-student, the fecundity to drop out has been found very high.

Variable	Variable Label	r-value
$\mathbf{X}_1$	Father's Education	004
$\mathbf{X}_2$	Father's Age	.199*
$X_3$	Total land acquired	.096
$X_4$	Irrigation Index	006
$X_5$	Nature of holding	041
$X_6$	Cropping intensity	.019
$X_7$	Days utilized as family labour by boys in a season	.072
$X_8$	Days utilized as family labour by girls in a season	.052
$X_9$	Expenditure towards Health care	.133
$\mathbf{X}_{10}$	Expenditure towards Education	022
$X_{11}$	Per capita family expenditure	.042
$X_{12}$	Monthly family income	.092
<b>X</b> <sub>13</sub>	family size	.101
$X_{14}$	Social interaction value	.118
$X_{15}$	Perceived reason of drop-out	145
$X_{16}$	Fertility status	.124
$X_{17}$	Key institutional interaction	.093
$X_{18}$	Distance Matrix	.125
$X_{19}$	Recreational facility index	.173*
$X_{20}$	Mother's age	.172*
$X_{21}$	Mother's Education	126
$X_{22}$	Hours mother engaged in household activity	035
X <sub>23</sub>	Girl's age	.873**
$X_{24}$	Hours girl engaged in household activity	.083
X <sub>25</sub>	Access to text	158
X <sub>26</sub>	Family Education Score	.148
$X_{27}$	Calorie Intake volume	065
X <sub>28</sub>	Information use index	.012

Table 5.3: Co-efficients of correlation (Y<sub>1</sub> vs X<sub>1</sub>-X<sub>28</sub>)

"\*" indicates r-value is significant at 0.05 level (2-tailed) "\*\*" indicates r-value is significant at 0.01 level (2-tailed)

The table (5.4) shows the co-efficient of co-relation between  $(Y_2)$  and 28 independent variable  $(X_1-X_{28})$ .

# Father's education and level of dropout

Father's education has been found to have positive and significant impact on class in which the girl child have occured. It suggests that education has been render tenable upto a higher class or level where in father has got a relatively high level of education. Higher educational level of father could inculcate an aspiration for educational achievement in the girl child and could deny the punitive poverty even. In other cases, the continuity of education could be culminated in the form of drop out after crossing, what you call, and the optimum level of educational attainment.

## Number of days utilized as family labour by girls in a season and level of drop-out

This variable has accorded the significant and negative correlation with the level of drop out or class in which the girl has been dropped out. The engagement in productive activity with more number of days spent on it, the chances of being dropped out at the younger age is fairly high. So, for the first generation learner of formal school education should be provided ample buffer period<sup>``</sup> to acclimatize to educational process. Otherwise, a premature culmination of education in the form of drop-out might be the inevitable consequence.

## Expenditure towards Health care and Level of drop-out

It has been found that the health care, as has been taken for a girl child, has got a proportionate influence on deciding the level of drop-out. This implies that drop-out at the apparently higher level of primary education has been caused by health reasons. Malnutrition, ill health, vulnerability to disease and stress are all attributive to cause, specially in rural poor farm families, dropout.

# Per capita family expenditure and the level of drop our

Average family expenditure as incurred on family member is an important indicator to suggest the economic status and capability of the family. It has already been mentioned that the families of the girls drop out are mostly reeling under abject poverty and eking out their livelihood from a minuscule size of holding. Both the family income and expenditure have gone so marginal that it is very different the sustain their families at the minimum level of living standard. It has thus been found that per capita family expenditure has significantly influenced that level of drop out of the girls.

## Monthly family income and level of drop-out

Monthly family income has been impacting on the drop-out levels, positively and significantly which would derive a thread connecting the increased economic activities of the family with the level of drop-out of the girl child.

# Recreational facility index and level of drop out

Most of the primary schools in our country have not been that successful to make provision for recreational facilities so that the children can find their learning joyful and scintillating. The previous chapter (Introduction) shows that only 32.86 per cent of primary schools in West Bengal have got a playground to offer the school children to enjoy the school hours. Rightly here, the variable, recreational facility has recorded significant impact on school drop out consequence.

## Perceived reasons and level of drop-out

Perceived reasons of drop-out in micro-environment has amounted to the level of drop-out and the factors of drop-out as perceived by the respondent have been found to contribute significantly and negatively with the level of drop-out. That means, reasons of drop-out remain as inhibitors at the younger age of the child or at this age, when they are in lower classes, are more vulnerable and susceptible to drop-out reasons.

# Hours mother engaged in house hold activity and level of drop-out

The variable, hours of engagement in household activities by a mother, has accorded a discernible impact on the level of drop-out. Since, the value of co-efficient of correlation has gone positive, it is predictable that

mother's engagement in household activity has directly deprived the child of affection and passion to be unleashed by a mother and of the care that might sustain all critical aspects of child education, nutrition, and over all the most desired socialization. However, the analysis and inferences has to be derived from a reticulate interaction to be had from path analysis by decomposing the coefficient of correlation values into direct, indirect and residual effect.

# Girl's Age and level of drop-out

Girl's age has been found to be associated positively and significantly with the level of drop-out. Drop-out at higher age level, as reflected through higher level of schooling within the defined periphery of primary education, has gone irreversible and deleterious by nature.

## Access to text and level of drop-out

Access to text is a critical variable that impacts on the proficiency of understanding the learning content and determines strongly the level of drop-out. It could be inferred that transition from gross learning to analytical learning or cognitive learning to perceptual learning, needs an ample access to text. That is why, having being impeded to access the text at higher age, when the girl child starts receiving any stimulation to be confronted against an analytical frame of mind, it hinders the learning process and amounts to both the level and nature of drop out. The agony of not understanding anything apparently discernible has got a psycho-motor complexity and resultantly the very learning processes gone wilted by this time in a valley of eroded schooling and also the childhood itself.

## Family education score and Level of drop-out

Family education score has recorded a positive and significant correlation with the level of drop-out. It is apparently a maze that family having higher education score has also been characterized with the higher level of drop-out. A delving analysis would possibly depict that, family having relatively higher education level, the other way round, could entail the progress of education to a higher extent only than those pertaining to poorer education score before being dropped out ultimately. The comparative advantage of families, having a higher education level in an orthodox agrarian society and getting gradually transformed into a rubanised one, has been to carry the girls education forwarded, further. But in an unequal fight against endemic poverty and impoverished motivation the protect of girl education goes gradually wilted, a bit latter for those somewhat economically strong or less poorer than the poorest.

Variable	Variable Label	r-value
$\mathbf{X}_1$	Father's Education	.204*
$X_2$	Father's Age	.066
$X_3$	Total land acquired	.119
$\mathbf{X}_4$	Irrigation Index	002
$X_5$	Nature of holding	.002
$X_6$	Cropping intensity	.020
$X_7$	Days utilized as family labour by boys in a season	.028
$X_8$	Days utilized as family labour by girls in a season	167*
$X_9$	Expenditure towards Health care	.201*
$\mathbf{X}_{10}$	Expenditure towards Education	.122

Table 5.4: Coefficients of correlation	n (Y <sub>2</sub> vs X <sub>1</sub> -X <sub>28</sub> )
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$\mathbf{X}_{11}$	Per capita family expenditure	.165*
X <sub>12</sub>	Monthly family income	.219**
X <sub>13</sub>	family size	.037
$X_{14}$	Social interaction value	.023
X <sub>15</sub>	Perceived reason of drop-out	228**
$X_{16}$	Fertility status	.043
X <sub>17</sub>	Key institutional interaction	018
$X_{18}$	Distance Matrix	.040
X <sub>19</sub>	Recreational facility index	.215**
$X_{20}$	Mother's age	.062
$X_{21}$	Mother's Education	.145
X <sub>22</sub>	Hours mother engaged in household activity	234**
X <sub>23</sub>	Girl's age	.442**
X <sub>24</sub>	Hours girl engaged in household activity	064
X <sub>25</sub>	Access to text	204*
X <sub>26</sub>	Family Education Score	.381**
X <sub>27</sub>	Calorie Intake volume	.058
X <sub>28</sub>	Information use index	099
"*" indi	cates r-value is significant at 0.05 level (2-tailed)	

"\*" indicates r-value is significant at 0.05 level (2-tailed)

"\*\*" indicates r-value is significant at 0.01 level (2-tailed)

# C. i) Regression analysis between nature of drop-out (Y) and independent variable $(X_1\!\!-\!X_{28})$

The table (5.5) presents the regression analysis to depict the causal effect of factor on the consequent factor of nature of drop-out.

# Expenditure towards education and nature of drop-out

It has been found that the variable expenditure towards education has recorded a significant regressional effect on the nature of drop-out.

The seasonality or the inconsistency nature of the flow and allotment of expenditure after education in a family has got a telling impact on the continuity or discontinuity of the education.

In most of the cases, specially for the economically fragile families, it is very difficult to sustain the level of expenditure at a fixed beam, hence, exposing the dependence to an extremely vulnerable financial support for the continuity as well as sustainability of the family.

# Girl's age and nature of drop-out

The girl's age has also been found to be closely and causally tuned to the nature of drop-out.

The chronological age of the girls, scrolling over the topography of real life experiences, has gone organically intrinsic with the nature of drop-out. Then by default, it has become concurrent with the age of girls enduring up the experiential learning.

Variable	Variable Label	β-Value	βx R	t-Value
$X_1$	Father's Education	057	-0.04241	555
$X_2$	Father's Age	204	-0.12913	-1.216
X <sub>3</sub>	Total land acquired	059	0.03735	382
$X_4$	Irrigation Index	0.13	0.008229	.073
$X_5$	Nature of holding	.082	0.051900	.691
X <sub>6</sub>	Cropping intensity	202	0.127866	1.236
X <sub>7</sub>	Days utilized as family labour by boys in a season	.009	0.005697	.097
X <sub>8</sub>	Days utilized as family labour by girls in a season	005	-0.00317	053
X9	Expenditure towards Health care	033	-0.02089	204
$X_{10}$	Expenditure towards Education	.345	0.219018	2.972**
X <sub>11</sub>	Per capita family expenditure	592	-0.37474	-1.970
X <sub>12</sub>	Monthly family income	.276	0.174708	1.041
X <sub>13</sub>	family size	313	-0.19813	-1.227
$X_{14}$	Social interaction value	.029	0.018357	.290
X <sub>15</sub>	Perceived reason of drop-out	024	-0.01519	200
X <sub>16</sub>	Fertility status	025	-0.01583	152
X <sub>17</sub>	Key institutional interaction	.015	-0.0095	.175
X <sub>18</sub>	Distance Matrix	088	-0.0557	-1.043
X <sub>19</sub>	Recreational facility index	145	-0.09179	-1.025
X <sub>20</sub>	Mother's age	237	0.150021	1.386
X <sub>21</sub>	Mother's Education	.165	0.104445	1.582
X <sub>22</sub>	Hours mother engaged in household activity	184	-0.11647	-1.918
X <sub>23</sub>	Girl's age	.532	0.338756	6.727**
X <sub>24</sub>	Hours girl engaged in household activity	138	-0.08735	-1.465
X <sub>25</sub>	Access to text	.063	0.039879	.671
X <sub>26</sub>	Family Education Score	135	-0.11774	-1.820
X <sub>27</sub>	Calorie Intake volume	.105	0.066465	1.281
X <sub>28</sub>	Information use index	030	0.01899	354

Table 5.5: Nature of drop-out (Y vs X<sub>1</sub>-X<sub>28</sub>)

\* denotes t is significant at 5% level of significance.

\*\* denotes t is significant at 1% level of significance.

## Regression analysis between age at drop-out $(Y_1)$ and independent variables $(X_1-X_{28})$ .

The table (5.6) presents the regression analysis depicting the effect of causal factors on the consequent factor on age at drop-out  $(Y_1)$ .

## Per capita family expenditure and expenditure towards education

It has been found that the factor, the expenditure towards education, has recorded a significant regressional effect on the age at drop-out, so also has been caused by per capita family expenditure incurred in the given family on age at dropout. Both these variables do indicate the cost bearing capability of a family to support and sustain education, health care and nutrition. The fragile capability of bearing different expenditure after

education has gone deleteriously and causes a permanent culmination of girl child's education. Both the girl's age  $(X_{23})$  and household activities have recorded significant impact on the age at drop-out.

## Hours girls' engaged in household activities

With the attainment of higher age and after touching the level of adolescence the girl's engagement in house hold activity has gone up. She has to bear now new critical responsibility and now is not any more able to derive sometimes positive for attending the "Dream School".

# Girl's age and engagement hours in house hold activities

Girl's Age and engagement hours in house hold activities are organically coupled and ultimately do form what you call a diode between involvement in household chores and the level of drop-out.

The  $R^2$  value-being 0.827 it is to infer that the combination of all these 28 factors has been able to explain the 82.7 per cent variation embedded with the consequent factor i.e. at age at drop-out.

Variable	Variable Label	β-Value	βx R	t-Value
$X_1$	Father's Education	0.036	0.03276	0.665
$X_2$	Father's Age	0.068	0.06188	0.758
X <sub>3</sub>	Total land acquired	0.133	0.12103	1.609
$X_4$	Irrigation Index	0.029	0.02639	0.304
X <sub>5</sub>	Nature of holding	0.005	0.00455	0.083
X <sub>6</sub>	Cropping intensity	-0.158	-0.14378	-1.798
X <sub>7</sub>	Days utilized as family labour by boys in a season	-0.057	-0.05187	-1.113
X <sub>8</sub>	Days utilized as family labour by girls in a season	0.024	0.02184	0.504
X <sub>9</sub>	Expenditure towards Health care	0.003	0.00273	0.037
X <sub>10</sub>	Expenditure towards Education	-0.174	-0.15834	-2.779**
X <sub>11</sub>	Per capita family expenditure	0.38	0.3458	2.352*
X <sub>12</sub>	Monthly family income	-0.198	-0.18018	-1.386
X <sub>13</sub>	family size	0.237	0.21567	1.728
X <sub>14</sub>	Social interaction value	0.036	0.03276	0.67
X <sub>15</sub>	Perceived reason of drop-out	-0.004	-0.00364	-0.097
X <sub>16</sub>	Fertility status	0.007	0.00637	0.076
X <sub>17</sub>	Key institutional interaction	0.037	0.03367	0.821
X <sub>18</sub>	Distance Matrix	0.037	0.03367	0.828
X <sub>19</sub>	Recreational facility index	0.064	0.05824	1.334
X <sub>20</sub>	Mother's age	-0.127	-0.11557	-1.383
X <sub>21</sub>	Mother's Education	-0.088	-0.8008	-1.576
X <sub>22</sub>	Hours mother engaged in household activity	0.077	0.07007	1.497
X <sub>23</sub>	Girl's age	0.841	0.76531	19.801**

# Table 5.6: Age at drop-out $(Y_1 vs X_1-X_{28})$

X <sub>24</sub>	Hours girl engaged in household activity	0.107	0.09737	2.119*
X <sub>25</sub>	Access to text	-0.055	-0.05005	-1.091
X <sub>26</sub>	Family Education Score	0.092	0.08372	1.671
X <sub>27</sub>	Calorie Intake volume	-0.084	-0.07644	-1.913
X <sub>28</sub>	Information use index	-0.001	-0.00091	-0.017

\* denotes t is significant at 5% level of significance.

\*\* denotes t is significant at 1% level of significance.

## Regression analysis between level of drop-out $(Y_2)$ and independent variable $(X_1-X_{28})$

The table (5.7) presents the regression analysis depicting the effect of causal factors on the consequent factor, age at drop-out.

## Father's education and level of drop-out

Father's education has been found to have significant regressional effect on the level of drop-out.

The level of drop-out, the other way round, does indicate the extent of continuity of education as well. Father's education, here, has been found to contribute both motivationally and operationally to the continuity of the girl child education. Across the economic category and social echelons, the father's education helps set the educational target of the son/daughter perfectly on. The daughter or the girl child can find a frame of reference for her future educational level from the father's educational attainment.

#### Girl's age and level of drop-out

Girl's age has well been attributive to the level of drop-out. These two variables i.e. girl's age and level of drop-out here have acted as co-genital characters by becoming both conceptually and functionally coupled and synergized.

#### Family education score and level of drop-out

Family education score like father's education, has also amounted to in determining the level of drop out. The continuity of the girl's education although correlated to father's education have also been summatedly been tuned to the family education level. Any family having attained the collective education score at a higher level, could also substantially influence the educational level of the girl child of that family.

#### Days utilised as family labour by girls in a seasons and level of drop out

This variable has also contributed to be Level of drop out. The intensity time and nature of engagement of girl children in the productive activities of the farm, specially at a relatively higher age echelon, has refrained them from attending the school.

The  $R^2$ -value being 0.439, it could be concluded that the combination of all these 28 variable has cumulatively explain 43.9% of the total variation embedded with the consequent variable, i.e. level of drop-out.

Variable	Variable Label	β-Value	βx R	t-Value
$X_1$	Father's Education	0.204	0.135	2.073**
$X_2$	Father's Age	-0.23	-0.159	-1.42
X <sub>3</sub>	Total land acquired	-0.163	0.108	-1.095
$X_4$	Irrigation Index	-0.036	0.023	-0.215
$X_5$	Nature of holding	-0.039	0.025	-0.34
$X_6$	Cropping intensity	-0.03	-0.019	-0.187
$X_7$	Days utilized as family labour by boys in a season	0.133	0.088	1.436

## Table 5.7: Level of drop-out (Y<sub>2</sub> vs X<sub>1</sub>-X<sub>28</sub>)

V	Derre utilized on family labour by side in a second	0.175	0.116	2.02*
X <sub>8</sub>	Days utilized as family labour by girls in a season	-0.175	0.116	-2.02*
X9	Expenditure towards Health care	0.056	0.037	0.36
$X_{10}$	Expenditure towards Education	-0.172	0.114	-1.531
$X_{11}$	Per capita family expenditure	0.216	0.143	0.742
X <sub>12</sub>	Monthly family income	0.202	0.133	0.786
X <sub>13</sub>	family size	0.098	0.064	0.396
X <sub>14</sub>	Social interaction value	-0.174	0.115	-1.811
X <sub>15</sub>	Perceived reason of drop-out	-0.059	0.001	-0.734
X <sub>16</sub>	Fertility status	0.003	0.039	0.02
X <sub>17</sub>	Key institutional interaction	-0.054	0.035	-0.663
X <sub>18</sub>	Distance Matrix	0.031	0.020	0.384
X19	Recreational facility index	0.048	0.031	0.558
X <sub>20</sub>	Mother's age	0.166	0.110	1.003
X <sub>21</sub>	Mother's Education	-0.021	0.013	-0.211
X <sub>22</sub>	Hours mother engaged in household activity	-0.114	0.075	-1.23
X <sub>23</sub>	Girl's age	0.413	0.273	5.391**
X <sub>24</sub>	Hours girl engaged in household activity	0.086	0.055	0.904
X <sub>25</sub>	Access to text	-0.006	0.003	-0.066
X <sub>26</sub>	Family Education Score	0.219	0.145	2.214*
X <sub>27</sub>	Calorie Intake volume	0.089	0.059	1.131
X <sub>28</sub>	Information use index	-0.046	0.030	-0.554

\* denotes t is significant at 5% level of significance.

\*\* denotes t is significant at 1% level of significance.

#### C. ii) Step down regression

From the step down regression analysis, the following variables viz. Girl's age, hours mother engaged in household activity, recreational facility, expenditure towards education, expenditure towards health care have recorded substantial regression impact on the nature of drop-out.

So, these are the variables having both strategic and operational impact in dealing with drop-out problem specially tuned with seasonality nature of drop-out.

Chronological age has got a curvilinear impact on the topography of the drop-out. And it has gone in compliance with the Kurt Lewin Model of learning experience wherein the behavior of a person is being impacted by the elements of situation surrounding the person. Both the harvesting and sowing time are also times for mothers' engagement in the crop field. Hence the kids are left aside at home for a fragile and unstructured attention and care as well.

So, also has happened for expenditure towards education. Precisely, it is one of the most significant indicators in placing the drop-out curves and the nature intrinsic there in along side the expenditure curves as well.

It has been found with the combination of five variables viz. girls age, hours mother engaged in household activity, recreational facility, expenditure towards education and expenditure towards healthcare at the fifth stage has explained 32 per cent of the variance embedded with the nature of drop-out.

The regressional impact on the predictor variable on the girl's age has been found significant and the  $R^2$  value being 0.762, it could be infer that a regressional impact between girl's age and the age at drop-out has wielded 76 per cent of the total explicable variability.

Stage I - Predictors: (Constant), girl's age

Stage II - Predictors: (Constant), girl's age, #hours mother engaged in household activity

Stage III - Predictors: (Constant), girl's age, #hours mother engaged in household activity, Recreational facility

Stage IV - Predictors: (Constant), girl's age, #hours mother engaged in household activity, Recreational facility, Expenditure towards Education

Stage V - Predictors: (Constant), girl's age, #hours mother engaged in household activity, Recreational facility, Expenditure towards Education, Expenditure towards Health care Coefficients.

Variables	Standardized Coefficients	t
	Beta	
(Constant)		-2.075
girl's age	.474	6.548
(Constant)		520
girl's age	.458	6.357
#hours mother engaged in household activity	148	-2.055
(Constant)		.062
girl's age	.472	6.619
#hours mother engaged in household activity	183	-2.515
Recreational facility	164	-2.250
(Constant)		140
girl's age	.470	6.678
#hours mother engaged in household activity	193	-2.678
Recreational facility	185	-2.554
Expenditure towards Education	.156	2.217
(Constant)		093
girl's age	.486	6.936
#hours mother engaged in household activity	188	-2.644
Recreational facility	187	-2.606
Expenditure towards Education	.289	3.028
Expenditure towards Health care	194	-2.037

# Table 5.8: Step down regression

a Dependent Variable : Nature of drop-out

a Predictors : (Constant), girl's age

Coefficients

	Standar	dized Coefficients
	Beta	t
(Constant)		1.495
girl's age	.873	21.792, $R^2 = 0.762$

## **D.** Factor analysis : Factors with contributing variables

The table (5.9) presents the factor analysis for depicting the principal principle component vis-à-vis factors by creating a functional conglomeration of different variables based on factor loading to be re-named as a new

factor instead of being called as variables. A factor analysis is eminently reticulating the intrinsic co-relations based on eigen vectors.

Factor-1: The following variables, expenditure towards health care, expenditure towards education, family expenditure, monthly family income and social interaction value have organically been combined. The variance explained by this factor is 3.9% per cent. Since the variables accommodated in this factor by attributes are economic as well as enterprising in nature. The factor has been renamed as FAMILY INVESTMENT FACTOR.

Factor-2: It has conglomerated the following variables – Father's education, total land acquired, irrigation use index. Nature of holding, cropping intensity, need to be delineated as a new factor which can be re-named as RESOURCE FACTOR. The variables included in this factor have characterized basically the resource feature of a respondent.

This factor alone has amounted to 3.48 per cent of explicable variables embedded with drop-out phenomena.

Factor-3: The third factor has incorporated the following variables days utilized as family labour by girl, days utilized as family labour by boys, Distance matrix, re-creational facility, mother engaged in house hold activity, mother's education, girl engaged in household. Activity, access to text, family education score, information use index. These are managerial by nature and keep contributing towards the clandestine maneuvering the different causal components tuned to drop-out phenomena. This factor thus has been renamed as MANAGEMENT FACTORS.

Factor-4 and Factor-5: Both factor 4 and 5 have indulged the conglomeration of variables viz-family size and fertility status ( $F_4$ ) and Father's age, reasons of drop-out, institutional interaction, mothers age, girl's age, calorie intake ( $F_5$ ) respectively. This factor can be renamed as FAMILY COMPOSITION AND FAMILY ATTRIBUTES RESPECTIVELY.

While the first combination of variables has highlighted the composition of a family basically, the constellation could be branded as *family composition factor*. The last factor thus has included the variables which are close to impacting on drop-out character and the same time these are also exclusively integral to a family structure, thus could be branded as *FAMILY ATTRIBUTE FACTOR*.

The factor together contributed to the 6.35 per cent of the variance embedded with the predicted character i.e. girl's drop-out.

Factor	Variables	Factor loading	Variance	C.V.	Factor Renaming
Factor – 1	Exp. Towards health care (x <sub>9</sub> )	0.904	3.932		Investment factor
	Exp. Towards education $(x_{10})$	0.777			
	Family expenditure (x <sub>11</sub> )	0.804			
	Social interaction value (x <sub>14</sub> )	0.515			
Factor – 2	Father's education $(x_1)$	0.465			
	Total land acquired (x <sub>3</sub> )	0.801			
	(TIA/TA) 100 (x <sub>4</sub> )	0.921	3.480	7.412	Resource factor
	Nature of halding $(x_5)$	-0.780			
	Cropping intensity $(x_6)$	0.866			
Factor – 3	Days utilized as family labour by girl $(x_7)$	0.365			

## Table 5.9: Factor analysis - Clubbing of variables into factors

	Days utilized as family labour by boys $(x_8)$	0.463			
	Distance Matrix $(x_{18})$	0.178	2.940	10.352	Management factor
	Recreational facility (x <sub>19</sub> )	-0.398			
	Mother's education $(x_{21})$	0.663			
	Hours of mother engaged in house hold activity $(x_{22})$	0.633			
	Hour's of girl engaged in house hated activity $(x_{24})$	0.655			
	Access to text $(x_{25})$	0.390			
	Family education score $(x_{26})$	-0.679			
	Information use index $(x_{28})$	0.396			
Factor – 4	Family size (x <sub>13</sub> )	-0.942	2.320	12.672	Family composition
	Fertility status (x <sub>16</sub> )	-0.920			
Factor – 5	Father's age $(x_2)$	0.809			
	Fertility status (x <sub>15</sub> )	-0.407	2.240	14.912	Home management factor
	Frequency of key instu interaction $(x_{17})$	0.298			
	Mother's Age $(x_{20})$	0.834			
	Hr. of mother engaged in household activity $(x_{23})$	0.503			
	Caloric intake (x <sub>27</sub> )	-0.268			

The table (5.10) presence the path analysis to delineate direct, indirect and residual effect of 28 exogenous variables on the consequent variables, the level of drop-out:

It has been found that the variable family expenditure  $(X_{11})$ , family size  $(X_{13})$  and girl's age  $(X_{23})$  have recorded substantial direct impact on the level of drop-out.

The sustainability of the family expenditure incurred on education is the determinant for the continuity of girl's education as well. The economic capability here is extremely important.

The family  $(X_{13})$  quite logically has exercised the decisive impact on the level of drop-out. For a large farm family inflicted by poverty and malnutrition, the girl child's education, has been considered a sheer luxury and deemed to be dropped out as a pristine sacrifice made in favour of the male child of the family.

The girl's age and level of drop-out both developed a synergy between chronological and experiential maturity which has been reflected in the psychic configuration of the girl child to indulge the process of drop-out as well.

In the same table, the indirect effect of family expenditure, family size and father's age, have recorded the significant bearing on the level of drop-out.

Father's age is an important psycho-somatic character which has got motivational, operational and strategic impact to organize girl child education.

The same variable, as happened in the earlier occasion, has also routed the highest indirect effect as many as ten variables to characterize the level of drop-out.

	Total	Direct	Indirect		S	Substan	tial Effec	t		Residual
Variables	Effect (r)	Effect (β)	effect (r-β)		Ι		П	[	III	Effect
$X_1$	-0.058	-0.067	0.009	x11	0.061	x3	0.055	хб	-0.054	-0.052
$X_2$	0.078	-0.204	0.282	x23	0.189	x20	-0.112	x13	0.034	0.170
$X_3$	-0.037	-0.059	0.022	x11	0.178	xб	-0.110	x11	0.178	-0.224
$X_4$	0.014	0.013	0.001	xб	-0.137	x11	0.092	x3	0.090	-0.044
$X_5$	-0.037	0.082	-0.119	xб	0.874	x3	-0.069	x23	-0.049	-0.874
$X_6$	0.065	0.202	-0.137	x11	0.127	x3	0.093	x12	-0.052	-0.304
$X_7$	-0.023	0.009	-0.032	x13	0.069	x23	0.056	xб	-0.038	-0.118
$X_8$	-0.075	-0.005	-0.07	x11	0.058	xб	-0.039	x3	0.026	-0.115
$X_9$	0.028	-0.033	0.061	x11	0.282	x12	-0.168	x10	-0.120	0.067
$X_{10}$	0.137	0.346	-0.209	x11	0.215	x12	-0.145	x3	0.033	-0.312
X <sub>11</sub>	-0.034	-0.592	0.558	x12	-0.159	x13	-0.112	x10	-0.098	0.928
X <sub>12</sub>	0.004	0.276	-0.272	x11	0.294	x10	-0.122	x3	0.062	-0.505
X <sub>13</sub>	-0.018	-0.313	0.295	x11	-0.179	x23	0.055	x12	-0.025	0.444
$X_{14}$	0.016	0.029	-0.013	x11	0.156	x12	-0.085	x23	0.073	-0.158
X <sub>15</sub>	-0.142	-0.024	-0.118	x23	-0.162	x20	0.015	x22	0.150	-0.121
X <sub>16</sub>	0.003	-0.025	0.028	x13	0.210	x11	-0.143	x23	0.080	-0.120
X <sub>17</sub>	0.099	-0.015	0.114	x23	0.095	x10	-0.026	x12	-0.026	0.071
X <sub>18</sub>	-0.005	-0.088	0.083	x23	0.111	x11	-0.040	x12	0.025	-0.013
X <sub>19</sub>	-0.071	-0.145	0.074	x23	0.092	x13	0.046	x3	0.034	-0.100
$X_{20}$	0.087	0.237	-0.15	x23	0.175	x2	0.058	xб	-0.038	-0.345
$X_{21}$	0.003	0.165	-0.162	x23	-0.110	x26	0.049	x11	0.045	-0.146
X <sub>22</sub>	-0.198	-0.184	-0.014	x23	-0.090	x24	0.037	x21	0.027	0.011
X <sub>23</sub>	0.474	0.532	-0.058	x20	-0.026	x13	0.015	x2	0.015	-0.062
X <sub>24</sub>	-0.037	-0.138	0.101	x23	0.045	x13	-0.044	x11	0.037	0.062
X <sub>25</sub>	0.017	0.063	-0.046	x11	-0.128	x23	-0.094	x12	0.063	0.113
$X_{26}$	0.013	-0.186	0.199	x23	0.109	x11	0.050	x21	-0.048	0.087
X <sub>27</sub>	-0.02	0.105	-0.125	x11	0.109	x23	-0.063	x12	-0.036	-0.134
$X_{28}$	-0.043	-0.03	-0.013	x11	0.117	x13	-0.046	x12	-0.045	-0.038

Table 5.10: Path analysis: Direct, indirect and residual effect: Nature of drop out (Y) vs twenty eight variables (X<sub>1</sub>-X<sub>28</sub>)

# **Residual effect : 0.599**

The residual effect being 0.599, it is to conclude that even though with a combination of twenty eight variables  $(X_1 - X_{28})$  embedded with the level of drop-out could not be explained.

This should suggest that infusion of more relevant variables could have gone a long way in explaining more of variance embedded with the consequent variable embedded with the nature of drop-out.

# E. Path analysis : Direct, indirect and residual effect Age at drop-out $(Y_{1)}$ and independent variables ( $X_1\hbox{-} X_{28})$

It has been found from the table (5.11) that the direct impact of the variables family expenditure, girl's age and expenditure towards education have recorded a substantive impact on age at drop-out.

Family expenditure has got an intense and concurrent impact on sustaining the continuity of education and efficacy for the children both at home and in school.

As a corollary, it should be the expenditure after education that has gone intrinsic with age at drop-out.

The girl's age and the age at drop-out have become the homophyllous expositions of apparently heterogeneous variables.

While scrutinizing the exogenous variables, it has been found that the same variable family expenditure has recorded the highest indirect effect as well. But the dent was distinctly positive and assertive, the indirect effect of family size has also been crystal and logically wielded some imbibing impact on age at drop-out.

Family size is an important determinant to decide both on expenditure and income, be generated by or spent on each and every member either.

	Total	Direct	Indirect			Substar	ntial Effect			Residual	
Variables	Effect (r)	Effect (β)	effect (r-β)		Ι		II		III	Effect	
X1	-0.058	-0.067	0.009	x26	0.102	x3	-0.006	x11	0.034	-0.121	
X <sub>2</sub>	0.078	-0.204	0.282	x20	0.143	x23	0.092	x3	-0.034	0.080	
X <sub>3</sub>	-0.037	-0.059	0.022	x11	0.100	x12	0.089	x1	0.081	-0.249	
$X_4$	0.014	0.013	0.001	x3	-0.107	x1	0.075	x11	0.052	-0.020	
X <sub>5</sub>	-0.037	0.082	-0.119	x3	0.081	x1	-0.041	x2	0.027	-0.186	
X <sub>6</sub>	0.065	0.202	-0.137	x3	-0.109	x11	0.071	x1	0.068	-0.167	
$X_7$	-0.023	0.009	-0.032	x8	-0.074	x11	0.039	x10	-0.037	0.040	
X <sub>8</sub>	-0.075	-0.005	-0.07	x7	0.056	x11	0.032	x3	-0.031	-0.127	
X9	0.028	-0.033	0.061	x11	0.159	x12	0.159	x10	-0.117	-0.139	
$X_{10}$	0.137	0.346	-0.209	x12	0.136	x11	0.121	x14	-0.047	-0.420	
X <sub>11</sub>	-0.034	-0.592	0.558	x12	0.149	x10	-0.096	x3	-0.074	0.579	
X <sub>12</sub>	0.004	0.276	-0.272	x11	0.166	x10	-0.120	x3	-0.073	-0.244	
X <sub>13</sub>	-0.018	-0.313	0.295	x11	-0.101	x14	0.033	x2	-0.033	0.395	

# Table 5.11: Path analysis : Direct, indirect and residual effect. Age at drop-out $(Y_{1})$ and independent variables $(X_1-X_{28})$

Х	14	0.016	0.029	-0.013	x11	0.088	x12	0.080	x10	-0.047	-0.134
Х	15	-0.142	-0.024	-0.118	x23	-0.079	x2	0.042	x26	-0.034	-0.046
Х	16	0.003	-0.025	0.028	x13	0.086	x11	-0.080	x23	0.039	-0.016
Х	17	0.099	-0.015	0.114	x23	0.046	x14	-0.034	x2	-0.032	0.134
Х	18	-0.005	-0.088	0.083	x23	0.054	x12	-0.024	x8	-0.023	0.075
Х	19	-0.071	-0.145	0.074	x26	0.065	x1	0.050	x23	0.045	-0.087
Х	20	0.087	0.237	-0.15	x2	-0.203	x23	0.085	x8	-0.030	-0.002
Х	21	0.003	0.165	-0.162	x26	0.119	x1	0.095	x23	-0.053	-0.322
Х	22	-0.198	-0.184	-0.014	x26	-0.059	x23	-0.044	x8	-0.043	0.133
Х	23	0.474	0.532	-0.058	x2	-0.052	x20	0.034	x26	0.028	-0.067
Х	24	-0.037	-0.138	0.101	x26	-0.057	x8	-0.041	x22	-0.039	0.239
Х	25	0.017	0.063	-0.046	x11	-0.072	x12	-0.059	x26	-0.047	0.133
Х	26	0.013	-0.186	0.199	x1	0.095	x23	0.053	x22	0.031	0.019
Х	27	-0.02	0.105	-0.125	x11	0.061	x3	-0.035	x12	0.034	-0.185
Х	28	-0.043	-0.03	-0.013	x13	0.066	x14	0.046	x12	0.042	-0.168

# **Residual effect : 0.173**

Monthly family income has also recorded a curvilinear impact on age at drop-out. It has been mother's education that behaves as a source of inspiration, motivation and vision, and tracking the carrier of the life for a getting a touch.

It has been found that the variable family expenditure has routed the highest indirect effect as many as twelve variables to characterize the performance of the consequent variable, age at drop-out.

The residual effect being 0.173, it is conclude that the combination of twenty eight exogenous variables embedded with the age at drop-out could not be explained either.

This should suggest that inclusion of more relevant variable could have gone a long way in explaining the more of variance embedded with the consequent variable, age at drop-out.

# Path analysis : Direct, indirect and residual effect: level of drop out (Y<sub>2</sub>) twenty eight variables (X<sub>1</sub>-X<sub>28</sub>)

The table (5.12) presents the path analysis for delineating the direct, indirect and residual impact of twenty eight variables on the consequent variable i.e. nature of drop-out by decomposing the total effect or r-value into the direct, indirect and residual effect.

It has been found that the variable family expenditure has wielded the highest direct level of impact on the nature of drop-out. From seasonal to perennial drop-out, the very nature of drop out has closely been tuned to the family expenditure pattern. On the other hand, the expenditure pattern or allocation of resources for the education of child here has been emerged as an important indicator to measure the topography of drop-out created over a span of primary education. This rather suggests that primary education even, whether it is an urban or rural areas has been persistently supported by the family expenditure.

The other variables expenditure towards education has rightly generated substantial direct effect on nature of drop-out. So, it is a kind of precise impact of family expenditure out education that would be distinctly deciding on the nature of drop-out.

May be supported by family expenditure and expenditure after education, again, it is the girl's age which has become a critical pshycho-somatic input which has got a substantial and direct impact on the nature of dropout. Beyond a soft limit of absenticism from the school has been turned into a irreversible drop-out consequence.

So far as indirect effect is in concern, it is again the family expenditure which has recorded the highest degree of influence which indirectly is characterizing the nature of drop-out.

Father's age, again, the another variable which imbibes the indirect impact on the nature of drop-out. With the higher age level of a father come up here has an incipid motivational capability to get her daughter placed to the re-schooling process after being dropped out.

The other variable, expenditure towards education has also imbibed the substantial indirect impact on the dropout nature of the girl child.

It has been found that the variable  $(X_{11})$ , family expenditure has routed the highest indirect effect through as many as 12 variables to ultimately characterize the nature of drop-out. So, it can be concluded that motivational support to the child's education and, at the same time, organizing family expenditure for the child are of immense importance across the economic category to check drop-out erosion or else, the alienation of girl children of educational mainstream remains painfully unabated.

The residual effect being 0.601%, it is to conclude that the variables of these twenty eight antecedent variables, 60.10% of the variability embedded with the nature of drop-out, would not be explained. These should rather suggest that inclusion of more number of contextual variables in the study would have topped up the level of explicable variability.

	Total	Direct	Indirect			Substa	ntial Effec	t		Residual
Variables	Effect (r)	Effect (β)	effect (r-β)		Ι		II		III	Effect
X <sub>1</sub>	-0.058	-0.067	0.009	x11	-0.094	x26	-0.088	x21	0.078	0.113
X2	0.078	-0.204	0.282	x20	0.207	x23	0.120	x13	-0.044	-0.000
X <sub>3</sub>	-0.037	-0.059	0.022	x11	-0.275	x6	0.138	x12	0.126	0.033
$X_4$	0.014	0.013	0.001	x6	0.172	x11	-0.143	x12	0.059	-0.087
X <sub>5</sub>	-0.037	0.082	-0.119	x6	-0.109	X23	-0.031	x20	-0.031	0.053
X <sub>6</sub>	0.065	0.202	-0.137	x11	-0.196	x12	0.070	x10	0.058	-0.068
X <sub>7</sub>	-0.023	0.009	-0.032	x11	-0.107	x10	0.074	x6	0.048	-0.048
$X_8$	-0.075	-0.005	-0.07	x11	0.089	x6	0.049	x22	-0.044	-0.164
$X_9$	0.028	-0.033	0.061	x11	-0.436	x10	0.237	x12	0.225	0.035
$X_{10}$	0.137	0.346	-0.209	x11	-0.333	x12	0.193	xб	0.033	-0.103
$X_{11}$	-0.034	-0.592	0.558	x12	0.212	X10	0.194	x13	0.146	0.004
$X_{12}$	0.004	0.276	-0.272	x11	-0.433	x10	0.241	xб	0.051	-0.131
X <sub>13</sub>	-0.018	-0.313	0.295	x11	0.277	x23	0.035	x12	0.033	-0.051
$X_{14}$	0.016	0.029	-0.013	x11	-0.242	x12	0.113	x10	0.094	0.020
X <sub>15</sub>	-0.142	-0.024	-0.118	x23	-0.103	x2	0.037	x22	-0.034	-0.018
X <sub>16</sub>	0.003	-0.025	0.028	x13	-0.275	x11	0.221	x23	0.051	0.030
X <sub>17</sub>	0.099	-0.015	0.114	x23	0.060	x10	0.052	x20	0.035	-0.035
$X_{18}$	-0.005	-0.088	0.083	x23	0.070	x11	0.062	x12	-0.034	-0.016
X <sub>19</sub>	-0.071	-0.145	0.074	x13	0.061	x17	0.058	x26	0.056	-0.102
$X_{20}$	0.087	0.237	-0.15	x2	0.178	x23	0.111	x6	0.048	-0.487
$X_{21}$	0.003	0.165	-0.162	x26	-0.102	x11	-0.069	x23	-0.069	0.080
X <sub>22</sub>	-0.198	-0.184	-0.014	x23	-0.057	x21	-0.051	x26	0.051	0.043

# Table 5.12: Path analysis - Direct, indirect and residual effect: Level of drop out (Y<sub>2</sub>) twenty eight variables (X<sub>1</sub>-X<sub>28</sub>)

X <sub>23</sub>	0.474	0.532	-0.058	x20	0.049	x2	-0.046	x26	-0.024	-0.037
X <sub>24</sub>	-0.037	-0.138	0.101	x22	-0.064	x13	0.057	x11	-0.057	0.165
X <sub>25</sub>	0.017	0.063	-0.046	x11	0.198	x12	0.084	x10	-0.062	-0.266
X <sub>26</sub>	0.013	-0.186	0.199	x21	0.090	x11	0.078	x23	0.069	-0.039
X <sub>27</sub>	-0.02	0.105	-0.125	x11	-0.168	x12	0.048	x23	0.039	-0.045
X <sub>28</sub>	-0.043	-0.03	-0.013	x11	-0.181	x10	0.084	x22	0.064	0.018

#### **Residual effect : 0.601**

#### F. Discriminant analysis (Table 5.13) between nature of drop-out (Y) and independent variable (X<sub>1</sub>-X<sub>28</sub>)

Discriminant analysis (table 5.13) for identifying variables having conspicuous discriminant function to differentiate between high and low topography of dropout i.e. nature of drop-out. The table presents the discriminant analysis for identifying variables having discriminant function.

#### Girl's age

It has been found from the table that the variables girl's age has elicited highest discriminant function in deciding on the nature of drop-out. The chronological age of the girl drop-out has also characterized the seasonality of drop-out in order of discriminatory efficacy. Mother engagement in household activity has been placed to the second rank to decide on the nature of drop-out. The excessive engagement of a mother in her house hold activity has rightly amounted to the seasonality nature of drop-out.

With the high intensity of farming operations, excessive stress for eking out livelihood, unplanned house hold chores all imply on the inability of a mother to pay more time and attention to the school going girl child. Being neglected some how rather, the girl child feels demotivated and dejected and, ultimately, drop-out appears to her as an inevitable consequence.

Perceived Reasons of drop-out has occupied third position in terms of discriminant function.

So, the perception of drop-out sometimes goes more significant than the material arrangement supporting or withdrawing educational process.

Variable	Standardized Coefficients	Mean Difference D( )1	F value of (D (I) 1,148	Min. D Squared	% value of D squared
Father's Education	-0.074	0.045	1.602	0.043	2.258403
Father's Age	-0.217	0.19	3.003	0.08	4.201681
Total land acquired	-0.023	0.022	0.026	0.001	0.052521
Irrigation Index	-0.234	0.228	0.127	0.003	0.157563
Nature of holding	0.203	0.307	0.108	0.003	0.157563
Cropping intensity	0.563	-0.557	1.823	0.049	2.573529
Days utilized as family labour by boys in a season	0.101	-0.1	0.421	0.011	0.577731
Days utilized as family labour by girls in a season	-0.122	0.12	0.376	0.01	0.52521
Expenditure towards Health care	-0.317	0.317	0.33	0.009	0.472689

Table 5.13: Table showing values of	narameters of discriminant Function	of nature of drop out $(\mathbf{V})$
Table 3.13. Table showing values of	parameters of user miniant function	or nature of urop out (1)

Expenditure towards Education	0.468	-0.467	2.248	0.06	3.151261
Per capita family expenditure	-0.618	0.618	0.015	0	0
Monthly family income	0.621	-0.62	0.513	0.014	0.735294
family size	-0.156	0.076	0.028	0.001	0.052521
Social interaction value	-0.092	-0.008	0.031	0.001	0.052521
Reason of drop-out	-0.026	-0.208	3.098	0.083	4.359244
Fertility status	-0.255	-4.792	0.084	0.002	0.105042
Key institutional interaction	0.066	-0.065	1.845	0.049	2.573529
Distance Matrix	0.056	-0.029	0.499	0.013	0.682773
Recreational facility index	-0.306	0.277	1.422	0.038	1.995798
Mother's age	0.389	-0.332	3.06	0.082	4.306723
Mother's Education	0.2	-0.075	1.584	0.042	2.205882
Hours mother engaged in household activity	-0.46	0.317	4.253	0.114	5.987395
Girl's age	0.901	-0.358	42.673	1.143	60.03151
Hours girl engaged in household activity	-0.11	0.082	0.31	0.008	0.420168
Access to text	0.124	0.166	0	0	0
Family Education Score	-0.522	0.076	1.508	0.04	2.10084
Calorie Intake volume	0.08	-0.08	0.166	0.004	0.210084
Information use index	0.013	-0.009	0.022	0.001	0.052521
D Square				1.904	100

# Discriminant analysis between age at drop-out $(Y_1)$ and $X_1$ - $X_{28}$ independent variables.

It has been found from the table (5.14) that the variable girl's age has possessed the most conspicuous and decisive discriminant function for creating difference between what we call the high and low drop-out age. It implies that the girl's age and drop out has been tuned in a consanguine manner. Drop-out consequence at a very early age has been found not to go further perennial by nature. It becomes seasonal and ephemeral. But drop-out incidence, when takes place at a higher levels of primary education the chances for revival has go bleak and remote.

The predomination of this variable in deciding age at drop-out has been found to am overwhelming extent i.e. 77.1% of total  $D^2$  value.

The second variable comes up with deceive impact with the fertility status and then followed by the variable the reasons of drop-out.

The fertility status implies the no. of children against a mother to be nurtured and cared. If it is so then the trend is that mother having les and lesser no. of children remain distant from the drop-out erosion.

The reasons of drop-out as perceived by the family of drop at children including the drop-out herself has logically been contributed to the age at drop-out. The poorer the perception the higher would be the drop-out propensity.

The other variable in rank order in discriminant function or capability is 77.15.

Table 5.14: Table showing values of parameters of discriminant Function	of age at drop-out (Y <sub>1</sub> )

Variable	Standardized Coefficients	Mean Difference D( )1	F value of (D(I))1,148	Min. D Squared	% value of D squared
Father's Education	-0.069	0.042	2.293	0.063	1.319371728
Father's Age	-0.154	0.135	2.854	0.078	1.633507853
Total land acquired	0.308	-0.299	0.636	0.017	0.356020942
Irrigation Index	-0.057	0.056	0.33	0.009	0.188481675
Nature of holding	0.024	0.036	0.097	0.003	0.062827225
Cropping intensity	-0.11	0.109	0.099	0.003	0.062827225
Days utilized as family labour by boys in a season	0.184	-0.182	3.941	0.108	2.261780105
Days utilized as family labour by girls in a season	0.149	-0.147	1.905	0.052	1.089005236
Expenditure towards Health care	0.273	-0.273	1.255	0.034	0.712041885
Expenditure towards Education	-0.426	0.425	1.195	0.033	0.691099476
Per capita family expenditure	0.583	-0.583	0.007	0	0
Monthly family income	-0.702	0.701	0.063	0.002	0.041884817
family size	0.154	-0.074	1.438	0.04	0.837696335
Social interaction value	0.188	0.016	0.686	0.019	0.397905759
Reason of drop-out	-0.196	-1.575	4.689	0.129	2.701570681
Fertility status	0.521	9.987	5.462	0.15	3.141361257
Key institutional interaction	0.04	-0.04	2.669	0.073	1.528795812
Distance Matrix	-0.119	0.062	0.31	0.009	0.188481675
Recreational facility index	-0.227	0.205	0.07	0.002	0.041884817
Mother's age	-0.039	0.033	2.512	0.069	1.445026178
Mother's Education	0.033	-0.012	2.158	0.059	1.235602094
Hours mother engaged in household activity	-0.001	0.001	0.264	0.007	0.146596859
Girl's age	0.972	-0.26	133.985	3.684	77.15183246

Hours girl engaged household activity	in 0.065	-0.049	0.527	0.015	0.314136126
Access to text	-0.242	-0.33	3.949	0.109	2.282722513
Family Education Score	-0.027	0.004	0.058	0.002	0.041884817
Calorie Intake volume	-0.074	0.074	0.098	0.003	0.062827225
Information use index	0.066	-0.047	0.116	0.003	0.062827225
D Square				4.775	100

# Discriminant analysis (Table 5.15) between level of drop out $(Y_2)$ and twenty eight $(x_1 - x_{28})$ independent variables.

Following table (5.15) describes the discriminant function of different predictor variables in making difference between what you call High and Low level of drop-out.

It has been found that the Girl's age  $(X_1)$  has wielded the highest discriminant function in making a difference between a high and low level of drop-out.

Girl's age has got both physical and psychological impact on the continuity of her education. In case she has gone dropped out or trying to retrive her carrier of educational progress, it is very difficult to go in compliance with "junior and younger friends" after having a restart of the school going process. The invisible mental block by this time has been created, enough impermeable, to mix freely and relaxedly with the chronologically junior girl classmates. So these variables are both critical and important and to be considered carefully while we are trying to reduce the drop-out level as such.

These variables have contributed 36.81% of  $D^2$  – value and hence wielded important impact on the drop-out consequences.

Father's educational score has also been found to contribute significantly to make discrimination on the differential level of drop-put. Father's education, especially parental education, is extremely important since they are the sources of inspiration and the prime mover to gear up educational status, the most dependable source for translating dreams of the daughter into reality. That is why with a poor parental educational background, it is very difficult for a girl child, to derive and enjoy the motivation from her parents for the continuity of schooling process and accomplishing the goal of educational excellence.

The monthly family income has ranked third in the  $D^2$  value and has transmitted the idea that income is the provider of an economics sustenance either to continue education further or to upgrade the quality of teaching learning environment in the family.

Hours of mother engaged in house hold activity has also elicited predominant. The  $D^2$  function to state that in case the mother somehow remains absent or stoic in attending the children, either due to engagement in household activity or due to poor education background of her own children's education specially, that of girl children has suffered the worst.

So also happened to the girl deployed as family labour in farm operations or other economic activity for eking out livelihood

The table thus shows an array of sequential importance of different variables in impacting on the level of dropout through exposing of respective  $D^2$  – values and percentile contribution in manaeuvering the variation by creating either a high and or a low level of drop out.

Resource allocation can follow for managing the drop-out level can- follow the percentile contribution has displayed by  $D^2$  – value so as to utilize different resources proportionately with the respective capability of different independent variable in terms of high and low occurrence as well.

					_
Variable	Standardized Coefficients	Mean Difference D ( )1	F value of (D(I))1,148	Min. D Squared	% value of D squared
Father's Education	0.104	-1.578720524	1.293	0.037	1.6157205
Father's Age	-0.715	-0.3840131	0.308	0.009	0.3930131
Total land acquired	-0.351	-1.365379913	1.128	0.032	1.3973799
Irrigation Index	-0.101	-0.256008734	0.214	0.006	0.2620087
Nature of holding	-0.202	-0.469349345	0.374	0.011	0.4803493
Cropping intensity	0.173	-0.597353712	0.475	0.014	0.6113537
Days utilized as family labour by boys in a season	0.071	-0.128004367	0.093	0.003	0.1310044
Days utilized as family labour by girls in a season	-0.297	-4.096139738	3.358	0.096	4.1921397
Expenditure towards Health care	-0.06	-3.456117904	2.804	0.081	3.5371179
Expenditure towards Education	-0.322	-1.280043668	1.047	0.03	1.3100437
Per capita family expenditure	0.231	-0.981366812	0.792	0.023	1.0043668
Monthly family income	0.611	-6.57089083	5.372	0.154	6.7248908
family size	0.577	-3.072104803	2.5	0.072	3.1441048
Social interaction value	-0.237	-0.042668122	0.034	0.001	0.0436681
Reason of drop-out	-0.093	-3.968135371	3.252	0.093	4.0611354
Fertility status	-0.21	-2.346746725	1.924	0.055	2.4017467
Key institutional interaction	-0.11	-0.170672489	0.123	0.004	0.1746725
Distance Matrix	0.083	-0.768026201	0.616	0.018	0.7860262
Recreational facility index	-0.077	-2.346746725	1.925	0.055	2.4017467
Mother's age	0.538	-1.024034934	0.848	0.024	1.0480349
Mother's Education	-0.019	-0.768026201	0.619	0.018	0.7860262
Hours mother engaged in household activity	-0.144	-4.69349345	3.846	0.11	4.8034934
Girl's age	0.725	-35.96922707	29.38	0.843	36.812227
Hours girl engaged in household activity	0.211	-0.042668122	0.043	0.001	0.0436681
Access to text	-0.116	-4.096139738	3.339	0.096	4.1921397
Family Education Score	0.482	-16.21388646	13.234	0.38	16.593886
Calorie Intake volume	0.095	0	0.015	0	0

Table 5.15: Table showing values of parameters of discriminant Function of level of drop out (Y<sub>2</sub>)

Information use index	-0.04	-1.024034934	0.821	0.024	1.0480349
D Square				2.29	100

# G. Canonical analysis

Canonical analysis (table 5.16) has been carried out to extract the canonical roots by dividing the set of variables understudy into the right side set and the left side set. While all the dependent variables  $(Y, Y_1, Y_2)$  together have been branded as set of dependent variables or the left side set. The independent variables $(X_1-X_{28})$  altogether have been called here the independent set or right side set. The basic purpose of carrying out canonical analysis has been to top-up the correlation values as to make a precise conclusion in terms of specific relations between each of the independent variables with that of the dependent variables.

The table shows that while the dependent variable nature of drop-out (Y), has been considered for the canonical analysis and the other two dependent variables are kept dormant, the variables girls' age ( $X_{23}$ ), total land owned ( $X_3$ ), monthly family income ( $X_{12}$ ), family size ( $X_{13}$ ), cropping intensity ( $X_6$ ), five in order of values have conspicuously impacted on nature of drop-out. The nature of agrarian lifestyle and livelihood passing the texture of seasonality as well as topography of labour demand have altogether characterized the configuration of drop-out nature.

To any planner of education (primary) this result has got both implicit and explicit communication. In precise, the canonical analysis shows that the nature of drop- out problem could not be intervened without considering the nature of agrarian lifestyles impacting on the school going behavior of the children living and confronting in the core agriculture based school eco-system.

In case of the dependent variable, age at drop-out  $(Y_1)$  the canonical analysis of elicits the precise impact of different independent variables are as follows:

 $X_1$  (per capital family expenditure).  $X_{11}$  (per capita family expenditure),  $X_{10}$  (expenditure towards education,  $X_{26}$  (family education score;  $X_{13}$  (family size) and  $X_1$  (fathers education).

So this result objectively shows that the educational and economic variables together have wielded decisive impact on the age at drop-out. It is either motivation or economy that as decided the extent of age upto which primary education has become a viable proposition for the variable.

In case of the dependent variable, class in which the girl dropped-out  $(Y_2)$  the canonical analysis elicits the precise impact of different independent variables are as follows:

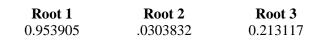
 $X_{11}$  (per capita family expenditure),  $X_{12}$  (monthly family income),  $X_{20}$  (mother's age),  $X_{10}$  (expenditure towards mother's education) and  $X_2$  (father's age).

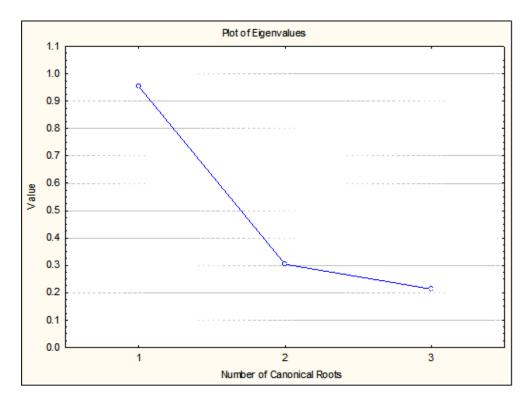
So, this result objectively shows that the family economy variables in terms of income, expenditure, and also the psycho-somatic variables like parent's age, have together characterized the level or classes to which the girl child is supposed to be dropped out. So, if the educational attainment of the girl children at primary level is to be assured, then these variables are extremely contextual.

Cannonical analysis presents the three canonical roots corresponding to three eigen variables as 0.953905, 0.303832, 0.213117 respect.

The graphical presentation of canonical analysis shows the maximum and the minimum roots along the Y axis and the different dependent variables expressed along the X-axis. The trend shows that canonical root values have become the highest for dependent variable Y and the lowest for dependent variable  $Y_2$ , while  $Y_1$  retaining the intervening value.

#### **Eigen values (MRP Statistical)**





	Chi-Square Tests with Successive Roots Removed (MRPStatistica)						
Root Removed	Canonical R	Canonical R sqr	Chi Sqr	df	р	Lamda Prime	
Root 1	0.976681	0.953905	489.2924	84	0.000000	0.025251	
Root 2	0.551210	0.303832	80.0448	54	0.012287	0.547803	
Root 3	0.461646	0.213117	31.8769	26	0.197355	0.786883	

Variance Extracted (Proportions), left set (MRP Statistical) d		Dependent Set
Rot factor	Variance extracted	Reddney.
Root 1	0.420764	0.401369
Root 2	0.278773	0.084700
Root 3	0.300462	0.064034

Variance Extracted (Proporti	ons), right set (MRP Statistica)	Independent Set
Rot factor	Variance extracted	Reddncy.
Root 1	0.046395	0.044257
Root 2	0.054483	0.016554
Root 3	0.037885	0.008074

Canonical Weights, left set (MRP Statistica)	Dependent set				
Variable	Root 1	Root 2	Root 3		
у	-0.421585	-0.590607	-0.715397		
y1	-0.872671	-0.207962	0.639487		
y2	-0.023618	0.995890	-0.513096		

 Table 5.16: Canonical analysis for selectivity elucidating the relations between set of dependent variables and independent variable

Canonical Weights, right set (MRP Statistica)	Y	Y <sub>1</sub>	Y <sub>2</sub>
Independent set variables	Root 1	Root 2	Root 3
X <sub>1</sub>	-0.012595	0.420332	-0.026984
$X_2$	0.036627	-0.234265	0.627644
$X_3$	-0.083379	-0.225074	0.343044
$X_4$	-0.024597	-0.112465	0.010964
$X_5$	-0.034436	-0.159586	-0.137362
$X_6$	0.050173	-0.229756	-0.431557
$X_7$	0.036494	0.239093	-0.146698
$X_8$	-0.013766	-0.318957	0.216109
$X_9$	0.005994	0.119274	0.046751
$X_{10}$	0.008135	-0.622490	-0.564883
$X_{11}$	-0.063988	0.934876	0.879392
$X_{12}$	0.032605	0.154501	-0.706307
$X_{13}$	-0.058647	0.424493	0.479277
$X_{14}$	-0.038528	-0.346288	0.170717
$X_{15}$	0.014876	-0.094746	0.119756
$X_{16}$	-0.000152	0.017741	0.103559
$X_{17}$	-0.024199	-0.096948	0.120764
$X_{18}$	0.003403	0.142253	0.151965
$X_{19}$	0.005271	0.212799	0.253446
$X_{20}$	-0.000318	0.105519	-0.650446
$X_{21}$	0.006204	-0.194290	-0.323737
$\mathbf{X}_{22}$	0.012904	-0.044895	0.526739
$X_{23}$	-0.992772	-0.148831	-0.097110
$X_{24}$	-0.036704	0.255735	0.254491
$X_{25}$	0.019623	-0.044956	-0.148350
$X_{26}$	-0.004375	0.545216	0.155649
$X_{27}$	0.012130	-0.077620	-0.078319
$X_{28}$	0.016940	-0.038889	0.064277

# **Component II**

The land mark programmes and case studies.

Land Mark Programms

## i) SOME OF THE LAND MARK PROGRAMMES IN PRIMARY EDUCATION : THE HIGHLIGHTS

Managing and making intervention for Primary Education (some case study) :

a. Title : Ensure access Enrolment of girls, especially from disadvantaged communities.

Components : Mobilization of community for enrolment.

- Formation of Village Education Committee with 30 to 50% women members to supervise, ensure retention and provide support.
- Mother Teacher Associations: Encourage girls' participation and monitors school. Education Guarantee scheme schools to augment access in unserved habitations.
- Linkages with early childhood care centres to free girls from responsibility for sibling care. More female teachers.

#### Revelation

- Evaluation studies/mission of DPEP reveal that girls enrolment has gone up, but may be difficult to attribute it directly to these strategies.
- Programme evaluation of education guarantee scheme also reports significant improvement in girls' enrolment, in particular in villages where a ECE centre was attached to the school.
- More female teachers is a generic strategy adopted in most projects. No one to one correlation made with girls enrolment.

#### b. Title: Ensure retention: Continuation of girls in schools.

#### Components

- Incentives in the form of mid day meals, free textbooks, uniforms, dry rations (rice or wheat), etc. DPEP.
- Awards and recognition for VEC.MTA as well as girls.
- Gender sensitization of teachers and educational administrations to make them more responsive to constraints faced by girls (Work burden, sibling care, etc.).

#### Revelation

- Impact assessment studies of mid-day meal reveal positive trend in retention in school of girls and boys from poor house holds.
- Difficult to establish one to one correlation between award VEC/MTA and gender sensitization.

#### c. Title : Improve quality and make education relevant: Content and process of education.

#### Components

- Adopted in DPEP and other EFA projects.
- Improve school environment make learning joyful.
- Gender review of curriculum and textbooks.
- Attractive teaching learning material.
- Academic / pedagogic support to teachers.

#### Revelation

• While these strategies where an integral part of DPEP, there is still not concrete evidence to show that the community finds content and process more relevant that it was prior to DPEP.

# d. Title : Making system responsive. Especially to gender and social equity issues.

#### Components

- Establishment of gender unit for training and ongoing support.
- All education data to be disaggregated by gender.
- Regular monitoring of girls' participation and achievement in class.
- Regular monitoring by district, state, national and joint donor committees/missions.

## Lok Jumbish

- Appointment of gender strategies of District Primary Education programmes succeeded in bringing gender issues centre stage in primary education. Given periodic review and monitoring by donors as well as independent researchers, availability of gender disaggregated data could be attributed to these strategies.
- Lok Jumbish demonstrated that availability of women as supervisory staff made a significant impact on the ground.

#### e. Teacher Motivation

#### Especially for women teacher to work in rural and remote areas.

#### Components

- Parateachers in GPS and EGS, as
- Appointment of local person as teacher ensuring that at least 50% parateachers are women.

#### Lok Jumbish

• Creating forum for women teachers to come together and share experience and also support each other and also address problems faced by women teachers working in rural areas.

#### Revelation

- The AS and EGS schemes have reported a positive impact of recruiting local women as teachers. This was made possible because recruitment of contract teachers/ parateachers were done through local bodies.
- Lok Jumbish experience of creating a forum for women teachers had a positive impact on their participation in training programmes. However, this effort could not be sustained in Lok Jumbish beyond 1999 therefore it would be difficult to make any conclusive statement on the efficacy of this strategy.

## f. Title : Encouragement:

#### Component

- Scholarships and merit-linked awards for girls.
- Awards for teachers.
- Awards for villages with 100% enrolment of girls.

# Revelation

• The direct impact of these measures is difficult to as certain, however, teachers and educational administrators say that such awards help boost the morale of students, teachers and community.

# g. Title : Getting older out of school girls back to school. Bridge courses short education.

#### Components

• Bridge courses, residential condensed coursed (Mahila Shikshan Kendra/Balika Shikshan shivir) initiated under the aegies of the Mahila Samakhya).

#### Revelation

This has now been acknowledged as one of the most successful initiatives to get out of school children back into the mainstream.

#### ii) Some case studies conducted in the selected villages

Case I : Nazma Khatun is a drop-out girl. The parents of drop-out girl sharing the saga of agony and destiny. Nazma a tiny and cute girl of Gour Mandal, has stopped going to school. The girls once prancing happily with dreams and smiles, now has become melancholic and untimely "adult" to her the world of school is elite and divine that she has started understanding herself as one of the branded drop-out of her locality. The poverty and ignorance made her parents extremely stoic to her education. She is now participating in gour making in every winter. Dawn used to come to her as a task of assisting her father in collection of date palm juice and gour making, while her mother will be the burning the juice to extract gour, she would be helping her mother in providing fire woods etc. The date palm juice is so sweet and the lost school life is so bitter. Nazma is hanging in between.



Nazma : Hanging between agony and lost dream

## Revelation

- 1. Engagement in economic activity is a snatcher of school lives for many girl children like Nazma.
- 2. Managing drop-out problem should not start by ignoring family life. They should be organic and integrated to all these cognate factors, social, economic and cultural in nature.
- 3. Driving away from the school life has got a serious harsh psychic impact which is very difficult to retrive or replenish for latter of part life.

Case II : Tapasi Mondal – a drop-out girl, away from school, is stiching her jobs now. Tapasi hails from a very poor farm family of Basirhat. Amongst one of three brother and sister she could have continued her education but poverty stood in between. Motivation starts diluting with the scrambling of livelihood Teacher's did not come forward nor the neighbor and thus education remains a bunch of delicious fruits hanging at the unreachable twigs. Hunger drives her join a job. Now she is earning some paltry of income by stiching works. The flames of education is dimming out and jobs her intruding. She is supposed to support her family as well, Tapasi now visited by a untimely adulthood full of responsibility and drudgery.



Tapasi Mondal : a drop-out girl, away from school, stiching her jobs now

# Revelation

Poverty, non supportive family, non-motivating teachers, and needs to hunt job acted as inhibitors to make her a drop-out girl. Alternative education system dose not come up sufficiently support both her education and livelihood. Also, the relative benefits of earning some money has superseded the placid proposal for continue education having a succumb to both poverty and hunger.

Case III : Rabia Khatun - a drop out girl of Class III could have finished her primary education over. She could not promoted herself to upper standard regularly. High frequency of failure and non performance drove her to a domain of frustration and alienation. Now, she is earning breads by making bidi. All the childhood dreams of her are overcast with clouds of disdain and grey realities.

## Revelation

Non supportive teachers, non supportive parents, lack of income and crippling agony have made Rabia a dejected entity on the premises on the school. She also has failed to get motivational support from her pear group. Bidi making has spilled to her as an alternative proposition to place her drop out education and dropped out dream. It is very difficult to take a drop out girls out of the web of rejection she had to assimilate silently and helpless.



Rabia Khatun : The life turns grey and cryptic