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## **Original Article**

## A Study on Early Marriage and its Associates in a Rural Community of West Bengal.

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## Abstract Background:

Early marriage in India is a major barrier to socio-economic development affecting the mother and child health. Community based study on it is a rarity.

## **Objective:**

To identify the prevalence, awareness of *early marriage* [ $\leq$  18 yrs (bride),  $\leq$  21 yrs (groom)] and factors associated among recently married (last 5 years) couples in a block of South 24 Parganas district, West Bengal, India.

## Methods:

Cross sectional observational community based study conducted among 1002 recently married (last 5 years) couples, using 30 cluster sampling in 2013. Data collected by face to face interview, record analysis and observations by house to house visits. Statistical analysis done using Ms-Excel and SPSS (version 16).

## **Results:**

Most of the marriages were unregistered (72.9%) and arranged (90.3%). Majority of the couples were Hindu (85.8%), belonging to General caste (52.9%) and

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socioeconomic status Class IV (46.2% for grooms & 40.2% for brides)[Prasad scale]. Brides were relatively less educated (4.7% graduates vrs. 15.7%)

Early marriages were more in brides (23% vrs. 11%). Primary reasons were poverty, custom and family pressure. It was significantly associated with non-registration, caste (non general), education, social class, manual occupation (groom), more siblings ( $\geq$ 3) and death of any parents. For brides, it was also significantly associated with lower age of 1<sup>st</sup> pregnancy, under nutrition, pallor, stillbirth, caesarean delivery and low birth weight baby.

#### **Conclusions:**

For better maternal and child health, early marriages should be avoided with registration of all marriages.

Key-words: Early marriage, Associates, Rural Community, West Bengal.

#### Introduction:

United Nations Children's Fund (UNICEF) defines *child marriage* as a formal marriage or union before 18 years of age.<sup>1</sup> Child marriage/early marriage is a common practice in many countries around the World; however it is especially prevalent in India, where more than one third of all child brides live.<sup>2</sup> According to UNICEF, 47% of girls are married by 18 years of age, and 18% are married by 15 years of age. <sup>3</sup> The highest rates are seen particularly in the rural areas of Andhra Pradesh, Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh.<sup>4</sup> In West Bengal, it is prevalent particularly in Purulia, Bankura, Birbhum, Coochbihar and Malda districts and Slums across the state. <sup>5</sup>It affects both boys and girls, but girls are far more likely to be forced into a child marriage than boys; however, there is a declining trend in recent years.<sup>5</sup>

Early marriage is said to be related to so many harmful effects such as human right violation, lack of education, poverty, teenage pregnancy, teenage mothers with risk of hypertensive disorders (pre-eclampsia and eclampsia), postpartum hemorrhage, pregnancy related deaths (twice among 15 - 19 years than the girls

between 20 - 24 yrs ).<sup>6,7,8</sup> If girls are married <15 years, they are five times more likely to die during child birth.<sup>9</sup>,<sup>10</sup> Early marriage leads to longer fertility period with more child births, leading to LBW babies, malnutrition, growth retardation, and more infant death.<sup>11,12, 13</sup>

Thus, early marriage has major public health consequences. Community based study on early marriage is less in eastern part of India, particularly in West Bengal. With this background, a community based study on early marriage, its awareness (regarding legal age and perceived causes) and associates (both the determinants and outcomes) was undertaken in Mathurapur -I Block, South 24 Parganas, West Bengal.

#### Materials and methods:

This cross sectional observational community based study was carried out in Mathurapur I Block, South 24 Parganas district, West Bengal during 2012-13. This block, belonging to "Sunderland" area, having an area of 148.3 sq. Km in **163 villages** and an estimated population of 2.04 lac (2011) with population growth rate of 16.0 percent during 1991-2001 decade.<sup>14</sup> It is predominantly an agrarian block (about 90% agricultural land) with literacy of 65.4% (1991; 6+ age group) and more than one third population being scheduled caste. <sup>15,16</sup>

Present study was conducted among recently married living couples (married during last 5 years), estimated to be about 8000, constituted the study universe. Sample size was calculated considering the prevalence of early marriage as **45%** using standard formula (3.84pq/L<sup>2</sup>). <sup>17</sup> Thirty (30) cluster (=village) sampling technique was used to select the clusters (by probability proportional to size; PPS technique) and the married couples within a cluster were selected by simple random sampling. With an allowable error (L) of 10%, design effect 2 and a non response allowance 5%, the final sample size came to be 987 (rounded to 990) and cluster sample size of 33. During the study, there were few households having more than 1

recently married couples and most of them were included on request, leading to the final study subjects as **1002** couples.

A predesigned pretested schedule was used to collect data through FACE TO FACE INTERVIEW (after verbal informed consent emphasizing anonymity and confidentiality), RECORD ANALYSIS [Birth Certificates, Ration Cards, Voter Identity cards (EPIC), School Certificates, immunization card of mother & babies etc as available] and OBSERVATION [*Body weight* was measured (nearest 100 gm) by a regularly calibrated spring weighing machine. *Height* was measured (nearest 0.5cm) by flexible non-stretchable measuring tape against a wall on a flat surface without shoe. *Blood pressure* was measured (nearest 2 mm Hg) by mercury sphygmomanometer and stethoscope in left arm after 30 minutes of rest in sitting position considering disappearance of sound as diastolic pressure point.]

**Variables** in this study were of two types. The first one being **variables considered determining or having a role in early marriage** e.g. *type of marriage* (arranged/love), *registration of marriage*, *dowry exchange in marriage*, *religion, caste, education* of the brides and grooms and their parents, *occupation, social class* (based on per capita income; Prasad's scale, updated for the study year: class I-V), *number of siblings* of brides and grooms and *death of any parents* before marriage. The second one being **variables considered as OUTCOME of early marriage** e.g. (a) For ever pregnant brides (n=737) - *age at first pregnancy, total number of pregnancies, nutritional status* of brides and *pallor* and (b)For mothers having live births (n=615) – number of *live births, caesarean delivery* and *low birth weight* (LBW) babies.

Data collected were analyzed using standard statistical technique and tests of significance. Help of statistical software, PASW/SPSS (statistical package for social sciences, version 16.0, windows compatible) was taken.

**Definitions** used in this study are (1) Early marriage – marriage of a bride before 18 years and groom before 21 years; (2) Ideal age at first pregnancy-taken as  $\geq$  20 years to maximum 30 years; (3) BMI (Body Mass Index) = Body weight

(Kg)/ Height (Mt)<sup>2</sup>; (4) Pallor – Clinical observation of colour of lower palpebral conjunctiva, tongue, nail bed etc. and graded as "present or absent" by the investigator themselves, all MBBS graduates; (5) LBW baby – birth weight of baby documented as less than 2500gm. In absence of suitable documents, confident history by mother was accepted.

#### **Results:**

The major sociodemographic and nutritional characteristics of the couples are depicted in **table 1**. Majority of the marriages were arranged marriage (90.3%), without any registration (72.9%). In 156 (15.6%) marriages, there was dowry exchange. Early marriage for the brides (<18 yrs) were 23.0% whereas for the grooms (<21 yrs) were 10.8%, less than half of the brides. The median age of marriage for grooms and brides were observed to be 24 and 19 years respectively. Brides were both more underweight (BMI<18.5) [23.4% vs. 14.7%] and overweight (BMI $\geq$ 25) [5.2% vs. 1.0%] compared to their grooms. Pallor was very frequent among brides compared to grooms (53.1% vs. 1.7%)

Majority of the grooms were Hindu (85.8%) followed by Muslim (13.8%) belonging to General caste (52.9%) followed by Scheduled caste (34.5%) and OBC (12.2%). Same trend also applies for the brides. *Educationally*, majority of the grooms were educated from class V-VIII (73.4%) with 15.7% graduate whereas for the brides, the figures were 75.5% and 4.7% respectively with 18.7% having education up to class IV. Predominant present *occupation* for the grooms were cultivation (40%) and shop-owner (19.3%) followed by daily labour (15.2%), service (13.1%) and business (12.4%) whereas the brides were predominantly homemakers (930, 92.8%).

Regarding *paternal education,* 92.2% of the groom's fathers were educated from class I-XII with **4.7%** illiterate and 3.1% graduate. Corresponding figures for the brides are 86.2%, **12.5%** and 2.3% respectively. For *maternal education*, **20.8%** of the groom's mothers were illiterate, 3.4% graduate and majority (75.8%) were educated from class I-XII. The corresponding figures for brides were **30.1%**,

0.3% and 73.6% respectively. Thirteen point four (13.4) percent of the groom's *parents died before their marriage* whereas it was 9.4% for brides. Majority of the grooms had 0-4 siblings (98.5%) with only 1.5% having more than 4. For the brides, the figures are 92.6% and 7.4% respectively. Regarding pre-marital *socio-economic status* (Prasad's Scale), majority of the grooms belonged to Class III-V (87.5%) followed by class II(10.3%) and class I (2.2%) while for the brides, the figures are 93%, 6.3% and 0.7% respectively.

Table No - 1									
Distributio	n of Couples ac	cording to differe characteristics (	nt socio demograph N=1002)	ic and nutritional					
<b>Characteris</b>	<u>tics</u>			No (%)					
A. Marriage	a) Regis	tration		272 (27.1)					
	b) Type		Arranged: Love:	905 (90.3) 97 (9.7)					
	c) Dowr	y exchange		156 (15.6)					
B. Age at ma	G R O O MB R I D EB. Age at marriage (yrs)No (%)No (%)								
_	Up to 20	108 (10.8)	Up to 17	231 (23.0)					
	20-25	579 (57.8)	18-24	733 (73.2)					
	26-30	214 (21.3)	25-29	29 (2.9)					
	> 30	101 (10.1)	≥ 30	9 (0.9)					
_	an 24, Mean 24.3, S	d 3.6, Min-17, Max-42]	[Median 19, Mean 19.3, S	Sd 2.5, Min-15, Max-30]					
B. Religion	Hindu	860(85.8)		858 (85.6)					
	Muslim	138(13.8)		138 (13.8)					
	Christian	03(0.3)	01 /	05 (0.5)					
	Others	01(0.1)	01 (	0.1)					
C. Caste	General	530 (52.9)		517 (51.6)					
	OBC	122 (12.2)		113 (11.3)					
	SC	346 (34.5)		369 (36.8)					
	ST	04 (0.4)		03 (0.3)					
C. i) Educati	ion (Self)								
-	Illiterate	6 (0.6)		9 (0.9)					
	Up to class IV	97 (9.7)		187 (18.7)					
	Class V-VIII	286 (28.5)		379 (37.8)					
	Class IX-XII	450 (44.9)		378 (37.7)					
	Graduate	157 (15.7)		47 (4.7)					
	PG	6 (0.6)		2 (0.2)					
ii) Educatio	on (Father)								

Indian Journal of Hygiene and Public Health, Kolkata, Volume 3, Issue 2, Dec 2017

	Illiterate	47 (4.7)	125 (12.5)
	Up to class IV	327 (32.6)	340 (33.9)
	Class V-VIII	416 (41.5)	354 (35.3)
	Class IX-XII	181 (18.1)	160 (16.0)
	Graduate & PG	31 (3.1)	23 (2.3)
iii) Educatio	n (Mother)		
	Illiterate	208 (20.8)	302 (30.1)
	Up to class IV	451 (45.0)	406 (40.5)
	Class V-VIII	219 (21.8)	220 (22.0)
	Class IX-XII	90 (9.0)	71 (7.1)
	Graduate & PG	34 (3.4)	3 (0.3)

## Table No - 1 continued

	GROOM	BRIDE
D. Occupation (present)		
Unemployed/at home/stu	ident 0 (0.0)	943 (94.1)
Daily labour	152 (15.2)	30 (3.0)
Cultivator	401 (40.0)	04 (0.4)
Shop owner	194 (19.3)	06 (0.6)
Service	131 (13.1)	15 (1.5)
Business	124 (12.4)	04 (0.4)
E. Social Class (PCI-Prasad)		
Class I	22 (2.2)	07 (0.7)
Class II	103 (10.3)	63 (6.3)
Class III	251 (25.0)	141 (14.1)
Class IV	463 (46.2)	515 (51.4)
Class V	163 (16.3)	276 (27.5)
F. No of siblings:		
0-2	657 (65.6)	611 (61.0)
3-4	330 (32.9)	317 (31.6)
>4	15 (1.5)	74 (7.4)
F. Parent's Death (before ma	rriage)	
None	868 (86.6)	908 (90.6)
Father	77 (7.7)	62 (6.2)
Mother	43 (4.3)	28 (2.8)
Both	14 (1.4)	04 (0.4)
G. Nutritional Status (BMI)		
Underweight [BMI<18.5]	147 (14.7)	234 (23.4)
Normal [BMI 18.5-24.99]	845 (84.3)	716 (71.4)

Indian Journal of Hygiene and Public Health, Kolkata, Volume 3, Issue 2, Dec 2017

#### Das S et al : A Study on Early Marriage

	Overweight [BMI ≥25]	10 (1.0)	52 (5.2)
H. Pallor		17 (1.7)	532 (53.1)

The present obstetric and newborn related characteristics of the BRIDES has been shown in **table 2**. Two hundred and sixty five brides (26.7%) were nonpregnant and 737 (73.6%) were ever pregnant. Prevalence of early pregnancy (1<sup>st</sup> pregnancy < 20 years) was **38.5%**.Total number of pregnancies were 971 among 737 ever pregnant brides; 521 (70.7%) had one pregnancy, 198 (26.8%) had two and 18 (2.5%) had three. The proportion of pregnancy outcomes were current pregnancy (140, 14.5%), abortions (48, 4.9%), IUFD (7, 0.7%) and live births (776, 79.9%).There was no live births among 387 (38.6%) brides with majority having one (464, 46.3%) and two (141, 14.1%) children. Only 10 (1.0%) had three children. Among 776 live births, majority (677, 87.2%) were delivered normally; rest (99, 12.8%) being caesarean section. Low birth weight prevalence was 160 **(20.6%)** 

Table No - 2						
Distribution of Brides according to different obstetric and newborn related variables (N=1002)						
<u>Variables</u> :			No (%)			
A. i) Pregnancy:	Non pregn Ever pregr		265 (26.4) 737 (73.6)			
ii) Age (yrs) at first pro [n=737]	egnancy	Up to 19 20-30 > 30	284 (38.5) 446 (60.5) 7 (1.0)			
iii) No of pregnancy [n	=737]	One Two Three <b>[total pregnanc</b>	521 (70.7) 198 (26.8) 18 (2.5) ies = 971]			
iv) Pregnancy Outcom	<b>e</b> [n=971]	Currently pregnant Live birth	140 (14.5) 776 (79.9)			

	Abortion	48 (4.9)	
	IUFD <sup>\$</sup>	07 (0.7)	
B. i) Live Births	Nil	387 (38.6)	
	One	464 (46.3)	
	Two	141 (14.1)	
	Three	10 (1.0)	
	[ total live	births = 776]	
ii) Mode of delivery [ n= 776]	Normal	677 (87.2)	
	CS	99 (12.8)	
<b>iii) LBW baby</b> [ n= 776]		162 (20.9)	

\$ IUFD = Intra uterine foetal death.

Grooms had better knowledge regarding legal age of marriage than their bride counterpart (**table 3**). For male (21 yrs), 74.2% grooms had correct knowledge compared to 68.4% in brides (p=0.004); for female (18 yrs), the figures were 86.8% and 83.7% respectively (p=0.051) Regarding ideal age of women for 1<sup>st</sup> pregnancy (20-30 yrs), grooms had slightly better knowledge (60.6% vs. 58.5%) but not statistically significant (p=0.339)

Among the early married grooms (married < 21 yrs; **n=108**), 89 (82.4%) knew/believed that they were married early. Major reasons cited by them [*multiple responses*] were **custom** (33.7%), family pressure (30.3%), love affair (23.6%), parents' death/illness (21.3%) and poverty (16.9%). For the early married brides (married < 18 yrs; **n=231**), 205(88.7%) knew/believed it with major cited reasons [*multiple responses*] were **poverty** (41.5%), custom (24.9%), family pressure (19.0%), poor academic performance (14.1%), love affair (13.7%) and parents' death/illness/remarriage (10.2%).

Among the early pregnant brides (1<sup>st</sup> pregnancy < 20 years; n=284), 215 (75.7%) knew/believed that they became pregnant early. Major reasons (*multiple responses*) cited were **ignorance/irregular use/failure of contraceptives** (66.9%) and family (husband/in law) pressure (31.6%).

#### Table No - 3

Distribution of the couples accordin regarding marriage and pregnancy	-	rrect knowledge and	d practice
<u>Variables</u> :	G R O O N No (%)	ИВ	R I D E N0(%)
A. i) Knows legal age of marriage			
Male (21 yrs)	743 (74.2)		685 (68.4)
Female (18 yrs)	870 (86.8)		839 (83.7)
ii) Knows/believes their marriage	[ n = 108	] [	n = 231 ]
was early	89 (82.4)		205 (88.7)
iii) <b>Reasons for early marriage</b> [multiple response]	[ n = 89 ]	[ n	= 205 ]
Custom	30 (33.7)	Poverty	85 (41.5)
Family pressure	27 (30.3)	Custom	51 (24.9)
Love affair	21 (23.6)	Family pressure	39 (19.0)
Parents' death/illness	19 (21.3)	Poor/Loss of study	29 (14.1)
Poverty	15 (16.8)	Love affair	28 (13.7)
Others #	25 (28.1)	remarriage	21 (10.2)
		Others##	48 (23.4)
B. i)Knows ideal age of women for 1 <sup>st</sup> pregnancy (20-30 yrs)	607 (60.6)		586 (58.5)
ii) Knows/believes their 1 <sup>st</sup> pregnancy was early (brides with 1 <sup>st</sup> pregnancy		4)	215 (75.7)
iii) Reasons for early pregnancy [ n =	215 ]		
[multiple response]			
Contraceptive ignorance/irre	-	e	144 (66.9)
Pressure (husband/in law/fa	mily)		68 (31.6)
Early marriage			18 (8.4)
Tradition			11 (5.1)
Others <sup>@</sup>			76 (35.3)

# Others include: poor/stopped education (3), elder sibling (1), non specific (21)

## Others include: elder sibling (12), proper groom (10), non specific (26)

@ Others include: accidental (4), loves baby/1<sup>st</sup> baby (2), non specific (70)

Association of early marriage with pertinent variables are depicted in **table 4**, **5&6**. Early marriage was observed to be significantly associated with unregistered and love marriage with no dowry exchange (**table-4**). Marriages in non Hindu religion (mainly Muslim) was observed to be earlier than those of Hindus but not statistically significant. Caste (non general caste) was significantly associated with early marriages. (**table-5**).

Poor education of the brides, grooms and their parents were significantly associated with early marriages. (**table-5**). Similarly, poor social class was also significantly associated. Regarding occupation, picture is different for grooms and brides. For the grooms, *manual occupations*, often considered 'low' in the society, was observed to be significantly associated with early marriage; whereas for the brides, having *any earning occupation* had more early marriages but not statistically significant. (**table-5**).

Two other factors, number of siblings ( $\geq$ 3) and death of any parents were significantly associated with early marriage, both for brides and grooms (**table-5**).

Table-4									
Association of early marriage with marriage related variables. $(n=1002)$									
<u>Variables</u>	Variables Number EARLY MARRIAGE AMONG								
		Bride No (%)	Significance <i>X</i> ²/p	Groom No (%)	Significance $\chi^2/p$				
1. Type of ma	rriage								
Arrang	ed 905	181 (20)	49.1/	74 (8.2)	47.38/				
Love	97	50 (51.5)	0.000	34 (35.1)	0.000				
2. Registration	n of marriage								
Yes	272	37 (13.6)	18.8/	07 (2.6)	18.07/				
No	730	194 (26.6)	0.000	101 (13.8)	0.000				
3. Dowry exch	3. Dowry exchange in marriage								
Yes	156	26 (16.7)	4.25/	08 (5.1)	4.24/				
No	846	205 (24.2)	0.039	100 (11.8)	0.039				

Table-5								
Associat	Association of early marriage with socio-demographic variables. (n=1002)							
Variables	G	R	0	0	М	BRI	D	E

Indian Journal of Hygiene and Public Health, Kolkata, Volume 3, Issue 2, Dec 2017 Page No. 18

	No	Early Marriage No (%)	Significance $\chi^2/p$	No	Early Marriage No (%)	Significance X²/p
1. Religion						
Hindu	860	88 (10.2)	1.88/	858	190 (22.1)	2.78/
Others	142	20 (14.0)	0.17	144	41 (28.4)	0.095
2. Caste						
General	530	39 (7.4)	12.94/	517	96 (18.6)	12.59/
Others	472	69 (14.6)	0.000	485	135 (27.8)	0.001
3 (a) Education	: Self					
Up to class IV	103	24 (23.3)	34.49/	196	68 (34.6)	40.0/
Class V-XII	736	83 (11.2)	0.000	757	136 (17.9)	0.000
Graduate & PG	163	1 (0.6)		49	0 (0.0)	
(b) Education: I	ather					
Up to class IV	374	64 (17.1)	22.51/	465	153 (32.9)	47.91/
Class V-XII	597	44 (7.3)	0.000	514	76 (13.2)	0.000
Graduate & PG	31	00 (0.0)		23	02 (8.6)	
(c) Education:	Mothe	er				
Up to class IV	659	94 (14.2)	24.54/	708	192 (27.1)	22.7/
Class V-XII	309	14 (4.5)	0.000	291	39 (13.4)	0.000
Graduate & PG	31	00 (0.0)		3	00 (0.0)	
4. Occupation						
Daily labour	152	24 (15.8)	38.92/ Unemploy	/ed/ 943	211 (22.4)	3.53/
Cultivator	401	62 (15.5)	0.000 at home	-		0.060
Shop-owner	194	15 (7.7)	student	:		
Service	131	2 (1.5)	Any earnir	ng 59	20 (33.8)	
Business	124	5 (4.0)	occupati	5	()	
5. Social Class:						
I	•	0 (0.0)	8.54/	7	00 (0.0)	15.14/
II & II	22 354	28 (7.9)	0.014	, 204	28 (13.7)	0.001
IV & V	626	80 (12.7)	5101 1	791	203 (25.6)	0.001
6. No of sibling		()			()	
0-2	<b>5</b> 657	55 (8.4)	11.49/	611	123 (20.1)	7.54/
≥ 3	345	53 (15.3)	0.001	391	108 (27.6)	
<b>7. Death of par</b>		55 (15.5)	0.001	551	100 (27.0)	0.000
No	868	81 (9.3)	13.02/	908	194 (21.4)	14.55/
Yes (any)		27 (20.1)	0.000	94	37 (39.3)	0.000

Association of early marriage with few outcome variables are depicted in **table-6.** It shows that early marriages among ever pregnant brides (n=737) were significantly associated with lower age at first pregnancy, occurrence of still birth, under nutrition and pallor. Abortion was more among early married brides (8.8% vs 5.9%) but not statistically significant. *No association was observed regarding total* 

*number of pregnancies* and obesity. Similarly early marriages among mothers (n=615) were significantly associated with LBW baby and caesarean delivery but no association was observed for *total number of live births*.

	1	Fable 6		
	-	riage with "Outcom		
[Fi Variable	igures in parentl Early Marriage	heses indicate percent Normal Marriage	<u>Total</u> Sig	<u>inificance</u> ², Z , t/p
A. For <b>ever pregnant Bride</b> (n=737)	es: (n=160)	(n=577)	(n=737)	
1. Age at first Pregnancy (Yrs: mean ± sd)	17.70 ±0.96	21.32 ±2.354	20.54 ±2.59	19.07/ 0.000
2. Total number of pregnanc (mean ± sd)	ies 1.313±0.52	1.319 ±0.51	1.318 ±0.51	0.139/ 0.89
3. Abortion	14 (8.8)	34 (5.9)	48 (6.5)	1.68 / 0.195
4. Still birth	4 (2.5)	3 (0.51)	7 (0.91)	5.22 / 0.022
5. (a) Under nutrition (BMI up to 18.49)	49(30.6)	90(15.6)	139(18.9)	18.4/ 0.000
(b) Obesity (BMI $\ge$ 25)	5(3.1)	21(3.6)	26(3.5)	0.097/ 0.755
6. Pallor	123(76.9)	290(50.3)	413(56.0)	36.01/ 0.000
B. For <b>Mothers</b> : (N=615)	[n=126]	[n=489]	[n=615]	
No of live births (mean ± sd)	1.21 ±0.449	1.27 ±0.482	1.26 ±0.476	1.26/ 0.209
C. For <b>Babies</b> :(N=776)	[ n=153]	[n=623]	[n=776]	
1. Caesarean delivery	29 (18.9)	70 (11.2)	99 (12.8)	6.57/ 0.01
2. Low birth weight (LBW) Baby	65 (42.4)	95 (15.2)	160 (20.6)	55.6 / 0.000

#### **Discussion:**

Present study observed the prevalence of early marriage to be **23.0**% for the brides (<18 year) and **10.8%** for the grooms (<21 year). These figures are comparatively much lower than the respective national and state figures (about 40-50%) obtained from various places in India.<sup>18,19, 20, 21</sup> These may be attributed to relatively higher educational status of the brides and grooms (illiteracy 0.9% and 0.6% respectively).The median age of marriage for grooms and brides in this study was observed to be24 and 19 years respectively. These figures are relatively higher than similar figure obtained from Karnataka and the likely reasons may be as above.<sup>20</sup>

Majority (90.3%) of marriages in present study was arranged, as per traditional Indian custom which matches with the reported preferences (74-90%) of Indians for arranged marriage and higher than the corresponding reported figure (58%) of West Bengal. <sup>22,23</sup>

About 16% of the marriages in this study had exchange of dowry, little lower than that observed (23%) for rural areas by Jeyaseelan V et all <sup>24</sup> However, much higher figure of 71% was also observed in a study in six states of India (Andhra Pradesh, Bihar, Jharkhand, Maharashtra, Rajasthan, and Tamil Nadu) <sup>25</sup>

Present study observed association of early marriages with unregistered and love marriage. It is likely that there shall be more early marriages among unregistered ones and none among registered ones but even among registered marriages, 13.6% of brides and 2.6% of the grooms had early marriages indicating the fact that there is a gray area regarding the age of the brides and grooms during registration.

Apparently, with an 'urban' mindset, it is difficult to digest the association of early marriage with 'love marriage' but in rural setting, such love marriages are often the result of teenage infatuations leading to early marriages with inevitable end of the academic life of the bride and often that of groom also. Regarding dowry, it is an established system in Indian society that its amount is more for aged brides compared to younger ones, leading to such association.

Present study reveals that early marriage is significantly associated with non general caste and lower levels of educations of grooms, brides and their parents. These findings are similar to those observed from different sources.<sup>19,21</sup> However, no association was observed between early marriage and religion in contrast to the observations in Bangladesh and Tamilnadu.<sup>21, 19</sup>

Any "earning" bride had more early marriages (although not statistically significant) which may be viewed as their more demand in present day money oriented society.

Early marriages among ever pregnant brides were significantly associated with lower age at first pregnancy (17.7 yrs vs 21.3 yrs; p=0.000) which is quite obvious in Indian community with universality of childbirth. Early marriages among mothers (n=615) were significantly associated with LBW baby and caesarean delivery *but no association was observed for total number of live births*. Comparable literatures are not readily available.

Non association of early marriage with total number of pregnancies and live births in this study apparently seems contradictory to common logic but it is for the fact that both early and normal married women were studied for *equal periods* with equal risk of pregnancy and childbirth to both.

Regarding the stated reasons of early marriage among grooms, traditional customs, family pressure, love affair, parents' deaths/illness and poverty were the main reasons. The same for the brides were poverty, traditional customs, family pressure, poor/loss of study, love affair and parents' death/illness/remarriage. These findings agree with the observations among mothers attending a PHC under Kempegooda Institute of Medical Sciences, Bangalore.<sup>26</sup>

#### **Conclusion and Recommendation:**

Present study shows the prevalence, awareness and the associates of early marriage in a rural community (block) of West Bengal. In view of its association with harmful biological and obstetric factors among brides, there should be whole hearted efforts to reduce/eliminate early marriage from the society as a whole. Existing legislation(s) for age of marriage should be strictly followed along with compulsory registration of all marriages. A pre-marital counselling initiative for would-be brides and grooms to make them aware of the harmful outcomes of early marriage may be beneficial including inclusion of this topic in formal academic curriculum.

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