THE IMPACT OF KIN AND RESIDENCE ON FEMALE FERTILITY IN NORTH INDIAN TRIBES IN THE STATE OF JHARKHAND

Shalini Kumari Singh and G. K. Kshatriya

ABSTRACT

The intercommunication between kinship system and demographic outcomes serves as wealthiest areas for theoretical and substantive work in anthropological demography. Changes in kin networks help in explaining the changing reproductive outcomes. The demographic individual ages but does not develop once born but is instead defined by series of demographic events namely marriage, childbearing and death. Individuals grow and differentiate with their converging and diverging network of kins. Countries on the road to modernization experiences kin breakdown and a strong adherence with non-relatives affecting economic decisions surrounding parenthood. Paternal kin and particularly maternal kin play an important role in shaping the reproductive preferences and behaviour among young adults. However not much is known about influence of intra-family relationship on reproductive decisions. The present paper investigates the impact of kin on female fertility including breastfeeding duration, institutional delivery and contraceptive uptake. A difference in the reproductive output of kin can be seen for women than the woman does for herself. A cross sectional study based on 1000 ever married Santal and Mahli women in the age group of 15-49 years was conducted in fifteen villages of Purbi Singhbhum District, Jharkhand through random selection of households. Living with kin influences a delay in contraceptive uptake, early marriage of couples and shortening of breastfeeding duration. The breastfeeding duration was seen shorter for couples who desired more children. Women in neolocal residence have greater autonomy in their decision making than women marrying into joint family system's household are in a relatively weak positions in terms of making decisions for herself and her child.

Keywords: Kin, Neolocal, Virilocal, Uxorilocal, Fertility preference.

INTRODUCTION

In developing world the fertility decisions occur within a specific social context. Fertility decisions such as spacing births, stopping child bearing and practicing

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contraception must be understood in the broader context. These decisions made by women in a social environment and kinship network is said to be influenced through pathways less easily measured than exchanges (Bereczkei, 1998). For instance, kin exert lifelong influences on individual preferences for fertility timing and family size (Sear and Coale, 2011). Given the modern rise of contraception use and commensurate decline in undesired fertility, individual preferences for fertility outcomes may play an increasingly important role in fertility trends (Madhavan et al, 2003). The study of nuclear and more complex types of family is beset by definitional problems, and variation in terms used by writers explains the looseness in the terminology so far employed. Hereafter, the term "nuclear family", as employed in Caldwell et al. (1982), which is an adaption from Le Play, 1855, will mean a conjugal couple with their unmarried children. A "stem family" will describe two married couples in different generations-in our area almost invariably where the older couple are the parents of the younger husband. A "joint family" refers to married siblings living together in our area almost always brothers; and a "jointstem" family is the classical full pyramid where the older couple have with them more than one of their married children and usually grand-children as well. Any of these types can be "ex- tended" if other persons, usually relatives, live with them. Virilocal and Uxorilocal residence indicates whether the domicile shared by the married couple is with the family of the husband or with the kin of the wife whereas in neolocal residence a newly married couple establishes their home independently of both sets of relatives (Fox, 1967). Families may also exert explicit control over courtship, marriage timing, sexual behaviours and other proximate determinants to fertility (Caldwell et al., 1982). Without denying the importance of household as a centre for ordering social relations and activities, there are two different norms that influence fertility dynamics and fertility decision making (Bankole and Singh, 1996). Anthropological demographers have more recently examined the role of kinship systems and the family on demographic processes. In examining the social world demographers have tended to focus on the household as the most important arena of social relations. Households are conceptualized as a dynamic social group defined by permeable boundaries embedded in a larger social context which is captured by natal and conjugal support networks. Many studies highlights that having a larger number of kin in her social network reduces her age at birth and also influences the decision to have a subsequent birth. Cultures based on clans and powerful kinship system networks encourage high fertility (Lorimer, 1954). Two proximate mechanisms namely kin assistance and priming influence a female transition to second birth (Sear and Mace, 2008). Kin assistance can be imparted in two ways, one is financial and other is childcare whereas priming requires a constant communication between the relatives. A substantial literature documents that homogeneous and dense networks exert pressure on family members to follow a normative pattern of behaviour (Birkel and Reppuci, 1971). These tight boundaries easily control and assist individuals in distress conditions whereas it also punishes those who transgress it. For instance women's social interaction will influence her capacity to use contraceptives and follow traditional

norms, if it is obligatory on her part. Social networks consist of social gate keepers such as mothers-in-law, mothers and husbands prominently promote in conserving the fertility norms (Gibson and Mace, 2005). The study contributes to a prior research on the role of residence pattern, presence of mother in law and any kin in the household in shaping the reproductive decision- making. In particular the main objective of the study is to examine the association between residence type and contraceptive use among the ever married women. The influence of institutional delivery and breastfeeding duration among currently married women in the presence of mother in law and any kin in the household is also observed in the present study.

MATERIALS AND METHODS

Data was collected through interview schedule method from 500 ever married Mahli women and 500 Santal women in the age group of 15-49 years from fifteen villages of Golmuri block, Purbi Singhbhum district, Jharkhand. The interview schedule contained questions regarding which set of parents the couple resided with after marriage. In the analysis uxorilocal and virilocal residence is used to refer to postmarital residence with the wife's or husband's parents, respectively; and neolocal refer to couples that lived with neither set of parents after marriage. Information on variables like age at marriage, age at first birth, mean number of child born, contraceptive use, education, socio economic indicators and employment history were also collected. Kin availability as an independent variable was measured in different ways for uxorilocal and virilocal residence. For multiple regressions, we created categorical variables for living with each set of kin after marriage, separate variables for husband's kin and wife's kin. 0 for women who did not live with either set of kin, 0=neolocal residence, 1 for women who lived in husband's family, 1=virilocal residence and 2 for those women who lived uxorilocally. Effect on female fertility is assessed by contraceptive use, institutional delivery and duration of breastfeeding among Santal and Mahli women. Thus, the dependent variable taken into consideration is contraceptive use , 0= None, 1=traditional method, 2= modern method, duration of breast feeding, 0= less than 6 months, 1= between 6 months and one year, 2= more than 1 year and delivery among women who had birth in last three years, 0= home/ no institutional delivery, 1= institutional delivery/hospital. The scale used to assess the socio economic status was Udai Pareek SES scale which consisted of 9, Caste, occupation, Education, Social Participation, Land, House, Farm Power, Material Possession and Family main items. These items significantly indicated socio economic status of rural families.

RESULTS

Table 1 shows the sample characteristics of 500 ever married Santal and Mahli women of which 27.8% of Santal women and 21.6% of Mahli women were currently married. 57.6% and 59.2% of Santal and Mahli, respectively, women had no

education. The median age at first marriage among Santal and Mahli women was 16 years and 17 years, respectively, which partly explains further the high average number of children per women, i.e., 4.51 children per women among Santal women and 3.24 children among Mahli women.

The household and network characteristic of ever married Santal and Mahli women is shown in Table 2. The median number of household member is 5 among Santal and 4 among Mahli women. The mean socio-economic status as measured by Udai Pareek SES scale is lower middle class for Santal , SES score =13.89 and lower class for Mahli, SES score =12.83. O the Santal women, 26 % reside in Joint or extended family and 74 % of Santal women live in nuclear family. Further 37 % and 63 % of Mahli women reside in Joint and nuclear family, respectively. 24 % and 18 % of Santal women resided with mother-in-law and kin whereas 31 % of Mahli women resided with their mother-in-law. Presence of conjugal kin (14.6 % in Santal household and 16.2 % in Mahli household) in the household of women of both the tribes is largest when compared to natal kins (3.4 % in Santal household and 4.8 % in Mahli household).

The type of residence among both the tribes is shown in Figure 1. Type of residence is in the sample includes neolocal residence (staying with husband only), uxorilocal residence (staying with wife's parent) and virilocal residence (staying with husband's parent). The figure shows that 74.60% of Santal women and 76.40 percentage of Mahli women stayed neolocally, 3% of santal women and 3.60% of Mahli women stayed uxorilocally and 53.2% of women stayed virilocally. By observing the type of residence we can deduce that the dataset follows and is much more inclined to patrilocal residence than matrilocal residence.

Table 3 and Table 4 present the bivariate association between type of residence, presence of mother-in-law and presence of any kin with the contraceptive use among

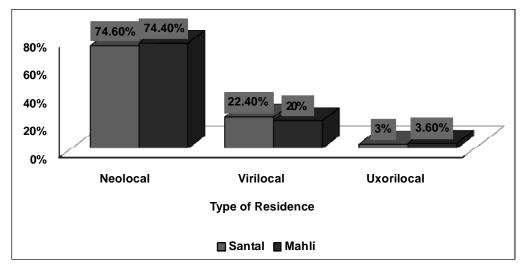


Figure 1: Type of residence among ever married Santal and Mahli women

Santal and Mahli women. It is clear from the tables that 78% of Mahli women and 75.2% of Santal women used modern contraceptive method whereas 20.8% of Santal women and 21% of Mahli women did not use any contraceptive method. It can be clearly seen that 72.4% of Santal women and 70% of Mahli used modern contraceptive method in the absence of any kin in their household. In particular Santal (F=18.50***) and Mahli women (F=11.23***) living with their mother-in-law were significantly more likely to not use contraceptive methods.

The F values are statistically non significant for contraceptive use with respect to presence of any kin in the household. A statistical significant difference in contraceptive use was found between the kin availability in neolocal, virilocal and uxorilocal residence among Santal women (F= 11.92***) and Mahli women (F=9.6**).

Table 5 presents the bivariate association between household type and presence and absence of kin and mother-in-law and institutional delivery. Among 157 currently married women of both the tribes, institutional delivery in last three years is high for Santal women (61.2%) than Mahli women (38.6%). Significant differences were observed by residence type and presence of mother in law in their respective households. The institutional delivery was high for women residing with her husband, which was 50.9% among Santal women and 35.6% among Mahli women. 12.7% of Santal women and 9.55% of Mahli women had institutional delivery in presence of mother-in-law. The F values are statistically significant for institutional delivery for kin availability among Santal women (F= 31.8*) and Mahli women (F= 44.6**).

Table 6 presents the bivariate association between residence type and breastfeeding duration among currently married Santal and Mahli women. Among 247 currently married women out of 1000 ever married women, 80 percentage and 20 percentage of currently married women had a breastfeeding duration of more than 6 months and less than 6 months respectively. A significant difference in the mean was observed by residence type, presence of mother in law and presence of kin in a household.

In particular, women living with her mother-in-law and kin had less duration for breastfeeding whereas 96.4 % of women residing with her husband only had a breastfeeding duration of more than 6 months. The F values were statistically significant for breastfeeding duration for residence type among Santal women (F= 36.2*) and Mahli women (F= 24.6**). The advent of modern contraceptive intake has made limiting reproduction an easy task. As an alternative way of testing whether kin and residence influence contraceptive intake, multivariate logistic regression was used. Table 7 presents the effect of independent variable type of residence, presence of mother-in-law and kin on dependent variable contraceptive use with odds ratio and 95% confidence interval. The results of the multivariate logistic regression shows that neolocal residence significantly increases the likelihood of contraceptive use among the women (O.R.-4.5***; CI-3.9,5.1). Women staying in husband's natal home were three times (O.R.-3.6**; CI-2.9,4.2) more likely

to use contraceptive method than women staying in her natal home after marriage. Women staying in her natal home, i.e. uxorilocal residence, had no significant effect on contraceptive use. In particular, women living with mother-in-law are significantly more likely to use contraceptives than women residing with kin. Presence of kin in residence has no significant effect on use of contraceptives among Santal and Mahli women.

Breastfeeding duration is often correlated with birth interval length among natural fertility (Ellison, 2001). One such route by which kin exerts an impact on women's birth interval is by cessation of breastfeeding. Kin may help directly or indirectly influence the breastfeeding duration by their presence in the household. Early weaned child is often taken care by other kin members more specifically, the role of mother-in-law was much adamant in this case. Table 8 presents the results of multivariate logistic regression odds ratios and 95% confidence intervals for the analysis of the effect of kin and mother-in-law presence on breastfeeding duration and institutional delivery among the currently married women Santal and Mahli women. The median length of breastfeeding was divided into less than 6 months and more than 6 months. The results of the multivariate logistic regression showed that women staying neolocally were twice more likely to have their breastfeeding duration as more than 6 months (O.R.-2.24**; CI-2.08, 2.91). Presence of mother-inlaw and any kin in the household had no significant effect on breastfeeding duration. Women staying with their husband only were three times more likely to go for institutional delivery than women staying with her mother-in-law (O.R.-3.29**; C.I.-2.98, 3.56).

DISCUSSION

The households in the study typically belonged to rural Indian society in which patrilines formed by males were the backbone of society. Network features were seen to have an important association with fertility outcome, in the absence of household effects, women's social world clearly transcended the domestic space. The traditional kinship institution played a pivotal role in determining the bargaining power of women, were her status and identity were significantly defined and correlated with her postnuptial residence (Miller, 1981; Agarwal, 1994). Anthropologists affirmed that this bargaining power was further influenced by the restriction on the alliance formation within and across various kin groups and families. Women staying away from their natal home tend to have a less support of their natal family when residence was virilocal than uxorilocal (Fox, 1967). A study conducted in India involving five generations of a family found that members in extended family were intimately involved in influencing couple's decision regarding number of children (Kara et al., 1997). Kin network had a notable effect on contraceptive use on fertility of women. The study findings illustrated the prevalence of modern family planning use being lowest among women residing in virilocal residence than neolocal residence. Other factors like age, number of living sons and female education, absence of mothers-in-law also contributed to the use

of modern family planning. Many qualitative studies pointed towards the hinderance of mother in law in using modern contraceptive method and encouraging traditional method of contraception. Women living with husband only were significantly more likely to have an institutional delivery and a prolonged duration of breastfeeding than women living either with mother-in-law or any kin. Recent studies demonstrated that women living in multigenerational households tend to have a large family size than those living in nuclear households (Kadir et al, 2003; Avan et al., 2005 and McCleary et al., 2012). Extended families usually included older family members, who were a strong followers of cultural traditions believing in larger family size as a necessity in continuation of family line. Reproductive decisions of termination of breastfeeding at an early duration as compared to women living in nuclear household is further said to be influenced by joint family network (Saika et al., 2009 and McCleary et al., 2012). Other studies from South Asia have demonstrated an influential role of mothers-in-law in altering the fertility decisions including the timing of childbearing, use of FP, ideal number of children. Notably, the influence of the mother-in-law may differ by whether the couple lives with the mother-in-law in the same household or not. A study conducted by Saika and Singh used nationally representative data from India and showed that women living in joint households are less likely to have an institutional delivery than women living in nuclear household. Further studies have indicated a key role of mother-in-law after the delivery of first child. Janani Suraksha Yojana, JSY or safe motherhood Scheme launched by Government of India in 2005 influenced young mothers to have institutional delivery by crediting them with an extra cash rather than influencing them by cultural norms to deliver at home traditionally. Women from the present studied area were significantly more likely to have an institutional delivery when staying with their husband only rather than residing with their inlaw. There are several limitations to the present study which warrants mention. First and foremost being the data collection for the present study was cross sectional and thus many kin effects on fertility outcomes were underestimated. For an example, mother-in-law or kin present in the household could be a due to a recent birth. Secondly determination of post nuptial residence was based on household roaster which indicated the relationship between all members and the head of the household. Finally, no data was collected on the list of kin as support givers and degree of actual support provided by them. To conclude, women staying in neolocal residence were more subjected to institutional delivery, elongated breastfeeding duration and modern contraceptive use which further altered their fertility. Presence of mother in law or any other kin in the household had a less significant effect on female fertility.

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Table 1: Descriptive characteristics of Santal and Mahli women

Women	Sa	ntal	Mahli		
	Number	Percentage	Number	Percentage	
Ever married women	500	100	500	100	
Currently married women	139	27.8	108	21.6	
Illiterates	288	57.6	296	59.2	
Literates	212	42.4	204	40.8	
Younger than 30 years	296	59.2	295	59	
Median age at 1st marriage (in years)	1	16	1	7	
Median age at 1st birth (in years)	18	19			
Average number of children per women	4.51	3.24			

Table 2: Household and network characteristics of ever married women

Characteristics	Saı	ıtal	Mahli		
	Number	Percentage	Number	Percentage	
Median no.of household members	į	5	4	1	
Mean asset score	13.89		12.83		
% living in nuclear	373	74	312	63	
% living in joint/extended family	127	26	188	37	
Presence of mother in law	120	24	154	31	
Presence of other kin	90	18	105	21	
Natal	17	3.4	24	4.8	
Conjugal	73	14.6	81	16.2	

Table 3: Use of contraceptive methods by Santal women

Characteristics	Modern		Tradi	Traditional		None	
	Number	Percentage	Number	Percentage	Number	Percenatge	F
All women	376	75.2	22	4.4	102	20.4	
Presence of kin							
No	362	72.4	1	0.2	4	0.8	0.304
Yes	14	2.8	21	4.2	97	19.4	
Presence of mother-in-la	aw						
No	360	72	8	1.6	15	3	18.50***
Yes	16	3.2	14	2.8	86	17.2	
Type of Residence							
Neolocal	336	67.2	6	1.2	20	4	11.92***
Virilocal	25	5	15	3	78	15.6	
Uxorilocal	15	3	1	0.2	4	0.8	

N = 500

^{***}p<0.001 **p<0.01 *p<0.05

Table 4: Use of contraceptive method by Mahli Women

Characteristics	Modern		Traditional		None		
	Number	%	Number	%	Number	%	F
All women	390	78	5	1	105	21	
Presence of kin							
No	350	70	1	0.2	14	2.8	1.058
Yes	40	8	4	0.8	91	18.2	
Presence of mother-in	ı-law						
No	348	69.6	2	0.4	24	4.8	11.23***
Yes	42	8.4	3	0.6	81	16.2	
Type of Residence							
Neolocal	360	72	0	0	17	3.4	9.6***
Virilocal	18	3.6	3	0.6	84	16.8	
Uxorilocal	12	2.4	2	0.4	4	0.8	

N = 500

Table 5: Institutional delivery among Santal and Mahli women who had birth in last three years

Characteristics	Institutio	nal Delivery	F value
	Number	Percentage	
ALL WOMEN	157	100%	
Presence of kin			
No	148	94.2	
Yes	9	5.8	8
Presence of mother-in-law			
No	110	70	
Yes	47	30	13.1*
Type of Residence			
Neolocal	136	86.6	
Virilocal	17	10.8	
Uxorilocal	4	3.6	20.2***
SANTAL WOMEN	97	61.8	
Presence of kin			
No	90	57.3	
Yes	7	4.4	3.7
Presence of mother-in-law			
No	70	44.5	
Yes	20	12.7	1.1
Type of Residence			
Neolocal	80	50.9	
Virilocal	15	9.5	
Uxorilocal	2	1.2	31.8*
MAHLI WOMEN	60	38.2	
Presence of kin			
No	58	36.9	
Yes	2	1.2	4.8
Presence of mother-in-law			
No	45	28.6	
Yes	15	95.5	2.51*
Type of Residence			
Neolocal	56	35.6	
Virilocal	3	1.9	
Uxorilocal	1	0.06	44.6**

N=157

^{***} p<0.001; ** p<0.01; * p<0.05

^{***}p<0.001; **p<0.01; *p<0.05

Table 6
Breastfeeding duration among currently married Santal and Mahli women

Characteristics	Breastfeeding Duration					
	Less that	n 6 months	More that	F value		
	Number	Percentage	Number	Percentage		
ALL WOMEN	39	100%	198	100%		
Presence of kin					15*	
No	7	17.9	144	72.7		
Yes	32	82.1	54	27.3		
Presence of mother-in-law					23.12***	
No	11	28.2	8	4		
Yes	28	71.8	190	96		
Type of Residence					25.5**	
Neolocal	13	33.3	191	96.4		
Virilocal	22	53.9	5	2.5		
Uxorilocal	5	12.8	2	1.9		
SANTAL WOMEN	14	35.8	143	72.2		
Presence of kin					38*	
No	6	15.3	97	49		
Yes	8	20.5	46	23.2		
Presence of mother-in-law					13.2	
No	3	7.6	43	21.7		
Yes	11	28.2	100	50.5		
Type of Residence					36.2**	
Neolocal	2	5.1	106	53.5		
Virilocal	8	20.5	34	17.2		
Uxorilocal	4	10.2	3	1.5		
MAHLI WOMEN	25	64	55	27.7		
Presence of kin					24*	
No	8	20.5	37	18.6		
Yes	17	43.5	18	9.1		
Presence of mother-in-law					18***	
No	4	10.2	15	7.7		
Yes	21	53.8	40	20		
Type of Residence					24.6**	
Neolocal	5	12.8	37	18.1		
Virilocal	16	41	14	7		
Uxorilocal	4	10.2	4	2		

N = 247
***p<0.001
**p<0.01
*p<0.05

Table 7
Multivariate logistic regression, odds ratio with 95 % confidence Interval of use of contraceptive method among ever married women

Dependent Variable→	Contrace	otive use
Independent variable ↓	Odds ratio	95% C.I.
Type of Residence (Reference Category: Uxorilocal)		
Virilocal	3.6**	(2.9, 4.2)
Neolocal	4.5***	(3.9, 5.1)
Presence of Mother-in-law (Reference category: Not living with mother-in-law)		
Mother-in-law in residence	1.9*	(0.8, 2.5)
Presence of any kin (Reference category: Not living with kin)		
Any Kin in residence	1.0	(0.5, 1.7)

N = 1000

Table 8: Multivariable logistic regression odds ratio 95% confidence intervals of breast feeding duration among currently married women and for institutional delivery for women who had a birth in last three years

Dependent Variable →	Breast f Dura	0	Institutional Delivery		
Independent variable ↓	Odds ratio	95% C.I.	Odds ratio	95% C.I.	
Type of Residence (reference Category: Uxorilocal)					
Virilocal	1.29*	,1.04,1.58	0.98	,0.4,2.1.06	
Neolocal	2.24**	,2.08,2.91	3.29**	,2.98,3.56	
Presence of Mother-in-law (Reference category: Not living with mother-in-law)					
Mother-in-law in residence	1.18	,0.9,1.42	2.1*	,1.9,2.7	
Presence of any kin (Reference category: Not living with kin)					
Any kin in residence	0.71		0.98		

N = 247

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^{***}p<0.001

^{**}p<0.01

^{*}p<0.05

^{***}p<0.001

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