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Factors associated with decision-making on fertility among rural women in the central district of Tamil Nadu

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Abstract

Introduction Fertility decision-making is an important factor affecting the Total Fertility Rate. Good communication between partners encourages shared decision-making and equal participation. Women's decision-making plays an important role in determining their reproductive health and fertility behaviour. Therefore, this study aimed to assess the decision-making of rural women on fertility.

Methods A household survey was conducted by using a multi-stage sample with 407 married women aged 18–45 years, having at least one child and living in Tiruchirappalli District, Tamil Nadu were recruited for this study. A semi-structured questionnaire was used to collect data about the demographic status and decision-making related to fertility.

Results Of the 407 participants, 70% were aged between 26 and 40 years, 73% were working as farmers and labourers and 77% were living in nuclear families. In decision-making on the usage of contraception, 25%, 27% and 27% of their decision were taken by themselves, their spouse, and both the participants and their spouse respectively. In spacing of childbirth, 53% took decisions concurrently with their husband. Among the participants, 40%, of their intake of food in the pre-and post-natal period was decided by them and 44% of women preferred the institutional delivery for childbirth by themselves.

Conclusion The study reveals that women tend to prefer sharing and involving their spouses in making decisions on fertility-related issues. Additionally, they exhibit greater support during the pre- and post-natal periods for women.

Keywords Decision-making, Fertility rate, Rural women, ReproductiveHealth

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Introduction

In India, the total fertility rate (TFR), has notably declined over the years. According to the National Family Health Survey-5 (NFHS-5: TFR 2.1 versus 1.6 children), women in rural areas on average have higher fertility than women in urban areas [1]. India has the world's largest population and two-thirds of the population lives in rural areas [2]. This population is growing at an unsustainable rate and is projected to reach 1.5 billion by 2030 and 2 billion by 2050. United Nations (UN) has recognized universal access to reproductive healthcare as a global health priority [3]. The rapid population growth puts more pressure on the existing limited resources and poses challenges to sustainable development growth, especially in developing countries like India.

Fertility decision-making is an important factor affecting Total Fertility Rate (TFR). These decisions can serve as predictors for women's contraceptive behavior and outcomes related to fertility [4]. The fertility decisions are based on a complex interactive process involving controlling forces that are mutually influenced by both partners. The primary decision-maker in the family is often male and he is responsible for making important decisions regarding when to have children and whether to utilize contraceptive methods or not, even though these decisions are primarily targeted at women [5]. Good communication between partners encourages shared decision-making and equal participation. It allows them to understand each other's attitudes towards family planning and the use of contraceptives [6].

Women living in rural parts are considered a vulnerable group in terms of reproductive health care, it is associated with various factors such as lack of support, knowledge, poor connectivity, and transportation facilities [7]. Women's decision-making plays an important role in determining their reproductive health and fertility behavior. Lack of decision-making by women in reproductive health matters can result in unplanned pregnancies, unsafe abortions and other adverse reproductive health outcomes. This study aimed to assess the decision-making of rural women regarding fertility aspects, including child spacing, contraceptive usage, family planning, food consumption, and hospital visits during the pre-and postnatal periods.

Materials and methods

Study setting and design

The study was conducted in Tiruchirappalli district, the fourth-largest and one of the oldest inhabited cities in Tamil Nadu. In this district, half of the district population (50.87%) resides in rural villages and the sex ratio in rural areas was1,010 females for every 1,000 males. Out of the 471 revenue villages, 431 villages are inhabited in this district [8]. A community-based cross-sectional study was conducted with 407 women who were residing in rural areas of Tiruchirappalli district. The study was conducted between the months of November and December 2017. The study includes all the adult married women who were aged between 18 and 45 years, living with their husband, having at least a child, and capable of independent communication.

A multistage sampling technique was applied to recruit the study participants from the fourteen blocks in Tiruchirappalli district, five blocks were randomly selected and from each block one village panchayat was selected using a lottery method. From each village panchayat, the hamlets were identified and the number of hamlets varied from two to seventeen in each village panchayat. From the total population of all the identified hamlets, 2,036 women fulfilled the sampling criteria. The minimum sample required at a 95% confidence interval was calculated using the sample size formula: $n = z^2P(1-P) / d^2$. where n is the sample size, d is a marginal error, z is the statistical value for the level of 95% confidence, is 1.96, P is expected prevalence or proportion which is 0.5. Since there is no previous study in this area, 50% was assumed for prevalence (P). By using the above formula the sample size was calculated to be 385, with 5% additional data collected. According to the adjusted sample size, approximately 407 rural women were included in this study from the study population through simple random sampling (Showed in Fig. 1).

Data collection and analysis

A semi-structured questionnaire was prepared to collect the demographic and the role of women in decision-making on fertility [Additional file S1]. The decision-making on fertility includes; child spacing, contraceptive usage, family planning, food consumption and hospital visits. The participants were recruited in the study after describing the study and obtained written informed consent from the participants before collecting the data. Furthermore, the researchers ensured the participants' confidentiality and anonymity. A face-to-face interview was conducted with the help of trained and qualified female field investigators. All interviews were conducted in the vernacular language Tamil. The interview was conducted in strict privacy after building rapport with the participants and it took about 30–45 min, including the establishment of rapport. The precaution was taken to avoid the emotional distress of participants. In case of any emotional distress, the interview was terminated. The data were entered and analysed using Microsoft Excel. Simple frequencies and distribution measures were calculated for demographic and decision-making on fertility.

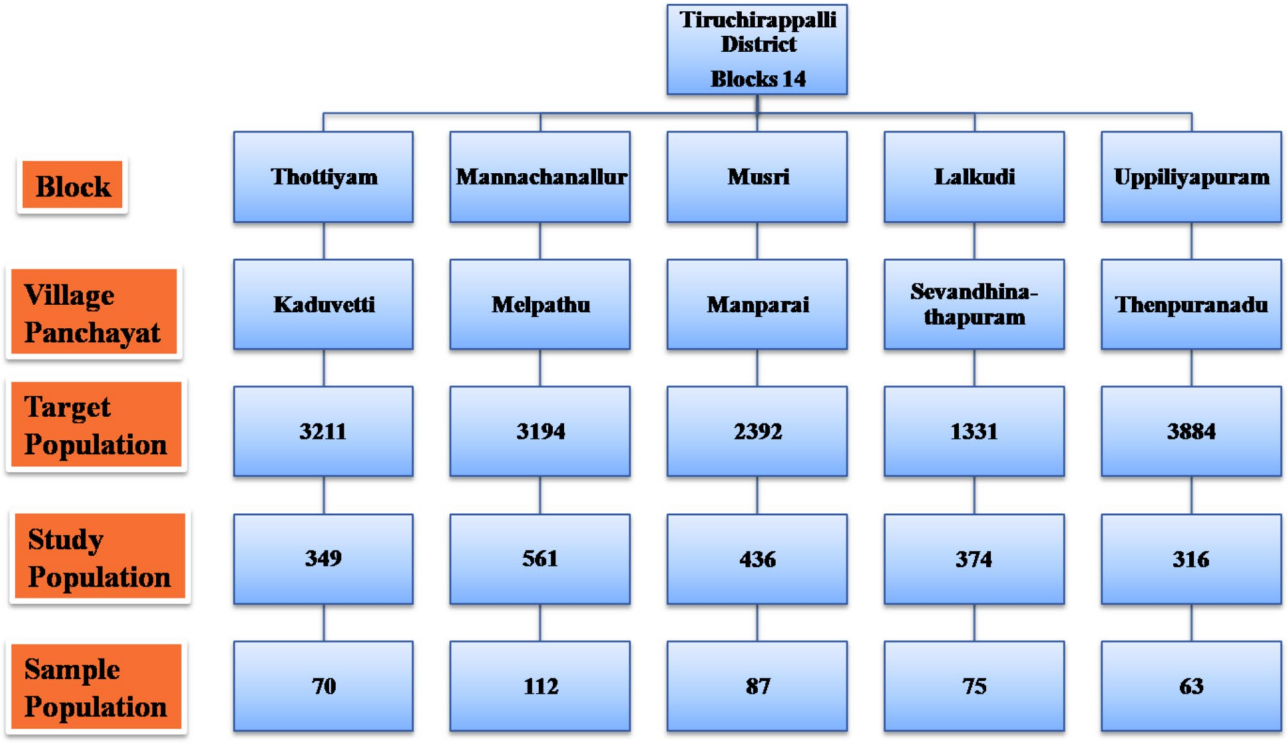

Fig. 1 : Multistage sampling to recruit study participants ($n=407$)

Table 1 Demographic Profile of the participants ($n=407$)

Variables	Frequency (*n*)	Percentage (%)
Age		
21–25 years	39	9.6
26–30 years	90	22.1
31–35 years	99	24.3
36–40 years	98	24.1
41–45 years	81	19.9
Age at Marriage		
Below 18 years	86	21.1
19–25 years	292	71.7
Above 25 years	29	7.1
Education		
Primary	64	15.7
Secondary	173	42.5
Higher Secondary & above	170	41.8
Occupation		
Labour	181	44.5
Agriculture	117	28.7
Govt & Private, Business	38	9.3
Housewife	71	17.4
Type of family		
Nuclear family	316	77.6
Joint family	91	22.4
Family income per month		
Up to Rs.5,000	143	35.1
Rs.5,000–10,000	189	46.4
Above Rs.10,000	75	18.5

Results

A total of 407 women participated in this study, with ages ranging from 21 to 45 years. Among them, 197 (48%) women were aged between 31 and 40. Three hundred and twenty-one individuals (79%) reported being married at the age of 18 or above. In terms of education, 173 participants (42.5%) had completed secondary education, while 170 (41.8%) had attained higher secondary education or above. One hundred and eighty-one (45%) of them were working as laborer and 29% were doing agriculture work. Three hundred and sixteen (78%) of the participants were living in nuclear families and 189 (46%) of their families were earning between Rs. 5,000 to Rs. 10,000 (Showed in Table. 1).

In decision-making on contraceptive usage, 102 (25%) participants made the decision by themselves, 108 (27%) reported that their husband made the decision and 110 (27%) reported joint decision made by participants and their husbands. In terms of decision on the spacing of childbirth, 148 (36%) participants took decisions independently, while216 (53%) participants reported that the joint decisions were made along with their husbands. (Showed in Tabe. 2).

In the pre-and post-natal period of participants, 39.8% of their food intake was decided by mothers, 26% by mothers-in-law, and 26.8% by doctors. Notably, 71.8% of participants received care from their husbands during the pre-and post-natal period (Showed in Table. 3).

Table 2 Decision-making on the usage of Contraception and Spacing of Childbirth ($n=407$)

Usage of Contraception and Spacing	Frequency (*n*)	Percent (%)
Decision-making on the usage of contraception		
Self	102	25.1
Husband	108	26.5
Both	110	27.0
Doctor	5	1.2
Not used	82	20.1
Decision taken on birth spacing		
Self	148	36.4
Husband	38	9.3
Both	216	53.1
No idea	5	1.2

Table 3 Decision on type of Food and Care received during pre and Post Natal Period ($n=407$)

Care received during the pre-and post-natal period	Frequency (*n*)	Percent (%)
Type of Food		
Self	21	5.2
Husband	5	1.2
Mother	166	39.8
Mother-in-law	106	26.0
Doctor	109	26.8
Care Received		
Self	17	4.2
Husband	290	71.3
Parents	100	24.5

Table 4 Decision taken on visit to Hospital, Type of Hospital for Child Birth and Mode of Transport ($n=407$)

Decisions on childbirth	Frequency (*n*)	Percent (%)
Periodical hospital visit		
Self	80	19.7
Husband	251	61.7
Both	9	2.2
Husband & Mother-in-law	33	8.1
Parent	34	8.4
Mode of transport chosen by		
Self	171	42.0
Husband	207	50.9
Both the couple	8	2.0
Parent	21	5.2
Hospital chooses for childbirth		
Self	178	43.7
Husband	49	12.0
Both	2	0.5
Parent	12	3.0
Doctor	166	40.8

Of the 407 participants, 62% of the participant's hospital visits for pre-and post-natal checkups were decided by their husbands, and 20% made decisions by themselves. In the mode of transport for hospital visits, 51% of decisions were made by husbands and 42% of decisions were made by participants themselves. When finalizing the hospital for childbirth, 44% preferred to choose a hospital by themselves and 41% made their decision based on the advice given by the doctor (Showed in Tabe. 4).

Discussion

International human rights principles uphold women's autonomy and equality, it recognize reproductive health as an essential part of women's health and play a key role in the overall development of a country [9]. This study reveals that in contraceptive decision, one-fourth of women made decisions by themselves, another one-fourth reported decisions made by their husbands and the subsequent one-fourth involved joint decision-making. Regarding the spacing of childbirth, more than one-third of participants made decisions independently and half of the decisions were jointly made by both the spouses. Similarly, a study from India, reported that two-thirds of married women expressed that both husband and wife jointly made contraceptive decisions and one-fourth of women need to seek their husbands permission for contraceptive use [10]. Another study conducted in Karnataka, India, reported that in 90% of the families, both husband and wife jointly decided on the usage of family planning measures [11].

The nutritional status of pregnant women directly influenced their reproductive performance and birth is crucial to an infant's chances of survival and to its subsequent growth and development [12]. This study findings on care received during pre-and post-natal period, indicated that half of the women's intake of food was decided by both mother and mother-in-law and the rest by the medical practitioners. Mostly, the spouse decided on care during the pre-and post-natal period of the participants. A similar study from India observed that 96% of pregnant women reported that they had received advice for eating healthy food from their husbands and 72% reported doctor as the advisory source for healthy food [13].

Moreover, in the selection of healthcare center for the pre- and post-natal period, this study observed that nearly two-thirds of the participants' husband took decisions on hospital visits for pre and post-natal checkups. On the choice of hospital for childbirths, nearly half of them took the decision and preferred the hospital by themselves whereas one-tenth of the participants' decision was taken by their husbands. In addition, more than one-third of their decisions were taken by the medical practitioners whom they approach for medical help. A study from India found similar findings that the majority

of husband decided on the treatment agency and he was the main decision maker in the selection of the hospital [14].

The status of women is a significant reflection of the level of social justice in that society. Women's status is often described in terms of their level of income, employment, education, health and fertility as well as the roles they play within the family, community and society [15]. Fertility is an important factor among married couples, especially for women. Therefore, the decision-making on fertility will determine the status of the women in their family and society and also it would improve their quality of life.

This study has a few limitations. The study was conducted with a large sample size and assessed the decision-making of rural women on fertility. Due to resource and time limitations, the study was conducted as a cross-sectional study in a rural area of the central district of Tamil Nadu, India. Cultural and environmental aspects may play an essential role in the decision-making on fertility. Decision-making participation preferences could change with increasing knowledge and relationships with other decision-makers such as partners, family members, neighbourhood and healthcare providers. Therefore, further comparative and longitudinal studies are needed to be undertaken on the decision-making of rural women on fertility.

In conclusion, women tend to prefer sharing and involving their spouse in making decisions on fertility, especially the usage of contraception and birth spacing. The support system is most crucial in the reproductive life of women; moreover, they should be given more chances to make their choices to complete their biological responsibilities successfully. Added to that focus on enhancing the socio-economic status of women and educational opportunities would help them to make the right decisions on fertility.

Abbreviations

TFR	Total Fertility Rate
NFHS	National Family Health Survey
UN	United Nations
SPSS	Statistical Package for Social Sciences

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s13104-024-07054-6.

Supplementary Material 1

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Author contributions

GJ & SS conceptualized the paper. GJ has done the data collection. GJ & PG wrote the first draft. PG has done the data analysis and prepared the tables. GJ. SS, SR & PG reviewed the first draft and provided inputs for discussion and revision. All authors approved the final manuscript.

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Data availability

The dataset used or analyzed during the current study will be available from the corresponding author upon reasonable request.

Declarations

Ethical approval and consent to participate

The study was approved by Doctoral Research Committee members with Ref No. 15844/Ph.D2/Sociology/Part-time/July, 2012, Department of Sociology, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India. All participants signed an informed written consent before participation and informed consent was obtained from all the study participants. The study was conducted under the principles of the Helsinki Declaration.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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