Original Research Article

International Journal of Silkroad Institute of Research and Training (IJSIRT)

Vol-1. No. 2, Jul-Dec 2023 DOI:10.3126/ijsirt.v1i2.61665 ISSN: 2990-7837 (Online & Print)

Children Ever Born and its Associated Factors of Women in Tansen Municipality of Palpa District Nepal

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ABSTRACT

Background: Fertility refers to a couple's, individuals, groups or population's ability to bear children. It primarily affects women in the reproductive age range of 15 to 49 years. Fertility is one of the most important factors influencing population change in practically all countries. This study is aimed to determine the socioeconomic and demographic factors that influence fertility in women in Tansen Municipality.

Methods: An analytical cross-sectional study was conducted among 144 married women of Tansen municipality using primary. Data was analyzed by using descriptive and inferential statistical tools. In descriptive statistics, mean, standard deviation, frequency distribution, pie-chart, bar-diagram, and cross-tabulation tools were utilized, while inferential statistics used chi-square test and t-test.

Results: The average age of respondent is 29 years with standard deviation 3.72 years. The average age of respondent whose Children ever born (CEB) is less than two (28.61±3.55) is statistically lower than that of having more than two CEB (32.44±4.63), (p-value=0.003). Education (P-value=0.007), and contraceptive/family planning knowledge (p-value=0.041) are factors that contribute to the decreased the number of children ever born to women. The longer duration of age contributes significantly to the rise in CEB. Women with a higher level of education appear to have a key role in reducing the number of CEB. The result of the study shows that the women having high level of knowledge about family planning and contraception use decreases the CEB of the women.

Conclusions: Findings show that age, education, and contraceptive/family planning knowledge are all factors that contribute to the increased number of children ever born to women.

Keywords: children ever born; factors; fertility; prevalence; women.

Received: 10th July, 2023 Accepted: 4th August, 2023 Published: 31th December, 2023

INTRODUCTION

Fertility refers to a couple's, individuals, groups or population's ability to bear children. It primarily affects women in the reproductive age range of 15 to 49 years. Fertility is one of the most important factors influencing population change in practically all countries, outweighing the other demographic factors. Fertility has a direct impact on population numbers and population structure. [1-2] Nepal's fertility rate is high and has stayed that for several decades, however it has been declining in the last decade or so. According to the 1981 census, the total fertility rate (births per woman) was 6.1, and by 1999, it had dropped to 4.3. These are high numbers not just when compared to global rates (3.7 and 2.7 in 1981 and 1999, respectively) but also when compared to South Asian countries (5.3 and 3.4 in 1981 and 1999 respectively). It is stated that lowering total fertility rates in a country is a necessary component of achieving demographic transition and raising people's living standards.[3] Nepal's fertility rate was 1.85 children per woman in 2020. Nepal's fertility rate dropped from 5.9 children per woman in 1971 to 1.85 children per woman in 2020.[4] In the later periods, while changes in marital structure began to play some role in the fertility decline, the contribution of marital fertility was still more pronounced. Rise in contraceptive use has been the primary reason for fertility decline. Age at marriage has begun to rise slowly. However, most recently, contraceptive use has not increased to explain the continuous fall in fertility. Factors such as an increase in male migration

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and induced abortion have been suggested as causes of the continued decline in fertility.[5] So, this study was introduced to see the fertility pattern and its associated factors in Tansen Municipality.

METHODS

The area selected for the study is Tansen municipality, which is located in Palpa district, Lumbini Province of Nepal. Tansen has total 14 wards, which are scattered across 110 square kilometers of geographical area. According to 2021 census conducted by Central Bureau of Statistics (CBS), Tansen Municipality had total 50,405 population with 23,414 males and 27,378 females.[6] According to Upadhyay HP and Bhandari KR studies, on average 3.19±1.949 children were born in 15-49 years of women.[7] According to these references, Sample size= $Z\alpha^2 \times \sigma^2 / e^2 = (1.96)^2 \times 1.949^2 / (0.1)^2 = 143.40 \approx 144$, Where, $Z\alpha$= 1.96 at 95% C.I, σ = S.D, e= margin of error. The optimal sample size for this study was 114. Primary data were collected from Tansen Municipality by using questionnaire method. Furthermore, Convenience sampling was used to obtain required information and data looking for availability and easy access of data. Socio-economic and demographic factor affecting fertility of women aged 15-49 were collected by using structured and semi structured questionnaire by interview method. The questionnaire was divided into two parts, first part i.e Household questionnaire that examine the number of family members and relation to the head, age structure, educational status, occupational status and other status of family members. Second part i.e. Individual questionnaire examined age at marriage, number of CEB, Educational status, occupational status of women and their husband, knowledge of family planning/use of contraceptive etc. Women were explained about the purpose of the study. The questionnaire was then distributed to the ever-married women informed consent to participate in the study. Confidentiality of the respondent as no individual identification was included in the questionnaire. Data were entered and analysis through SPSS version 20. Mean, standard deviation, frequency distribution, cross tabulation tools were used in descriptive statistics and Chi-square test, T test, were used in inferential statistics according to data structure.

RESULTS

The mean age of the respondent husband is about 33 years with standard deviation 5.08. The respondent's husband is found of age ranging from 30 years to 52 years. The mean age at first marriage of the respondents under study is found to be about 22 years with standard deviation 3 years. The respondents are found of first marriage age ranging from 15 years to 35 years. The mean age of first birth of the respondent under study is found to be 25 years with standard deviation 3 years. The respondents are found age of first birth ranging from 16 years to 36 years. The mean of the total CEB to the respondents under study is found to be about 2 with standard deviation 0.611. The respondents are found total CEB ranging from 1 to 3 children (Table 1).

Table 1. Information on age, age at marriage, age at first birth.

Characteristics	Mean±S.D	Minimum	Maximum
Age of husband(years)	33±5.08	30	52
Age at first marriage (years)	22.3125±2.98	15	35
Age of first birth (years)	24.88±3.06	16	36
CEB	1.55±0.611	1	3
Family Income	32535 ±14194	5000	80000

Above figure shows that the out of 144, 91 women are of Brahmin/Chhetri group and about 35 of them are from Janajati and remaining 18 of them from Newar and Dalit ethnic groups. Among them the 9% of the women are uneducated, 10% of them got primary level of education,34% of them got secondary level of education and 47% of them got higher level of education. Among the total women under study, about 8% of the women have their husband with no education, about 15% of them have husband with primary level education where 32% have secondary level and 45% have higher level of education. On the basis of occupation 96 respondents are housewives, 27 of them are engaged in services and remaining 21

are engaged in business and 38(26%) and 106(74%) of their husband are engage in business and service respectively (Table 2).

Table 2. Sociodemographic information of the respondents.	
Characteristics	**Frequency (%)**
Ethncity	
Bramin/Chhetri	91(63)
Janajati	35(24)
Newar	14(10)
Dalit	4(3)
Education level	
Uneducated	11(8)
Primary	22(15)
Secondary	46(32)
Higher	65(45)
Education of Husband	
Uneducated	11(8)
Primary	22(15)
Secondary	46(32)
Higher	65(45)
Occupation	
Housewife	96(67)
Service	27(19)
Business	21(14)
Occupation of husband	
Business	38(26)
Services	106(74)

The average age of respondent whose CEB was less than two was 28.61±3.55 and more than two CEB was 32.44±4.63 which was statistically significant. (p=0.003, df=142)

In above table average age of respondent on the basis of their husband age whose CEB was less than or equal to two was 32.6±4.85 and more than two CEB was 39.11±4.78 which was statistically significant. (p=0.003, df=142). The average age at first birth of less or equal to two children (25.04±2.99) is statistically higher in having more than two children (22.44±3.24) (Table 3).

It shows that the age of respondent has no significant impact on CEB at 5% level of significance. 25 years or above women more likely to have less than or equal to 2 children. Thirty years or above respondent husband more likely to have less than or equal to two children. The age at marriage has no significant impact on CEB to the respondent. The woman who marries at the age 20 years or above more likely to have less than or equal to 2 children as compared to those who get married at less than 20 years. As compared to uneducated, primary and secondary level of education having women, the women who having higher level of education more likely to have less than or equal to two children which is statistically significant($p=0.007<0.05$). As compared to uneducated, primary and secondary level

Table 3. Relationship between CEB and different demographic and socio-economic variable.					
Variables	**Mean±S.D**	**t-value**	**p-value**	**95% CI**	
				Lower C.I	**Upper C.I**
Age					
≤2 children	32.6±3.55	-3.07	0.003	-6.29	-1.36
≥2 children	32.44±4.63				
Husband age					
≤2 children	32.6±4.85	-3.89	0.003	-9.81	-3.2
≥2 children	39.11±4.78				
Marriage-age					
≤2 children	22.4±2.97	1.48	0.167	-0.5	3.53
≥2 children	20.88±2.93				
Age at first birth					
≤2 children	25.04±2.99	2.5	0.013	0.54	4.65
≥2 children	22.44±3.24				
Income					
≤2 children	32800±14422	0.86	0.257	-5424	13913
≥2 children	28555±9938				

Table 4. Association between CEB and Age of Respondent.				
Variables	**CEB**		**Chi-square**	**p-value**
	≤2 children	**>2 children**		
Age				
<25 years	16(100)	0	1.2	0.213
≥25 years	119(93)	9(7)		
Age of Husband				
<30 years	20(100)	0	1.54	0.213
≥30 years	115(93)	9(7)		
Age at Marriage				
<20 years	25(93)	2(7)	0.76	0.789
≥20 years	110(94)	9(7)		
Education				
Uneducated	10(77)	3(23)	12.42	0.007
Primary	14(93)	1(7)		
Secondary	43(90)	5(10)		
Higher	68(100)	0		
Uneducated	9 (82)	2(18)		
Education of husband				
Primary	20 (91)	2(9)	3.56	0.314
Secondary	44(96)	2(4)		
Higher	62 (95)	3(5)		
Occupation				
Housewife	89(93)	7(7)	0.757	0.757
Service	26(96)	1(4)		
Business	20(95)	1(5)		
Occupation of husband				
Business	37(97)	1(3)	1.15	0.28
Service	98(92)	8(8)		

education having husband, the women having higher education husband are more likely to have less than 2 or equal to 2 children. But which is not statistically significant(p=0.314). As compared to services and business women, the women who are housewife more likely to have 2 or less than 2 children. But which is not statistically significant(p=0.757>0.05). The occupation of husband has no significant impact on CEB to the respondent. As compared to business work, the respondent husband engaged in services are more likely to have less than or equal to two children.

DISCUSSION

The study began with the goal of identifying socio-economic and demographic characteristics that influence children ever born to women in Tansen municipality, Palpa District, Nepal, using a sample of 144 ever married women. The mean of the total CEB to the respondents under study is found to be about 2 with standard deviation 0.611 (1.55±0.611, Maximum= 4) and 94% women have 2 or less children. According to the 1981 census, the total fertility rate (births per woman) was 6.1, and by 1999, it had dropped to 4.3. These are high numbers not just when compared to global rates (3.7 and 2.7 in 1981 and 1999, respectively) but also when compared to South Asian countries (5.3 and 3.4 in 1981 and 1999 respectively). It is stated that lowering total fertility rates in a country is a necessary component of achieving demographic transition and raising people's living standards.[3,7,8] Infertility affects 186 million people worldwide.[5] While increasing a woman's age during conception is the strongest negative predictor of fertility. Other elements, such as

lifestyle and environmental influences, are thought to be increasingly important.[9] According to the World Health Organization, the global fertility rate in 2020 was 2.4 births per woman. Over the last 50 years, the global fertility rate has been steadily dropping, from 4.6 births per woman in 1971 to 2.4 births per woman in 2020. [10] Factors such as an increase in male migration and induced abortion have been suggested as causes of the continued decline in fertility.[11-13] The study's findings show that age 32.6±3.55 in ≤2 children, and 32.44±4.63 in ≥2 children, p- 0.003 , t value= -3.07), education (P-value=0.007), and contraceptive/family planning knowledge (p-value=0.041) are all factors that contribute to the increased number of children ever born to women. A study conducted by Upadhya HP and Bhandari KR,For explaining the children ever born (CEB) to the women of Somadi VDC in Palpa district, the factors knowledge of family planning, husband's occupation, and age at marriage appear to have a major impact.[7] Recent Trend of Change in Fertility in Nepal," by Hikmat Bahadur Raya (2018). This study attempts to compare Nepal's fertility trend to the global trend and the patterns of other SAARC countries. The quantitative analysis used in this research is based on secondary data sources. Both ASFR and TFR have been steadily falling since the 1990s, according to the findings. Between 1998 and 2005, the pace of decline was very significant. Now that the TFR is 2.3, Nepal is reaching the replacement fertility rate. Early marriage is a big issue, which explains why the fertility rate of this age group in Nepal has not decreased in contrast to other age groups.[10] The study conducted by Adhikari R. covered a representative sample of 8,644 married women of reproductive age, and both bivariate and multivariate analyses were used to describe the fertility differentials. Three and five children were the average number of children ever born among married Nepali women of reproductive age and women aged 40-49, respectively. When compared to their counterparts, women with a higher number of children as ideal (p-value=0.03), those who lived in rural areas (p-value=0.02), Muslim women (p-value =0.07), those who had ever used family planning methods (p-value =0.08), and those who had a child death experience (p-value =0.31) were more likely to have a higher number of CEB.[11] Women's empowerment and fertility: A review of the literature," by Upadhyay UD, Gipson JD, and Prata N, was cited in their study. Women's empowerment has grown as a focus issue for global development efforts. They did a literature analysis on studies examining the links between women's empowerment and several fertility-related subjects for this study. For this review, a representative sample of 60 women was selected and a quantitative analysis was employed. The majority of the studies were done in South Asia (n=35) and used household decision making as a measure of empowerment (n=37). This research discovered a link between women's empowerment and decreased fertility and longer birth intervals. The following keywords were used in this study: fertility, family size, optimum family size, birth intervals, birth/birth spacing, induced abortion, reproductive health, and unwanted pregnancy.[14] In this study, the woman who marry at the age 20 years or above more likely to have less than or equal to 2 children (94%) as compared to those who get married at less than 20 years (93%) but has no significant impact on CEB to the women (p = 0.798). Study conducted in Sunsari district by Gautam L et. al. the average age of a teen pregnancy was 18 ± 1.04 years, and the average age of marriage was 16.69 ± 1.09 years. Where 86.3 percent were housewives, 31.4 percent had a positive history of teen pregnancy on either side of the family, 38.2 percent had married at the age of 17, and 31.4 percent were expecting their first child. Lack of knowledge about teenage pregnancy, cultural acceptance, illiteracy, and difficulties obtaining information and access to family planning methods were all significant contributors. Many solutions have been proposed to address these issues, the most important of which is that awareness of the risks and disadvantages of early marriage and pregnancy should be increased not only among girls, but also among their parents and in-laws, in order to change the attitude and practice of early marriage and teenage pregnancy.[15] "Women's autonomy, women's status, and fertility related behavior in Zimbabwe," according to Hindin's research. Women's household decision-making

autonomy is an essential but unstudied indicator of their reproductive control. A DHS sample of 3,701 married black African women from Zimbabwe was used in this study. The researchers looked at whether women who have no voice in significant purchases should work outside the home and the number of children in this study. Women were less likely to approve of contraception use or discuss their desired number of children with their husbands in households where men dominated all household decisions. Women who had no decision-making freedom from their husband had 0.26 more children than women who had some. These autonomy measures give fertility-related behavior more independent explanatory power.[16] Study in Sanjya conducted by Dumre P.P report, the literacy rate is only 45.5 percent, while the illiteracy rate is 54.5 %. The agriculture industry employed 68.2 percent of the total respondents. Similarly, 50.9 percent of total respondents aged 15-49 years were married in the age group 15-19 years, followed by 10 percent in the age group 10-14 years, indicating that longer marital length is a significant factor in raising the number of CEB. The researcher discovered that low income, early marriage, low education, and a lack of understanding about family planning/contraceptive use all contribute to the high number of CEB.[1] "Fertility behavior among Bote women of Chitwan District, Nepal," conducted by Dhakal K.R looked at Bote women's fertility patterns and calculated the average number of children they have ever had (CEB). Fertility behavior informs us about population increase that is undesirable, as well as socioeconomic and demographic issues. The participants for this study were 48 newlywed women. The questionnaire was used to get both primary and secondary data. Data was systematically separated into independent and dependent variables in this study. Independent variables include socioeconomic and demographic aspects, with socioeconomic components divided into three categories: education, occupation, and contraceptive use. And demographic characteristics were divided into two categories: respondent age and respondent age at marriage. As a dependent variable, the number of CEB was used. Secondary data was gathered for this paper from a variety of books, journals, websites, and officials records. According to this survey, the average CEB was 2.64. This study also shown that the CEB increases with the age of marriage. The scenario can be improved through a public awareness campaign, more education and use of contraception.[17]

CONCLUSIONS

The study's findings show that age, education, and contraceptive/family planning knowledge are all factors that contribute to the increased number of children ever born to women. Women who are unaware of contraception or family planning are more likely to have a larger number of CEB than those who are aware. It is noticeable that knowledge of family planning affects women's fertility levels because women without such knowledge are more likely to become pregnant, even if they do not want to be, whereas women with such knowledge can control their fertility using various contraceptive methods if they do not want to become pregnant. Furthermore, women who are older are more likely to have a higher number of CEB than women who are younger. One reason for this is that older women are thought to be less likely to be educated, which may have an impact on their total CEB. Finally, the parameters of age, education, and contraceptive/family planning knowledge are proven to have a substantial impact on explaining the CEB to the women of Tansen municipality in Nepal's Palpa District.

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Citation: Bhandari KR, Ghimire K, Upadhyay HP, Pachhai DB, Karki S. Children Ever Born and its Associated Factors of Women in Tansen Municipality of Palpa District Nepal. IJSIRT. 2023; 1(2):84-90.