

Güneybatı Nijerya'da Kadınlar Arasında Doğurganlığın Belirleyicisi Olarak Evlilik Örüntüsünün Bir İzlemi

[A Survey Of Marriage Pattern as Determinants of Fertility Among Women in Southwestern Nigeria]

ÖZET

AMAÇ: Doğurganlık düzeyleri, doğurganlığı azaltma programlarına devasa kaynaklar ayrılmasına rağmen insanın ve çevresinin üzerindeki etkilerle dünyanın pek çok yerinde yükselmeye devam etmektedir. Bu çalışmanın amacı Güneybatı Nijerya'da şehirde ve kırsalda yaşayan kadımlar arasında doğurganlığın belirleyicisi olarak evlilik örüntüsünü değerlendirmek ve karşılaştırmaktır.

YÖNTEM: Bu araştırma, kentsel ve kırsal topluluklarda çok aşamalı örnekleme kullanılarak seçilmiş doğurganlık çağında 1024 kadında gerçekleştirilmiş bir tanımlayıcı, kesitsel ve karşılaştırmalı çalışmadır. Kullanılan araştırma araçları ön denemesi yapılmış, yarı yapılandırılmış ve görüşmeciler tarafından uygulanan soru formlarıdır. Veriler SPSS programı kullanılarak analiz edilmiştir.

BULGULAR: İlk evlilik yaşı kırsal kadınlarda 19,6±3,3 iken kenti kadınlarda 22,6±3,9 idi ve fark istatistiksel olarak anlamlıydı (p=0.001). Polygami kırsal kadınlarda %41,5 (212) ile %21,7 (111) olan kentsel kadınlara göre oldukça yüksekti. Kırsal bölgede boşanmış, ayrılmış veya dul kalmış kadınların %27,3 (9)'ü, kentsel bölgede ise %32,4 (11)'ü yeniden evlenip yeni kocalarından çocuk sahibi olmuştu. Kadın başına doğum sayısı kırsal bölge kadınlarda 3,4±1,8 iken, kentsel kadınlarda 2,9±1,5 idi. Doğurganlık sayısı formal eğitimi olan kadınlarda (her iki bölgede de) formal eğitim almayanların yaklaşık yarısıydı. Yirmi yaş altında evlenme ihtimali formal eğitimi olan kadınlarda (her iki bölgede de) formal eğitim almayanların yaklaşık sekizde biriydi.

SONUÇ: Doğurganlığı azaltıcı programlar amaçlarına ulaşmak için erken evliliği ve gelişigüzel tekrar evlilikleri etkileyen sosyokültürel engelleri kaldırmalı engellemelidir.

SUMMARY

INTRODUCTION: Fertility levels in many parts of the world continues to rise despite huge resources committed to fertility reduction programmes, with resultant effects on man and his environment. The objective of this study is to assess and compare marriage pattern as determinants of fertility among women living in rural and urban communities in south western Nigeria.

METHODOLOGY: This is a descriptive, cross-sectional comparative study carried out among 1024 women of reproductive age group in rural and urban communities using multistage sampling method. Research instrument used were pre-coded, pre-tested, semi structured, interviewer administered questionnaires, and data analyzed using the SPSS software.

RESULTS: Mean age at first marriage was 19.6±3.3 years for rural women and 22.6±3.9 years among urban women, and the mean difference was statistically significant (p=0.001). Polygamy featured more prominently in rural setting with 212 (41.5%) of respondents remarried compared to 111 (21.7%) of urban respondents. In rural setting, 9 (27.3%) of respondents remarried among the divorced, separated and widowed (all combined) compared to 11 (32.4%) of same group of urban respondents, and bear children for the new husband in remarriage.

Mean number of births per woman (index of total fertility rate) was 3.4±1.8 births per woman in rural, and 2.9±1.5 births per urban woman. Women with formal education in both settings had about a half (OR=0.59, 95% C.I.=0.45-0.95 and p=0.001) fold fertility level and about one-eighth fold (OR=0.08, 95% C.I.=0.06-0.12 and p=0.019) chance of having first marriage below 20 years compared to women with no formal education.

CONCLUSION: Fertility reduction programmes should remove socio-cultural barriers influencing early marriage and indiscriminate remarriages in order to achieve their aims.

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INTRODUCTION

The global population has been on the increase, and this may be as a result of persistently high fertility recorded in most parts of the world. This level of fertility in the world varies broadly by and within

regions. Africa is the region with the highest annual population growth rates, ranging from 2.2 % to 2.8%, compared to 1.4% to 1.7% for the world as a whole (1). Nigeria as a country is no exception to this trend. In Nigeria, the total fertility rate of the rural residents

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exceeds that of the urban residents by almost 26% with the South western region of the country having the lowest rate (2). High fertility puts pressure on family income and social status; which might contribute to a high socioeconomic strive.

Marriage is universally referred to as an institution with many concepts which has a lot of influences on our culture and socioeconomic life. Some of its components include the age at first marriage, marital status, marital setting whether polygamous or monogamous and the age at first births. The age at first marriage for a woman is an important determinant of the number of children she would have. Age patterns of fertility vary considerably among regions, different groups and within countries (3). Although some childbearing occurs before marriage, the age at marriage often represents the beginning of regular sexual activity. The age at which a woman first experiences sexual intercourse and is thus at risk of pregnancy and childbearing also have an important effect on fertility. The older her age, the lower her potential lifetime fertility. In Nigeria, the median age at first marriage was 18 years and generally, urban women marry approximately 2 years later than rural women (19 years in urban and 17 years in rural) (2). Also, one fourth of women of reproductive age group have never married, 70% were either formally married or living together, and 4% were widowed, divorced or separated (2).

Examining the various fertility determinants, most especially socio cultural intricacies surrounding marriage may provide information that will help in the design of programmes to control some of the factors that could contribute to high fertility, serve as baseline upon which future demographic interventions could be based as well as to plan programmes that will assist in improving socioeconomic conditions of the population. The continued high rate of population growth in many countries which is usually a constraint to the efforts of Governments to fulfill her commitment to improve the quality of life and standard of living of her people calls for more concerted efforts to generating more information on this subject matter. This study could showcase the importance of marriage indices as a contributor to fertility pattern and could influence marriage related policies towards enhancing fertility reduction and awareness efforts that could stem down the menace of early marriage and childbearing. The objective of this study is to enumerate and compare marriage pattern as determinants of fertility among women living in rural and urban communities in Osun State in South western Nigeria:

METHODS

Study design: This is a descriptive cross sectional, comparative study of marriage pattern as a determinant of fertility, and it was carried out among women of reproductive age in rural and urban communities in selected states of Southwestern Nigeria.

Study area: There are six states in Southwestern region of Nigeria. Generally in the rural areas, majority of inhabitants are farmers while in the urban settings, they are mostly traders, artisans and civil servants. Marriage is an institution which everyone looks up to. The two main forms of marriage are customary and religious

Study population: The target populations were women of reproductive age 15 to 49 years of age. Eligible women would have been living in the rural or urban area for at least five years. Respondents who took part in the filling of the research instruments constitute the study population.

Sample size estimation Using the sample size calculation formula for the comparison of two rates (4), and a prevalence rates of 0.61 for rural and 0.48 for urban according to national demographic and health survey (2), the calculated sample size was 512 for each of rural and urban respondents. Total sample size is 1024.

Sampling method: A multi stage sampling method was adopted in sample selection. In stage I, two out of six states were selected at random employing simple balloting. Questionnaires were proportionately allocated to each of Ogun and Osun states which are divided into local government council areas. In stage II and for each state, five Local Governments areas in each state were selected by simple random sampling, employing simple balloting. A list of communities designated as rural and urban per local government was obtained from the state Ministry of local government and chieftaincy affairs. In stage III, one rural and one urban community were selected per local government using simple random sampling (simple balloting). This evolved a total of five rural and five urban communities per state recruited for the study.

In stage IV, a sampling frame of all enumeration areas in each community was drawn. The enumeration areas used was allocated by the National Population Commission for the 2006 National population census. One enumeration area (EA) was selected per community using simple random sampling (simple balloting). In stage V, a sample frame or list of all streets in an enumeration area was

prepared and two streets were chosen per enumeration area by simple random sampling employing simple balloting. On a street, the existing primary health care household numbering was utilized to select houses. Every house with the last number being an even number was selected (for rural communities) and odd numbers for urban communities.

Data collection: All eligible women met in the sampled houses were interviewed with pre coded, pre tested interviewer administered questionnaires conducted by trained research assistants who could also speak local language. A vernacular version of the questionnaire was prepared for the uneducated respondents to reduce inter-observer variation in interpretation during the interview. Five visits to each of the rural and urban setting were made. Whenever a house was found to be empty, such houses were omitted and the next house to it was selected to replace it.

Study variables: Information on socioeconomic characteristics of the respondents, their fertility pattern and preferences were obtained. Information collected on marriage pattern include marital status, age at first marriage and first births, episodes of remarriages if any and marriage setting whether polygamous or monogamous among others.

Ethical consideration and Limitation: Approvals to conduct this study was obtained from the Research ethics committee of LAUTECH Teaching Hospital Osogbo, the local ministries and departments, head of communities and expanded households.

Study limitations: include inability to focus on unwanted outcomes of high fertility. There is also a possible dis-inhibition to giving information on the part of some respondents as a result of some cultural believes that may prohibit counting of number of children a woman has for her husband. This was appropriately handled by persuasive training and sensitivity of the research assistants.

Data management: The SPSS Version 10.0 statistical package was used for data entry and analysis. Validity of data was ensured by double entry and random checks for errors. Relevant frequency distributions and summary measures were done. The Chi-square test was used to demonstrate relationships between categorical variables, and two independent sample T test analysis was used to compare mean differences between quantitative variables. Binary logistic regression analysis for fertility level (based on first age at marriage and desire to have more children) and some selected

variables was done. Level of significance was set at P-values ≤ 0.05 for all inferential analysis.

RESULTS

Table I shows the socio-demographic characteristics of respondents. The highest proportion of respondents was found in the age group 15 to 24 years in both rural 206 (40.2%) and urban 203 (39.6%) communities. One hundred and ten (21.5%) of rural respondents had no formal education, compared with 38 (7.4%) of urban respondents. The distribution of respondent by religion shows that the Muslims formed the highest proportion (48.5% in rural and 42.8% in urban settings) while Catholics constitutes 21 (4.1%) of rural respondents compared with 26 (5.1% in urban). Four hundred and sixty seven (91.2%) of respondents in the rural settings were married compared with 414 (80.9%) of urban respondents. Also only 12 (2.3%) of rural women were singles compared with 63 (12.3%) of urban women.

Table II shows that 463 (90.4%) of rural and 337 (72.4%) of urban women got married between 20 and 29 years. Mean age at first marriage was 19.6 ± 3.3 years for rural women and 22.6 ± 3.9 years among urban women, and the mean difference was statistically significant ($p=0.001$). About 287 (56.2%) of rural and 341 (66.6%) of urban respondents were in monogamous marriages. Polygamy featured more prominently in rural setting with 212 (41.5%) of respondents compared to 111 (21.7%) of urban respondents. A greater percentage of respondents who were polygamous were either first, second, third or fourth wife. In rural setting, 9 (27.3%) of respondents remarried among the divorced, separated and widowed (all combined) compared to 11 (32.4%) of same group of urban respondents. Some of these respondents also had more than one child for the new husband in remarriage. Mean number of births per woman (index of total fertility rate) was 3.4 ± 1.8 births per woman in rural, and 2.9 ± 1.5 births per urban woman.

Further statistical analysis showed that there was a significant association between desire to have more children (among both rural and urban respondents) and marriage setting being polygamous ($p=0.001$) and age at first marriage ($p=0.002$). The mean age at first marriage was lower in rural (19.6 ± 3.3 years) than in urban (22.6 ± 3.9 years), and the mean difference was statistically significant ($t=12.681$, $p=0.001$). A binary logistics regression analysis showed that women with formal education in both settings had

TAF Preventive Medicine Bulletin, 2013:12(2)

about a half (OR=0.59, 95% C.I=0.45-0.95 and p=0.001) fold fertility level compared to women with no formal education. Similarly Women with formal education in both settings have about one-eighth

(OR=0.08, 95% C.I=0.06-0.12 and p=0.019) fold of having first marriage below 20 years compared to women with no formal education.

Table I. Socio-demographic data of respondents by location.

Variable	Rural n (%)	Urban n (%)
Age in years		
15-24	107 (20.9)	105 (20.5)
25-34	206 (40.2)	203 (39.6)
35-44	156 (30.5)	182 (35.6)
45 and above	43 (8.4)	22 (4.3)
Education level		
No formal	110 (21.5)	38 (7.4)
Primary	166 (32.4)	81 (15.8)
Junior secondary	67 (13.1)	62 (12.1)
Senior secondary	135 (26.4)	175 (34.2)
Post secondary	29 (5.7)	135 (26.4)
Others e.g. koranic	5 (1.0)	21 (4.1)
Occupational group		
Professionals e.g. doctors	8 (1.6)	81 (15.8)
Skilled e.g. teachers	332 (64.8)	279 (54.5)
Semi skilled e.g. artisans	85 (16.6)	107 (20.9)
Unskilled e.g. petty traders	54 (10.5)	4 (0.8)
Unemployed e.g. housewife	33 (6.5)	41 (8.0)
Religion		
Catholic	21 (4.1)	26 (5.1)
Protestant	234 (45.8)	159 (31.1)
Islam	248 (48.5)	219 (42.8)
Traditional	3 (0.6)	7 (1.4)
Others.	6 (1.0)	101 (19.7)
Marital status		
Single	12 (2.3)	63 (12.3)
Married	467 (91.2)	414 (80.9)
Divorced	10 (2.0)	11 (2.1)
Widowed	13 (2.5)	16 (3.1)
Separated	10 (2.0)	7 (1.4)
Others	0 (0.0)	1 (0.2)

Table II. Marriage pattern of respondents by location.

Variable	Rural N (%)	Urban n (%)
Age at first marriage in years	(N=490)	(N=466)
15-19	8 (1.6)	0 (0%)
20-24	257 (50.2)	107 (23.0)
25-29	206 (40.2)	230 (49.4)
30-34	23 (6.4)	92 (22.5)
35-39	6 (1.6)	17 (5.2)
Marriage types		
Monogamous	287 (56.2)	341 (66.6)
Polygamous:	212 (41.5)	111 (21.7)
Order if wife in polygamy		
1 st wife	75 (60.0)	50 (40.0)
2 nd wife	109 (66.1)	56 (33.9)
3 rd wife	17 (56.7)	13 (43.3)
4 th wife	11 (61.1)	7 (38.9)
Remarriage	n=33	n=34
(a) Respondents remarried (Yes)	9 (27.2)	11 (32.4)
(b) No of children for new husband(s)	n=9	n=11
None	0 (0.0)	2 (18.2)
1 child	6 (66.7)	4 (36.4)
>1 children	3 (33.3)	5 (45.4)
Number of children ever born	(N=512)	(N=512)
0 (Nulliparous)	11 (2.1)	24 (4.6)
1 (Monoparous)	75 (14.6)	87 (17.0)
2-4 (Multiparous)	289 (56.4)	322 (62.9)
5 and above (grandmultiparous)	137 (26.8)	79 (15.5)
Desire for more children	(N=490)	(N=489)
No	202 (41.2)	232(47.4)
Yes	288 (58.8)	257(52.6)

Table III. Association between selected fertility determinants and locations

Desire for more children (rural and urban), N (%)			
Level of education			
No formal	47 (16.3)	18 (7.0)	0.001 ^a
Formal	241 (83.7)	249 (93.0)	
Differences between locations (rural and urban), mean (sd)			P
Age at first marriage	18.0 (3.9)	19.5 (5.0)	0.001 ^b
Mean No of children ever had/born	3.4 (1.8)	2.9 (1.5)	0.010 ^b
Binary logistic regression model for fertility level, and age at first marriage < 20 years in both settings, OR and 95% CI level			P
Level of education (ref=no formal)	0.59	0.45-0.95	0.001
Level of education (ref=no formal)	0.08	0.06-0.12	0.019

^a Chi-square test

^b T-test

DISCUSSIONS

In this study, most of respondents both urban and rural were married. This finding agreed with the NDHS in which 70% of women of reproductive age were found to be married (2). The fertility implication is that sexual relations were virtually established as the married women live and have sexual intercourse freely with their husbands, and this might result in pregnancy and childbearing. Although some childbearing occurs before marriage, the age at marriage often represents the beginning of regular sexual activity.

While being divorced or separated is an indication of re-marrying (which may be culturally prescribed to avoid stigmatization) and initiation of another childbearing life with the new husband, a high proportion of unmarried population may imply a free sexual life and consequently unwanted children if not aborted. This may contribute to more fertility as reflected in this study. This trend is more pronounced among rural respondents. The mean age at first marriage in this study was about three years higher in

urban than rural areas. This age is older when compared with the NDHS study (5).

In the NDHS, median age at marriage is lowest among girls in North West and North East regions, at 15.8 and 16.8 years respectively. Rural girls were more likely to marry early compared to urban girls; for example, in the North West. A UNICEF study among six West African countries revealed a prevalence of 44% of women 20-24 years were married before 15 years (6).

The delay in getting married early observed in some Asian countries (7), could be as a result of longer time period devoted to a search for higher western education, and search for financial and occupational stability and buoyancy before affected women get married. In a similar cross country survey, women in developed countries were found to be unlikely to marry before age 18 and only a few do so in the industrialized nations (8).

In this study, about half and one-fifth of respondents in rural and urban areas respectively were in polygamous marriages. Polygamy is a well-

known practice in Nigeria occurring reported among 36% of all females in a polygamous union in 1989 and 41% in 1999; and this practice is commoner in rural (38%) than urban areas (31%) (2). The risk of conception for women in polygamous marriages is 13 per cent lower than women in monogamous marriages due to lower sexual exposure (9). The reason could be that the wives share out the days of sexual activities of their husband. Childlessness may also be higher among first and second polygamous wives than among monogamous ones, and that the average number of children per fertile woman is lower (9).

Early marriage recorded among rural respondents in this study could mean that they have more time for fertility and child bearing. This could explain higher fertility reported among rural respondents. However, the relatively lower fertility recorded by urban respondents who married lately may be explained by the fact that ovarian functions decreases with age (10).

The difference in education level among rural and urban respondents and its direct bearing to getting married at or before 20 years and consequent fertility was reported by this study. In addition, fertility was higher in rural women than urban women evident by difference in mean number of children ever had being higher among rural locations than urban. The mean differences were also statistically significant. This has been supported by NDHS (11). Also in all countries surveyed since 1990, the total fertility rate is lower in urban areas from a difference of just 0.1 children per woman in Mauritius to as much as 3.4 children in Uganda (12). Fertility that has dropped significantly in this study compared with the NDHS could be attributed to stepped up awareness on contraception, breastfeeding as a contraceptive method, and harsh economic situation that has made many households to marry much later in life as well as limit the number of children they desire.

As seen in this study, better educated women were found to have got married at a much later age and subsequently have lower fertility. This has been supported by the national demographic and health survey (13). Better-educated women have broader knowledge, higher socioeconomic status and less fatalistic attitudes towards early marriage and reproduction than do less educated women. The disparity in number of women with formal education between rural and urban settings could be due to the fact that educational resources and facilities were more located in the cities. Even within marriages whether in rural or urban settings, women with

appreciable level of education would more likely have access to contraceptive counseling and services, have better awareness about ovulation and have better understanding of sexual and reproductive health information compared with women with no education.

CONCLUSION

In this study, early marriage, living in polygamous marriages and history of remarriages were commoner among rural compared to urban women. This accounts for a relatively higher fertility recorded among them. There is a need to remove social, economic and cultural barriers that may predispose women to these for a successful fertility control programmes to occur.

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REFERENCES

1. United Nations Development Programme. Human Development Report. 2001:154-157
2. National Population Commission (Nigeria) 2000. Nigeria demographic and health survey 1999. Calverton, Maryland; National Population Commission and ORC/Macro. 1999:35-43.
3. Ezeh AC, Mberu BU, Emina JO. Stall in fertility decline in Eastern African countries: regional analysis of patterns, determinants and implications. *Philos Trans R Soc Lond B Biol Sci.* 2009 Oct 27;364(1532):2991-3007.
4. Olawuyi, J. F. Choosing the study subjects and sampling; In *Biostatistics, a foundation course in health sciences*. First edition. Yotson consult publishers. Ibadan. 1996: 110 - 118
5. National Population Commission (Nigeria) 2003. Nigeria demographic and health survey 1999. Calverton, Maryland; National Population Commission and ORC/Macro. 2003:35-43.
6. Assani A(2000). Etude sur les mariages precoces et grossesses precoces au Burkina-Faso Cameroun, Gambia, Liberia, Niger et Tchad. UNICEF WCARO, Abidjan

TAF Preventive Medicine Bulletin, 2013:12(2)

7. World Marriage Patterns 2000 Wall Chart. UN Population division, Dept of Economic and Social Affairs.
8. Sobotka T, Skirbekk V, Philipov D. Economic recession and fertility in the developed world. *Popul Dev Rev.* 2011;37(2):267-306.
9. Muhsam H.V. Fertility of Polygamous marriages. Available at <http://www.jstor.org/discover/10.2307/2172271?uid=3738720&uid=2129&uid=2&uid=70&uid=4&sid=47698741778017>. Accessed 10th January 2012.
10. Jihn, B. Women's fertility drops 'almost to zero' after age 43. Baylor College of Medicine Division of Reproductive Endocrinology and Infertility. 1998 – 2007. Baylor College of Medicine. 2007:14
11. National Population Commission (Nigeria). Nigeria Demographic and Health Survey. Calverton, Maryland; National Population Commission and ORC/Macro, 2000: 35-43.
12. Lawoyin, T.O and Onadeko, M.O. Fertility and Child bearing practices in a rural African community. *West Afr. J. Med.* 1997; 16 (4) : 204-207
13. National Population Commission (NPC). Nigeria demographic and health survey. Calverton Maryland. NPC and ORC Macro, 2006 : 45-47.