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Socio-cultural Factors Affecting Pregnancy Outcomes among the Ibani of Rivers State, Nigeria

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The Ibani of Rivers State, Nigeria, have a high incidence of maternal and infant mortality/morbidity, which has been linked to the perception, attitude and practices of the people with regard to pregnancy and childbirth. This study examines the process leading to pregnancy outcomes among the Ibani. Through an interdisciplinary approach, it provides an in-depth and comprehensive understanding of the association between pregnancy outcome and child spacing; source of antenatal care; and access to and use of antenatal health care facilities. Data was collected through in-depth interviews, focus group discussions, case studies, observation and survey questionnaires. The findings indicate that pregnancy outcome among the Ibani is not necessarily derived from spousal communication and gender discourse, because women whose husbands were solely responsible for decision making on child spacing recorded higher type-1 (mother and child survival) outcome (87.7 per cent) than those who shared decision making with their spouse. There is no consistent relationship between the amount of time spent on getting to the source of antenatal care and pregnancy outcomes because Ibani women who spent between 31 and 59 minutes to get to the source of antenatal had more type-1 outcomes than those who spent about 30 minutes. Other factors affecting pregnancy outcomes, among the Ibani of Rivers State, include communal and individual values, norms and practices, and their persistent influence signals a need to investigate their separate and combined influences on pregnancy outcomes. The study contributes to a demographic understanding of how macro-level factors impinge upon individual-level events like pregnancy outcomes.

Key words: Communal and individual values, exploration, child spacing, family planning, post-partum period, multi-discipline, Nigeria, pregnancy outcomes, Ibani, antenatal care, traditional birth attendants(TBAs), mortality and morbidity.

Background

Demographic events, in the developing world and sub-Saharan Africa in particular, are characterized by consistency. The major components of population dynamics, namely fertility, mortality and migration, have remained relatively high in the region despite intervention at various levels. A combination of socio-cultural factors such as poverty, low status of women, early marriage, rural-urban migration, traditional beliefs and practices, indifference to family planning, especially among men etc. (Mills and Bertrand, 2005; Lundgren et al., 2005) are linked to the failure of attempts at improving the demographic profile of the affected societies. The present study examines pregnancy outcomes among the Ibani of Rivers State, Nigeria, as a way of understanding the context within which they occur. Maternal/child morbidity and mortality is ranked among the most pressing reproductive health problems in the world (Nwokocha, 2006).

Studies show that an annual global estimate of 600,000 women between 15 and 49 years die from pregnancy-related causes, with only one (1) per cent of this total coming from the developed world (Population Reference Bureau, 2002; WHO, 2000; Addai, 1998). Nigeria alone accounts for 10 per cent of the total (Okolocha et al., 1998) and as such represents a disproportionate number of high-risk pregnancy and childbirth in the group. Research findings indicate that the use of skilled attendants, at

birth increased from 41 to 57 per cent between 1990 and 2000 in the developing world except in sub-Saharan Africa (Stanton and Holtz, 2006). As a result, the highest number of preventable reproductive mishaps occurs in sub-Saharan Africa. Turan et al. (2006) re-echoed the WHO position that antenatal care is one of the 'pillars' of safe motherhood, although there is no consensus about the ideal frequency and content of antenatal visits.

The critical role of family planning in reducing the incidence of unwanted pregnancies is not emphasized in most developing countries. Even where family planning clinics exist, women who attend them are still denied effective contraception due to socio-cultural and medical barriers (Stanback et al., 2005). Abortion is also a critical issue in pregnancy outcome discourse in the developing world, considering the low level of awareness about family planning and contraceptives in this region. One health risk associated with unplanned pregnancies is induced abortion (Cu Le et al., 2004). Annually, an estimated 46 million women are involved in induced abortion globally, with 36 million of the cases taking place in developing countries. About 19 million of these abortions, mostly in the developing world, are carried out by quacks in unhygienic conditions (Benson, 2005; WHO, 2004; Cu Le et al., 2004; Ahman and Shah, 2002).

Unsafe abortion can lead to major complications such as haemorrhage and septicaemia, chronic morbidity (eg, pelvic pain and infertility), and mortality (Murray et al., 2006; WHO, 2004). Research shows that unsafe abortion accounts for about 13 per cent of maternal deaths worldwide, although the average in some countries is higher (WHO, 2004; Zhirova et al., 2004) with poor and marginalized women being the most affected (WHO, 2003). It is difficult to obtain representative data in countries where abortion is illegal, therefore, the information used in the study is based on hospital admissions (Murray et al., 2006). The problem of unsafe abortion is less pressing in Europe than other parts of the world due to the legalization of abortion in most countries in the region (Zhirova et al., 2004).

In a recent publication, Alan Guttmacher Institute (2005) observes that Nigeria's high maternal mortality rate, estimated at 800 per 100,000, results mostly from poorly performed abortions (see Rasch and Lyaruu, 2005). The objectives of the present study, which seeks to examine some aspects of this phenomenon include: a description of pregnancy outcomes by types; an examination of the influence of child-spacing practices on pregnancy outcomes; and the identification of the association between access to and use of antenatal health care facilities and pregnancy outcomes.

The Ibani were selected for the study because of their high maternal mortality. Surprisingly, little has been done to investigate reproductive health among the people. Ibaniland, like other Niger-Delta communities, is characterized by political marginalization, harsh economy, environmental degradation and a resultant conflict and restiveness (Ikporukpo, 2002; Gbadegesin, 2001; Durotoye, 2000; Osuntokun, 2000; Petters, 2000; Ibeanu, 1999; Onosode, 2000). Owing to this shift of attention to environmental and political issues, the demography of the Niger Delta, particularly the Ibani, has been grossly neglected. For instance, the consequences of none adoption of family planning and child spacing; the factors, which influence access to and use of antenatal care facilities; and the influence of cultural beliefs and practices (UNICEF, 2001; Ikporukpo, 2001; United Nations, 2000) as they collectively affect pregnancy outcomes have received little or no attention.

Conceptual framework

In order to examine the relationship between socio-cultural variables and pregnancy outcomes, voluntary social action theory (Talcott Parsons) and systems theory (Bertalanffy) were integrated (fig. 1). It highlights and also activates the background factors, which interact to influence pregnancy outcomes.

The dependent variable (pregnancy outcome) is influenced by the independent variables embedded in the socio-cultural life of the people. The voluntaristic perspective supposes that individuals are allowed the choice of activities perceived as most rational in order to achieve successful outcomes within the socio-cultural environment dictating the underlying elements of relationships within a given milieu. In patriarchal societies (as in most African communities) beliefs and practices, symbols, public policies and economic and political systems are situated within a patriarchal definition.

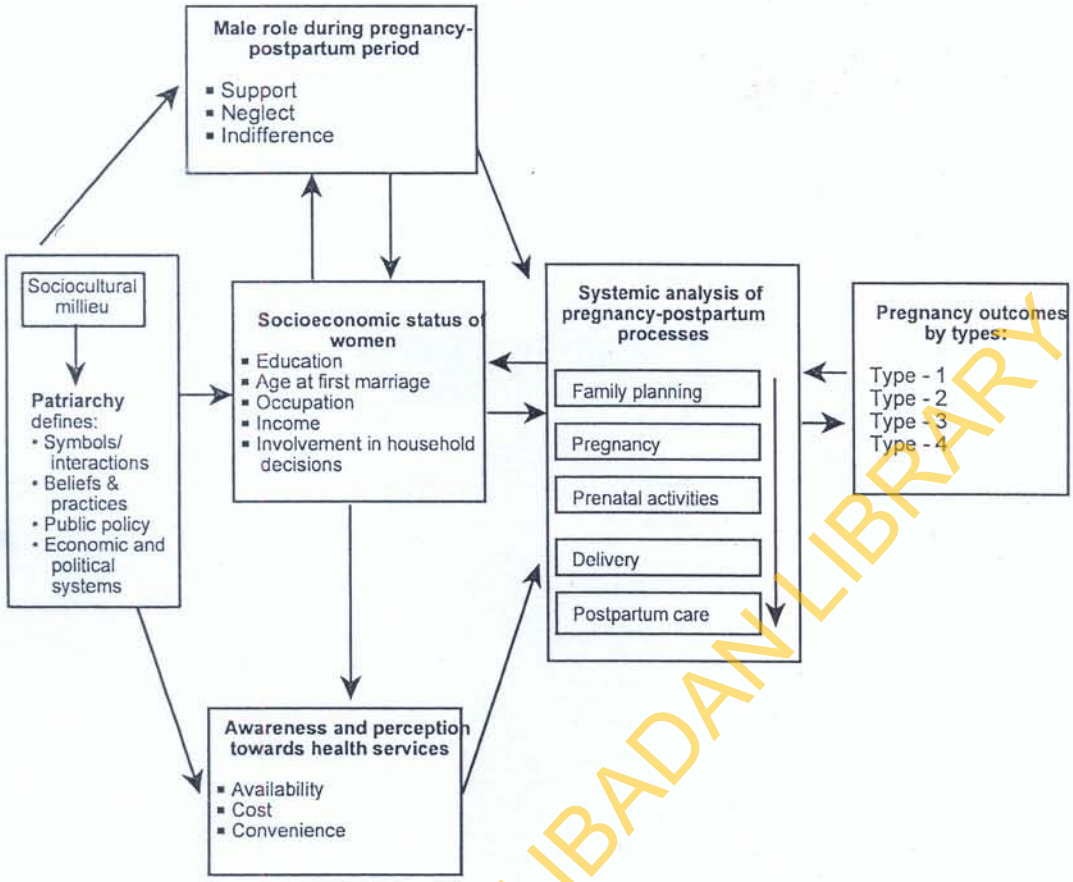

Figure 1. Conceptual framework

The extent to which men are aware of and perceive health care services and perform roles, which generally assist women during pregnancy to postpartum period is also guided by the patriarchal system. The roles of men in family planning and during their wives' pregnancy to postpartum period generally affect pregnancy outcomes. For instance, supporting women emotionally during the above period reassures them that they are not alone, especially during labour when morale plays an important role in their efforts at successful delivery.

The systems theory, by emphasizing the role of each subsystem in the pregnancy outcome processes, complements voluntary action theory in the understanding of major issues in this analysis. The framework, which follows synthesizes the interconnections among relevant variables.

Economic support from men not only ensures that women are adequately cared for during the antenatal, delivery and postpartum periods, in terms of nutrition, medical treatment etc. but also dissuades these women from taking part in strenuous economic activities, especially during the third trimester, when there is a high risk of complications occurring.

In addition, patriarchy has indirect but far-reaching implications for the socioeconomic status of women in terms of the latter's occupation, income, awareness and involvement in reproductive health decisions, which as a complex whole impinges on pregnancy outcome. Women with low income engage in energy intensive jobs during antenatal period in order to augment the family income. In places where women, for various reasons, are not allowed to work, they are totally dependent on their husbands and this absolute dependence limits women's involvement in reproductive health decisions. This highlights the reason behind the negative attitude of women with

low incomes towards family planning, antenatal care, child-delivery and postpartum activities. The socioeconomic status of women influences the extent and type of roles played by men during pregnancy till postpartum period. The tendency is that women with higher education and income are more involved in family decisions than those in a relatively lower position. This class of women can even solely bear the financial responsibilities of pregnancy, leaving the men to handle basic family responsibilities such as feeding, payment of school fees and house rent.

Aside from the fact that the decision-making role played by men, starting from family planning to the postpartum period, and the socioeconomic status of women can directly affect pregnancy outcomes, they also influence the awareness and perception of health care services in terms of availability, cost and convenience. These variables, also indirectly affect the behaviour of individuals in terms of family planning, antenatal and postpartum activities. In the final analysis, the pregnancy outcome recorded by a couple will determine the nature of feedback and the activities, which characterize the pregnancy/postpartum processes and, eventually, other variables that affect pregnancy outcomes.

Combining the voluntary social action and systems theories in explaining the relationship between socio-cultural factors and pregnancy outcomes among the Ibani was useful in order to get a comprehensive analysis. Looking at pregnancy outcomes from the perspective of its being the cumulative effect of a range of socio-cultural activities that precede such outcomes, beginning from family planning to the postpartum stage, the study contributes to the understanding of the impact these factors have on the outcome of pregnancies.

Methodology

Data for the study was collected through a combination of qualitative and quantitative methods. Independent variables were built around such factors as: male role and patriarchy; family planning and family size; socioeconomic status of women; women's educational attainment; involvement of women in reproductive decisions; age at marriage; nutrition; cultural inclination and contraceptive knowledge, and practices; the determinants of child spacing; and availability and use of antenatal care facilities. Respondents were identified with pseudonyms in line with ethical requirements for ethnographic studies.

Fieldwork began with the qualitative aspect of the research which provided important insights for the investigation of the study area. For most studies employing triangulation, qualitative data are immensely significant and must precede the survey method in order to facilitate the design of the questionnaire. By setting out to investigate attitudes, values, beliefs and practices, which could directly or indirectly affect pregnancy outcomes among the Ibani, the present study relied primarily on exploratory data as a starting point for quantitative research (Isiugo-Abanihe and Obono, 2000). Specifically, qualitative data for the present analysis was elicited through focus group discussion (FGD), in-depth interview (IDI) and observation.

For the quantitative data, a cross-section of Ibani women, ages 20–60 and above, were selected as respondents using a multi-stage sampling technique. In all, 750 questionnaires were administered, out of which 717 were finally returned for analysis. Only 709 questionnaires were useful, however, representing a return rate of 94.5 per cent. Sampling, the process of selecting a number of individuals to represent a larger group, began with obtaining a complete list of enumeration areas (EAs) in Bonny (demarcated for the 1991 census). An EA is a compact area carved out of a locality with well defined and identifiable boundaries. According to the National Population Commission's (NPC) demarcations, there were 154 EAs in Bonny, with an estimated 102 households per EA and an average number of 4 persons per household. This gives an estimate of 408 persons per EA.

The study aimed at sampling about 14 per cent of the total number of EAs, through random sampling technique in order to generate representative data. Twenty-two (22) of the EAs were selected by first organizing the 154 EAs into clusters, according to the kingdoms into which they fall – each of these kingdoms has its peculiarities,

in terms of its organization and history. The clusters were made up of an average of 11 EAs and about 10 per cent of the EAs within each cluster were selected by simple random technique. There was no sampling frame for women who constitute survey respondents for the study, the research team, therefore, devised an ad-hoc frame for each household.

The next stage involved the use of systematic approach, in the selection of households from the already chosen 22 EAs. Within each selected household, an ever-pregnant woman was interviewed. In any household where there were more than one ever-pregnant woman, a simple random technique was adopted to select the respondent who was finally interviewed.

Quantitative data was edited and cleaned to eliminate inconsistencies, which could undermine the validity of the data. The data generated from pre-coded, open-ended and fixed choice questions were entered, using Microsoft Access software in order to minimize data entry error and to ensure better data management. Data was finally exported and analysed using the Statistical Package for Social Sciences (SPSS) software. A descriptive analysis of data was undertaken using univariate frequency distributions and cross-tabulation of variables whose combined influences impact strongly on pregnancy outcomes. The socio-demographic variables examined in the course of the univariate and bivariate analyses included age, marital status, religion, education, occupation, income and age at first marriage. Multivariate logistic regression models were also employed in the analysis because predicting pregnancy outcomes and identifying variables necessary for such predictions are of vital importance.

Qualitative data was analysed using a manual content analysis. The procedure began with the transcription and translation of the tape recordings of both the in-depth interviews and focus group discussions, then the examination and later, isolation of various responses that were relevant to study objectives. Using this method, data from the group discussions and in-depth interviews were imported into the analysis on the merit of their applicability.

Table 1. Percentage distribution of respondents by selected socio-demographic characteristics

Character-istics	Categories	Frequency	%	Cumulative
Age	20-24	9	1.3	1.3
	25-29	32	4.5	5.8
	30-34	52	7.4	13.2
	35-39	49	7	20.1
	40-44	138	19.6	39.7
	45-49	153	21.7	61.4
	50-54	121	17.2	78.6
	55-59	82	11.6	90.2
	60+	69	9.8	100
	Total	**705**	**100**	
Marital Status	Single	15	2.2	2.2
	Married	563	80.8	82.9
	Cohabiting	4	0.6	83.5
	Divorced	39	5.6	89.1
	Separated	21	3	100
	Widowed	55	7.9	97
	Total	**697**	**100**	
Religion	Catholics	80	11.7	11.7
	Protestants	571	83.6	95.3
	Traditional	32	4.7	100
	Total	**683**	**100**	
Education	No schooling	62	8.8	8.8
	Primary	240	34	42.8
	Secondary	385	54.5	97.3
	Tertiary	19	2.7	100
	Total	**706**	**100**	
Occupation	Civil service	59	10.3	10.3
	Fishing/farming	266	46.3	56.6
	Small trade	202	35.1	91.7
	Unemployed	34	5.9	97.6
	Others	14	2.4	100
	Total	**575**	**100**	
Monthly income in Naira	2000 or less	125	20.3	20.3
	2001-4000	194	31.5	51.8
	4001-6000	190	30.5	82.6
	6001-8000	71	11.5	94.2
	8001-10000	23	3.7	97.9
	10001+	13	2.1	100
	Total	**616**	**100**	
Age at first marriage	15-19	48	7	7
	20-24	320	46.6	53.6
	25-29	279	40.6	94.2
	30- above	40	5.8	100
	Total	**687**	**100**	

Results and Discussion

This study found four principal types of pregnancy outcomes among the Ibani: type-1 (when the mother and her baby survive pregnancy and live for up to six weeks following delivery); type-2 (mother's survival and infant mortality); type-3 (spontaneous abortion); and type-4 (maternal mortality and infant survival). Although four major types of pregnancy outcomes were found among the Ibani during the course of this study, there is a possibility of other types of outcomes in other communities, which have similar features or even among the Ibani at a different period. This suggests that such outcomes are relative to a period of time and location.

Analysis of quantitative data was limited only to types 1-3 outcomes, given that questionnaire was distributed among women who experienced other types of outcomes, except maternal mortality, which type-4 represents. A total of 709 Ibani women, aged 20 – 60 and above were sampled for the study. The sample was sex-specific, given the nature of the phenomenon under investigation and the fact that women are the ones directly affected by pregnancy and the subsequent outcomes. Considering, however, that pregnancy outcomes result from an interaction of both sexes, Ibani men were well involved in the qualitative aspects of the study.

Table 1 shows that not all the respondents answered questions related to all the variables presented in the questionnaire. Some of the questions were perceived as sensitive and impinging on the respondents' privacy and were deliberately skipped by a few respondents. Thus, while a total of 709 respondents were involved in the quantitative study, less than that number responded to each of the variables.

The mean age distribution of the sample was 46 years. This can be explained in terms of the socio-economic and environmental push factors, which accelerate rural out-migration. In the opinion of a male in-depth interviewee from Adongo Hart 'what would young ladies be doing in the village where nothing exists except gossiping; we encourage the youth to go out there and struggle with their mates.' Hence, the push factors include moral and ideological ones. Table 1 indicates that only 9 respondents (1.3 per cent) were in the age group 20-24. At the other extreme were women of age 60 and above, being 9.8 per cent of the total number of respondents, showing a 'middle-heavy' age distribution of respondents.

Among the respondents, about 81 per cent of the women are married, while only 2.2 per cent are single. Nearly 8 per cent of the women are widowed and another 8.6 per cent are either separated or divorced. The implication of this finding is that the level of marital instability among the Ibani is high, compared to national figures, which are less than 2 per cent for the widowed, separated or divorced (NPC, 2000). One of the male FGD participants in age-group 40 and above threw some light on this:

> *It is not in our custom to force our daughters to marry . . . but we welcome genuine people that are introduced as would-be husbands by the girls. Marriage, on the other hand, does not suggest that our daughters, no matter how bad they are treated cannot come back home and also be re-established to begin life anew . . . there are instances when such ladies, even at times after two or more attempts, later married men who are their real husbands.* (Wilcox, 2002)

Each marital union, however, places a demand on couples in terms of child bearing, as defined by the pro-natalist ethos of the Ibani society. A male FGD participant stated that: 'Although a woman may not be told outrightly about the need to give birth to, at least, one child in her matrimonial home, she is expected to win the heart of her husband by doing so.' According to some community elders, marriage is not and does not mean that women are completely detached from their families, to the extent that even when they are being physically or mentally abused in their matrimonial homes, they cannot go back to their family home. The study found that marriage ceremony (endogamous and exogamous) among the Ibani is simple and the bride wealth is low, relative to what obtains in most other communities in the Niger Delta. Table 1 indicates that 95.3 per cent of the respondents are Christians, while only 4.7 per cent practices the traditional religion.

An examination of the educational qualification of the respondents shows that 54.5 per cent of the women had secondary school education, while 2.7 per cent had tertiary education, showing that most Ibani women are literate. A woman's level of education is related to her ability to recognize pregnancy signs, its associated complications, the need for healthy nutrition during pregnancy and how and when to use contraceptives.

Although Ibani women are literate, a high number of them are engaged in occupations other than working for the civil service(only 10.3% of the respondents are civil servants). Respondents are, however, not strictly separated along occupational lines, as depicted by the table. It cannot be completely asserted that activities are rigidly separated to the extent that individuals cannot criss-cross or switch occupations at any given time. Most of the Ibani people who are engaged in farming and fishing, are sometimes involved in small scale business. Hence, there is duality and at times, multiplicity of roles/occupations. One of the female FGD participant in the 20–49 age category confirmed this deduction: 'Most of us who are involved in fishing also smoke them and eventually sell these fishes for a living.'

Table 1 also shows that the monthly mean income is ₦4,305.31. Although this amount is more than a dollar per day, which places Ibani women well above the national average, their income level is low relative to the cost of living in the Ibani society. Most of these women, therefore, still engage in usually strenuous economic activities to augment their usually meagre family income, even in the last trimester of pregnancy. Consequently, the women are vulnerable to complications, which can arise from not taking proper care during the antenatal period, especially given that most of them have little or no time to attend antenatal care clinics. Some female FGD participants noted that the only way to avoiding these problems is through child spacing so they can have enough time to engage in business activities without inhibition. For women with low income who are dependent on their husbands this can lead to exploitation because the men end up taking major decisions, including those directly affecting only their wives.

The interaction of the respondents' education, occupation and income level reveals that these variables are related to the age-at-marriage with the mean at 24 years. This average is normal in communities where strong emphasis is laid on higher education for both sexes. Involvement in educational pursuit usually affects age-at-marriage, increases the individual's occupational opportunities and chances at earning better income. The 7.0 per cent representing married women between 15–19 years shows that the number of Ibani women who married at those ages is low. When women marry at an early age, they are usually ill-educated, earn low income and are basically dependent on their husbands; also, pregnant adolescents are at risk of suffering from pre-eclampsia (Chism, 1997).

Child-Spacing and Pregnancy Outcome

Table 2 displays the data on the cross tabulation of pregnancy outcomes and decision on child spacing, which shows a strong relationship at 1 per cent significance level. Three hundred and sixteen (316) respondents indicated that decision on child spacing was solely taken by their husbands. Although perceived as subsumed in inequity, patriarchal relationship among the Ibani is a paradox, as shown in table 2, given that 87.7 per cent of those whose husbands took decisions alone had a type-1 pregnancy outcome.

Table 2. Distribution by decision on birth spacing and pregnancy outcomes

	Pregnancy outcomes			
Decision taker	**Type-1**	**Type-2**	**Type-3**	**Total**
My husband's decision alone	277 87.7%	23 7.3%	16 5.1%	316 100.0%
My own decision alone	47 66.2%	19 26.8%	5 7.0%	71 100.0%
Both of us	133 74.3%	35 19.6%	11 6.1%	179 100.0%
Others	2 15.4%	10 76.9%	1 7.7%	13 100.0%
Total	459 79.3%	87 15.0%	33 5.7%	579 100.0%
Pearson's Chi-square [df]	55.900[3]*			
Significance Value	0.000			

* Types 2.and 3 were merged for the chi-square analysis to improve the reliability of the test.

The success associated with this unilateral decision making has sustained the subordination of women in most societies and accounts for the high fertility rate in such societies (Kritz et al., 2000; Isiugo-Abanihe, 1994). It would be expected, therefore, that joint decision making, as an indication of effective spousal communication, would produce higher type-1 pregnancy outcomes, however, according to data presented in table 2, when decisions were jointly made, 74.3 per cent of the respondents, in that category, reported a type-1 outcome.

In cases where women alone took decisions about child spacing, the type-2 percentage recorded was 26.8 per cent, while 7 per cent had type-3 pregnancy outcomes, which were the highest across all the categories.

The last category in table 2 comprises the 13 respondents who are single and, therefore, not directly affected by pregnancy outcomes due to the fact that many pregnancies resulting from extramarital relationships end up being aborted. Of the respondents, therefore, 76.9 per cent experience type 2 and 7.7 per cent record type-3 pregnancy outcomes (altogether making 84.6%) compared with the 15.4 per cent, which had type-1 outcomes. Also included in this category are those advised by medical practitioners, family members and friends on the need for birth spacing. In summary, 79.3 per cent of the respondents had type-1 outcomes, while 15.0 and 5.7 per cent of the total had types 2 and 3 outcomes respectively. The data shows that the incidence of types 2 and 3 pregnancy outcomes among the Ibani is high.

Tables 3 and 4 focus on variables, which highlight the association between access to and use of health care facilities and pregnancy outcomes. Table 3 highlights the impact of antenatal care on pregnancy outcomes, which shows a strong association between the antenatal care provider during their previous pregnancy and outcomes at 1 per cent significance level. The table shows that 506 out of 681 respondents received antenatal care from traditional birth attendants (TBAs) indicating that most Ibani patronize TBAs. Table 3 also shows that 85.0 per cent of those who patronized TBAs during previous pregnancies recorded a type-1 outcomes compared with the 56.9 and 42.9 per cent recorded by those who patronize health centres and 'others' category respectively.

Table 3. Distribution by source of antenatal care and pregnancy outcomes

Source of antenatal care	Pregnancy outcomes			
	Type-1	Type-2	Type-3	Total
Health centre	29 56.9%	17 33.3%	5 9.8%	51 100.0 %
TBA's house	506 85.0%	54 9.1%	35 5.9%	595 100.0 %
Others	15 42.9%	17 48.6%	3 8.6%	35 100.0 %
Total	550 80.8%	88 12.9%	43 6.3%	681 100.0 %
Pearson's Chi-square [df]	58.134[2]*			
Significance Value	0.000			

* Types 2 and 3 were merged for the chi-square analysis to improve the reliability of the test.

The above finding is supported by the views of some FGD respondents that TBAs are the most patronized source of antenatal care among the Ibani. One of the male FGD participants in age group 30–39 confirmed this by saying:

> *I wonder what gives some of our women the courage to visit health centres during pregnancy . . . no right thinking person will go to a place where problems are not solved when you have solutions waiting to be exploited. We don't have an alternative to TBAs . . . experience over the years has shown that most Ibani women that died from pregnancy related causes were those that, for certain reasons, neglected the activities of TBAs. For this reason women are advised in their interest and that of their families to register with the latter for antenatal, natal and postpartum care.* (Manilla Peppie. 20/06/02)

The table further shows that women who received antenatal care from TBAs (595 respondents) experienced the lowest type-2 and type-3 outcomes (9.1 and 5.9 per cent respectively). Women who attended antenatal clinics at the health centres on the other hand (51 respondents) experienced a comparatively high

type-2 (33.3 per cent) and type-3 (9.8%) outcomes. A female FGD participant at Ibanigo village (age category 25-29) who further highlighted the situation thus:

> *We do not have hospitals in Ibani villages; rather there are health centres without medical doctors. These centres are usually small rooms without facilities including drugs. Doctors are afraid to come to these villages, not only because of their ocean-bound nature but also the perceived inability of the people to defray medical charges. So, whenever we sense danger during pregnancy, we make early arrangement to transfer such women to Bonny town or Port Harcourt as the case may be.* (Ibanigo. 22/06/02)

The above scenario suggests that visiting orthodox health centres in Ibani villages during pregnancydoes not depict any difference from non-attendance. This assertion is strengthened by the fact that Nwacresi and Jiapu, the only respondents who registered at an health centre and with TBAs recorded stillbirths and spontaneous abortion respectively. Although these birth attendants are incapable of handling certain aspects of maternal health, their proximity is considered an advantage. In summary, table 3 shows that only 80.8 per cent of the respondents recorded a type-1 outcome, while the remaining had 12.9 and 6.3 types 2 and 3 respectively.

Table 4 shows that there is no association between the length of time spent to get to antenatal care providers and pregnancy outcome. The table shows that 87.0 per cent of the respondents who reach their antenatal care providers between 30 and 59 minutes had type-1 outcomes, while those that got to their care providers before 30 minutes and in 60 minutes and above had 80.4 and 71.4 per cent type-1 outcomes respectively. It would have been expected that women who were able to access their antenatal care providers within 30 minutes should experience the highest type-1 outcomes.

Furthermore, respondents that reach their source of care between 30 and 59 minutes had the least of types 2 and 3 outcomes, represented by 5.8 and 7.2 per cent respectively. While these figures confirm the non-association between pregnancy outcomes and length of time to antenatal care provider, they indicate that time spent to get to the care providers does not show any consistent pattern with pregnancy outcomes. Considering the need for quick and easy access to maternal health facilities, an association would have meant that the percentage of types 2 and 3 outcomes for respondents who get to antenatal care centres within 30 minutes should be the lowest.

Table 4. Length of time to source of antenatal care and pregnancy outcomes

Length of time to reach source of antenatal care	Pregnancy outcomes			
	Type-1	Type-2	Type-3	Total
<30 mins	476 80.4%	79 13.3%	37 6.3%	592 100.0%
30-59 mins	60 87.0%	4 5.8%	5 7.2%	69 100.0%
60 mins or more	10 71.4%	3 21.4%	1 7.1%	14 100.0%
Total	546 80.9%	86 12.7%	43 6.4%	675 100.0%
Pearson's Chi-square [df]	2.543[2]*			
Significance Value	0.280			

* Types 2.and 3 were merged for the chi-square analysis to improve the reliability of the test.

Equally, significant relationship between duration of time at getting to the antenatal care provider and pregnancy outcomes, in terms of type-1 outcome, would have indicated a continuously progressive association beginning from the first category. An association would have also meant the reverse i.e. progression in the percentages of types 2 and 3 outcomes as the time increased. This table however shows that length of time spent getting to antenatal care provider does not show a consistent relationship with pregnancy outcomes, possibly due to the compact nature of Ibani villages, that account for why a very large majority of the people patronize the same source. Table 4 shows that the incidence of types 2 and 3 outcomes is high among the Ibani of Rivers State. Of the total, only 80.9 per cent had type-1 outcome, while 12.7 and 6.4 per cent recorded types 2 and 3 results, respectively.

The relationship between pregnancy outcomes and duration of time spent getting to the source of antenatal care indicates that there is no consistent relationship between the dependent and independent variables. Table 5 shows data on access to and use of antenatal health care facilities and pregnancy outcomes. The model indicates that the variables, which show the source of antenatal care as well as their mode of transportation to antenatal care providers are significant at 0.01 level. The overall model is significant at 0.1 level (99% confidence level) according to the model chi-square statistic. The model predicts 84.1 per cent of the responses correctly.

The table shows that women who were assisted by traditional birth attendants (TBAs) are 66 per cent less likely to have types 2 and 3 outcomes, compared to women who deliver in hospitals. This implies that the high rate of types 2 and 3 outcomes recorded by women who reside in any of the 13 villages but seek to give birth in hospitals located either in Bonny town or Port-Harcourt find it difficult to access care in case of emergencies.

The table shows further that women who gave birth at the TBA houses are also 64.2 per cent less likely to have types 2 and 3 outcomes compared to those who delivered in hospitals. The earlier explanation that the non-existence of hospital facilities in Ibani villages and the inadequate transportation explains the high rate of TBAs patronage. This makes double and even multiple registration of these women at different kinds of health care facilities inevitable.

The table also shows that women who attend antenatal care in the health centres are about 1.4 times more likely to experience types 2 and 3 outcomes compared to those who attend antenatal clinics at hospitals. This result shows that the difference between antenatal care and child delivery is wide. In the earlier analysis on the place of child delivery, women who delivered in health centres experienced more type-1 pregnancy results than those who patronized hospitals, a sharp contrast with the antenatal source data.

Health centres in Ibani lack personnel and equipment. This inadequacy is linked to the nature of services, which such centres can render to their

Table 5. Logistic Regression Model for pregnancy outcomes with respect to access and use of maternal health facilities

Variables/Categories	B	Sig.	Odds ratio
Place of delivery		.279	
Hospital	RC		1.000
Health Centre	-1.079	.128	.340
TBA's House	-1.026	.136	.358
Sources of antenatal care		.000	
Hospital	RC		1.000
Health Centre	.370	.515	1.447
TBA's House	-.908	.126	.404
Frequency of use of source of antenatal care			
Frequently/Often/Regularly/Always/Most times	.037	.916	1.038
Few times/Not often	RC		1.000
Services provided by antenatal care source		.113	
Physical Examination	.438	.317	1.549
Abdominal Examination	-.178	.690	.837
Massaging	RC		1.000
Reason for utilizing source of antenatal care		.424	
Cheap/Low Cost	-.214	.515	.807
Convenient/Near	-.425	.190	.654
Good service/desired outcome/Safety	RC		1.000
Length of time to reach source of antenatal care			
<30 mins	RC		1.000
30 mins or more	-.659	.130	.517
Mode of transport to source of antenatal care		.000	
On foot	RC		1.000
Speed boat	-1.355	.098	.258
Canoe	-3.924	.000	.020
Constant	.673	.347	1.960
-2 Log likelihood	396.629		
Model Chi-Square [df]	152.165[12]		
% Correct Predictions	84.1		
Hosmer and Lemshow Goodness of Fit Test [df]	5.239[8]		
Number of Cases	573		

RC=Reference category

patrons. Even though hospitals do not exist in Ibani villages, the few Ibani women who attend hospitals outside those villages are more likely to receive better antenatal care and more type-1 outcome than those who depend on health care centres. Even those who for various reasons delivered at the villages (after being attended to at hospitals outside the villages), given the cumulative effects of antenatal care beginning from the first trimester, there is a higher likelihood of experiencing more type 1 pregnancy outcomes than those who depend on health care centres that lack medical facilities.

Table 5 further shows that women who patronize TBAs for antenatal care are 59.6 per cent less likely to have any other type of outcome apart from type1 in comparison to those who use an hospital. It is important to note at this point that several factors account for the high patronage of TBAs and the high incidence of type-1 pregnancy outcome recorded by these patrons.

Women who visit their antenatal care providers frequently are slightly (1.038 times) likely to experience types 2 and 3 outcomes compared to women who rarely do. Ideally, the reverse ought to be the case. This finding shows clearly that the case of the Ibani is peculiar. This implies that the services provided during antenatal periods when a large number of people rely on TBAs are not significantly related to pregnancy outcomes. It can be deduced from the above figure that favourable pregnancy outcomes among the Ibani occur by 'chance', not in the least arising from frequent attendance of antenatal clinics. It means that antenatal care, however consistent, can impact positively on pregnancy outcome only when such care has a measure of efficacy.

Women whose antenatal care providers performed physical examination on them during pregnancy are about 1.5 times more likely to have types 2 and 3 outcomes compared with those who only employed massaging of clients' abdomen. The competence of the antenatal care provider largely determines the type of treatment given to clients. Conversely, women who were given abdominal examination by their antenatal care providers are about 16.3 per cent less likely to have any other type of outcomes apart from type 1.

Women who patronize antenatal care providers due to the low cost of their services are 19.3 per cent less likely to experience types 2 and 3 outcomes compared to those who patronize for qualitative service. The above finding can be attributed to the preference of these women for cheap and accessible facilities. On the other hand, women who prefer to attend antenatal clinics at government hospitals experienced more types 2 and 3 pregnancy outcomes than those who settled for available facilities. Women who patronize antenatal care providers due to convenience and proximity are 34.6 per cent less likely to have any type of outcome apart from type-1 outcome compared to women that patronize antenatal care facilities because of service quality.

Table 5 also shows that women who reach their sources of antenatal care in at least 30 minutes are 48.3 per cent less likely to record types 2 and 3 outcomes than those who spend less than 30 minutes. Similarly, those who board speed boats to their antenatal care providers are 74.2 per cent less likely to experience types 2 and 3 outcomes than those who trek to the facilities. This implies that women who access their antenatal care providers in at least 30 minutes go outside their villages of residence, for which boat transport is employed. This means that the services of other antenatal care providers other than those of TBAs are engaged.

Conclusion

This study has provided data to affirm the links between socio-cultural variables and pregnancy outcomes among the Ibani of Rivers State by identifying communal and individual values, attitude and behaviours related to pregnancy through an interdisciplinary approach. The emerging paradigm shift in the social sciences, which is situated in trans-disciplinary collaboration nullifies the erstwhile seclusion of individual disciplines from the technical virility of other fields of knowledge, which share indistinguishable methodological boundaries. By de-emphasizing such parochial outlook, embedded in methodical linearity and limitations in analytical insights, the study argues that the influence of beliefs and practices is central to the investigation and analysis

of pregnancy outcomes, where the activities of individuals are strictly regulated by culture.

The influence of culture on pregnancy outcomes was investigated by examining the impingement of child-spacing intervals, sources of antenatal care and access and use of antenatal health facilities on these outcomes. The study findings show inconsistency between spousal communication, amount of time spent getting to source of antenatal care and type 1 outcome. This implies that some intervening variables such as peer influence, unilateral decision making among pregnant women to seek care and self-medication, affect the pregnancy outcomes in Ibani. There is a further need for more investigations, which would lead to an understanding of the specific latent variable of interest in order to design effective intervention strategies to improve these outcomes significantly.

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