

Multiparity and Childbirth Complications in Rural Women of Northeastern Nigerian Origin

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Abstract: This study sought to evaluate the rate of childbirth associated complications and to determine if multiparity constitutes a danger to mother and child. The cross-sectional study included women of childbearing age (15-45 years) who had attended health care facilities during pregnancies within the past two years (2009-2011). 384 women who fall into different para groups were picked at random. Data on subjects were abstracted from their medical records. Events such as abruptio placentae, uterine rupture, hemorrhage, malpresentations and mortality were observed and their rates of occurrence in the different para groups were analyzed. The research findings showed that complications occurred in all groups with the highest rates occurring in grand multiparas (para 6-9) such that uterine rupture occurred in 24% of the grand multiparous group, abruptio placentae was observed 17.97%, malpresentations [20.05%] and death [4.17%]. The grand multipara appears to have the highest risks of all groups of child bearing women in the study population. Based on the high rates of childbirth complications that increased with parity, and due to poor perinatal care obtainable in the general population; multiparity is seen as dangerous and predisposes women to have childbirth complications. Thus, health workers and public health educators have the responsibility to enlighten the communities on the dangers of multiparity; husbands should value the health of their wives as a family and community asset and ought to be protected against all odds. Adequate family planning methods may be useful.

I. Introduction

Parity indicates how many births a woman has already had. Hence, grandmultiparity has been defined by the International Federation of Gynecology and Obstetrics (1993) as delivery of the fifth to ninth viable pregnancies^{1, 2,3,4,5}. Multiparity has been identified as an independent risk factor for a variety of serious intrapartum complications including: placenta previa, placental abruption, malpresentation of the fetus, instrumented delivery, cesarean delivery, postpartum hemorrhage, prematurity, newborn intensive care unit admission, and maternal death.^{4, 6-9}

“Multiparity”, from the introduction of the term had been regarded “dangerous” and an independent factor in maternal and infantile morbidity and mortality^{7, 10-14}. Although some other works tried shifting the blame to other factors including: poor perinatal care^{2, 6, 15-19}; interpopulation differences²⁰, poor socio-economic status²³⁻²⁵ as well as advanced maternal age²⁸⁻³¹. There has been repeatedly mixed results as various researchers have observed inconsistent outcomes in seemingly similar populations.

It seems fair that with improved and modern perinatal care, improved perinatal outcomes for both mother and child might be assured²¹⁻²². In other words; high parity may not be a great cause for concern if the economy is stable, population is healthy and there is access to high quality medical care²³⁻²⁵. Thus, in a healthy population that has access to modern medical care, even refugee status did not count²⁶. In every country, mothers and children constitute a major segment of the total population. In India, women of child bearing age (15-44 years) form 19% and children under 15 years of age accounts for 34-33% of the total population²⁷.

In Nigeria, Bauchi state alone presents a total of 4,653,066 persons of which the female population was estimated at 2,283,800 (The Nigerian Population Census, 2006). Hence, the female population accounts for about 49.08% of the total population in Bauchi state. This has not taken into consideration the children among the male population. Although, these statistics are yet controversial; it still points to the fact that a large block of our nation's human resources consist of women and children. Thus, we need not overemphasize the need to pay adequate attention to whatever affects their health.

We must note that; “by virtue of their large numbers, mothers and children are entitled to special care.”²⁷. Unfortunately, the state of affairs of perinatal health care in Nigeria is deplorable. The maternal mortality rate in the year 2009 was placed at 545 per 100,000 live births (UNFPA, 2010)³³. This record is only second to India.

II. Methodology

A cross sectional study of all women who attended healthcare facilities during pregnancies within the past two years (2009-2011). Subjects were classified into 3 groups according to birth order. This includes:

- 1 Multiparous group (between 2 and 5 births)
- 2 Grandmultiparous group (between 6 and 9 births)
- 3 Huge multiparous group (10 or more births)

Childbirth complication for the purpose of this research was defined as “when at least one of the following conditions occurs: massive hemorrhage, uterine rupture, abruptio placentae, malpresentation as well as mortality.” A simple random sampling technique was employed in choosing subjects for study. A total of 384 multiparous cases were picked at random as well as a corresponding control group of primiparous women. The primiparous group did not include very young (below 15 years) and very old (over 44 year old) individuals.

The sample included individuals from a multi-social background of ethnic Nigerian origin.

Data was abstracted from the medical and delivery records available at the clinics visited. All located within Ningi Local government area of Bauchi state. Information considered includes number of births (parity), maternal age and complications associated with childbirth such as hemorrhage: ante/postpartum, uterine rupture, malpresentation, placental abruption and death. Data was analyzed and presented in simple percentages.

III. Results

TABLE 1: Mean Maternal Age

| Age range | Mean age | N (frequency) | Mean parity |
|-----------|----------|---------------|-------------|
| 15-19 | 17 | 80 (20.83%) | 2.3 |
| 20-24 | 22 | 92 (23.96%) | 4.0 |
| 25-29 | 27 | 71 (18.49%) | 5.2 |
| 30-34 | 32 | 63 (16.41%) | 5.7 |
| 34-39 | 37 | 46 (11.98%) | 8.0 |
| 40-44 | 42 | 32 (8.33%) | 9.1 |

FIGURE 1: Parity in women of child bearing age in Ningi Local Government Area of Bauchi state.

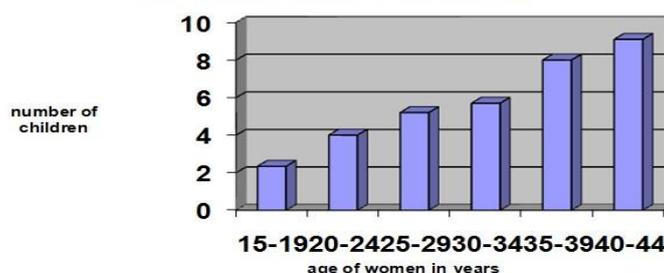


TABLE 2: Levels of Parity

| Para | Number of deliveries | Maternal age range | Mean age | N (Frequency) |
|----------------|----------------------|--------------------|----------|---------------|
| Primipara | 1 | 15-22 | 14 | 384 |
| Multipara | 2-5 | 15-35 | 24 | 106 |
| Grandmultipara | 6-9 | 21-46 | 33.5 | 213 |
| Huge multipara | 10- | 37-48 | 42.5 | 65 |

TABLE 3: Childbirth Complications % Per Para Group

| Complications | Primipara (control group) | Multipara | Grandmultipara | Huge multipara |
|--------------------|---------------------------|-----------|----------------|----------------|
| Heamorrhage | 27.06% | 9.88% | 8.20% | 5.71% |
| Uterine rupture | 0% | 6.17% | 25.68% | 11.43% |
| Abruptio placentae | 5.88% | 13.58% | 37.71% | 28.57% |
| Malpresentation | 2.35% | 7.41% | 42.08% | 31.43% |
| Death | 7.06% | 4.94% | 8.74% | 2.86% |

TABLE 4: Childbirth Complications % in General Population

| Complications | Multipara | Grandmultipara | Huge multipara | Total complication |
|---------------------------|--------------|----------------|----------------|--------------------|
| Heamorrhage | 2.08% | 3.90% | 0.52% | 12.49% |
| Uterine rupture | 1.30% | 12.24% | 1.04% | 14.58% |
| Abruptio placentae | 2.87% | 17.97% | 2.60% | 24.74% |
| Malpresentation | 1.56% | 20.05% | 2.87% | 24.74% |
| Death | 1.04% | 4.17% | 0.26% | 7.03% |

IV. Discussion

The findings of this research reveal that childbirth complications are obviously influenced by multiparity although the findings may not be conclusive. In all the groups studied, some amount of complications occurred and while it was more prevalent in some groups, it appeared to have occurred less in some groups.

Childbirth complications studied in the target population include: hemorrhage, uterine rupture, abruptio placentae, malpresentation and mortality. The incidence of maternal mortality in the study population seems to be unexpectedly high in grand multiparous women and slightly high in primiparous women. In the primiparous women, maternal mortality as well as hemorrhage seemed to be high while the prevalence of abruptio placentae and malpresentation were minimal and least for all groups. There were no cases of uterine rupture in the primiparous women observed.

In relation to level of parity; maternal age increased with parity such that at the mean age of 17 years, Northeastern Nigerian women have 2 or more children while at a mean age of 32 years, they have between 5 or 6 children. Early marriage appears to be a trend in Northeastern Nigerians as 20.83% of the whole study group fall within the ages of 15 – 19 years. The maternal population peaks at the mean age 22 years and reduces progressively with advance in age. At 42 years of mean age we have only 8.33% of the study population. The number of offsprings per individual increases steadily through the various age groups to reach an apex of 10 deliveries or more in the oldest group (maternal age: 40-44 years).

According to birth order, that is, primipara, multipara, grand multipara and huge multipara; the numbers of individuals per group are 85, 81, 183 and 35 respectively. Childbirth complications observed include: Hemorrhage [postpartum / antepartum], uterine rupture, abruptio placentae, malpresentation and, maternal mortality [death]. Tables 3 and 4 presents these results in percentages. In the primiparous women there was no occurrence of uterine rupture in the group studied. Slight occurrence of abruptio placentae [1:3%] and malpresentation [0.26%]. A slightly high incidence of death at 1.56% and the most points in hemorrhage.

In multiparas, except for a relatively higher value in uterine rupture and abruptio placentae, risks of hemorrhage, death and malpresentation appears to have decreased.

The grand multipara appears to have the peak values for uterine rupture [12.24%], Abruptio placentae [17.97%], malpresentation [20.05%] and death [4.17%] the grand multipara appears to have the highest risks of all group of child bearing women in the study population.

The huge multiparas have far less values than the grand multiparas. Contributing to this is the occurrence of fewer individuals in this group, a better medical attention received as they are easily identified as potential risk individuals and the traditional African way of attending to older individuals first, then the younger ones later. Older women tend to be more careful with their health and have a stronger will to attend health care facilities even when social demands might be obstructive.

Though the results of this research may not be conclusive due to many limiting factors such as: poor record keeping in clinics as well as poor response rate when further research was made/attempted to determine certain cultural values that might have influenced the perceived outcomes. But, it can be concluded that multiparity increased the risk of childbirth complications.

V. Conclusion

It can be said that multiparity is dangerous and predisposes women to childbirth complications. Women having 6 deliveries and more are already at risk of such complications as malpresentation, Abruptio placentae, uterine rupture and death. Besides the fact that health care facilities in Northeastern Nigeria are not standard, a good number of the indigenous women show a shy attitude towards modern health care. Even though modern and specialist prenatal care can reduce the high rate of childbirth complications, the socio- economic effects can not be denied.

VI. Recommendations

The health care systems should address issues of record keeping especially in clinics and primary health centers (PHCs) in rural areas. Health care providers oftentimes ignore operating an efficient referral system. Such that some personnel disregard earlier efforts by other co-health workers. This weakens the health care delivery system and thereby undermines the necessity of adequate record keeping and denies the patients, a medical history; and the researcher; resources for improving on the deficient systems.

These oftentimes neglected rural areas should reflect the true status of health care delivery in the communities. Multiparity is a subject that deserves more attention especially in developing countries. In a country with an unstable economy like Nigeria, multiparity increase the poor socioeconomic status of individuals and this has a “ripple effect” on the nation and beyond. The Nigerian Population Commission (NPC, 2012) has declared that the Nigerian nation has over 167 million people living in a world of about 7 billion persons. This makes Nigeria the 6th most populated nation in the world. Considering the challenges and implications of this near explosion of population, it is a most appropriate recommendation that people need to be educated on safe family planning methods and reproductive rights especially the women folk.

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