Original Article

Perception of Male Gender Preference Among Pregnant Igbo Women

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Abstract

Background: Male gender preference is a dominant feature of Igbo culture and could be the reason behind women seeking fetal gender at ultrasound. **Aim:** The aim of this study is to investigate the perception of prenatal ultrasound patients of male gender preference in a patriarchal and gender sensitive society. **Subjects and Methods:** The study was a cross-sectional survey, which targeted pregnant women who presented for prenatal ultrasound at four selected hospitals in Anambra State. A convenience sample size of 790 pregnant women constituted the respondents. The data collection instrument was a 13-item semi-structured self-completion questionnaire designed in line with the purpose of the study. Descriptive and inferential statistical analyses were carried out with statistical significance being considered at $P < 0.05$. **Results:** Most of the women (88.4%, 698/790) were aware that fetal gender can be determined during the prenatal ultrasound while just over half of them (61.0%, 482/790) wanted fetal gender disclosed to them during prenatal ultrasound. More than half (58.6%, 463/790) of the women desired to have male babies in their present pregnancies while 20.1% (159/790) desired female babies and 21.3% (168/790) did not care if the baby was male or female. Some of the women (22.2%, 175/790) wanted to have male babies in their present pregnancies for various reasons predominant of which was protecting their marriages and cementing their places in their husbands' hearts. Male gender preference was strongly perceived. There was considerable anxiety associated with prenatal gender determination and moderate loss of interest in the pregnancy associated with disclosure of undesired fetal gender. Socio-demographic factors had significant influence on perception of male gender preference. **Conclusion:** Male gender preference is strongly perceived among Igbo women and its perception is significantly influenced by socio-demographic factors. Male gender preference may be responsible for Igbo women seeking fetal gender at ultrasound.

Keywords: Male gender preference, Patriarchal society, Perception, Prenatal ultrasound

Introduction

Prenatal ultrasound has become an integral part of obstetric care wherever it is available. It is a simple non-invasive ultrasound imaging of the fetus and other contents of the uterus. Sonography is usually requested in pregnancy for medical reasons, but non-medical fetal ultrasound is now being promoted by some businesses.[1] Non-medical fetal ultrasound is defined as using ultrasound to view, take a picture or determine the gender of a fetus without a medical indication.[1] Even though, non-medical fetal ultrasound is considered ethically unjustified,[1] it has continued to grow in demand especially for fetal gender determination. This trend is principally because there are no scientifically proven harm to fetus from the procedure.[1]

Access this article online

Quick Response Code:

Website: www.amhsr.org

DOI: 10.4103/2141-9248.129027

Prenatal gender determination is medically indicated for carriers of sex-linked disorders, testicular feminization syndrome, pseudo hermaphroditism, genital anomalies, ambiguous genitalia, and determination zygosity in multiple pregnancy,[2-6] but there is now a view that it has consequences for maternal-fetal attachment.[7] It can improve bonding between

mother and fetus if the gender is the desired type or negatively affect bonding if otherwise. Prenatal determination of gender can lead to sex-selective abortion. A study in China reported that sex-selective abortion is practiced leading to imbalance in sex ratio at birth (SRB). There is currently female deficit in China because of strong preference for sons. The study also states that there is an opinion that these sex-selective abortions are strongly linked to China's one-child population control policy.[8] Another study in China reported that even though there has been a considerable weakening of son preference, SRB still remains high because a small proportion of individuals still carry out sex-selective abortion to ensure male off springs.[9] Another aspect of SRB is socioeconomic status of women. Wallner *et al*.[10] reported that in Uganda, ownership of dwelling place affects SRB in favor of males. They reported that women who live in owned dwellings give increased births to sons compared to those who live in non-owned dwellings. How the ownership status of dwelling place affects the gender of child being conceived is still debatable. Mubuuke[6] is of the opinion that revealing undesired fetal gender at ultrasound would elicit psycho-social effects such as stress, depression, and social isolation. Previous studies indicate that a majority of Nigerian parturients desire to know the gender of their fetus during prenatal ultrasound scan.[11-14] Furthermore, in Uganda, parturients expressed a strong desire to know fetal sex at ultrasound.[6] The desire to know fetal gender may be attributed to societal pressure as a previous study reported that 50% of undergraduate students prefer their first child to be male.[15] In most Ugandan cultures, there is gender bias in favor of men who are dominating and looked at as future leaders.[6] Son preference is a well-documented demographic problem in China.[8,9] In Pakistan, the preference for boys is deeply culturally embedded and this has led to a wide range of disadvantages for the female gender.[16] There is also report of male gender preference among women in Nepal.[17]

The Igbo are the original inhabitants of the South Eastern part of Nigeria and constitute the third largest ethnic group in Nigeria. The traditional Igbo society is very gender-sensitive and patriarchal. This is captured in this reading from Chinua Achebe's Things Fall Apart, which provides us with the portraiture of the traditional Igbo family with its genderized roles and functions.[18] "In the family, if a child is born, the sex is determined and if the baby was a male, that meant greater joy for the parents. For the man, joy, because he has a man who will take his place after his death and continue his family line; joy for the mother because that will properly entrench her in her husband's heart. Having a son means for her that nothing can uproot her from the family. A son further means having a voice to defend you in the family. However, if the child is a girl, the husband and wife receive it with mixed feelings. And if the female child is coming as the third, fourth, fifth or sixth female in the family without a male child that is enough reason for sorrow. For the man, it brings sorrow because his hope of having a male child to continue his lineage is becoming slimmer, the females will soon be married off to other men. Having female children is like "tending other people's vineyard while yours is unkempt."

The aim of this study is to investigate the perception of prenatal ultrasound patients of male gender preference in the gender-sensitive and patriarchal Igbo society. Throughout this study, we have used son preference and male gender preference, and sex and gender interchangeably.

Subjects and Methods

This study was a cross-sectional survey, which targeted pregnant women who presented for routine prenatal ultrasound at Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi; Holy Rosary Hospital and Maternity, Waterside, Onitsha; Saint Charles Boromeo Hospital, Onitsha; and General Hospital, Onitsha; all in Anambra State between January 2012 and July, 2012. Onitsha and Nnewi are two major commercial and industrial towns, which serve as settlements for many Nigerians of different ethnic extractions. The Igbos of different backgrounds, unarguably are the major inhabitants of these two towns.

The subjects included in this study were those who satisfied the selection criteria. The selection criteria were:

i. The patient must be of Igbo ethnic origin
ii. Must be healthy, conscious and free from any psychiatric disorders at the time of the study
iii. Must not be presenting for obstetric ultrasound scan on emergency basis
iv. Must be a patient with uncomplicated pregnancy, and
v. Must be a patient who voluntarily consented to participate in the study.

A convenience sample of 790 pregnant women who were referred for routine obstetric ultrasound from antenatal clinics formed the respondents in this study. Data were collected from patients who satisfied the selection criteria. The data collection instrument was a 13-item semi-structured self-completion questionnaire designed in line with the purpose of the study. The questionnaire was independently face validated by a public health physician and an obstetrician The questionnaire was administered to the patients after obtaining prior permission and consent of the hospital management to carry out the survey. The research design was approved by the Research Ethics Committee of NAUTH, Nnewi.

Data collected were analyzed using the Statistical Package for Social Sciences (SPSS) version 19.0 (Chicago, Illinois, USA). Numerical values were assigned to responses to questions with Likert scale to show their magnitude and direction and for objective statistical analysis. The numerical values assigned to responses were as follows: "strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1"; "very anxious = 4, anxious = 3, a little anxious = 2, unconcerned = 1"; and "very much = 4, quite little = 3, not at all = 2, unconcerned = 1."

Descriptive and inferential statistics were carried out with statistical significance being considered at $P < 0.05$.

Results

A total of 790 pregnant women attending antenatal clinics at the study centers formed the respondents in this study. Their socio-demographic characteristics are as shown in Table 1. Most of them were aged between 21 years and 35 years. An overwhelming majority have had formal education (99.2%, 784/790), are of Christian faith (98.7%, 780/790) and in monogamous marriages (95.9%, 758/790). Most of the women (95.7%, 756/790) have been married for a period of between 1 year and 9 years. Majority of the women (31.9%, 252/790) were primiparous. Most of the women (88.4%, 698/790) were aware fetal gender can be determined during prenatal ultrasound while just over half of them (61.0%, 482/790) wanted fetal gender disclosed to them during prenatal ultrasound.

More than half (58.6%, 463/790) of the women desired to have male babies in their present pregnancies while 20.1% (159/790) desired female babies and 21.3% (168/790) did not care if the baby was male or female as shown in Table 1. Some of the women (22.2%, 175/790) wanted to have male babies in their present pregnancies for various reasons predominant of which was protecting their marriages and cementing their places in their husbands' hearts.

Male gender preference was strongly perceived by all categories of respondents as shown in Table 2. Anxiety levels associated with prenatal gender determination and loss of interest in the pregnancy associated with disclosure of undesired fetal gender are shown in Table 3. Anxiety level increased with increasing age, improved formal education, increasing number of wives married by the husband, and increasing number of female children already had. It however, showed a decreasing trend with increasing number of male children already had. Loss of interest in the pregnancy associated with disclosure of undesired fetal gender was fairly moderate and similar among all categories of respondents.

There was weak, but statistically significant correlation between some socio-demographic characteristics and perception of male gender preference, anxiety level associated with prenatal gender determination and loss of interest in the pregnancy due to disclosure of undesired fetal gender as shown in Table 4. Table 5 shows that all the socio-demographic factors had significant influence on perception of male gender preference and anxiety levels associated with prenatal determination of gender. Furthermore in Table 5, except for education and number of co-wives, socio-demographic factors were of significant influence on loss interest in pregnancy associated with disclosure of undesired gender.

Table 1: Socio-demographic characteristics of the patients

Socio-demographic factor	Frequency	Percentage
Age (years)		
≤20	20	2.5
21-25	224	28.4
26-30	217	27.5
31-35	214	27.1
≥36	115	14.6
Total	790	100.0
Formal education		
None	6	0.8
Primary	52	6.6
Secondary	349	44.2
Tertiary	383	48.5
Total	790	100.0
Religious affiliation		
Traditional	10	1.3
Christianity	780	98.7
Total	790	100.0
Monogamous or polygamous marriage?		
Monogamous	758	95.9
Polygamous	32	4.1
Total	790	100.0
Gender preferences in current pregnancy		
Male	463	58.6
Female	159	20.1
Any gender	168	21.3
Total	790	100.0

Table 2: Perception of male gender preference by patients according to some socio-demographic characteristics

Socio-demographic factor	Perception rating (mean (SD))
Age (years)	
Less than 20 (*n*=20)	3.1 (0.3)
21-25 (*n*=224)	3.0 (0.7)
26-30 (*n*=217)	3.1 (0.6)
31-35 (*n*=214)	3.1 (0.8)
36 and above (*n*=115)	3.2 (0.7)
Formal education	
No formal education (*n*=6)	3.0 (0.0)
Primary (*n*=52)	3.0 (0.9)
Secondary (*n*=349)	3.0 (0.7)
Tertiary (*n*=383)	3.2 (0.7)
Type of marriage	
Monogamous (*n*=758)	3.1 (0.7)
Polygamous (*n*=32)	2.9 (0.7)
Number of male children already had	
0 (*n*=385)	3.1 (0.7)
1 (*n*=176)	3.1 (0.8)
2 (*n*=118)	3.0 (0.6)
3 and above (*n*=85)	3.0 (0.8)
Number of female children already had	
0 (*n*=349)	3.0 (0.7)
1 (*n*=173)	3.1 (0.7)
2 (*n*=163)	3.2 (0.7)
3 and above (*n*=105)	3.1 (0.7)

SD: Standard deviation

Table 3: Anxiety and loss of interest levels shown by patients according to some socio-demographic characteristics

Socio-demographic factor	Anxiety level (mean (SD))	Loss of interest (mean (SD))
Age (years)		
Less than 20 (*n*=20)	1.7 (0.5)	1.9 (0.3)
21-25 (*n*=224)	2.5 (1.0)	2.0 (0.4)
26-30 (*n*=217)	2.4 (0.8)	2.1 (0.4)
31-35 (*n*=214)	2.5 (1.0)	2.1 (0.4)
36 and above (*n*=115)	2.5 (1.0)	2.2 (0.6)
Formal education		
No formal education (*n*=6)	2.0 (0.0)	2.0 (0.0)
Primary (*n*=52)	2.6 (0.9)	2.2 (0.4)
Secondary (*n*=349)	2.4 (0.9)	2.1 (0.4)
Tertiary (*n*=383)	2.4 (1.0)	2.0 (0.4)
Type of marriage		
Monogamous	2.4 (0.9)	2.0 (0.4)
Polygamous	3.4 (0.6)	2.3 (0.5)
Number of male children already had		
0 (*n*=385)	2.5 (0.9)	2.1 (0.4)
1 (*n*=176)	2.5 (0.9)	2.7 (0.5)
2 (*n*=118)	2.3 (0.8)	1.9 (0.4)
3 and above (*n*=85)	2.3 (1.1)	2.0 (0.3)
Number of female children already had		
0 (*n*=349)	2.4 (1.0)	2.0 (0.4)
1 (*n*=173)	2.4 (0.9)	2.0 (0.2)
2 (*n*=163)	2.4 (0.9)	2.1 (0.5)
3 and above (*n*=105)	2.7 (1.1)	2.2 (0.6)

SD: Standard deviation

Table 4: Pearson's correlation between socio-demographic factors, and anxiety level and loss of interest

Socio-demographic factor	Male gender preference	Anxiety level	Loss of interest
Age	*r*=0.1	*r*=0.04	*r*=0.2*
	P=0.07	*P*=0.22	*P*<0.01
Formal education	*r*= −0.1*	*r*= −0.01	*r*= −0.1
	P<0.01	*P*=0.77	*P*=0.06
Number of wives	*r*=0.1*	*r*=0.2*	*r*=0.1*
	P<0.01	*P*<0.01	*P*<0.01
Number of male children already had	*r*= −0.03	*r*= −0.1*	*r*= −0.1
	P=0.37	*P*<0.01	*P*=0.05
Number of female children already had	*r*=0.1*	*r*=0.1*	*r*=0.2*
	P=0.01	*P*=0.02	*P*<0.01

NB: *Significant correlation noted

Discussion

Socio-cultural background has a lot of influence on reproductive health and many decisions regarding childbearing are made with socio-cultural circumstances given a prominent consideration. The respondents studied in this survey were Igbo women consisting of varied mix of multiparous and primiparous women. Almost, all women have had some form of formal education and Western (European) culture and life-style is not alien to them.

Table 5: Multinomial regression table showing the influence of socio-demographic factors on perception of male gender preference, anxiety level and loss of interest in pregnancy associated with pre-birth disclosure of undesired gender

Socio-demographic factor	Perception of male gender preference	Anxiety level	Loss of interest
Age	*P*<0.01*	*P*<0.01*	*P*<0.01*
Education	*P*<0.01*	*P*<0.01*	*P*=0.17
Number of male children already had	*P*<0.01*	*P*<0.01*	*P*<0.01*
Number of female children already had	*P*<0.01*	*P*<0.01*	*P*<0.01*
Number of wives	*P*=0.01*	*P*<0.01*	*P*=0.23

NB: *Significant influence noted

The Igbos is traditionally patriarchal. The male child is brought to see himself as superior to the females,[18] and he is made to understand this very early in life. Thus, the male child is seen are as being very important by both men and women in the traditional Igbo society. However, today's Igbo society cannot be described as typically traditional. The Igbo have become one of the most sophisticated tribes in the present Nigerian nation. They are profoundly educated, widely traveled, economically advanced, socially advanced, and psychologically active.[18] As a consequence, Ndiokwere,[19] is of the opinion that the Igbo traditional identity is fast being eroded as many Igbos leave their country for other places in search of greener pastures.

Obstetric ultrasound is a well-recognized prenatal test used to visualize and determine the condition of a pregnant woman and her fetus.[1] Aside the medical uses, obstetric ultrasound is often used to determine the gender of fetus. Most of the women were aware that fetal gender can be determined during obstetric ultrasound scan. This is in tandem with the report of a previous study that 81% of women are aware that ultrasound can be used to determine fetal gender.[13] Majority of our respondents desired disclosure of fetal gender to them, which is in agreement with reports of previous studies.[11,13,14] Furthermore, a study in Uganda reported that Ugandan parturients have a strong desire to know fetal sex at ultrasound.[6] Other studies, in contrast, have also reported that only a small proportion of obstetric patients seeks to know fetal gender.[5,12]

Our results show that male gender preference is strongly perceived by Igbo women irrespective of age, formal educational attainment number of co-wives married by the husband, and number of male and female children already had. From the foregoing, it can be deduced that Western education has not seriously affected the Igbo Society's preference for the male child. This is in disagreement with the opinion of Ndiokwere.[19] Perception level of male gender preference noted in this study is supported by the fact that over half of the respondents wanted a male child in the present pregnancy irrespective of parity and gender mix of children already had. It is therefore not surprising that the anxiety level associated with prenatal gender determination recorded in this study was generally high. An interesting trend was that the anxiety level

increased with unfavorable socio-demographic characteristics such as older age, polygamous marriage lower number of male children already had, and increasing number of female children already had.

Anxiety is a displeasing feeling of fear and concern.[20] It is sometimes wrongly equated with fear. While, fear refers to concrete real danger, anxiety is the paranoia of something unreal. Hence, anxiety results from one's imagination. Anxiety often accompanies medical tests, including prenatal determination of fetal gender at ultrasound because of the uncertain nature of the findings – pleasant or unpleasant. In our study, the women expressed anxiety about pre-birth determination of gender. In our opinion, the anxiety could be as a result of uncertainty about having the desired gender, usually male. A recent study showed that women are relieved when fetal gender is disclosed to them and a great majority of them remain happy even when the gender is not the desired type.[21] However on the other hand, the anxiety may be indicative of real danger for the woman as failure to have a male child could propel the husband to marry additional wife/wives. This desperation is because of societal pressure to perpetuate one's lineage. Mubuuke[6] in Uganda had reported that according to imaging professionals revealing the undesired fetal gender at ultrasound elicits psycho-social effects such as stress, depression, and social isolation.

Our results revealed that Igbo women would usually be disappointed with the finding of undesired gender prenatally and show moderate loss of interest in the pregnancy. In a study conducted in Benin City, Nigeria, the women were happy even when the desired gender was not found.[21] These diametrically opposed findings could be as a result of differences in the value system of the Igbos and people in Edo area. Loss of interest in a pregnancy as a result of undesired fetal gender may consequently lead to induced criminal abortion. Previous studies suggest that there is a strong connection between son preference and sex-selective abortion.[8,9,22] Furthermore, sex determination prior to birth can lead to post-natal sex selection, which implies high death of female children through deliberate neglect.[22] We did not attempt to establish this fact in our study because of the sensitive nature criminal abortion in our society, but we do think there may be a connection. This is a limitation in this study. Also, perception of male gender preference is strong among Igbo women. However, a question that readily comes to mind is, "would Igbo women attempt to select the sex of their children prenatally?" We do not know their attitude toward sex selection technologies and to say that they would embrace or not is not possible from this study. We therefore, suggest that further studies to investigate the attitude of Igbo women toward sex-selective abortion and sex selection technology should be carried out. The sample size and sampling method in this study have been convenience in nature. The shortcoming of these is that the sample so selected and evaluated may not be representative of the Igbo women as a whole. Precision has been compromised by the small sample size and lack of randomization. The result of this study should be treated with these limitations in mind.

Conclusion

Male gender preference is strongly perceived among Igbo women and its perception is significantly influenced by socio-demographic factors. Male gender preference may be responsible for Igbo women seeking fetal gender at ultrasound. We speculate that male gender preference as perceived by these women may lead them to embrace sex selection technologies and sex-selective abortion, which could tilt SRB in favor males and consequent future masculinization of the adult population and its attendant social consequences.

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How to cite this article: Ohagwu CC, Eze CU, Eze JC, Odo MC, Abu PO, Ohagwu CI. Perception of male gender preference among pregnant Igbo women. Ann Med Health Sci Res 2014;4:173-8.

Source of Support: Nil. **Conflict of Interest:** None declared.