

Non Parametric Analysis of Parental Gender Preference in Enugu State.

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Abstract: Parental gender preference in developing countries has generated a lot of challenges in the families, ranging from divorce cases to Polygamous homes. This study has examined Parental gender preference in Enugu state of Nigeria; whose culture as Ibos attaches a lot of importance to a male child for the continuous existence of paternal lineage. Using the chi square test of homogeneity, the analysis gave P-values > 0.05 , which led to the acceptance of the null hypothesis of homogeneity. Therefore, it was observed that contrary to the popular view of the people, gender preferences are not significantly different among parents irrespective of their educational level; which measures parent's modernization status.

Keywords: Divorce, Educational level, Family, Gender preferences, Homogeneity, Parents and Sex selection.

1 INTRODUCTION

Parental gender preferences and their impact on fertility decisions and other family issues has been a thing of great concern in some areas, especially among the Ibo ethnic group in Nigeria. The reason for the preference for a specific sex (composition) of children is still not well understood. This issue may continue to be a demographically relevant topic till the next decade. In developing countries, like Nigeria, sons are presumed to have greater economic net utility than daughters, since male offspring is better able to provide assistance in agriculture and to serve as a simple social security system, hence they are more preferred. In patrilineal societies sons are also valued for continuing the family name. Daughters, on the other hand, are seen as being more relevant in helping with household tasks, taking care of younger siblings and providing old-age assistance. Thus, even in countries with a prevailing preference for sons, many families consider

it important to have at least one daughter (Arnold 1997), (Cleland et al. 1983). Recent evidence from the Nordic countries (Andersson et al. 2006) strongly suggests that modernization does not necessarily neutralize gender preferences, but that in some cases traditional values attached to sons may still retain a foothold. Seriousness attached to gender preference has led to the adoption of the method of preconception sex selection by some individual (Willson,2003), this method enables them select the gender of their choice before conception. Preferences for sons versus daughters may sometimes necessitate divorce, child custody, shotgun marriage e.t.c; when the sex of the child is known before birth, and fertility stopping rules are considered. Study has shown that parents with girls are significantly more likely to be divorced, in such cases, divorced fathers are more likely to have custody of their sons, while women with only girls are substantially more likely to have never been married, this sometimes influences the preference of sons by some women who feel that their marriages are more secured with sons than with daughters. When we turn to fertility, we find that in families with at least two children, the probability of having another child is higher for all-girl families than all-boy families. Some have it that the preference for sons are largely driven by fathers. (Gordon et al, 2004). However, some are of the opinion that mothers prefer sons to daughters while fathers prefer daughters to sons. This opinion of gender preference is still not well understood, as studies have shown that mothers prefer daughters to sons while fathers prefer sons to daughters. This mother's preference is largely driven by the opinion that raising a daughter is easier than raising a son (Fariba, 2011). Child psychologists and sociologists have discovered that boys enjoy their father's presence in the household than the girls, as a result of this, parents of boys tends to avoid or delay divorce for fear of the negative effect it may have on their sons (David, 2013). Generally, it is pertinent to mention that every child is as important as the other irrespective of the gender. However, for the purpose of research, this study gears towards hypothesizing if fathers prefer their daughters to their sons while mothers prefers their sons to their daughters, and, if modernization affects gender preference among parents or not.

2. EXPERIMENTAL DESIGN AND DATA COLLECTION

With these issues in mind, parents were posed with the following research questions:

1. Do fathers prefer daughters to sons / do mothers prefer sons to daughters?

2. Does modernization affect gender preference?

To address the first question, 30 families were randomly selected and 60 questionnaires designed to determine their individual gender preference were distributed to each of them respectively. For the second research question the questionnaire distributed was designed to answer question on highest educational level attained by the respondents.

3. METHODOLOGY

Enugu state of Nigeria belongs to the ethnic group called Ibos; whose culture and traditions places much emphasis on a male child than the female child. In this study, sixty questionnaires were randomly distributed to thirty families but responses were obtained from twenty-one families within the state irrespective of their profession and social status, adding up to a total of 42 respondents. They gave their responses based on individual gender preference in their respective homes. Six variables were used to measure their gender preference, which includes; How many children do you have specify (number of boys and girls)? How often do you buy gift, cloths etc for them and who (gender) receives first? How often do you go out with them? Who do you prefer to go out with, specify gender? Are you closer to any of your children, specify if (boy or girl)? Who among them feel your absence the more specify (boy or girl)?

If one is interested in a test that gives more information about the distribution of the preference among the gender, then the chi-square goodness-of-fit test can be used to determine if the preference has a particular distribution. Again assuming there is no overall preference, both genders should be equally likely to be preferred. The hypothesis will be

$$H_0 = \pi_b = \pi_g = 0.50$$

$$H_a = \pi_b \text{ is different from } 0.50$$

where π_b and π_g are the proportions of the parents that would choose boy and girl respectively, as the most preferred gender. Again, it is important to check the assumptions of this test (Maben, 2013); a simple random sample has been drawn from the population and the expected counts in each cell are at least 5. Clearly our expected counts are greater than 5 since we have 42 respondents. A low p-value (less than the chosen significance level) is usually taken to indicate rejection of the null hypothesis. Here, the significance level is chosen as 0.05. Table 1 below show the categorical data based on the responses of the respondents on their individual gender preference.

TABLE1.
 DATA FOR CHI SQUARE GOODNESS OF FIT TEST FOR GENDER PREFERENCE
 AMONG PARENTS

Parents	Preference for Boys	Preference for Girls	No Preference	Total
Fathers	3	17	1	21
Mothers	7	10	4	21
Total	10	27	5	42
	23.8	64.3	11.9	100.0

Using WINKA SDA version 6, the chi square analysis performed gave the result as presented on table 2 below

TABLE 2
 CHI SQUARE ANALYSIS USING WINKS

Statistic	DF	Value	p-value
Chi-Square	2	5.215	0.075
Phi Coefficient		.352	
Cramer's V		.352	
Contingency Coefficient		.332	

Since $p > 0.05$, the null hypothesis of homogeneity is accepted and no multiple comparisons are performed.

Table 2 above gave a chi-square test statistic of 5.215 with 2 degrees of freedom and a p -value of 0.075. The result of the test is statistically significant.

To address the question on the effect of modernization on gender preference, the questionnaire constructed contains question on respondent's level of education. Tables 3 and 4 below show the categorical data based on the responses of the respondents on their individual gender preference with respect to educational level. The hypotheses are:

H_0 : The populations are homogeneous.

Vs

H_a : The populations are not homogeneous

TABLE 3
 FATHERS PREFERENCE BASED ON MODERNIZATION

Fathers	Preference for Boys	Preference for Girls	No Preference	Total
Highly Educated	1	12	1	14
Fairly Educated	2	5	-	7
Total	3	17	1	21

Using WINKA SDA version 6, the calculated chi-square statistic in this case is 2.30 with a p-value of 0.317. The hypothesis is:

The calculated chi-square statistic in this case is 2.30 with a p-value of 0.317. At a 0.05 significance level, since $p > 0.05$, the null hypothesis of homogeneity is accepted. The p-value of 0.317 indicates that there is not enough evidence to reject the null hypothesis of homogeneity. Therefore, based on this study, we conclude that gender preferences are not significantly different with respect to educational level of fathers.

TABLE 4
 MOTHERS PREFERENCE BASED ON MODERNIZATION

Mothers	Preference for Boys	Preference for Girls	No Preference	Total
Highly Educated	4	5	2	11
Fairly Educated	3	5	2	10
Total	7	10	4	21

The calculated chi-square statistic in this case is 0.10 with a p-value of 0.953. At a 0.05 significance level, since $p > 0.05$, the null hypothesis of homogeneity is accepted the p-value of 0.953 indicates that there is not enough evidence to reject the null hypothesis of homogeneity. Therefore, based on this study, we conclude that gender preferences are not significantly different with respect to educational level of mothers.

4. ANALYSIS

From the analysis performed on table 1 above, the acceptance of the null hypothesis led to the rejection of the alternative hypothesis. This indicates that gender preferred is the same among parents, showing that no sex is more preferred than the other. Also considering the study by Andersson et al. (opcit) whose study strongly suggests that modernization does not necessarily neutralize gender preferences, rather preferences are influenced by traditional values. Therefore to compare the preferences among the highly educated and fairly educated parents, it was equally observed that gender preferences are not significantly different with respect to educational level of the parents, indicating that gender preferences are the same among the highly educated and fairly educated parents.

5. CONCLUSION

Based on this study, contrary to people's view that in the Ibo ethnic group, fathers prefer their daughters more than their sons while mothers prefer their sons more than their daughters, parental gender preference is not as people view it in Enugu State. The result of the analysis based on this study, indicated that both gender are equally preferred. This goes a long way to show that parents could not prefer a particular gender more than the other, since both genders are equally important; rather gender preference may coincide with the circumstances surrounding the child whose gender may be seen as the most preferred.

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