Attribution of infant mortality by literate adults in Ilorin, Kwara State, Nigeria

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Abstract

Infant mortality is the death rate of infants between delivery and age of five years. This study was aimed at surveying the attribution of infant mortality among literate adults in   Ilorin metropolis. Descriptive survey method was used in this study. The target population of this study comprised of all literate adults in Ilorin metropolis. 200 respondents participated in this study and they were all selected from the population using simple random sampling technique. The instrument used to obtain relevant data for this research was titled "Attribution of Infant Mortality Questionnaire" (AIMQ). The instrument for this study was divided into three sections. Section A elicited the demographic data. Section B consisted 24 items which was divided into three sections. Each section consisted of eight (8) questions on attribution of infant mortality. Data collected were analyzed using frequency counts, percentages, t-test and Analysis of Variance (ANOVA). All hypotheses were tested at 0.05 alpha level of significance. Result of this study revealed that there was significant difference in the attribution of literate adults on the basis of age, educational qualification, religion and marital status. No significant difference was found on the basis of gender. It was therefore recommended that medical treatment for children under the age of 5 years should be made free and that laws should be enacted against treatment of children in local setting while modern medical technology should be encouraged and affordable.

Keywords

Infant, mortality, Attribution, literate, Age, Adults, Gender

Introduction

The prevalence rate of infant mortality in developing countries has increased progressively despite the millennium development goal of UNICEF to reduce child mortality rate by the year 2015. Infant mortality is a major societal problem and this has been blamed on

inadequate health facilities, parent's attribution pattern and lack of financial resources to access medical care. Protuero (2010) reported that nearly 10 million children under the age five die daily worldwide. Infant mortality is the death of children before the age of five years after birth (Kessel, 2011; WHO, 2000). Gary (2001) defined infant mortality as the number of infant death per 1000 live birth.

Attribution of infant mortality refers to ideas that are not scientifically proven which, people consider to be the major cause of a child's death. Ogunjuyigbe (2004) explained that most Yoruba's attributes measles and diarrhea attack to the breaking of the family taboos. In Nigeria, parents attribute the death of children to witches. They are believed to exist and are regarded as enemies of the community. It is also believed that they unpredictably and malevolently bring sickness, cause accident and some disorder in children (Ojikutu, 2000). Children are protected from witches, evil eyes, and sickness by wearing charms and amulets. The Yoruba also hold some aspect of movement restrictions; they commonly believe that if a pregnant woman walks in the hot afternoon or midnight without tying a stone on her wrapper, she is likely to meet some evil spirits that can exchange the baby in her womb. This seems to be responsible for still births.

Another traditional belief that is of grave concern is the traditional prohibition of newly delivered mothers. It is known as *"ate"* a practice that forbids newly delivered mothers from eating foods that contain salt, seasoning, oil and pepper, for seven or nine days depending on whether the child is a male or female in Nigeria. Iyun and Oke (2000) reported that Yoruba's believe that when this not done it could lead to the death of the baby. In the same vein, if a child becomes ill frequently, the child is assumed by the society to be an *"Abiku"* sent from the spirit world. This belief assumed that such children will die eventually irrespective of the efforts of the parents in protecting them. Ebochukwu (2007) confirmed this relationship between culture and health by showing how traditional practices can lead to ill health in children.

A careful analysis of literature showed that infant mortality has continued to increase in Nigeria and Africa at large. Ngulde (1997) estimated infant death rates to be about 40,000 out of 100,000 live birth. Ayalew (2007) revealed that about one million children under the age of five years die annually in Nigeria. Veneman (2009) asserted that infant mortality rate in Nigeria is unacceptably high and that most children die as a result of preventable diseases.

However, with the improvement in basic health facilities one would have expected that infant mortality rate should have reduced significantly, this is not so because many Nigerians tend to ignore scientific explanations of natural phenomena for the unscientific. This has resulted in the consistent increase in infant mortality rate. Regardless of the educational attainment, most Nigerians tend to attribute death to external rather than internal factors.

Purpose of the Study

The purpose of this study was to investigate the attribution of infant mortality among the literate adults in Ilorin metropolis. The study also sought to find out whether variables such as age, religion, gender, marital status, and educational level had significant influence on the attribution of literate adults.

Methodology

Research Design

The descriptive method was adopted. Hassan (1995) stated that descriptive survey method describes variables in a given situations and established relationship between variables. Stangor (2004) pointed out that this method is preferred because it captures the complexity of everyday behaviour.

Sample and Sampling Procedure

The target population was all literate adults in Ilorin metropolis. A simple random sampling technique was used to select 5 wards from the four Local Government Areas so that all members have equal and an independent chance of being selected. These Local Government Area (L.G.A) includes Ilorin East with 12 wards; Ilorin South, 11 wards, Ilorin West consist of 12 wards, while Asa has 17 wards. A purposive sampling technique was used in picking 10 educated respondents from each of the ward.

Instrumentation

 The instrument used to obtain relevant data for this research was titled "Attribution of Infant Mortality Questionnaire" (AIMQ). The instrument for this study was divided into three sections. Section A elicited the demographic data. Section B consisted 24 items which was divided into three sections. Each section consisted of eight (8) questions on attribution of infant mortality. Section A of the instrument was scored using frequency counts and simple percentage with no points assigned to the items. In section B (which was scored on a four-point Likert scale), scores were allotted as follows: Strongly Agree 4   points,   Agree- 3points, Disagree- 2 points and Strongly Disagree-   1 point.

Psychometric Properties of the Instrument

Validity: The validity of any instrument is the degree to which the instrument measures what it purposes to measure (Hassan, 1995). In order to determine the validity of the instrument, the researcher gave the draft of the questionnaire to some experts in the Department of Counsellor Education for content validity. The modification and comments made by these experts were considered in the final selection of items for the questionnaire. The experts adjudged that the instrument has content validity.

Reliability: This means the extent to which the results obtained from the test can be consistent if the same test is administered to the same group of persons (Stangor, 2004). To ensure the reliability of the instrument, the test re-test method was adopted. The researcher administered the same instrument on twenty (20) respondents at an interval of four weeks. The 2 group's scores were correlated using Pearson Product Moment Correlation Coefficient and a reliability index of 0.73 was found. Therefore, the questionnaire is statistically said to be reliable for the study.

Method of Data Analysis

 Frequency count and percentage distribution statistics were used to compute the demographic data of the respondents. The t-test and Analysis of Variance (ANOVA) were

used to test the hypotheses at 0.05 alpha level. DUNCAN multiple range test was used to separate means where significant difference was observed.

Results

This section presents the result of the analysis of data obtained from the study. The data collected were analyzed using both descriptive and inferential statistic. Table 1 indicates the means and rank order of the items in the questionnaire. Majority of the respondents believed that poor medical attention during pre-natal are responsible for infant mortality. This factor was closely followed by destiny and will of God. However, factors such as; mother of twins refusing to dance in the market after birth, mother not obeying the taboo of not eating salt after birth, and walking at night during pregnancy were ranked as least factors responsible for infant mortality by the respondents. From the table above it could be seen that literate adult attribute to both scientific and cultural belief system.

Table1: Means and Rank Order of Responses on the Attribution of Infant Mortality

Item No.	When a child dies, it is always caused by:	Mean	Rank
17	poor medical attention during pre-natal period.	3.45	1st
1	destiny.	3.33	2nd
2	will of God.	3.19	3rd
18	poor trained mid-wives during delivery.	3.18	4th
19	unhygienic living condition.	3.16	5th
20	lack of proper immunization against preventable diseases.	3.12	6th
3	misfortune.	2.99	7th
21	genetic disorder.	2.98	8th
4	natural phenomenon e.g. war, earthquake disaster.	2.98	8th
22	poisoning.	2.76	10th
9	witchcraft.	2.68	11th
23	premature birth.	2.63	12th
5	inherited generational curses.	2.56	13th
12	evil eyes of co-wives.	2.47	14th
24	lack of adequate breast feeding.	2.44	15th
10	charm.	2.42	16th
6	near relatives marrying.	2.37	17th
7	being an Abiku.	2.36	18th
11	god and goddess being angry.	2.34	19th
8	accident.	2.30	20th
13	seeing blood and masquerade in the dream.	2.27	21st
14	walking at night during pregnancy.	2.24	22nd
15	mother not obeying the taboo of not eating salt after birth.	2.13	23rd
16	mother of twins refusing to dance in the market after birth.	1.85	24th

Hypotheses Testing

Five (5) null hypotheses were generated and tested in this study. They were tested using the t-test and Analysis of Variance (ANOVA) statistical procedures.

Hypothesis 1:

There is no significant difference in the attribution of infant mortality by Literate Adults on the basis of gender

Table 2: Mean, Standard Deviation, t-value on the Attribution of Infant Mortality by Literate Adults on the Basis of Gender

Gender	N	Mean	SD	Df	Cal. t-value	Crit. t-value
Male	83	64.12	7.616	198	1.02	1.96
Female	117	64.15	8.195			

Table 2 indicated that the calculated t-value of 1.02 is less than the critical t-value of 1.96 at 0.05 alpha level of significance. Since the calculated t-value of 1.02 is less than the critical t-value of 1.96 therefore, the hypothesis which stated that there is no significant difference in the attribution of infant mortality by literate adults on the basis of gender was accepted because no significant difference was observed.

Hypothesis 2:

There is no significant difference in the attribution of infant mortality by literate adults on the basis of age

Table 3: Analysis of Variance (ANOVA) showing the Attribution of Infant Mortality by Literate Adults on the Basis of Age

Age	Sum of Squares	df	Mean Squares	Cal. F-ratio	Crit. F-ratio
Between Groups	745.538	4	186.38	3.08*	2.37
Within Groups	11801.817	195	60.52		
Total	12547.355	199			

* Significant, $p < 0.05$

Table 3 indicated that the calculated F-ratio of 3.08 is greater than the Critical F-ratio of 2.37 at 0.05 alpha level of significance. As such the null hypothesis was rejected. Therefore, the hypothesis which stated that there is no significant difference in the attribution of infant mortality as expressed by literate adults on the basis of age was rejected, $F_{(4 \& 195\ df)} = 3.08$, $p < 0.05$. In order to bring out the differences, further analysis was carried out using Duncan Multiple Range test.

Table 4:   Duncan Multiple Range Test (DMRT) Comparing Means of Attribution on the basis of age

Duncan Groupings	N	Mean	Group	Age
A	2	72.50	4	51 - 60 years
B	23	68.73	3	41 - 50 years
C	21	64.00	5	61 years and above
C	57	63.87	2	31 - 40 years
C	97	63.05	1	20 - 30 years

Table 4 showed the DMRT comparing the differences in attribution of infant mortality as expressed by literate adults on the basis of age. Group 4 with a mean score of 72.50 differ significantly from Groups 5, 2 and 1 with mean scores of 64.00, 63.87 and 63.05 respectively. Equally, group 3 with a mean score of 68.73 significantly differ from other groups, hence group 4 and 3 are responsible for the difference found in ANOVA used to test hypothesis 4.

Hypothesis 3:

There is no significant difference in the attribution of infant mortality by literate adults on the basis of `educational qualification

Table 5: Analysis of Variance (ANOVA) showing the Attribution of Infant Mortality by Literate Adults on the Basis of Educational Qualification

Educational Qualification	Sum of Squares	df	Mean Squares	Cal. F-ratio	Crit. F-ratio
Between Groups	1310.596	5	262.11	4.52*	2.21
Within Groups	11236.759	194	57.92		
Total	12547.355	199			

* Significant, p < 0.05

Table 5 shows that the calculated F-ratio was 4.52 while the critical F-ratio was 2.21 at 0.05 alpha level of significance. The null hypothesis was rejected. Therefore, the hypothesis which stated that there is no significant difference in the attribution of infant mortality by literate adults on the basis of educational qualification was rejected F(5&194 df) =4.52 P< 0.05.As a result of the significant difference observed; the Duncan Multiple Range Test was employed.

Table 6:   Duncan Multiple Range Test (DMRT) Comparing Means of Attribution on the Basis of Educational Qualification

Duncan Groupings	N	Mean	Group	Educational Qualification
A	18	70.44	6	First School Leaving Certificate
B	6	67.67	1	Ph.D
C	18	65.83	2	Master Degree
C	13	65.54	5	Grade II/WASC
D	61	64.28	4	OND/HND
E	84	61.85	3	B.A/B.Sc./B.Ed.

Table 6 shows result of the DMRT comparing the differences in attribution of infant mortality as expressed by literate adults on the basis of educational qualification. Groups 6 with a mean scores of 70.44, differ significantly from Groups 1, 2, 5, 4 and 3 with mean scores of 67.67 65.83, 65.54, 64.28 and 61.85 respectively. while Group 1 with a mean score of 67.67 differ from Group 6 with a mean score of 70.44 and differ significantly from Groups 2,5,and 4 with mean scores of 65.83, 65.54 and 65.28.Group 3 differ significantly from Groups 4, 5,2,1and 6 with mean scores of 64.28, 65.54, 65.83, 67.67 and 70.44 respectively.

Hypothesis 4:

There is no significant difference in the attribution of infant mortality by literate adults on the basis of marital status

Table 7: Analysis of Variance (ANOVA) showing the Attribution of Infant Mortality by Literate Adults on the Basis of Marital Status

Marital Status	Sum of Squares	Df	Mean Squares	Cal. F-ratio	Crit. F-ratio
Between Groups	809.996	2	404.998	6.40*	3.00
Within Groups	12466.357	197	63.281		
Total	13276.353	199			

* Significant, p < 0.05

Table 7 indicated that the calculated F-ratio is 6.40 while the critical F-ratio is 3.00 at 0.05 alpha level of significance. The null hypothesis was rejected. Therefore, the hypothesis which stated that there is no significant difference in the attribution of infant mortality by

literate adults on the basis of marital status was rejected F (2&197df) = 6.40, p< 0.05. In order to determine the magnitude and direction of this difference Duncan Multiple Range Test was used.

Table 8:   Duncan Multiple Range Test (DMRT) Comparing Means of Attribution on the Basis of Marital Status

Duncan Groupings	N	Mean	Group	Marital Status
A	14	65.43	3	Divorce
A	113	64.48	1	Married
B	73	63.36	2	Single

Table 8 showed the DMRT comparing the differences in attribution of infant mortality by literate adults on the basis of marital status. Group 2 with a mean score of 63.36 differed significantly from Groups 1 and 3 with mean scores of 65.43 and 64.48 respectively. Since group 3 and 1 are similar group 2 is therefore responsible for the difference found on the ANOVA table. Hence, the hypothesis was rejected

Hypothesis 5**:**

There is no significant difference in the attribution of infant mortality by literate adults on the basis of Religion

Table 9: Analysis of Variance (ANOVA) showing the Attribution of Infant Mortality by Literate Adults on the Basis of Religion

Religion	Sum of Squares	df	Mean Squares	Cal. F-ratio	Crit. F-ratio
Between Groups	2946.45	5	589.29	9.34*	2.21
Within Groups	12239.46	194	63.09		
Total	15185.91	199			

* Significant, p < 0.05

Table 9 indicated that the calculated F-ratio was 9.34 while the critical F-ratio was 2.21 at 0.05 alpha level of significance. The null hypothesis was rejected. Therefore, the hypothesis which stated that there is no significant difference in the attribution of infant mortality by literate adults on the basis of religion was rejected F (5&194df) =9.34, p<0.05. As such the Duncan Multiple Ranged Test was also employed.

Table 10:   Duncan Multiple Range Test (DMRT) Comparing Means of Attribution on the Basis of Religion

Duncan Groupings	N	Mean	Group	Educational Qualification
A	7	68.14	1	African Traditional Religion
B	107	64.07	2	Christianity
B	86	63.89	3	Islam

Table 10 showed the DUNCAN comparing the differences in attribution of infant mortality by literate adults on the basis of religion. Group 1 with a mean score of 68.14 differed significantly from Groups 2 and 3 with mean scores of 64.07 and 63.89, respectively. Since group 2 and 3 are similar, group 1 accounts for the difference found on the ANOVA table.

Discussion

Means of attribution of infant mortality and items rank order showed that item 17 with a mean score of 3.45 ranked 1st and it stated that "when a child dies, it is always caused by poor medical attention during pre-natal period". This was followed by item 1 with a mean score of 3.33 and it stated that "when a child dies, it is always caused by destiny". The item that ranked last was item 16 with a mean score of 1.85 and it stated that "when a child dies, it is always caused by mother of twins refusing to dance in the market after birth".

The result of the first null hypothesis showed that there is no significant difference in the attribution of infant mortality as expressed by literate adults on the basis of gender. This implied that male and female literate adults do not differ in their attribution of infant mortality. This corroborates the views of Ikechukwu (2007) that cultural belief is derived from the belief system of a community irrespective of gender.

The second null hypothesis indicated that there is a significant difference in the attribution of infant mortality by literate adults on the basis of age. This finding agrees with the observation of Johnson (2008) which stated that exposures of different age groups to life issues, shapes their views of life experiences thesis revealed that there is significant difference in the attribution of infant mortality as by literate adults on the basis of educational qualification. This could be as a result of the respondents' educational exposure. This findings is in line with the report of Asonibare et al (2009) that the differences in educational background of respondents has a way of exposing them to different views which eventually affects their belief system.

The result of the fourth null hypothesis indicated that there is significant difference in the attribution of infant mortality by literate adults on the basis of marital status. It is expected that the married and the divorced will have more experience on the causes of infant mortality than their unmarried counterparts.

Hypothesis five showed that there is significant difference in the attribution of infant mortality by literate adults on the basis of religion. This finding agreed with the report of Asonibare et al (2009) that there is always variation in the beliefs, doctrines and practices of the three religions. However, this observation disagrees with the findings of Dimkpa (1999) who found no significant difference in the attribution of infant mortality among parents and teachers on the basis of religion.

Conclusion

Based on the findings of the study, literate adults in Ilorin metropolis differ in their attribution of infant mortality based on age, educational qualification, marital status and religion, but no significant difference was found irrespective of their gender.

Implication for Counselling

Counsellors should organize enlightenment programmers and partner with medical personnel's, religious organizations, non-governmental agencies in encouraging the use of modern medical facilities rather than traditional/ local ways of treating illness especially in children. This will help to replace the unscientific beliefs with scientific.

Counselling techniques should be taught right from the secondary to the University level. It will help those who are traumatized as a result of child or siblings death to face the future with hope.

Counsellors can also organize individual and group counselling especially among women experiencing infant mortality.

Recommendations

Based on the findings of this study, the following recommendations were made:

(1)   Medical treatment for children under the age of 5 years should be free.

(2)   Government should encourage free education for all. This will allow people to bring in their wards to school, which will positively affect their belief system.

(3)   Laws should be enacted against treatment of children in local settings while modern medical technology should be encouraged and affordable for all.

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