

The Effect of Socio-demographic Status of Mothers on the Management of Febrile Illnesses Among Under-Fives that Presented in a Tertiary Hospital In South-east Nigeria: A Two-Year Review

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ABSTRACT

Background: *Infant and child mortality rates due to febrile illnesses are high in resource poor countries especially in sub Saharan Africa. The World Health Organization estimates that seeking prompt and appropriate care could reduce child deaths due to acute respiratory infections, by 20%. There is high disease burden from febrile illnesses with malaria contributing 30-50% of outpatient burden and 35% of hospital admissions.*

Objective: *This is to measure the effect of socio-demographic status of mothers on the management of febrile illnesses in under-fives.*

Methods: *This is a 2-year retrospective survey. A proforma was used to retrieve information from the case notes of under-fives who presented with febrile illness in a tertiary health institution in Anambra State from January 2006 to December 2008.*

Results: *Out of a total of 1000 under-fives that presented in the children's outpatient and children's emergency room in the institution during the study period, 400 had febrile illness with malaria accounting for (32.5%) 130 cases of the febrile conditions. Majority of the mothers, 50% (200) were between the ages of 26 and 30 years, and 25%; (100) were illiterate mothers. Fifty percent (200) were traders; 12.5% (50) artisans; 25% (100) were full time housewives, 12.5% (50) were civil servants, while 25.0% (100) did not receive any form of formal education.*

Conclusion: *The fourth Millennium Development Goal (MDG) is to reduce child and infant mortality in the world by two thirds by 2015. As such an understanding of the roles that socio-demographic factors play in improving health and health-seeking behavior is important for public health policy. Findings of this study will equip stakeholders with the necessary input for planning and implementation towards an effective child health care services delivery and attainment of the MDG 4.*

Keywords: *Socio-demographic status, febrile illnesses, Tertiary Hospital.*

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INTRODUCTION

The term febrile condition refers to a state of being feverish which is usually associated with malaria, measles, neonatal tetanus, pneumonia, whooping cough^{1,2}. Febrile illnesses due to different etiologic agents are the most common causes of morbidity and mortality in developing tropical and subtropical countries.³ This is seen mostly among children. In a United Nations' report for instance, mortality rate amongst the under fives in Nigeria was put at 178 per 1000.⁴ A major cause of this mortality is febrile conditions, which are not only preventable but also curable provided treatments are sought promptly and from appropriate centres.

Access to health services and the quality of care administered at all levels of health care have been considered as the central determinants of health outcomes.⁵ The survival of children in developing countries depends on the family's and community's ability to access basic needs of life.

Some studies have shown that perceived illness severity, maternal recognition of certain signs and symptoms of childhood illness were critical factors determining health care seeking behaviour. The studies showed that rural residence is the highest risk factor for febrile illnesses in under fives.⁶⁻⁹ It was also reported that children as well as women with lower levels of education, are more likely to suffer from fever compared to urban children and better educated women.⁶⁻⁹

A study by Olaogun, et al in Osun State Nigeria showed that while mothers' age was negatively correlated, occupation was positively correlated with under-fives mothers' action. Education, religion, incomes and family structure were however insignificant at 5% level.¹⁰ However the World Bank and the 2003 National Demographic Health Survey report that established a strong relationship between mothers' education and health seeking behaviour.^{11,12} Hobbs and Blanks, reported that occupation plays a major role in shaping the life style of individuals.¹³ According to them, it increases women's access to resources and strengthens their bargaining power within the household and the workplace. The women's access to resources and their bargaining power within the household have a significant influence on their treatment seeking behavior for their children.¹⁴ They asserted that there are correlations to be made between one's occupation and one's education, recreational and leisure-time activities, political affiliation and quality of basic social services.^{13,14} The Nigeria Demographic and health survey 1999 report emphasized that the children of more educated mothers and those living in more

economically advantage households and the least likely to experience febrile illnesses and the likelihood of seeking treatment increase as education of mothers and economic index of household increase.¹⁵ The objective of this study is to measure the effect of socio-demographic status of mothers on the management of febrile illnesses in under-fives.

METHODS

A health facility based study was conducted in a tertiary institution in Nnewi, Anambra State. The Nnamdi Azikiwe University Teaching Hospital, (NAUTH) is located in Nnewi North Local Government Area (LGA) of Anambra State which lies in the south eastern part of Nigeria. NAUTH is located in the heart of the town with good access roads.

Nnewi is a commercial town and semi urban area, having boundaries with Nnobi to the East; Ihiala to the West; Ukpokor to the South and Ojoto to the North. The land mass has an area dimension of 72km² and an approximate total population of 157,569 people by the population census of 2006.¹⁶ From this an average population density of 2.189 people per square kilometer can easily be appreciated. The people are ethnically Ibos and the language spoken is Igbo; although English and its adulterations are spoken. The annual rainfall is about 1800-2000mm per annum; with average temperature of 27°C.¹⁶ It is essentially made up of four large villages, Otolo, Uruagu, Umudim and Nnewichi. The religion is predominantly christianity with pockets of traditional worshippers. Agricultural activity is subsistence farming. The means of transportation is principally motor cycle and commuter buses.¹⁶

This is a retrospective study. Inclusion criteria were: The proxy clients or caregivers were biological mothers of sick children; the children had a febrile condition and were below 5 years of age. A proforma was used to retrieve information from the case notes of under-fives who presented with febrile illness in Nnamdi Azikiwe University Teaching Hospital (NAUTH) Nnewi from January 2006 to December 2008. To explore the experiences, knowledge and perceptions on management of febrile illnesses in under fives, a focus group discussions (FGD) was held with purposively selected groups of mothers/caregivers.

Quantitative data was analyzed using SPSS version 12.0 to generate frequencies and cross tabulations. The key variables investigated were: maternal age, mothers'

occupation, mothers educational status, perceived causes of, seeking skilled treatment for a child with fever, follow-up and adherence to health worker treatment and advice. Qualitative data was manually transcribed, categorized and summarized according to the study objectives. Recurrent and emerging themes were identified and organized into meaningful categories with verbatim reporting where necessary. For comprehensiveness, quantitative and qualitative data was integrated for complementary and validation purposes

RESULTS

Out of a total of 1000 under-fives that presented in the children's out-patient and children's emergency room in NAUTH during the study period, 400 had febrile conditions. Malaria accounted for a greater percentage of the febrile conditions (32.5%) 130 patients; septicaemia (12.5%) 50; bronchopneumonia (12.5%) 50 and lobar pneumonia (15.0%) 60 patients. HIV (8.7%) 35, meningitis (7.4%) 30 patients, gastroenteritis; (10.0%) 40 patients; upper respiratory tract infection (3.7%) 15 patients; Acute renal failure (4.0%) 1 patient; febrile convulsion (4.2%) 17 patients and sickle cell disease (3.7%) 15 patients.

However, the ages of the mothers ranged from 15 years to 60 years. Majority of the mothers 50% (200) were between the ages of 26 and 30 years, as shown in table I. The ages of their children ranged from one day to 5 years, and duration of the children's illnesses ranged from 1 day to 6 months. The family structure revealed that majority (99.2%) came from monogamous homes. There is a general low literacy level as only 13.75% of the mothers had up to post secondary school level of education. Twenty five percent of mothers did not receive any form of formal education, as shown in table 11

The occupation profile showed that about 50 % was traders; 12.5% artisans; 25% were full time housewives while the rest, 12.5% were teachers, nurses and other categories of civil servants.

Home management of fever involving sponging or washing with warm water at the household level, was widely practiced by caregivers. One mother in a focus group discussion stated: "...the more oily foods a child eats the more he/she has fever ...". Findings from focus group discussions with mother/caregivers revealed that knowledge deficit on the need to prevent mosquito bites was the main problem why some sick children come down with fever.

TABLE I: AGE OF PROXY CLIENTS.

| Age in years | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| 16-20 | 0 | 0.0 |
| 21-25 | 100 | 25.0 |
| 26-30 | 200 | 50.0 |
| 31-35 | 75 | 18.7 |
| 36-40 | 15 | 3.8 |
| 41-45 | 0 | 0.0 |
| 46-50 | 10 | 2.5 |
| Total | 400 | 100 |

TABLE II: EDUCATIONAL LEVEL OF PROXY CLIENTS

| EDUCATIONAL LEVEL | FREQUENCY | PERCENTAGE |
|-------------------|-----------|------------|
| ILLITRATE | 100 | 25.00% |
| PRIMARY | 95 | 23.75% |
| SECONDARY | 150 | 37.50% |
| POST-SECONDARY | 55 | 13.75% |
| TOTAL | 400 | 100 |

DISCUSSION

The notion of combining multiple treatments to ensure the greatest therapeutic benefit was prevalent, and modern medicines were often administered simultaneously with traditional therapies. Appropriate home treatment also involves early recognition of the illness, prompt use of relevant pharmaceuticals and avoidance of ineffective and harmful treatments.

The inverse relationship between age of proxy clients and their action when the children develop febrile illnesses, as observed in this study indicates that the older the mothers' are, the more likely they would not take action when their under-fives develop febrile illness. This seeming lackadaisical response of the older women could be attributed to their previous experience with children's illness behaviour. This is in keeping with the study by Olaogun et al in Osun State Nigeria which showed a negative correlation between mother's age and health seeking behaviour for their children.⁹

However, maternal occupation and educational status as observed by this study has a positive effect on the health status of the family. Such related factors include: improved nutritional status, better sanitation, improved living standard, reduction in psychological stress and reduced susceptibility to infections. The 1999 Nigerian Demographic and Health Survey also emphasized that children of more educated women and those living in more economically advantaged homes, are least likely to experience febrile illness.¹⁴ Hobbs and Blanks also noted

that occupation influences women's access to resources, and this has a significant influence on their treatment seeking behaviour for their children.¹³

CONCLUSION

The result of this study poses a lot of challenges to policy makers in developing countries where education of mothers is very low. There is also need to increase the number of women who are the benefiting from micro credits. This will ensure that more women are engaged in a form of occupation that is profitable and can sustain the economic and health needs of the family.

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