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Roads to Good Health: Effect of Distance to Health Facilities on Maternal and Child Health Care in Burkina Faso

TANOU MARIAM

Background: Maternal health and undernutrition of children under-five years old still remains a challenge for most of developing countries, especially Burkina Faso. Health services utilization by mothers is declining. In 2010 in Burkina Faso, the percentage of women that had at least one antenatal care visit was 95.2%, while only 34.5% received the recommended number of at least four visits. Furthermore undernutrition was recognized to be the underlying cause of 54% of child death in Burkina Faso at the same period. Geographical accessibility, such as distance to services or poor road conditions, is suspected to be one of the reasons for the sharp drop of the maternal use of health services and the high rate of child malnutrition. It is well known that the utilization of maternal health services is associated with improved maternal, infant and child health outcomes. This study examines the effects that the distance to health centers has on maternal and child health in Burkina Faso.

Methods: The database of the Demographic and Health Survey of Burkina Faso 2010 with its sample of 15,044 households and 6,523 children aged 0-59 months has been used. Multilevel logistic regressions were used to examine the effect of distance to the nearest health facility and others predictors on maternal and child health. The Quantum Geographic Information System (QGIS) software was used to assess the distance from the community to the nearest health facility.

Result: Distance was an important predictor of the maternal utilization of health centers. However, there was no significant relation between distance to the nearest health facility and child anthropometric status. The main reason of this result may be the fact that the health centers do not provide adequate care services for the under five year old victims of malnutrition. Nonetheless the consistent predictors of child nutritional status were sex, age, birth weight and body mass index of the mothers. Age, education, religion and household wealth were also significantly associated with maternal utilization of health services.

Conclusion: This study has demonstrated that distance to a health facility among other factors was an important predictor in lowering the use of health services by mothers. Maternal health influences child nutrition such as interventions strengthening mother's status have improved the nutritional status of children in other countries such as Ethiopia, Indonesia, Nepal and Papua New Guinea (Nael Aoun 2015). Furthermore, maternal health increases with visits to health care

facilities, therefore, distance inversely affects the ability of mothers to reach and use those health care facilities. Consequently, the ability of mothers to reach these centers is the most important for them and also for their children.

In our study no statistical significant relation was found between distances to the nearest health facility and child malnutrition. Since this relationship is a result of Qgis simulation, further validation studies should be undertaken on the field.

Despite the lack of statistical significant relation between distance to the health facilities and child undernutrition, the statistical significant relation between distance to health facilities and maternal health means that there is an obvious logical relation between health care access and child undernutrition. Therefore, our results recommend that increasing the effectiveness of the management of child undernutrition by for health facilities, and improving the transport infrastructure (roads) could be important targets for health policies and decisions in Burkina Faso.