

ABSTRACT

Background:

HIV/AIDS (human immunodeficiency virus/ acquired immunodeficiency syndrome) has kept threatening Kenyan health and life still now. Although AIDS-related deaths were reduced gradually because of an introduction of free ART in 2003 and continued effort to improve, it is a leading cause of death for adults which accounts for approximately 30% of annual death. In addition, the number of people living with HIV (PLWH) has kept increasing due to the spread of ART and the continuous high incidence. Along with the increase, the number of children who have parents with HIV are expected to be increased, but few studies focused on them have been done comparing HIV orphans and many things are still not clear; in orphans' cases, negative impacts on children's educational and nutritional status have been known. However, there is a probability that they face more difficulty than orphans.

Therefore, this study aims to describe their situation, especially on children's educational and nutritional status, with focusing on the difference of mothers' care and to identify affecting factors for them.

Objectives:

- 1) To explore the relationship between mothers' HIV infection and quality of their parenting, and the relationship between the parenting and their children's educational and nutritional status.
- 2) To assess differences of educational and nutritional status between children who have mothers living with HIV and those who have mothers living without HIV

3) To identify the factors affecting educational and nutritional status of children who have mothers living with HIV

Methods:

A cross-sectional, comparative study of mothers living with HIV and those who living without HIV was conducted from April to June 2017 in Mbita, Kenya. Mothers with HIV who had been confirmed their HIV infection more than one-year ago with medical records, and their children who enrolled in primary school were recruited at Patient Support Center and Maternal and Child Health department in Mbita sub-county hospital. Similarly, mothers without HIV who had been confirmed their HIV negative on the day of data collection and their children who belonged to primary schools were also recruited at HIV Testing and Services in the hospital. Socio demographic information, household food security level, mothers' clinical status, and quality of mothers' care were obtained from the mothers through a structured questionnaire. In addition, their children's height and weight were measured, and weight-for-age, height-for-age, and body mass index for age Z scores were calculated. As an educational status, their children' scores of five main subjects were also obtained from their schools.

Results:

A total of 272 mothers were recruited at the hospital. Among them, 250 mothers (91%) were traced for their children's anthropometry. 132 mothers with HIV and 118 mothers without HIV mothers and their 205 children who had the mothers with HIV and 210 children who had the mothers without HIV were enrolled. As a result of t-tests, there was no difference in children's nutritional status by mothers' HIV status;

weight-for-age ($p=0.512$), height-for-age ($p=0.509$), and BMI-for-age ($p=0.187$). The mean of average scores on schools' subjects were 54.9 (mothers with HIV) vs 57.1 (mothers without HIV), however it was not statistically significant ($p=0.215$). The quality of care was expected as a mediator of poor children's status, however it was not associated with mothers' HIV status ($p=0.572$). Multivariable linear regression showed that there was no association between mothers' HIV status and their children's nutritional status, however children's age and classes, the length of school absence, living with infants, delay of school enrolment, mothers' marital status, mothers' BMI, the number of sick adults, and commuting time from houses to schools were associated with the nutritional status. Children's average scores of school subjects were associated with children's classes and mean school level scores on national examination although it was not associated with mothers' HIV status.

Conclusion:

There was no association between mothers' HIV status and children's educational and nutritional status. It is assumed that mothers with HIV could live same lives as those without HIV as long as their conditions were stable; all of them who took part in this study were under ART (Anti-Retroviral Treatment) and medical personals' monitoring. Children's nutritional status was affected especially by mothers' nutritional status and existence of infants. In regard to children's educational status, their classes and school level average score on a national examination were associated with it. However, the importance of households' economic status is not negligible since these two variables were associated with it.

Although any serious difference was not found on the children, mothers with

HIV and their children might face other challenges such as psychological aspects, which this study did not explore. A multidimensional study will be required to reveal their situations more extensively. This study found the importance of ART for their life anew. It is essential to promote the diffusion of correct knowledge on ART including adherence and also to take account of the sustainable way to secure resources while giving more emphasis on prevention not to increase people who need the treatment.