

Abstract

BACKGROUND Malnutrition poses a global threat to childhood growth and survival. Coupled with HIV exposure and infection, under-nutrition risk is greatly increased. Infection with HIV results in Acquired Immune Deficiency Syndrome which increases the body's nutrient requirements and may significantly affect the body composition parameters. This study aimed to review data from published articles to identify the changes in body composition among children under five in sub-Saharan Africa as a result of Moderate Acute Malnutrition (MAM) and HIV exposure

MATERIALS AND METHODS We conducted a systematic review of published articles on body composition, moderate acute malnutrition treatment and HIV exposure among children under five years. Data was searched from PubMed, Ovid-MedLine, Google Scholar, Cochrane Central Register of Controlled Trials and EMBASE. The review was done as per Cochrane reviews and Preferred Reporting Items for Systematic Reviews and MetaAnalyses guidelines (PRISMA). The articles were then screened for suitability of inclusion and analysis.

RESULTS A total of 1,505 records were identified; 520 articles from PubMed, 535 from Medline and 430 from EMBASE. On the first screening step, 755 duplicate records were removed. Screening the articles by abstract and title led to the elimination of 717 records. Further, 88 records were excluded due to a lack of full-text articles, not related to the topic, no prospective studies and the wrong age group (above five years). We finally ended up with 9 articles that were included for review.

CONCLUSIONS There is an interrelationship between MAM treatment, HIV Exposure and body composition. Treatment of MAM using standard ready-to-use supplemental foods and locally produced specialized nutritious formulas improves the body composition parameters of children under five years. HIV-exposed infected children exhibit poorer body composition parameters than HIV-exposed uninfected and HIV-unexposed uninfected children.