

**DETERMINANTS OF DEHYDRATION AMONG CHILDREN UNDER FIVE
YEARS WITH ACUTE DIARRHEA ATTENDING MBAGATHI HOSPITAL IN
NAIROBI CITY COUNTY, KENYA**

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DECLARATION

This thesis is my original work and has not been submitted for a degree in any other University.


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ABSTRACT

Diarrhea in the developing countries is the second death causing infection among children below five years of age. Millions of these deaths are caused by dehydration which is the most frequent and dangerous complication of diarrhea. Identification of determinants of dehydration among under five years old would help in predicting the children with acute diarrhea who are likely to die due to dehydration. The aim of the study was to establish predictors of dehydration among under five years old seeking treatment for acute diarrhea at Mbagathi County hospital in Nairobi county, Kenya. The specific objectives were to determine the socio- demographic characteristics of primary care givers (PCGs) and child associated with dehydration in under five years old with acute diarrhea attending Mbagathi county hospital, to identify the social- cultural beliefs of PCGs which are associated with dehydration in under five years old with acute diarrhea attending Mbagathi county hospital, to establish whether there was an association between the PCGs level of knowledge in diarrhea management and dehydration in under five years old with acute diarrhea at Mbagathi county hospital and to determine whether there was an association between the prior actions taken by PCGs to manage the acute diarrhea at home and dehydration in children under five years at Mbagathi county hospital. The study applied a hospital based unmatched case- control analytical design with mixed method approach. Purposive sampling was used to select 110 cases and 110 controls who met the inclusion criteria at a ratio of 1:1. The study participants were interviewed using a structured questionnaire. The same sampling method was used to select PCGs to participate in focus group discussions (FGDs). Qualitative data was thematically analyzed by Nvivo software then transcribed and coded into themes. Quantitative data was analyzed using SPSS Version 25. A mixed effect logistic regression model was used to evaluate the association between the predictors of dehydration. The results of the logistics regression analysis are presented in terms of odd ratios (OR) and the corresponding 95% confidence intervals (CIs). The socio demographics characteristics of PCGs in cases and controls were almost similar in terms of proportion in both groups. The characteristics of child demographics were also almost similar in both groups. In univariate analysis the variables that were statistically significant at cut off $p < 0.2$ were then offered to the multivariable model. Findings from the adjusted multivariate model the variables that were statistically significant were highest level of education at $p < 0.05$ and initiation of zinc supplement at home immediately diarrhea started $p < 0.05$. After adjusting for duration of diarrhea, results of the logistic regression showed that the variables median age of the PCGs at $p < 0.01$ and initiating zinc supplement at home immediately diarrhea started at $p < 0.02$ were significant predictors of dehydration among children below five years. In conclusion there is risk of developing diarrhea- associated dehydration among children under five years with acute diarrhea attending Mbagathi hospital mainly in young mothers with low education and also due to delay in initiating zinc supplement when children develop diarrhea. Recommendation was that there is need for more focused health education on diarrhea management in young mothers and health promotion activities at the community level so as to sensitize the community and dispel myths and misconceptions on causes and management of diarrhea.