

ABSTRACT

TITLE : Screening for ‘at risk’ under five children by community health workers – a study in a rural area of Tamil Nadu

DEPARTMENT : Community Health

NAME OF THE CANDIDATE : Dr. Swathi Krishna .N.
(Reg No: 201525056)

DEGREE AND SUBJECT : MD Community Medicine (Branch XV)

NAME OF THE GUIDE : Dr. Vinod Joseph Abraham

OBJECTIVES

- To screen for ‘at risk’ under five children in a rural area of Tamil Nadu using community health workers during the period October 2016 to June 2017
- To validate the screening done by the community health workers
- To determine the prevalence of ‘at risk’ under five children’ in this population based on the screening and validation

METHODS

Study setting : The study was conducted in Kaniyambadi block, Vellore District, Tamil Nadu, India. This block is predominantly rural with a population of approximately one lakh twenty thousand in a total of 82 villages.

Methodology : The study had two main components – (a) screening by twelve health workers of the under five children in their respective areas and (b) concurrent validation of the health worker's findings by the principal investigator in a sample of 469 children using the same screening tool.

Tools : Semi structured questionnaire for the screening programme to identify 'at risk' under five children , WHO weight-for-age Z-score Reference standards, modified B G Prasad scale, WHO windows of achievement of six gross motor milestones
The questionnaire was designed based on the WHO document on 'Risk Approach in Maternal & Child Health' and considering local prevalence of childhood illnesses.

The use of the semi structured questionnaire by the principal investigator and the health workers was based on uniform rules which were according to the reference literature and discussed among and agreed upon by the investigators and explained to the health workers during the orientation session.

Data Management : Data entry was done in Epidata version 3.1 and data analysis was done using SPSS version 20.

Statistical Methods: Results of the screening survey by health workers which included sociodemographic features of study subjects, prevalence of individual risk factors as well as overall risk, were expressed as proportions. Chi square test was done to find out

association of prevalence of individual risk factors with different age groups (under 1 year age and 1-5 years age groups). Results of validation study by the principal investigator were expressed in terms of sensitivity and specificity of screening by health worker (overall as well as for individual risk factors) as compared to screening by principal investigator (taken as gold standard). Prevalence of ‘at risk’ under five children was also calculated.

RESULTS

- The prevalence of ‘at risk’ under five children in Kaniyambadi block during the period of October 2016 to June 2017 from the screening by health workers is 56.6% and the projected prevalence is found to be 79.82%.
- Inadequate weight for age (31.7%), followed by low socioeconomic status (14.1%) are the major risk factors among the children studied.
- The health workers require more intensive training to recognise the risk factors among these vulnerable groups of children as indicated by the overall sensitivity of 66.23% and specificity of 81.51% of screening by health workers.

KEYWORDS : ‘At risk’ under five children, weight for age, socioeconomic status, risk approach, low resource setting, under five mortality rate, infant mortality rate, risk factors, prevalence, sensitivity, specificity, health worker, maternal education, vulnerable group, WHO, Z scores, screening, validation, low birth weight, National Family Health Survey, Millennium Development Goals, Sustainable Development Goals