

Knowledge and Attitude of Nurses Working at Edward Francis Small Teaching Hospital, Banjul on Malnutrition Management'

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ABSTRACT

Since malnutrition is a factor that has its long time history in the sub-Saharan countries and Gambia is not an exception, the extent to which this menace can be controlled should be made known to all especially the healthcare givers. This study aims at assessing the knowledge and practice of nurses working at the country's main referral hospital (Edward Francis Small Teaching Hospital Pediatric Unit) on severe acute malnutrition (SAM) management and also to determine the practices of these nurses regarding the management of cases.

The methodology involved is a descriptive cross sectional design. A descriptive cross sectional study was made to identify and describe the variables within an identified situation at a point in time.

The results shows 88% benefited from the childhood malnutrition during their nursing program however, only 36% have undergone in-service training or workshop on management of SAM. 44% encountered the display of SAM protocol in the pediatric ward 86% positive awareness for causes of death due to malnutrition and wasting 64%. Only 40% really know the standardized criteria for the diagnosis. 68% were able to define the acronym ReSoMal and a rather unfortunate number (44%) of the respondent could not trace the formula for calculating ReSoMal. Only 48% were able to accurately figure out the preferred method of giving fluids/feeds to a child with malnutrition. 58% knew what should be given to a dosage booster for a child with SAM less than 6 months of age. For a child between 6 to 11 months of age, and 12 to 59 months were 28% and 56% respectively, and increasing 60% are well informed about the respective vitamin dosage booster. For the volume of feeding that should be used for a child with malnutrition and without edema, 52% are aware of it. Prior to discharge, the need to investigate and counsel on HIV and TB are understood by 88% of the respondents.

In conclusion, although the overall respondents on key issues stood positive, there is a need for ground settings regarding nurse education on malnutrition forms.

Keywords: sever acute malnutrition,

INTRODUCTION

Malnutrition is one of the major health concerns especially in developing countries which affect almost 800 million people where the largest proportions found in Africa and South East Asia. It is the most recognizable and perhaps most unpleasant consequence of poverty in children (Ashworth A, et al 2004). Childhood under nutrition is a major global health problem, contributing to childhood morbidity, mortality, impaired intellectual development, suboptimal adult work capacity, and increased risk of diseases in adulthood.

Reducing malnutrition among children under the age of five remains a huge challenge in developing countries of the World. An estimated

230 million under-five children are believed to be chronically malnourished in developing countries. Eastern and middle Africa is known with a highest prevalence of estimates in the UNsub regions with 50% and 42%, respectively (**Black R et al., 2008**). Early detection and appropriate management of nutritional problems among children is important in ensuring that the needs of ill children are met to decrease child mortality. However, studies shows that the quality of health care for children in developing countries has often been found poor (**Duke T, et al., 2003**).

Malnutrition is a major public-health problem throughout the developing world and is an underlying factor in over 50% of the 10–11

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million children under 5 years of age who die each year of preventable causes (Pelletier et al 2003). It is estimated that there are approximately 20 million children worldwide with SAM. In addition, malnutrition contributes to more than one third of childhood deaths worldwide (UNICEF 2009).

The findings of the study will help nurses and other service providers in the field of pediatric nursing to enhance their skills on the management of severe acute malnutrition. Researchers interested in carrying out further studies in this issue will also find this study a useful guide. The study will also be of great significance to academicians who seek to explore the knowledge and practice of nurses on SAM management.

The mainisto assess the knowledge and practice of nurses' working at Edward Francis Small Teaching Hospital Pediatric Unit on SAM management

OBJECTIVES

- To assess the knowledge of nurses' working at Edward Francis Small Teaching Hospital on SAM management.
- To determine the practice of nurses' working at Edward Francis Small Teaching Hospital on SAM management.

RESEARCH QUESTIONS

- What is the knowledge of nurses' working at Edward Francis Small Teaching Hospital on SAM management?
- What are the practices of nurses' working at Edward Francis Small Teaching Hospital on SAM management?

LITERATURE REVIEW

In developing countries, one of the major health concerns is malnutrition and the huge burden lies in Africa and South East Asia. Despite the fact that malnutrition is preventable, its negative consequences still hold the poor population of the aforementioned regions. Childhood mortality and morbidity exert effects on children impaired intellectual development and sociobiological trauma among children (ZelalemTafese and AntenehShele, 2015).

In various literature or publications, severe acute malnutrition (SAM) is defined as weight-for-height measurement at 70% or even below the median. In contrary to SAM chronic

malnutrition is regarded as "stunted" which is by a height-for-age indicator. When combining the two; weight-for-age indicator is elements for both stunting and wasting (WHO (1999). This condition of malnutrition confers various causes and requires distinctive treatment methods. And for this reason, a clear nomenclature is required for easily identification and making consistency in the global nutrition programs (UNHCR (1999).

Statistically, the case-fatality rates in hospitals around the developing countries is on average 20-30% and this occurrence has got its history dating from the 1950s despite clinical interventions in a bid to reduce case-fatality rate. Over 50% of children of 10 to 11 million fewer than 5 years die on a yearly basis due to preventable SAM. In fact sometime in 1992, the involvement of scientific approaches as to the study of malnutrition and creating much awareness was criticized and never adopted until after 13 years, a greater discrepancy between the modern knowledge and other outdated idea. Berg A. (1992)

Many complicated forms of SAM are accompanied with infectious disease; and special attentions should be made to diarrhea, acute respiratory infections and gram negative septicemia. These illnesses come into being for the fact that the immune response of children cannot sustain the amount of food, energy and water being drawn away by the infective agents (bacteria and virus)(Babirekere-Iriso, et al, A. 2006; Bachou, H., 2006).

The treatment of SAM is believed to be an intervention that should include both the clinical medicine and public health. While until to date the causes of malnutrition are listed as; social exclusion, poor public health, poverty and loss of entitlement, these can be prevented with the multi approaches of developing public health measures and specific country economic (Bernal, C., Velasquez, C., Alcaraz, G. and Botero, J. 2008). To add on to this based on the recent findings, clinical input should be evaluated as malnutrition control.

Part of the control measures, there should be a thorough knowledge on the classification scheme for severe and moderate malnutrition. Worldwide, about 60 million children are with moderate acute (mortality rate is 30-148 per 1000 children per year) and 13 million with SAM (mortality rate is 73-187 per 1000 children per year). Out of this this, 9% are in Sub-

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Saharan Africa and 15% south Asian territories (Antoinette Fletcher, Eileen Carey 2011).

On the attitude and knowledge of malnutrition, an estimation of 82% use malnutrition chart book according to the study conducted by (ZelalemTafese and AntenehShele, 2015). And 41.7% check anemia for every child while 59% of health care workers assess and grade edema appropriately.

METHODOLOGY

The study adopted a descriptive cross sectional design. A descriptive cross sectional design identifies and describes the variables within an identified situation at a point in time. It enabled the researcher to explore the knowledge and practice of nurses' working at the pediatric unit of Edward Francis Small Teaching Hospital.

The study was conducted at Edward Francis Small Teaching Hospital Pediatric Unit after seeking permission from the Chief Medical Director. The Pediatric Unit offers inpatient services.

The target population for the study was 125 nurses working at Edward Francis Small Teaching Hospital Pediatric Unit.

A research sample comprises elements of the population considered for the actual inclusion in the study. A convenient sample of 125 respondents took part in the study which will represent the study population.

For a participant to be part of the study he or she must be a nurse working at Edward Francis Small Teaching Hospital Pediatric Unit and he or she should agree to participate in the study. In the other hand nurses working in other hospitals and units and those who did not agree to participate in the study will be excluded.

Data was collected from Monday to Friday excluding public holidays until the calculated sample size is attained. Self-designed structured questionnaires were used to collect data on knowledge and practice of nurses working at Edward Francis Small Teaching Hospital Pediatric Unit. The questionnaire consisted of three parts namely part (1) Demographic profile of respondents, part (2) Knowledge of nurses on SAM management and part (3) Practice of nurses on SAM management.

Reliability refers to ability of the instrument to give consistent or same results under conditions that are comparable. It also addresses accuracy and precision. A pilot study was conducted with half of the study population to assess whether consistent results could be obtained. Changes were made on the questionnaire where necessary. Validity in the other hand is the degree to which an instrument measures what it is supposed to be measuring. The instruments were given to the research supervisor to review and find out if the items on the questionnaire address the research questions.

Data was analyzed manually using descriptive statistics and this was presented in the form of frequencies and percentages. The purpose of descriptive statistics is to reduce, summarize and describe the data collected so that the characteristics of the study sample can be described.

RESULTS

On this study, 32% of the participants are BSc holders, 36% state registered nurse (SRN), 24% state enrolled nurse (SEN) and 0.08% composed community health nursing (CHN).

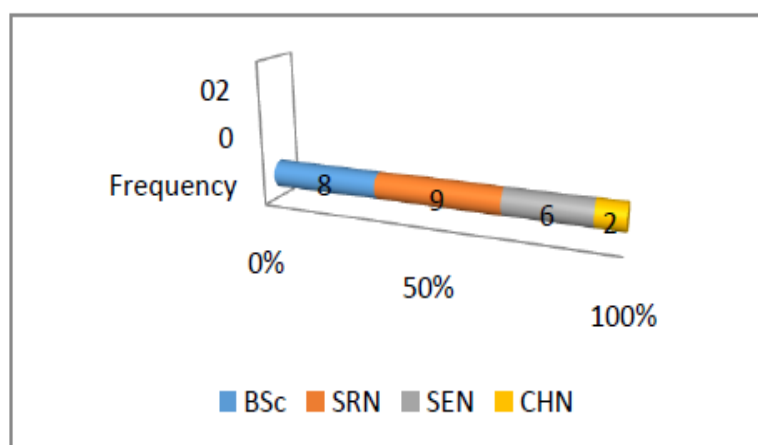


Figure1. Nurse Category as per respondents

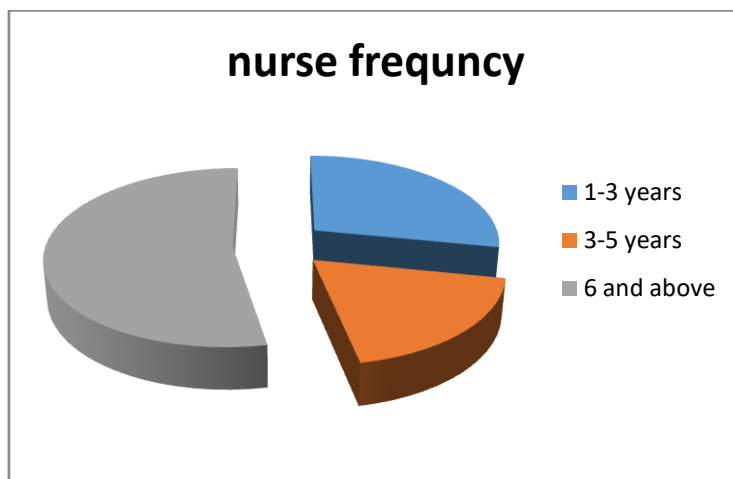


Figure2. Length of Service of the respondents

Among the participants; majority have acquired equal number from those with between 3 to 5 6 and above years of work experience, yet an years and 1 to 3 years of work experience.

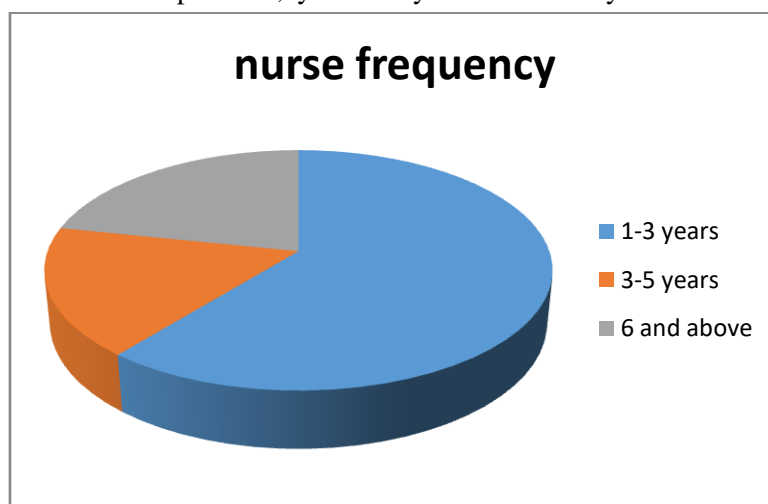


Figure3. Years of Experience of The respondents in Pediatric Clinic

Regarding the length of service delivery in the Pediatric Clinic, more than 50% of the respondents have 6 and above work experience and an equal number have 3 to 5 years and 1 to 3 years of experience in the pediatric clinic.

QUESTIONS	% POSITIVE
CMC (- child malnutrition covered)	88
In-Service-Training	36
SAM display	44
Causes of Death in malnutrition.	84
Definition of wasting in road to Health Chat	64
Standardized criteria for SAM	40
ReSoMal abbreviation	68
Formula for calculating ReSoMal	36
Preferred method of feeding	48
Child with edema can be given diuretics	58
What should be given to a child who develop SAM	52
Should vitamin be given as a booster?	80
Dosage of vitamin A to a child less than 6 month	28
Dosage of vitamin A to a child 6 to 11 months	56
Dosage of vitamin A to a child 12 to 59 months.	60
Volume used for a child with malnutrition and edema.	52
Investigations and counselling.	88

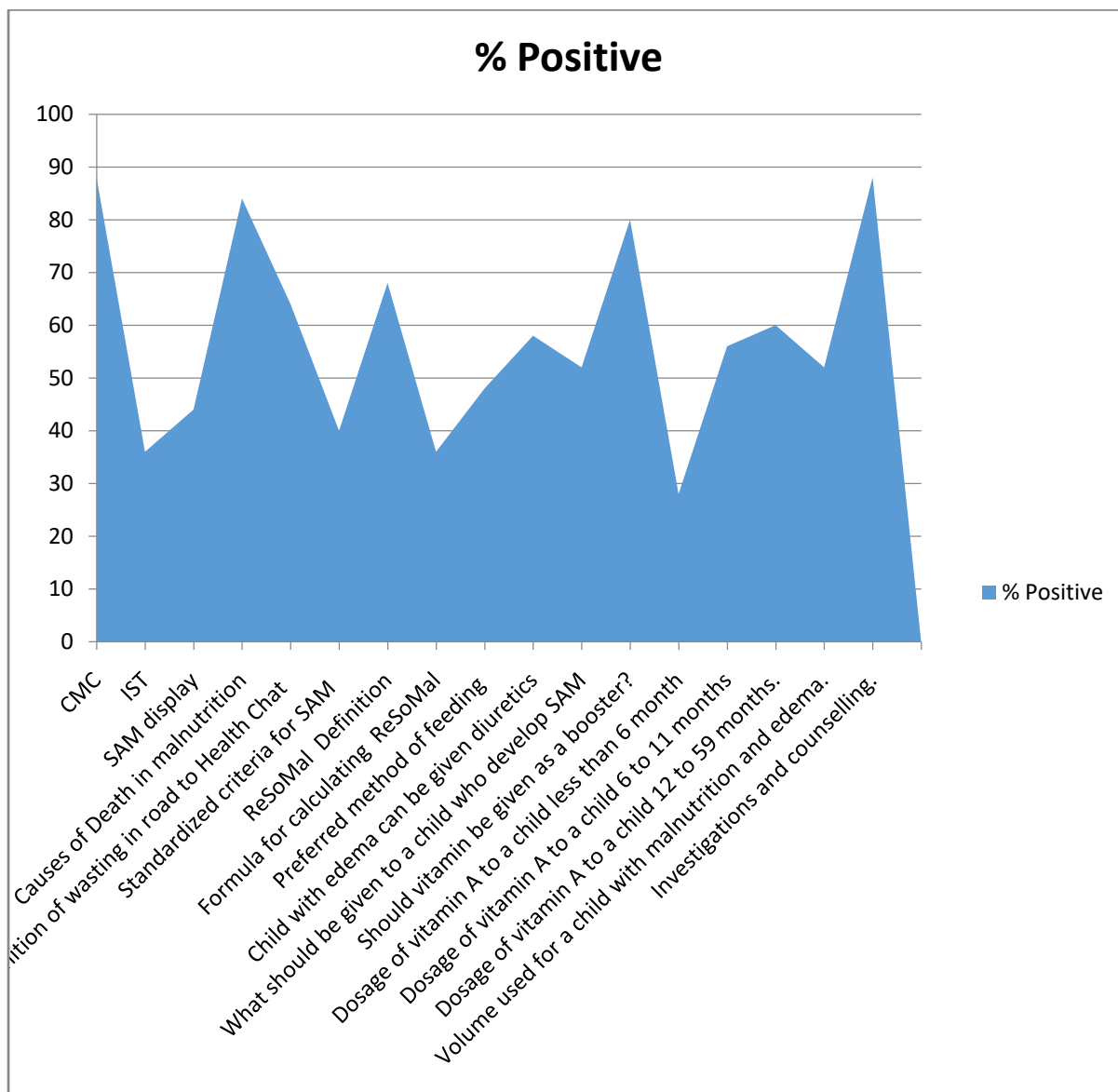


Figure 5. Percentage awareness of the participants against the questions

On the knowledge on severe acute malnutrition management; 88% of the respondents were able to benefit from the childhood malnutrition during their nursing program however, only 36% have undergone in-service training or workshop on management of SAM. Again only 44% had ever encountered the display of severe acute malnutrition protocol in the pediatric ward or consultation room. The awareness of the four main causes of death among malnourished children was much understood, reaching unto 86% positive awareness. Similar to this positive awareness, wasting is greatly understood in the Road to health chart, accounting to 64%. Only 40% really know the standardized criteria for the diagnosis of severe acute malnutrition using mid-upper arm circumference. 68% were able to define the acronym ReSoMal and a rather

unfortunate number (44%) of the respondent could not trace the formula for calculating ReSoMal. Going deep down to the expertise of management of malnutrition, only 48% were able to accurately figure out the preferred method of giving fluids/feeds to a child with malnutrition. When question as to what should be given to a child with whether a child with edema should be given diuretics was asked to the respondents, many 58% were accurate and 52% knew what should be giving to a child with worsening edema as potassium. A frustrating number (72) could not tell the accurate vitamin A dosage booster for a child with SAM less than 6 months of age, the booster for a child with SAM 6 to 11 months of age, 52% awareness was seen and for a child between 12 to 59 months, and increasing 60% are well informed

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about the respective vitamin dosage booster. For the volume of feeding that should be used for a child with malnutrition and without edema, 52% are aware of it. Prior to discharge, the need to investigate and counsel on HIV and TB are understood by 88% of the respondents.

DISCUSSION

Even with the WHO protocol of “Ten Steps” to guide hospitals, severe acute malnutrition is still among the leading factors contributing to high mortality rate. The regional and country wise evaluation and assessments of malnourished children as per country might outweigh the protocols set by the WHO. In fact this is consistent with a study conducted in Western Cape, South Africa by Dr. Adele Catherine Anthony in 2013. This was set to assess the adequacy of clinical management practices for number of malnourished children admitted in district hospitals while making comparisons with the WHO guidelines. They went further to describe the prognostic indicators on admission on clinical severity of malnutrition and co-morbidities like Human Immune Deficiency Syndrome (HIV), tuberculosis (TB), diarrhea and pneumonia. In line with this study, they also assessed the management practices of severe malnutrition.

Clinical signs were not well documented by the clinicians. While the most accurate practice was for treatment of infections with 90% patients receiving antibiotics, doctors sought need for accurate assessment and monitoring to reduce the mortality risk of patients.

RECOMMENDATIONS

Stabilization and Rehabilitation approaches are highly recommended from this study. In the sectorial reform, high number of nurses should be well trained and adequately equip for the underlining tasks ahead. In addition, in patient bed capacity should be monitored and keep the sanitation measures to the standard to avoid nosocomial infections. Both the quality and quantity of the service delivery should be checked and a more stable environment with staff motivation is indeed recommended.

In fact is high time for the clinicians, microbiologist and public health officers in the country to come with a term frame work of activities in a bid to reduces the number of malnutrition type and user friendly manual in respect to Gambia for every nurse to use as a guide in understanding forms and the

appropriate attitudes towards malnourished patient care.

In line with recent studies, there should be adequate resources, skilled and motivated health staff to run the supplements centers and make consistent follow ups to registered patients.

ETHICAL CONSIDERATION

Ethical clearance was sought from the Chief Medical Director of Edward Francis Small Teaching Hospital before the commencement of the study. An informed consent was taken from all participants who volunteered to take part in the study before the administration of the questionnaire. The consent explained the purpose of the study as well as the right to withdraw from the study and confidentiality will be maintained. The respondents' will be reassured that their autonomy and dignity will be respected. All respondents will be given equal chances of being selected except those who did not meet the inclusion criteria.

BIBLIOGRAPHY

- [1] Ashworth A, Chopra M, McCoy D, Sanders D, Jackson D, Karaolis N, Sogaula N, Schofield C (2004). WHO guidelines for management of severe malnutrition in rural South African hospitals: effect on case fatality and the influence of operational factors. *The Lancet* 363: 1110-1115
- [2] WHO. WHO child growth standards. *Acta Paediatr* 2006; 95 (suppl): 1–101.
- [3] UNHCR. Handbook for emergencies, 2nd edn. Geneva: UNHCR, 1999.
- [4] SPHERE project team. The SPHERE humanitarian charter and minimum standards in disaster response, 2nd edn. Geneva: The SPHERE Project, 2003. 5 Schofield C, Ashworth A. Why have mortality rates for severe malnutrition remained so high? *Bull World Health Organ* 1996; 74: 223–29.
- [5] Berg A (1992). Sliding towards nutrition malpractice; time to reconsider and redeploy. *Am J Clin Nutr*; 57: 3–7.
- [6] UNHCR (1999). Handbook for emergencies, 2nd edn. Geneva WHO (1999) Management of severe malnutrition: a manual for physicians and other senior health workers. *Geneva: WHO*
- [7] Babirekere-Iriso, E., Musoke, P. and Kekitiinwa, A. (2006). Bacteraemia in severely malnourished children in an HIV-endemic setting. *Annals of Tropical Paediatrics*, 26: 319-328
- [8] Bachou, H., Tylleskar, T., Kaddu-Mulindwa, D. and Tumwine, J. (2006). Bacteraemia among severely malnourished children infected and

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- uninfected with the human immunodeficiency virus-1 in Kampala, Uganda. *BioMed Central Infectious Diseases*, 6:160
- [9] Bernal, C., Velasquez, C., Alcaraz, G. and Botero, J. (2008). Treatment of Severe Malnutrition in Children: Experience in Implementing the World Health Organisation Guidelines in Turbo, Colombia. *Journal of Pediatric Gastroenterology and Nutrition*, 46 (3): 322-328.
- [10] ZelalemTafese and AntenehShele (2015). Knowledge, attitude and practice towards malnutrition among health care workers in Hawassa City, Southern Ethiopia *Global Journal of Public Health Research* 1(1);001-008
- [11] Antoinette Fletcher, Eileen Carey (2011). Knowledge, attitudes and practices in the provision of nutritional care. *Brit. J. Nurs.* 10: pp. 570-574.

Citation: Ousman Bajinka , Ida Jallow ,SaineyJanneh" Knowledge and Attitude of Nurses Working at Edward Francis Small Teaching Hospital, Banjul on Malnutrition Management", *Annals of Microbiology and Infectious Diseases*, 1(4), pp.1-7.

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