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Impact of infant and young child feeding (IYCF) counselling on practices and knowledge of mothers in rural areas in Bangladesh

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The optimal IYCF practices during the first 2 years of life is of very importance as this period is for the promotion of good growth and cognitive development. The objective of the study was to evaluate the mother's knowledge and practices on proper breastfeeding and timing of complementary feeding in infant and young child, by identifying the actual status of the rural lactating mother, and to assess the knowledge about IYCF practice before and after the IYCF counselling.

I have selected 177 Mother's whose knowledge level; 42.4% mothers had proper knowledge about IYCF practice which improved to 48.6% who have at least 80% knowledge about IYCF. 61.0% mothers had knowledge on initiation of breastfeeding within one hour of birth and after study 79.1% mother knew the right message while 50.7% of the mothers-initiated breastfeeding within an hour after birth remain same before and after the study. Exclusive breastfeeding for 6 months was practiced by the mothers of 60.2% & study leads to 73.5% and knowledge level of mother increased from 58.7% to 75.7% as an impact of counselling. After counselling on IYCF knowledge increased from 61.6% to 75.2% on complimentary feeding should start at 6 months and 55.4% of the mother wished to continue breast fed for 2 years of infants but finally

65.5% agreed on right age of continuation of breast feeding for children. Before study MDD was observed in 30.3% children between 6-23 months age group and after the study it increased to 39.0%. MMF was observed in the majority (63.6%) of children aged 6-23 months before & after study it increased to 74.6%. The nutritional status of children slightly changed from previous condition to current condition. The wasting rate (WHZ) reduced from 21.1% to 20.1%. Similarly, the underweight (WAZ) and stunting (HAZ) also reduced from 36.9% to 35.4% and from 45.4% to 43.8% respectively.

Speaker Biography

Taslima Arzu has completed her (4 years) graduation and Masters (1 year) on Applied Nutrition and Food Technology, From Islamic University Bangladesh. After that she has done her Post Graduation Fellowship From BCSIR (Bangladesh Council of Scientific and Industrial Research, Dhaka, Bangladesh). Then she has completed her PhD on IYCF, from Jahangir Nagar University, Savar, Dhaka, Bangladesh. She is currently working as National IYCF Coordinator, Nutrition with Terre des Homes (TdH) a reknown International NGO in nutrition sector in Rohingya Response program in Cox's Bazar of Bangladesh. She has 5 publications, which are published in 5 different international journals.

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Effects of toss jute (*Corchorus olitorius*) and yellow tassel (*Emilia coccinea*) vegetables extracts on the lipid profile and blood glucose level of alloxan induced diabetic rats

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The study examined the effects of the aqueous extracts two leafy vegetables (*Corchorus olitorius* and *Emilia coccinea*) on the lipid profile and blood glucose level of alloxan induced adult male diabetic rats. The study adopted the experimental design. The tender leaves of the two leafy vegetables were cultivated from farmlands in Mbamo ward, Katsina-Ala, Benue State. The leaves were sorted, rinsed with portable water, shade dried and pulverized. The experimental animals for this study were healthy adult male albino wistar rats weighing between 100-200g. The acute toxicity and mean lethal dose (LD50) of the aqueous extracts was determined using a total of 18 mice for the test. The experimental animals were fed water and rat chow ad libitum. The rats were randomly divided into 7 groups of five rats each made up of six (6) test groups and a control group. Rats in group 1 served as a control group of normal rats fed rat chow and distilled water only. Groups 2 - 3, 4-5 and 6-7 were diabetic groups fed rat chow and administered orally 100, 200 and 300 mg/kg body weight of the various vegetable extracts, respectively early in the morning for the 14 days feeding trial. The rats in each group were induced of diabetes using alloxan on the 6th day and the results collected from the samples served as the baseline data. The individual weights of the rats were taken at the beginning of the experiment and at the end of the experiment to determine the weight gain. The blood samples collected before the feeding trial and after the treatment were subjected to biochemical analysis. The data obtained from the biological studies were analysed using the Statistical Product and Service Solutions (SPSS) version 21.0 computer software package. The 100mg *E.coccinea* group had the

highest (10.7%) increase in weight. The extracts were able to significantly ($p < 0.05$) lower the blood glucose relative to the control. The 300 mg *E.coccinea* extracts showed the highest (43.1%) decrease in total cholesterol. All the vegetable extracts at various levels of supplementation showed a reduction in triglycerides. The 200mg *C.olitorius* group showed the highest (40.2%) reduction in triglycerides level ($p < 0.05$). The 300mg *E.coccinea* group had the highest (13.6%) increase in HDL-c. Vegetable extracts supplementation in all groups showed a decrease in LDL-c levels ($p > 0.05$). The 200mg *C. olitorius* and 300mg *E.coccinea* had the highest (40.3%) decrease in VLDL-c. There was a decrease in the % difference of the ratio of LDL-c/HDL-c in all the groups except 200mg/kg *C.olitorius* (42.9%) that rather showed an increase. All the values in the TC/HDL ratio were not above 5. There was an observed % decrease in the total protein in all groups. The 200mg *C. olitorius* group showed the highest (35.7%) overall decrease in albumin levels ($p < 0.05$). There was an observed % decrease in the activities of AST, ALT and ALP for all the groups. This study has revealed that, these vegetables have properties that were able to reduce blood glucose level and ameliorate the lipid profile in rats.

Speaker Biography

Igbatim Clement completed his Ph.D. in Human Nutrition and Dietetics from the University of Nigeria Nsukka, Nigeria at the age of 45 years. He is a Chief Standards Officer with the Standards Organisation of Nigeria. He has over ten publications in local and international journals. He is a researcher and consultant Nutritionist.

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Complementary feeding practices associated with wasting of children 6 - 23 months old in Dilala, Lualaba province, DRC, 2017

Ngoy Bulaya Emmanuel

University of Lubumbashi, DRC

Background: Malnutrition is in high prevalence in some developing countries, like Democratic Republic of the Congo mostly among children from 6 to 23 months. Complementary Feeding is among the main causes of malnutrition worldwide.

Objectives: The present study aimed to assess the complementary feeding practices associated with acute malnutrition in DRC.

Design (Methodology): A community-based cross-sectional study was conducted from October 23rd to November 25th 2017 in DILALA Health Zone, using a three-stage stratified cluster-sampling technique. In 10 Health Areas, 698 children 6-23 months old were assessed on nutritional status and their mothers interviewed on complementary feeding practices. Household questionnaire pretested and revised, standardized anthropometry equipment and World Health Organization recommendations were used with trained data collectors. ENA for SMART and Logistic regression on SPSS 23 were used to data analysis.

Results: Wasting was associated with lack of knowledge on minimum meal frequency (a adjusted odds ratio=2.4, CI 1.14-5.11), minimum dietary diversity (an adjusted odds

ratio=0.23, CI 0.055-0.981) and protected source of drinking water (an adjusted odds ratio=0.50, CI 0.26-0.93).

Conclusion: Wasting was more increased among children whose mothers were without knowledge on minimum meal frequency of complementary feeding, but more prevented in children having met minimum dietary diversity and in children from household with protected source of drinking water.

Speaker Biography

Ngoy Bulaya Emmanuel birth born in Tanganyika Province; DRC is Nutritionist in Public Health (2005). He obtained his MPH in Epidemiology, Preventive Medicine and Disease Control at the School of Public Health, Lubumbashi University (2007). He obtained his MPH in Nutritional Epidemiology at the School of Public Health, Kinshasa University (2017). He was elected and became the provincial president of the DRC nutritionists association in the entire Katanga Province from (2009 - 2012). In September 2009, the University of Lubumbashi appointed him at the School of Public Health as Assistant Professor in the Nutrition Unit while the DRC Health Ministry designated him like Provincial Coordinator of National Nutrition Program (2009 – 2015). He worked at the School of Agronomic Studies as Secretary of the Manager Committee (2003 - 2006). He was elected and became the Provincial President of the DRC Nutritionists Association in the entire Katanga Province from (2009 - 2012). He has over three publications in various conferences.

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A study on total dissolved solids and hardness level of drinking mineral water in Bangladesh

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Natural water is being processed by the Reverse Osmosis purification system in the different area of Bangladesh for drinking purposes. Most of the water processing companies fill the 500 mL, 1000 mL, 2000 mL and 5000 mL bottles with this processed water and sell widely in the different parts of Bangladesh. However, the dissolved minerals in their purified drinking water are not sufficient for human health. Total Dissolve Solids (TDS) is a parameter that counts all dissolved minerals in the water. Calcium, magnesium and potassium are minerals that are introduce as a “Beneficial Minerals” for human health. Calcium is an important mineral for bone development, potassium is needed for muscles and nervous system and magnesium is helpful protect cardiovascular disease. The objective of the study is to examine the Total Dissolved Solids (minerals) and the Total Hardness (TH) in selected bottled water samples. The selected samples have been marketed by the local branded companies in Bangladesh. TDS and TH are measured in total eight of bottled water samples collected from the local confectionery shops in Dhaka city. The obtained results show that the levels of dissolved minerals in the drinking water samples are very low,


which is quite alarming. Particularly, calcium and magnesium are found in very low amount in water samples of three companies. It can be assumed that those bottled water do not bring additional benefits to human health.

The TDS of sample of one company was alarming low (9.44 mg/L. It may pose negative effects on human health especially malnourished people's health.

Speaker Biography

Mohammad Khairul Islam Sarkar, completed his BSc honors program (4 Years) in Biochemistry at Primeasia University and MSc in Biotechnology at North South University at the age of 25 years from Dhaka, Bangladesh. He joined a Pharmaceutical Industry, then BUREAU VERITAS Consumers Products Services (BD) Ltd and from last year, at last, he joined as Laboratory officer at Independent University, Bangladesh (IUB) the leading Environment and health science research institute of Bangladesh. He joined as Research Officer in the Environmental and Biochemistry Lab, IUB from August 2014. During this period he worked on a number of research projects and has over 20 publications that have been cited over 50 times, and his publication H-index and Scopus is 15 and has been serving as an editorial board member of reputed Journals.

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