

2nd World Congress on

Public Health & Nutrition

March 22-23, 2017 | Rome, Italy

IMPACT OF SUPPLEMENTATION OF PEARL MILLET (*Pennisetum typhoides*) PRODUCTS ON ANEMIA, MALNUTRITION AND PSYCHOLOGICAL ATTRIBUTES IN SCHOOL AGE CHILDREN OF JODHPUR, A DESERT DISTRICT OF RAJASTHAN, INDIA

Madhu B Singh^a and KS Premavalli^b^aDesert Medicine Research Centre (ICMR), India^bDFRL, India

Statement of the Problem: Anemia and malnutrition are burning problems in developing countries, especially in young children. In desert areas, children are in constant state of nutritional stress. The food-based approach needs promotion for reduction of anemia besides Iron supplementation strategy. Pearl millet is the staple diet of the desert area, which is also important dietary source of Iron and Zinc. With this aim, pearl millet products were prepared and supplemented to observe its impact on Anemia, Malnutrition and Psychological attributes in school age children.

Methodology: 311 School children of 6-11 years of Jodhpur tehsil were registered and examined for Socio-demography, nutritional deficiency signs, hemoglobin estimation, anthropometry, four Psychological Tests for IQ level, before and after supplementation of Pearl Millet products daily for 180 days.

Findings: Supplementation of pearl millet products reduced anemia (hemoglobin estimation), from 79.4 to 61.8%. The overall non-anemic children increased significantly from 20.6 to 38.2% ($p < 0.01$). Knox Cubes Test (Intelligence level and short term memory) revealed that supplementation increased the percentage of children (6.1%) in average IQ level. Digit Span Test points used for short term memory revealed that overall 68.7 percent children showed an increase in DST points scale after supplementation. SD classification for weight for age showed a decline of moderate malnutrition from 26.2 to 14.3%.

Conclusion & Significance: Significant increase in non-anemic children along with significant positive effect on malnutrition and on psychological tests performed on learning attributes in terms of memory, intelligence, and cognition after supplementation.

Recommendation: Pearl Millet products can be included, in ongoing national programs in arid areas.

Biography

Madhu B. Singh has her expertise in Micronutrient Deficiency Disorders and Nutrition & Growth. She is mainly involved for last 32 years in research work pertaining to different aspects mainly MDDs, Malnutrition, Nutrition Intervention and Dietary in the desert and non-desert parts of Rajasthan. She persuaded 30 research projects funded by various agencies of International and National repute namely, HarvestPlus, Wasington, DRDO, UNICEF and ICMR etc. Awarded WHO Fellowship for undergoing training in 'Food Safety and MDDs' at Institute of Nutrition, Mahidol University, Bangkok, Thailand. Adjudged for the first best paper award, Fellowship of Indian Public Health Association; Recognized as Ph.D. supervisor by JNV University and Life Member of 07 National professional societies and 10 Honors as well. She has Published 53 research papers in International/National journals. Delivered 50 research papers in 69 scientific conferences/workshops

mbsgh@yahoo.com

Notes: