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Hunger-Undernourishment: Where Do We Stand and Where Do We Go?

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Short Commentary

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ABSTRACT

Education and nutrition are significant conditions and resources for remodeling public health. Non-communicable diseases are developed due to unhealthy nutrition [1]. Healthy nutrition refers “maintaining a healthy nutritional status which helps us for good growth and health” Malnutrition can be defined as the lack of proper nutrition, excessive or imbalanced consumption of nutrients. It is a complex and multisectoral issue that involves a wide spectrum of causes at individual, household, and community level. According to the WHO, childhood malnutrition is the gravest single threat to global public health[2]

INTRODUCTION

Increasingly, evidence suggests overweight and obesity risk may be related to high demand, low-control work environments and extended work hours. High-stress employees often report poor eating habits, low level of physical activity, smoking/alcohol use, and weight gain. High stress work can also lead to psychological issues including anxiety and depression

In more wealthy industrialized nations malnutrition is usually caused by: **Poor diet** - if a person does not eat enough food, or if what they eat does not provide them with the nutrients they require for good health, they suffer from malnutrition. **Mental health problems** - some patients with mental health conditions, such as depression, may develop eating habits which lead to malnutrition. **Mobility problems** - people with mobility problems may suffer from malnutrition simply because they either cannot get out enough to buy foods, or find preparing them too arduous. **Digestive disorders and stomach conditions** - some people may eat properly, but their bodies cannot absorb the nutrients they need for good health. Malnutrition is the root cause of the deaths of 2.6 million children each year, and the bodies and brains of 450 million more will fail to develop properly due to inadequate diet over the next 15 years unless immediate action is taken, according to a survey published on Wednesday by a leading international charity

Key Insights

Children are most vulnerable to malnutrition in developing countries because of low dietary intakes, lack of appropriate care, and inequitable distribution of food within the household. Malnutrition remains one of the most common causes of morbidity and mortality among children throughout the world. Malnutrition In Ethiopia, in the form of stunting, underweight and wasting were identified as 44%, 29% and 10% and Amhara National region state 52%, 33.4% and 9.9%, respectively in children under five. The prevalence rate of malnutrition in the study area was found high and this was coupled with association of many independent variables. This needs appropriate factor specific interventions [4].

Comparison of the growth patterns of the study population with that of the NCHS references revealed that none of the children grew exactly according to the NCHS references. The prevalence rate of both

under nutrition and over nutrition among the 0-2 year's old children living in Mezam division was high. Children aged 0 to 6 months were more affected by under nutrition while those aged 6-12 months were more affected by over nutrition. Risk factors of under nutrition in these infants were as a result of factors such as: Nature of parents' profession, parents' educational level, inappropriate child feeding practices such as exclusive breastfeeding practiced incorrectly and mixed feeding started too early. Conclusion: The study revealed a high prevalence rate of both under nutrition and over nutrition among children aged 0-2 year's old living in the Mezam division [5].

Stunting was significantly associated with the illiterate mothers and non-exclusive breastfeeding practice. Thus, an organized effort should be made at all levels to improve maternal education and exclusive breastfeeding practice of the poor rural population particularly mothers [6]. Being African American as opposed to Haitian American was a greater risk factor for obesity and inflammation. Obesity was associated with elevated CRP levels in African and Haitian Americans regardless of diabetes status. Inflammation constitutes a serious health problem for minorities with high rates of obesity [7]. The prevalence of obesity and metabolic syndrome in urban Burkina Faso is high. There is a need to pay closer attention to combating these health disorders. An important place must be reserved for the prevention and the fight against obesity by appropriate lifestyle [8]. The social classes, level of education, marital status, alcohol and tobacco consumption are not regarded as influential factors in the successful outcome of treatment in overweight and obese patients [9].

The knowledge of pregnant mothers was relatively low in this study. Information about nutrition, family income and educational status of mothers had a positive significant relation with mothers' nutrition knowledge in the study area. Hence, the government in collaboration with concerned bodies should focus on nutritional education and information about nutrition to increase the knowledge of pregnant mothers on nutrition and put in practice during pregnancy in the study area [10,11].

Students in this population experienced moderate weight gain during their first year in college, in conjunction with a decrease in vigorous-intensity physical activity and modest changes in food intake. Weight gain occurred despite large increases in time spent walking and bicycling for transportation [12]. Interventions to increase vigorous physical activity, especially activities beyond walking and bicycling, may be particularly important in preventing weight gain in this population [13]. Excess body weight would start at early stages in life, when dietary habits of the children depend almost exclusively on family habits, and would be aggravated during school attendance. Finally, a disproportionate weight increase occurs in adolescence probably related to unhealthy dietary habits and lifestyle [14]. Analysis of data for individual food groups showed that increasing weight was associated with higher scores for almost all food groups in India. In Iran, mean scores for vegetables, beverages, sweets and fats increased with increasing weight. Heights for age z-scores were positively associated with a mean score for pulses in countries and dairy products, beverages and fats. Higher BMI was associated with higher scores for cereals, fruits, vegetables, dairy products, mixed dishes, beverages, sweets and fats [15] high prevalence of malnutrition (stunting, thinness and underweight).

Vaccination, family planning, latrine construction and utilization, rice production and prevention and early treatment of infection were identified as essential interventions to reduce the risk of malnutrition. Ownership of radio should be promoted to reduce malnutrition. However, parasitic infection among primary school children was not significantly associated with malnutrition. But, school children should be targeted to deworming to treat parasitic infections [16]. The acceptance of food offerings was the most influential impeding factor to adherence with weight loss diets in a group of weight regainers. Moreover, the acceptance of food offerings was related to lower self-esteem. Findings from this study suggest that helping patients, change responses to food offerings and other socially motivating reinforcers as well as improving self-esteem should be featured components of behavioral weight loss interventions [17]. Nutrition-related disorders are increasingly wide-spread in the United States of America and the European Union. There are major concerns about the recent rise in obesity-related diseases, such as type II diabetes, as well as heart diseases, especially coronary artery disease (CAD) and atherosclerosis. The latter is the number one cause of deaths in the Western World.[18]. The more independent elderly, who received visits and contributed financially less to the institution, had better nutritional status. Inadequate

nutritional status associated with social conditions and mobility indicates the need to promote healthy eating habits by a nutrition team in conjunction with nursing staff and other professionals providing comprehensive health care for the elderly [19]. The total lymphocyte count behaved in a similar way in both groups with $1.7\pm 0.9 \times 10^9$ /L in the malnourished and $1.7\pm 0.7 \times 10^9$ /L in the non-malnourished ($P=0,368$). In relation to the state of immunocompetence, a higher percentage of immunodepressed in the undernourished was reflected, in comparison to the non-malnourished with 41.7% versus 28.6%, however this was not statistically significant ($P=0.254$)[20].

Stevia has an additional property useful in alimentation, since it does not alter glucose blood levels but simultaneously satisfies appetite for something sweet. In animal experiments, stevia prevents atherosclerosis because increases superoxide dismutase enzyme activists, thus removing oxidized LDL cholesterol and other harmful lipids from blood vessels wall. The preventive effects of steviosides on the development of AD and its relationship with soy-based diet surely deserve further studies [21]

A substantial proportion of adolescents experience clinical and subclinical depression. It is particularly important to study novel risk factors that may broaden our understanding of depression during adolescence. There is growing literature on the relation between eating- and weight-related disturbances (e.g., body weight regulation strategies, body dissatisfaction) and depression during adolescence; however, age and gender differences in this relation remain unclear [22,23].

CONCLUSION

The hypothesis that interval training (IT) is as effective as continuous exercise (CE) in reducing markers of obesity in women with abdominal obesity and low cardiorespiratory capacity. Twenty-one women with central obesity (mean \pm SD: 47 ± 11 years old; 95.7 ± 9.8 cm of waist circumference; $38.8 \pm 4.5\%$ body fat) performed CE (-20% of Ventilatory Threshold - VT) or IT (2 min of stimulus/2 min of recovery +20%/-20% of VT) during a 10 week period, 2 times per week, for 20 to 40 minutes per session[24,25].

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