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Criterion-III

3.3.1 Number of research papers published per teacher in the journals notified on UGC care list during last five years

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1. Detection of Rhodamine B dye in Tomato, Red chilli and szechuan sauces served by street food joints in Pune city (India)

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SCAN ME

Research Paper

DETECTION OF RHODAMINE B DYE IN TOMATO, RED CHILLI AND SZECHUAN SAUCES SERVED BY STREET FOOD JOINTS IN PUNE CITY (INDIA)

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Abstract

These days the consumption of fast food from street food joints has increased. These street foods come with toxic food dyes which are harmful to our body. Mainly there are two types of food colours, natural and synthetic food colours. Synthetic food colours, also known as artificial food colours are manufactured by chemical methods and are commonly used in the food and pharmaceutical industries. Some common synthetic food colours used in fast food are Tartrazine, Sunset Yellow, Brilliant Blue, Allura red, Erythrosine, Indigo Carmine, Sudan dye III, Rhodamine B, etc. Rhodamine B is a banned colour. The aim of this study was to detect the presence of synthetic food dye Rhodamine B present in chilli powders used for the preparation of different sauces in Street food joints of Pune city, Maharashtra. 10 samples of each sauce (Tomato sauce, red chilli sauce and Szechuan sauce) were collected from different street food joints. Different chemical analysis tests were performed to detect the presence of Rhodamine B. In certain samples presence of Rhodamine B was observed. These results indicate that even though Rhodamine B is banned by the Indian government, its presence can be seen.

Key words: Synthetic colours, Rhodamine B, Street food, Sauces, fast food.

INTRODUCTION

Fast food and street foods have become more popular with the changing lifestyle. Street food joints help a lot of livelihoods and the poor urban population by providing an inexpensive variety of food. In view of its increasing popularity, the quality and safety aspects of street foods need continuous evaluation. [1] This sector needs more improvement in context with the use of different additives. Tomato sauce, red chilli sauce and szechuan sauce are very commonly consumed as accompaniments with a variety of street foods.

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2. Comparison of bioelectrical impedance analysis and skinfold thickness to determine body fat percentage among young women.



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Comparison of Bioelectrical Impedance Analysis and Skinfold Thickness to Determine Body Fat Percentage among Young Women

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Abstract

Body composition analysis (BCA) measurements are the quantitative methods to evaluate nutritional status and adiposity. There is an increased need for BCA methods, especially calculation of body fat percentage with better sensitivity and precision. This study is focused on estimation of body fat percentage using two methods. Objective of the study was to compare body fat percentage obtained using four-site skinfold thickness (SFT) measurement with bioelectrical impedance analysis (BIA) of young women. The 4-site SFTs were measured at triceps, bicep, subscapular and suprailiac region, using Harpenden caliper. Body fat percentage was computed using sum of skinfolds and Durnin-Womersley equation. BIA was done using a body composition analyzer. Statistical analysis including the Bland-Altman plot was performed in SPSS software v.23.0 and MS Excel. A total of 310 women (age 18-25 years) participated in this cross-sectional study. Mean BMI of participants was 22.2 ± 5.05 kg/m². Body fat percentage from skinfold thickness and BIA techniques were $32.79 \pm 5.048\%$ and $33.85 \pm 5.32\%$ respectively. Although there was a positive correlation ($p < 0.01$) observed between the two methods, Bland-Altman plot indicated a proportional bias ($r = 0.176$, $p < 0.05$). It also showed difference of agreement between SFT & BIA methods. BIA overestimates the body fat percentage with limits of agreement range -5.33% to 3.28%. Our study reported that BIA overestimates body fat percentages compared to SFT. However, the two methods are not interchangeable. Evaluating anthropometric measurements is considered useful method as it controls regional changes of subcutaneous adiposity, whereas BIA technique can be used for its practical applicability.



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3. Association of premenstrual syndrome with adiposity and nutrient intake among young Indian women.



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

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4. Determinants of Anemia Among Adolescents Girls

Determinants of Anemia Among Adolescents Girls

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Objectives: To assess the relative significance of various factors contributing to anemia in adolescent girls of lower socioeconomic status.

Methods: A random sample of 100 adolescent girls (15 to 19 years), selected from 300 adolescents girls living in a poor urban settlement, of Navi Mumbai, India have participated in the study. An interviewer-administered questionnaire was used to collect data on sociodemography, anthropometry, three-day dietary intake, food frequency, blood hemoglobin, serum ferritin and stool parasites.

Results: The prevalence rates of anemia was 30% and among them 95% of the anemic girls were iron deficient. The mean dietary iron intake was 9.4 mg per day, predominantly from the consumption of cereals, pulses, and vegetables. Intake of different nutrients were almost inadequate among the participants. Blood hemoglobin was significantly correlated with Body Mass Index, dietary intake of fat, protein, iron, folic acid and riboflavin. Serum ferritin was related with vitamin B₁₂. The parasitic infestation was low among the study participants.

Conclusions: An inadequate intake of dietary iron, and concurrent inadequate intake of dietary micronutrients appear to be the primary factors responsible for anemia and iron deficiency in adolescent girls. Nutrition interventions on identified associated factors are important to reduce the burden of anemia among adolescents girls.

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5. Application of mathematical model using advanced programming languages to estimate lake pollution

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Application of mathematical model using advanced programming languages to estimate lake pollution

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Abstract---The goal of this article is to develop an online simulation of lake pollution. The mathematical model for detecting the load of various pollutants in a lake was developed earlier. Through this model, different pollutants are disseminated throughout the lake and their discharge is calculated. Manual arithmetic calculations were possible, but they had many limitations due to the logarithmic equations as well as the length of time it took. In order to accomplish this, C++ and Java were used to create the Lake Pollution Model. A manual scientific calculation has been used to calibrate this model, which has an error of 0.114 to 0.25 mg/L. Based on the results, it can generate lake pollution output in a very short amount of time without involving scientific calculations.

Keywords---lake water, pollution model, calibration, software, water pollutants.

Introduction

Over two thirds of Earth's surface is covered by water, less than a third is taken up by land. As Earth's population continues to grow, people are putting ever-increasing pressure on the planet's water resources. In a sense, our oceans, rivers and other inland waters are being "squeezed" by human activities - not so they take up less room, but so their quality is reduced. Poorer water quality means

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6. Intervention of Water Quality Index (WQI) for Assessment of Bhima River water for Drinking from its Origin to Ujjani Reservoir

Intervention of Water Quality Index (WQI) for Assessment of Bhima River water for Drinking

Intervention of Water Quality Index (WQI) for Assessment of Bhima River water for Drinking from its Origin to Ujjani Reservoir.

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Abstract

Aim of the present study was to assess water quality of Bhima river for drinking purpose. Perennial river Bhima originates at Bhimashankar in Pune district and flows towards eastward. During course of journey several tributary rivers merge in to Bhima river. Study area of present work lies from origin of Bhima river to Ujjani reservoir in Pune district. For physicochemical analysis of water in Bhima river was collected from total twenty (20) sampling sites as per the guidelines by APHA and WHO for period of two years (2015 and 2016) and two months intervals. Water Quality Index (WQI) calculated by using NSF WQI equation put forward by Brown et al (1970). WQI calculator was used by using nine (9) parameters. Study investigated that, 'Excellent' quality water doesn't find among any sampling site of Bhima river. Water quality of Bhima river among all the sampling site wasn't too good to possess criteria to fit this water for drinking purpose. Anthropogenic activities around Bhima and tributary rivers discharges untreated waste water make serious concern of water pollution. This study concluded that Bhima river water during January to May months not suited to drinking purpose without conventional treatment.

Key Words: water quality index, drinking water purpose, Bhima river, Pune district.

Introduction

Water Quality Index (WQI) generally used to symbolize the common value for water usages for various purposes. Numerous studies proposes definition of Water Quality Index. Rao S. (2013) defines it is rating of reflection the composite influence of different water quality parameters were taken into consideration for the calculation of Water Quality Index. Malaysian Environmental NGO (2008) defines Water Quality Index is a phrase to describe the chemical, physical and biological characteristics of water. Darapu S.S.K. (2011) et al., defines Water Quality Index is a single number (grade) that expresses overall water quality at a certain location and time based on water quality parameters. Kumar A. and Sharma M.P.(2014) gives definition of WQI is a number to express the overall water quality of certain location and transforms the complex physicochemical parameters into information that is usable and understandable by general public. Ramakrishnaiah C.R. et al., (2009), defines WQI as a rating reflecting the composite influence of different water quality parameters. United State of America's EPA (1974) define WQI is a single numerical expression which reflects the composite influence of nine physical, chemical and microbiological parameters of Water Quality. Brown et al (1970) concluded that single numerical expression indicating the composite influence of single analyses affecting the water quality was feasible.

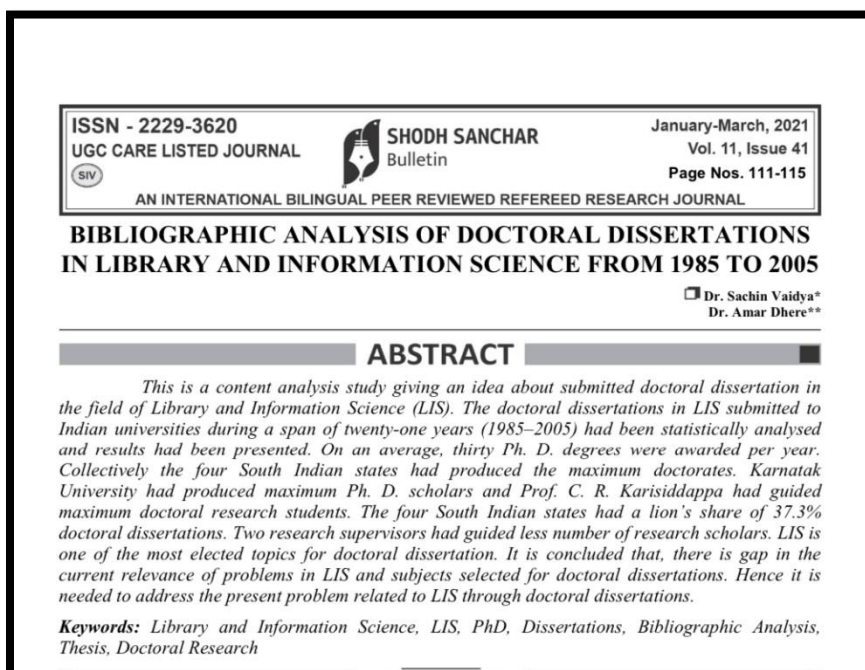
Various Water Quality Indexes developed and used around world (House and Ellis, 1987). However, Horton (1965) laid the foundation stone for development of WQI in USA. In 1959 USA based committee on National Water policy of the conference of state sanitary Engineers (CSSE) felt the need of uniform method for management of water quality. Then in 1965, United State of America's Environmental Pollution Panel recommend the development of index for chemical pollution in water (USEPA, 1974). Brown et al (1970) develop Water Quality Index with the reference of data assembled from the panel of 142 persons in the expertise in water quality management. Brown et. al. (1970) assigns weightage of each parameter according to the

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7. Study Of Social, Economic And Environmental Impact Of Bhima River Pollution (Print only)



8. Bibliographic analysis of doctoral dissertations in library and information science from 1985 to 2005 (Print only)



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EFFECT OF NUTRITION EDUCATION ON VITAMIN A INTAKE OF ADOLESCENT GIRLS

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ABSTRACT-

Adequate Vitamin A intake is important for adolescent girls. Nutrition education has been recognised as a nutritional knowledge improver and good food habit builder. The purpose of the study was to improve their nutritional status through nutrition education and observe the change in their Vitamin A intake. The results show that more than 75 per cent respondents had positive change in their vitamin A intake after exposure to nutrition education. The 't' value for vitamin A intake were highly significant. The findings support the importance of nutrition education in adolescent girls and it helped them to consume vitamin A adequately.

Keywords: Nutrition education, Vitamin A intake

INTRODUCTION

Adolescent age group is a crucial period in life. Meal skipping, eating out and eating irregularly are common in adolescent girls. Good nutrition and dietary behavior are important during adolescence to achieve full growth potential and appropriate body composition. As the direct reproducers of future generations the health of adolescent girls influences not only their own growth, but also the health of future population (Ramya and Anooja 2015). Health education for nutrition and healthy balanced diet should be integrated in the curriculum of adolescent girls (Elrahman *et al.* 2013). In light of above mentioned background and need of the study "Effect of Nutrition Education on Vitamin A Intake of Adolescent Girls" was adjudged.

MATERIALS AND METHODS

Sampling and research design of the study


The study was carried out on a group of 290 adolescent girls of age range 13-15 years from 10 schools of Amravati city, Maharashtra. A list of adolescent girls from the 10 schools was prepared and 290 adolescent girls sample was drawn with the help of lottery method. The study design was before after without control experimental research design.

Diet Survey (24 hours diet recall method)


To identify Vitamin A intake of the respondents 24 hours diet recall method was used. The nutritive value of consumed food was then calculated using "Diet soft" (Hore and Gurdeep Kaur, www.dietsoft.in), the software developed, based on data of 'Nutritive value of Indian foods' (Gopalan 2010). Vitamin A intake were calculated from actual food intake before and after nutrition education and compared with RDA.

Nutrient Adequacy Ratio (NAR)

NAR for Vitamin A was divided into three categories, viz. 0-66%, 66-99% and $\geq 100\%$ and the frequency of respondents occurring in these categories were found out for vitamin A intake


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