Effectiveness of consumption of ragi porridge on level of haemoglobin among adolescent girls in selected areas of the city.

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Abstract
The aim of the study was to find effect of consumption of ragi porridge on level of hemoglobin among adolescent girls in selected areas of the city. Materials and Methods: An experimental design with pre test and post test control group was used for the study. The total sample consists of 60 adolescent girls between the age group of 17-19 years in selected areas of the city using non-probability purposive sampling technique. The thirty participants was taken to control group and thirty participants was taken to experimental group. Haemoglobin is estimated by using was done using digital hemoglobinometer. The Karl Pearson’s correlation coefficient was carried out to find association between study findings with selected demographic variables. Results: The study finding showed that there was improvement in the level of hemoglobin of the adolescent girls after consumption of Ragi porridge in experimental group and also indicates that the level of hemoglobin in control group adolescent girls worsened without consumption of Ragi porridge. Conclusions: In study religion was found to have significant association with level of hemoglobin of adolescent girl.

Introduction
Adolescence, a period of transition between childhood and adulthood, occupies a crucial position in the life of human beings. This period is characterized by an exceptionally rapid rate of growth. Adolescents (both boys and girls) are at risk of developing iron deficiency and iron deficiency anemia because of the increased iron requirements for growth. Adolescence is a “coming of age”, as children grow into young adults. These teen years are a period of intense growth, not only physically, but also mentally and socially. During this time, 20% of final adult height and 50% of adult weight are attained. Because of this rapid growth, adolescents are especially vulnerable to anemia. Proper nutrition, including adequate iron intake, plays an important part of teenager’s growth and development. During adolescence, teenagers will acquire the knowledge and skills that will help them to become independent, successful young adults. Iron deficiency and iron deficiency anemia can affect this learning and development, but parents can help their teenagers stay healthy by teaching them some easy ways to prevent iron deficiency.
Anemia continues to be a major public health problem worldwide, particularly among growing children, females of reproductive age and elderly people, especially in the developing countries. Adolescent girls are particularly prone to anemia because of the increased demands of iron by the body. This anemia not only affects the present status of health of the adolescent girls, but also shows a deleterious effect when these girls become future mothers. A satisfactory hemoglobin status at the time of conception results into safe pregnancy and healthy child birth. This could be attained only when the status of hemoglobin is improved in adolescent girls.

**Problem Statement**

‘Effectiveness of consumption of ragi porridge on level of hemoglobin among adolescent girls in selected areas of the city’

**Objectives**

1. To assess the level of hemoglobin among adolescent girls in selected areas of the city.
2. To determine the effectiveness of consumption of Ragi porridge on level of hemoglobin among anemic adolescent girls in selected areas of the city.
3. To find out the association between study findings with selected demographic variables.

**Hypothesis**

*H0:* There is no significant effect of consumption of ragi porridge on level of hemoglobin among adolescent girls. (p=0.05)

*H1:* There is significant effect of consumption of ragi porridge on level of hemoglobin among adolescents girls. (p=0.05)

**Method**

The present study aim at finding the effect of ragi porridge on level of hemoglobin among adolescent girls. In this study quantitative research approach was used. The Quasi-experimental Non-equivalent control group design was used. Samples were selected from selected areas of the city by using non-probability purposive sampling technique. The total sample size was 60 from that 30 samples for experimental group and 30 samples for control group. The data was gathered with the help by using digital hemoglobinometer in pre-test and post-test of level of hemoglobin of adolescent girls. The content validity was determined by the experts. The reliability of the instrument was done from the bio medical engineer. Data was collected from 1st January upto 31st January.

**Finding in Demographic Variables**

Demographic findings was In experimental group, 33.3% of the adolescent girls had age 17 years, 36.7% of them had age 18 years and 30% of them had age 19 years. In control group, 30% of the adolescent girls had age 17 years, 40% of them had age 18 years and 30% of them had age 19 years. In experimental group, 46.7% of them were Hindu, 10% of them were Muslim, 13.3% of them were Christians and 30% of them had some other religion. In control group, 33.3% of them were Hindu, 13.3% of them were Muslim, 26.7% of them were Christians and 26.7% of them had some other religion. In experimental group, 63.3% of them had monthly income below Rs. 10000, 26.7% of them had monthly income Rs. 10001-20000 and 20% of them had monthly income Rs. 20001-30000. In control group, 40% of them had monthly income below Rs. 10000, 30% of them had monthly income Rs. 10001-20000, 20% of them had monthly income Rs. 20001-30000 and 10% of them had monthly income above Rs. 30000. In experimental group, 66.7% of them were living in hostel and 33.3% of them were living at home.
them were living at home. In control group, 70% of them were living in hostel and 30% of them were living at home. In experimental group, 23.3% of them were vegetarians and 76.7% of them were non-vegetarians. In control group, 33.3% of them were vegetarians and 66.7% of them were non-vegetarians. In experimental group, 60% of them were from joint family and 40% of them were from nuclear family. In control group, 53.3% of them were from joint family and 46.7% of them were from nuclear family. In experimental group, 10% of them were unemployed, 6.7% of them had self-business, 20% of them were government servant, 13.3% of them were private servant, 26.7% of them were farmers and 23.3% of them were workers. In control group, 6.7% of them were unemployed, 3.3% of them had self-business, 13.3% of them were government servant, 20% of them were private servant, 36.7% of them were farmers and 20% of them were workers.

**Major Finding**
The study finding revealed that in experimental group, 80% of the adolescent girls had mild level of hemoglobin and 20% of them had moderate level of hemoglobin. In control group, 70% of the adolescent girls had mild level of hemoglobin and 30% of them had moderate level of hemoglobin. In experimental group in pretest, 80% of the adolescent girls had mild level of hemoglobin and 20% of them had moderate level of hemoglobin. In posttest, 83.3% of them had mild level of hemoglobin and 16.7% of them had moderate level of hemoglobin. This indicates that the level of hemoglobin in control group adolescent girls worsened without consumption of Ragi porridge.

**Result**
Researcher applied paired t-test for the effectiveness of consumption of Ragi porridge on level of hemoglobin among anemic adolescent girls. Average level of hemoglobin in pretest was 9.76 which increased to 9.87 in posttest. T-value for this test was 2.8 with 29 degrees of freedom. Corresponding p-value was 0.004, which is small (less than 0.05), null hypothesis is rejected. This is evident that the level of hemoglobin of the adolescent girls improved significantly after consumption of Ragi porridge. Researcher applied two-sample t-test for comparison of experimental and control test for the effectiveness of consumption of Ragi porridge on level of hemoglobin among anemic adolescent girls. Average change in level of hemoglobin in experimental group is 0.12 which is 0.01 for control group. T-value for this test is 1.9 with 58 degrees of freedom. Corresponding p-value was 0.030, which is small (less than 0.05), the null hypothesis is rejected. This is evident that because of consumption of Ragi porridge, level of hemoglobin in experimental group significantly improved to that of Control group. Thus, consumption of Ragi porridge is significantly effective in improving the level of hemoglobin of adolescent girls. Since p-value corresponding to religion is small (less than 0.05), religion was found to have significant association with the level of hemoglobin of adolescent girls. Since all the p-values are large (greater than 0.05), none of the demographic variables was found to have significant association with the level of hemoglobin of adolescent girls.
Conclusion
Anemia is a multifactorial disorder. It requires a multipronged strategy for its prevention and management. T-value for this test is 1.9 with 58 degrees of freedom. Corresponding p-value was 0.030, this is evident that because of consumption of Ragi porridge, level of hemoglobin in experimental group significantly improved to that Control group. Thus, consumption of Ragi porridge is significantly effective in improving the level of hemoglobin of adolescent girls. In study religion was found to have significant association with level of hemoglobin of adolescent girls.

References