

## ABSTRACT

### **A COMPARISON OF JAMAICAN HIGH SCHOOL STUDENTS' CONCEPTIONS ON NUTRITION AND REPRODUCTION**

**Sonia Rose Marie Dobson**

The main purpose of this study was to compare the level of knowledge of grades nine and eleven students on nutrition and reproduction as well as the effects of certain independent variables on their conceptions of the two concepts.

The subjects were 522 students (226 males, and 296 female) selected randomly from ten high schools in Jamaica. They comprised 249 grade nine and 273 grade eleven students.

The instrumentation involved the development and validation of a biology test on nutrition and reproduction, an adopted science attitude scale and an adapted socio-cultural attitude scale.

The main findings of the study are as follows:

1. The students' knowledge of the two biological concepts explored was quite low. However, the students had a slightly better knowledge of reproduction than nutrition.
2. Grade eleven students performed significantly better than grade nine students on both nutrition and reproduction.
- 3.(a) There was no statistically significant difference in the performance of all the boys and girls in the concepts tested.
- (b) Students in the urban schools significantly performed better on the two concepts than their rural counterparts.

- (c) There was statistically significant difference in the students' performance on nutrition due to differences in their attitudes towards science whereas, there was no statistically significant difference in their performance on reproduction due to their attitudes towards science.
- (d) There was no statistically significant difference in students' performance on nutrition due to differences in their socio-cultural attitudes. However, there was a statistically significant difference in their performance on reproduction due to differences in their socio-cultural attitudes.
- 4(a) (i) There was no statistically significant difference in the performance of male and female grade eleven students, while female grade nine students significantly outscored their male counterparts.
- (a) (ii) There was no statistically significant difference in the performance of male and female grade nine students' and male and female grade eleven students on reproduction.
- (b) (i) Grade eleven students with low and average attitudes towards science significantly performed better on reproduction and nutrition than grade nine students who had low and average attitudes towards science. There was no statistically significant difference in the performance of grade nine and eleven students whose attitudes towards science were high on nutrition and reproduction.

- (b) (11) Grade eleven students with low and average socio-cultural attitudes towards science significantly performed better on nutrition and reproduction than grade nine students who had low and average socio-cultural attitudes towards science. There was no statistically significant difference in the performance of grade nine and eleven students whose socio-cultural attitudes towards science were high on both concepts.
5. There was almost no relationship between the students' socio-cultural and science attitude and their knowledge of the two concepts. There was a significant difference in the students' knowledge of reproduction based on the difference in their socio-cultural attitudes.
6. Generally, the grade nine students displayed more misconceptions than grade eleven students. The more misconceptions the students had on the topics the lower were their scores.

The educational implications of the findings are discussed.