Research on Student Learning

Students of all ages focus on the physical dimensions of health and pay less attention to the mental and social dimensions. Students associate health primarily with food and fitness. ^[1] Middle-school and high-school students' wrong ideas about the causes of health and illness may derive from cultural knowledge. ^[2]

Students of all ages tend to believe that many factors they consider important to their health and life span are also beyond their personal control. ^[3] After instruction, middle-school students appear to have accurate knowledge about nutrition and physical fitness, but they are often unable to explain their knowledge in scientific terms. ^[4]

Lower elementary-school children know that there are different foods, that there are good foods and bad foods, and that there are different nutritional outcomes such as variations in size and health. In addition, they are aware of certain limits (drinking just water leads to death; eating only one thing - even one good food - is insufficient for good health). They still may believe, however, that food and water have equivalent nutritional consequences; height and weight are similarly influenced by amount of food eaten; and energy and strength result from exercise but not nutrition. These misconceptions tend to fade by the end of 5th grade. ^[5]

References

[1] Brumby, M. N., Garrard, J., Auman, J. (1985). Students' perceptions of the concept of health. *European Journal of Science Education*, 7, 307-323.

Moon, A., Wetton, N., Williams, D. (1985). Perceptions of young children concerning health. In Kelly, P.J. (Ed.), *Education and health* (pp. 27-34).

[2] Rice, P. (1991). Concepts of health and illness in Thai children. *International Journal of Science Education*, 13, 115-127.

Prout, A. (1985). Science, health, and everyday knowledge: A case study about the common cold. *European Journal of Science Educationy*, 7, 399-406.

[3] Brumby, M. N., Garrard, J., Auman, J. (1985). Students' perceptions of the concept of health. *European Journal of Science Education*, 7, 307-323.

Merkle, D.G., Treagust, D.F. (1987). Secondary school students' locus of control and conceptual knowledge relating to health and fitness. *Proceedings of the second international seminar misconceptions and educational strategies in science and mathematics*, 325-335.

[4] Merkle, D.G., Treagust, D.F. (1987). Secondary school students' locus of control and conceptual knowledge relating to health and fitness. *Proceedings of the second international seminar misconceptions and educational strategies in science and mathematics*, 325-335.

[5] Wellman, H.M., Johnson, C. (1982). Children's understanding of food and its functions: A preliminary study of the development of concepts of nutrition. *Journal of Applied Developmental Psychology*, 3, 135-148.