



EXAMINING LEVELS OF PERCEPTION ON HEALTH AND FITNESS IN SPECIAL POPULATION OF KARNATAKA STATE

(Received on: 24 Jan 2016, Reviewed on: 23 March 2016 and Accepted on: 21 April 2016)

Nagaraja S., Research Scholar,
Department of P.G. Studies and Research in Physical Education,
Prakash S. M. Director, Department of Physical Education,
Gajanana Prabhu B. Assistant Professor,
Department of P.G. Studies and Research in Physical Education,
Kuvempu University, Shimoga, Karnataka



Abstract

Individuals with hearing and visual impairment are substantially more likely to report poor, fair, or worsening health compared to the general population. Knowledge about own health and fitness should be possessed by every individual. This is utmost necessary to avoid health complications in future. The levels of perception about health and fitness is indispensable in avoiding health complications of serious nature. The purpose of the present study was to examine the levels of perception on health and fitness in hearing and visual impaired children of Karnataka state. The subjects for the study were 414 male special children from various parts of Karnataka state. Among them 243 were visually impaired and 171 hearing impaired from various residential special schools located in various districts of Karnataka state. Their age ranged between 13 to 18 years. Body Mass Index was used as measure of health status and Sit and Reach test was used for assessing fitness of selected subjects. Levels of perception were assessed through a self-structured questionnaire prepared for this purpose. The students had to rate their perceived BMI and back flexibility on a three-point scale. Pearson product moment correlation was used as a statistical tool apart from descriptive statistics like mean and standard deviation.

Keywords: Perception, Health, Fitness, Body Mass Index and Flexibility.

Introduction

Health and fitness are indispensable aspects of any human being irrespective of age, sex or physical condition. Maintaining health and fitness should be given priority for a productive life. Regular physical activity and allied activities are especially important in maintaining the health and well being of people of all sections. Regular physical activity benefits both physical and psychological health and reduces risk for heart disease, diabetes, high blood pressure, obesity, and stress-related illnesses (U.S. Department of Health and Human Services, 1996). Research clearly indicates that virtually all individuals, including those with disabilities, can gain health benefits from regular physical activity. The health promotion and disease prevention needs of people with disabilities who have secondary health conditions may be complicated by specific medical aspects of disabilities.

Body mass index is a measure of weight adjusted for height, calculated as weight in kilograms divided by the square of height in meters (kg/m^2). Although BMI is often considered an indicator of body fatness, it is a surrogate measure of body fat because it measures excess weight rather than excess fat. Body Mass Index is a reasonable indicator of body fat for both adults and children. BMI is used as a measure to track weight status in populations and as a screening tool to identify potential weight problems in individuals. The sit and reach test is a common



measure of flexibility, and specifically measures the flexibility of the lower back and hamstring muscles. This test is important as because tightness in this area is implicated in lumbar lordosis, forward pelvic tilt and lower back pain. This test was first described by Wells and Dillon (1952) and is now widely used as a general test of flexibility. Individuals with hearing and visual impairment are substantially more likely to report poor, fair, or worsening health compared to the general population (Capella-McDonnall, 2005; Tielsch, Sommer, Katz, Quigley, & Ezrine, 1991; Wang, Mitchell, & Smith, 2000). Such people should take care of their health in order avoid being liability on their family members. Such individuals should constantly enhance their fitness levels to lead an independent life. Knowledge about own health and fitness should be possessed by every individual. This is utmost necessary to avoid health complications in future. The levels of perception about health and fitness are indispensable in avoiding health complications of serious nature. The concept of self-perceived is usually divided into physical, emotional, cognitive and social areas (Ommundsen and Bar-Eli, 1999) whereas the conscious physical concept of over self refers to the experience of the qualities of self-perceived physical fitness and body structure as well as appearance (Shavelson, Hubner and Stanton, 1976). According to the theory by Soenstrom (1978), physical fitness affects self-esteem through physical competence. Self-perceived physical competence is part of the general self-perception and it is usually divided into physical competence, body image, self-estimated physical strength and physical fitness (Fox, 1994). The purpose of the present study was to examine the levels of perception on health and fitness in hearing and visual impaired children of Karnataka state.

Methodology

The subjects for the study were 414 male special children from various parts of Karnataka state. Among them 243 were visually impaired and 171 hearing impaired from various residential special schools located in various districts of Karnataka state. Their age ranged between 13 to 18 years. Purposive random sampling was used to gather data from the subjects. Body Mass Index was used as measure of health status and Sit and Reach test was used for assessing fitness of selected subjects. Levels of perception were assessed through a self-structured questionnaire prepared for this purpose. The students had to rate their perceived Body Mass Index and back flexibility on a three-point scale. 1 means lesser level of perception, 2 means average level of perception and 3 mean higher levels of perception. A descriptive explanation was given by the researcher for expressing their perception level on each aspect and responses sought. The data was collected at the residential schools with prior intimation and permission. Pearson product moment correlation was used a statistical tool apart from descriptive statistics like mean and standard deviation.

Findings

The raw data on Body Mass Index and Sit and reach were subjected to descriptive statistics for deriving inferences. The results are given in table 1.

TABLE 1
MEAN AND STANDARD DEVIATION OF BODY MASS INDEX AND BACK FLEXIBILITY OF SPECIAL POPULATION

Variables	Mean	Std. Deviation
Perceived Body Mass Index	1.83	.48
Actual Body Mass Index	18.05	2.91
Perceived Flexibility	2.10	.54
Actual Flexibility (in cms)	27.07	5.29



Table 1 makes it clear that the perceived Body Mass Index presented in scores is slightly below the normal Body Mass Index level possessed by them. At the same time the actual Body Mass Index measured in terms of Height Weight ratio is 18.05. Further, it is also clear that the flexibility perceived by subjects was just above the average level that they possessed. The actual flexibility was found to be 27.07. In order to find the relationship between perceived and actual status of Body Mass Index, Pearson product moment correlation was calculated and the results are given in table 2.

Table 2

Summary of correlation between perceived and actual Body Mass Index of special population

		Perceived Body Mass Index	Actual Body Mass Index
Perceived Body Mass Index	Pearson Correlation	1	.434**
	Sig. (2-tailed)		.000
	N	414	414

** Correlation is significant at the 0.01 level (2-tailed).

From table 2 it is evident that the perceived and actual Body Mass Index has a moderate positive linear relationship in special population of Karnataka state. Correlational results on perceived and actual back flexibility is given in table 3.

Table 3

Summary of correlation between perceived and actual back flexibility of special population

		Perceived Flexibility	Actual Flexibility (in cms)
Perceived Flexibility	Pearson Correlation	1	.422**
	Sig. (2-tailed)		.000
	N	414	414

** Correlation is significant at the 0.01 level (2-tailed).

Table 3 makes it clear that there is moderate positive linear relationship between perceived and actual sit and reach scores of special population of Karnataka state.

Discussion

The results obtained in the present study makes it clear that there is a significant positive correlation between levels of perception and actual health as well as fitness in special population of Karnataka state. This means the subjects actually having higher BMI perceive that they have higher BMI and vice versa. The discussion holds good for back flexibility as well. The self-awareness of health and fitness is most essential in avoiding health complications in future. Any deviations in these perceptions will lead to upset in health and wellbeing of special population.

The prevalence of obesity is increasing in adolescents (Dwyer, et. al., 2000). People with visually impairment tend to be more obese than those with normal vision, and obesity may be partly attributable to a lack of habitual physical activity. BMI was significantly associated with the prevalence of visual impairment in school students of Central China (Yang, et. al., 2016). In a study by Magdalena (2016), over 21% of subjects with visual impairment were found to be overweight and about 15% suffered from obesity. A study by MAdu and Amarpreet (2015) shows that there is a significant difference between Sedentary, Active and Deaf and Dumb girl students for their Flexibility Ability. It was observed that there was significant difference in flexibility between normal and deaf & dumb boys of West Bengal and further it was noted that the flexibility value of the normal boys had been greater than the deaf & dumb boys (Ghosh, 2014). Contrary to the findings of the present study students with higher scores on flexibility did not have higher self-concept in a study by Balsalobre, et. al. (2014).



Conclusion

The special population of Karnataka had moderately high levels of perception about their health and fitness.

References

- Balsalobre, F. G., Lopez Sanchez, G. F. and Suarez, A. D. (2014) "Relationships between physical fitness and physical self-concept in Spanish adolescents", *Procedia - Social and Behavioral Sciences* 132: PP:343 – 350.
- Capella-McDonnall, M.E. (2005). The effects of single and dual sensory loss on symptoms of depression in the elderly. *International Journal of Geriatric Psychiatry*, 20(9), 855-61.
- Dwyer, J.T, Stone, E.J, Yang, M, Webber, L.S, Must, A, Feldman, H.A, (2000) "Prevalence of marked overweight and obesity in a multiethnic pediatric population: findings from the Child and Adolescent Trial for Cardiovascular Health study". *J Am Diet Association* 2000;100:1149–56.
- Fox, K.R., 1994. Research perspectives on children's competence and achievement in physical education and sport. *British J. Physical Education*, 25: 20-22.
- Ghosh, S. S. (2014) "A comparative study on selected physical fitness components between deaf & dumb and normal school boys of West Bengal", *International Journal of Physical Education, Fitness and Sports*, Vol.3. (2); PP: 52-59.
- Madhu, D. and Amarpreet, S. (2015) "Diagnostic Study of Selected Physical Fitness and Physiological Variables between Sedentary, Active and Deaf and Dumb School going Girl students", *Research Journal of Physical Education Sciences*, Vol. 3(6), PP: 1-5.
- Magdalena, W., Urzedowicz, B., Motylewski, S., Zeman, K., Pawlicki, L. (2016) "Body mass index and waist-to-height ratio among school children with visual impairment: A cross-sectional study", *Medicine*: 95:32; reviewed at <http://dx.doi.org/10.1097/MD.00000000000004397>
- Ommundsen, Y. and M. Bar-Eli, 1999. Psychological outcomes: theories, research and recommendations for practice. In: Y.V. Auweele, F. Bakker, S. Biddle, M. Durant and R. Selier, eds. *Psychology for physical educators*. Champaign, Illinois: Human Kinetics.
- Shavelson, R.J., J.J. Hubner and G.C. Stanton, 1976. Self-concept: validation of construct interpretations. *Rev. Educ. Res.*, 46: 407-441.
- Soenstrom, R.J., 1978. Physical estimation and attraction scales: rationale and research. *Med. Sci. Sports Exerc.*, 10: 97-102.
- Tielsch, J.M., Sommer, A., Katz, J., Quigley, H., & Ezrine, S. (1991). Socioeconomic status and visual impairment among urban Americans. Baltimore Eye Survey Research Group. *Archives of Ophthalmology*, 109(5), 637-641.
- U.S. Department of Health and Human Services. (1996). *Physical activity and health: A report of the surgeon general*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.
- Wang, J.J., Mitchell, P., & Smith, W. (2000). Vision and low self-rated health: The blue mountains eye study. *Investigative Ophthalmology & Visual Science*, 41(1), 49-54.
- Wells, K.F. & Dillon, E.K. (1952). The sit and reach. A test of back and leg flexibility. *Research Quarterly*, 23. 115-118.
- Yang, F., Yang, C., Liu, Y., Peng, S., Liu, B., Gao, X. and Tan, X. (2016) "Associations between Body Mass Index and Visual Impairment of School Students in Central China", *International Journal of Environmental Research and Public Health*, 13, 1024; PP: 1-10. doi:10.3390/ijerph13101024