CORRELATION OF RELATIONSHIPS TOWARDS SCHOOL AND PHYSICAL EDUCATION CLASS WITH LEISURE TIME PHYSICAL ACTIVITIES

MATEJA KUNJEŠIĆ - MARIJA LORGER - IGOR BOKOR
Faculty of Teacher Education
University of Zagreb
Croatia

ABSTRACT

Increasing physical activity in young adults can significantly reduce the current epidemic of obesity and other diseases associated with immobility. Extremely favourable environment for the promotion of active and healthy lifestyle and the adoption and retention of physical exercise habits for years to come is physical education (PE) class. Therefore, the fundamental question in this study: "Is there a correlation between relations towards school and physical education class with physical exercise in their free time during the study''? The study was conducted on female students of Faculty of Teacher Education, University of Zagreb via a questionnaire. Multiple correlation of relations with the school and PE classes with regard to engaging in sports activities in their free time showed 2 statistically significant variables (relations towards PE in elementary school and relation towards high school). Devastating results are related to leisure time physical activity.

Keywords: female students, regression analysis, the questionnaire survey

INTRODUCTION

According to the World Health Organization, increasing physical activity among young people and adults can significantly reduce the current epidemic of obesity and other diseases associated with immobility (WHO, 2007). Research by Pate and others (2007) found that health education can promote an increase in physical activity in children. The significance of just one physical education class reflects and promotes the importance of physical exercise and motivates people to exercise during their free time. It is recommended that children and adolescent exercise daily, for at least an hour with sports activities (Department of Health, 2004, National Association for Sport and Physical Education, 2004, National Institute for Health and Clinical Excellence, 2009).

The subject of physical and health education occupies an important role and place in training - the education system, with clearly defined goals and tasks. One of the key goals of physical education is to educate the youth with specific skills, knowledge and competencies that will assist them to participate in physical activities in their leisure time (National Standards for Physical Education, 1996). Studies have concluded that the amount of physical activity decreases as the child enters adolescence and adulthood (Tammelin, 2005; Telama, 2000). By being engaged in physical exercise and/or leisure sports, it encourages a positive attitude towards physical and health culture. Engagement in physical exercise (sports) during adolescence, significantly determines the risk factors in adulthood, such as cardiovascular risk (Barnekow-Bergqvist, Hedberg, Janlert, Jansson, 2001). We find a contradiction in terms of physical exercise of people who exercise on a regular basis to people who do not exercise at all. Therefore, a positive attitude towards physical activity is very important. By teaching physical education a favorable environment can promote an active and healthy lifestyle and the adoption and/or retention of physical exercise habits for the future. Therefore, the fundamental question in this study: 'Is there a connection between school and physical education to doing physical exercise in free time''? The study was conducted on female students of the Faculty of Teacher Education University in Zagreb, via a questionnaire.

METHODS

Subjects

Research was conducted on 331 students from the Faculty of Teacher Education, at the University of Zagreb. Of the total of 346 respondents, 15 of them did not correctly fill out the questionnaire, so that 331 students participated in the study. The participants were students of the first and second year of Teacher Education and Preschool Education Studies.

The variables

Students are tested by a questionnaire, which task was to determine the relationship of female students towards physical education at school, and their leisure activities. The questionnaire offered nine variables. The first four variables students were evaluated on a 1-5 Likert scale (from "I hated school and physical education" to "I loved school and physical education"). The last five variables were evaluated as rarely, sometimes and often related to leisure activities.

Data processing method

Data analysis was performed using the statistical package Statistics for Windows 7.0 to calculate the basic descriptive parameters for each variable. To establish the correlation of attitudes towards physical education and recreational exercise, the regression analysis was used.

RESULTS AND DISCUSSION

The highest average score of female students towards to PE classes received a variable that illustrates teaching PE in primary school (3.67) which the Likert scale suit claims, "I loved physical education in primary school''. Based on the obtained values of the arithmetic mean, it can be concluded that the students from the selected sample loved PE classes in primary school, while in high school a little less favored PE (3.21). In his study Bjelajac (2006) received data that 55% of secondary school students like physical education class, while 23% do not. Similar values were obtained in the variables that demonstrate the difference from elementary to secondary school. Based on the mean value (3.72), it can be concluded that the students generally liked primary school while in high school this is deteriorated. All variables covered a range of responses on a scale from 1 to 5, except in relation to the variables of the primary school where the responses ranged from 2 to 5. There were somewhat disturbing results from the last five variables, these were related to female students spending leisure time. Recreational exercising has the lowest arithmetician mean (1.85) while the largest has computer use (2.75). Other ways of spending free time are contributed to going out, reading books and watching television. Studies conducted in Croatia indicate the existence of a relatively stable form of spending free time, with the predominant being socializing, going out, and utilizing the media, these facilitate and guarantee fun and entertainment. The content-oriented education and personal growth is in the background (Ilišin, 2007). In a study conducted in 1987 and 1988 on the population of the students of Zagreb, it was found that more than half of all the students spent their leisure time on socializing, listening to the radio, reading newspapers and books, going out to the cinema and watching TV. Going to sporting events and public forums, participating in trivia games and listening to folk music was present in a very small number of students (12-5%; Ilišin, 1991). In recent times, it is changes are apparent, resulting in a higher level of interest in participating in trivia games, attending sporting events, active sports and listening to folk music (Bouillet et al., 2008.).

Table 1 Arithmetic mean and standard deviations of the results

	N	AS	Min	Max	SD	Skew	Kurt
Prim school PE	331	**3.67**	1.00	5.00	**0.92**	-0.65	0.30
High school PE	331	3.21	1.00	5.00	0.94	-0.40	-0.05
Prim. school	331	**3.72**	2.00	5.00	**0.73**	-0.33	0.01
High school	331	3.33	1.00	5.00	0.81	-0.31	-0.15
Reading	331	2.11	1.00	3.00	0.71	-0.16	-1.01
Watching TV	331	2.10	1.00	3.00	0.74	-0.16	-1.16
PC	331	2.75	1.00	3.00	0.50	-1.86	2.67
Recreation	331	**1.85**	1.00	3.00	**0.73**	0.24	-1.08
Leisure time	331	2.59	1.00	3.00	0.56	-0.96	-0.11

Legend:
N-number of respondents, AS-arithmetic means, SD standard deviation, Min-minimum score, Max-maximum result, Skew-measure of asymmetry, Kurt-measure elongation. Primary PE-attitude towards PE classes in elementary school; high school PE- attitude towards PE classes in high school; elementary school-attitude towards elementary school; high school-attitude towards high school

Table 2 Results of regression analysis estimates the attitude towards school and PE classes and engaging in physical activity during leisure time

Multiple correlation (R)	Coefficient of determination (R^2)	F-value (F)	Degree of freedom (df)	Statistical notability
0.243	0.059	2.537	8.322	0.01

The overall correlation of predictor variables and the criterion variable was R = 0.24, which explains about 12% of common variance. Low level of common variability confirms extremely small value coefficient of determination R2 as its measure. Such an association was significant at the level of p = 0.01. Therefore the other 88% in explaining the total variability accounted for some of the other indicators that are not described in this questionnaire, but they are obviously present (motivation to exercise, cognitive variables of conative variables ...). This also supports an extremely low coefficient of internal reliability of the questionnaire Cronbach alpha (Cα = 0.25), indicating that this questionnaire is extremely unreliable in the case of measurements that should be measured when it is known that the lower confidence limit should be 80% (Momirović , Štalec, Wolf, 1975; Horvat, 1978, Li, Harmer, Acock, Vongjaturapat, Bonverabut, 1997, The Kidscreen Group Europe, 2006; Ravens Sieberer, et al. 2005; Hong, et al. 2007; Lorger, 2011).

Table 3 Regression analysis of individual variables

	Beta	Std.Err.	B	Std.Err.	t (322)	p
Intercept			1.011	0.435	2.325	0.020
Primary school PE	0.181	0.059	0.143	0.047	3.037	0.002
High school PE	0.045	0.058	0.035	0.045	0.766	0.443
Primary School	-0.038	0.056	-0.037	0.056	-0.666	0.505
High School	0.129	0.058	0.117	0.052	2.237	0.025
Reading	0.034	0.056	0.034	0.057	0.607	0.543
TV	-0.050	0.056	-0.049	0.055	-0.883	0.377
PC	-0.041	0.055	-0.060	0.080	-0.746	0.455
Recreation	0.042	0.055	0.055	0.072	0.761	0.447

Analysis of the impact of individual variables on the correlation relationship within school and physical education with undertaking physical exercise in leisure time shows that on relationship most affecting are two variables. Variable no. 1 „Attitude toward PE in elementary school'' (0.181) and variable no. 4 „Attitude toward high school'' (0.129). It is apparent that there is a reduction in the interest and motivation at school as well as a drop of positive attitude and likeness for physical education (Table 1). This thus reflects a lower interest in participating in physical activity in leisure time. This in turn demonstrates that participants spend their free time sitting on the computer, going out at night with friends, reading and watching TV. Recreation and physical activity is the least represented in the findings. It is widely known that physical exercise has a remarkable therapeutically role in generating ergonomic posture (for example while working on computer) and preventing in proper posture as well as possible deformities of the spine. These results are a cause of concern.

CONCLUSION

A multiple correlation relationship within school and PE classes with regard to sports activity in leisure time, was statistically significant (p = 0.01). It is not possible to claim that the relationship to school is the only factor that affects physical activity in leisure time. This is a conclusion due to minimal amount of the variance, about 12% and the unreliability of the questionnaire (Cα = 0.25), which most probably contain some other elements that shape the relationship of attitudes towards school and physical education and to physical activity engagement in leisure time described from another aspect. For more reliable results in addressing these issues a more concise instrument should be developed with good metric characteristics that would provide more reliable and credible research results and thus be utilised as a guideline for further research.

REFERENCES

Barnekow-Bergqvist M, Hedberg G, Janlert U, Jansson E. (2001) Adolescent determinants of cardio vascular risk factors in adult men and women. *Scand J Public Healthc*; 29:208–17.

Bjelajac, S. (2006). Sport i društvo. Fakultet prirodoslovno-matemačkih znanosti i kineziologije Sveučilišta u Splitu. Retrieved on 2nd March 2013 from http://www.pmfst.hr/online_publikacije/sport_i_drustvo.pdf

Bouillet, D., Ilišin, V., Potočnik, D. (2008). Continuity and Changes in Croatian University Students' Leisure Time Activities (1999–2004). *Sociologija i prostor,* 46 (2):123– 142.

Department of Health (2004). At least five a week: Evidence on the impact of physical activity and its relationship to health. A report from the Chief Medical Officer. London: Department of Health

Hong, S., D., Yang, J., W., Jang, W., S., Byun, H., Lee, M., S., Kim, H., S., Oh, Mi-Y., Kim, Ji-H. (2007). The KIDSCREEN-52 Quality of Life Measure for Children and Adolescents (KIDSCREEN-52-HRQOL): Reliability and validity of the Korean Version. *J. Korean Med.Sci., 22*, 446 – 452.

Horvat, V. (1978). Metrijske karakteristike testova za određivanje funkcionalnih sposobnosti kardiovaskulrnog sistema. *Kinesiology*, Volume 8, 1-2: 17-48.

Ilišin, V. (1991). Interesi i slobodno vrijeme studenata. In: Magdalenić, I. (Ed.). *Društveni profil zagrebačkih studenata krajem osamdesetih*. Zagreb:Institute for Social Research, University of Zagreb 91–124.

Ilišin, V. (2007). Slobodno vrijeme i interesi mladih. In: Ilišin, V.; Radin, F. (Ed.). *Mladi: problem ili resurs.* Zagreb: Institute for Social Research, University of Zagreb: 179–201.

Li, F., Harmer, P., Acock, A., Vongjaturapat, N., Boonverabut, S. (1997). Testing the Cross-Cultural Validity of TEOSQ and Its Factor Covariance abd Mean Structures across Gender. *International Journal Sport Psychology, 28,* 271 – 286.

Lorger, M. (2011). *Sport i kvaliteta* života *mladih*. (Doctoral dissertation, Unniversity of Zagreb in Zagreb).Zagreb: Faculty of Kinesiology, University of Zagreb.

Momirović, K., Štalec, J., Wolf, B. (1975) Reliability tests of some composite primary motor skills. Kinesiology; *5*, (1-2), 169-191.

National Standards for Physical Education (1995). Moving into the future: National Standards for physical education, A guide to content and assessment. Reston, VA: NASPE.

Pate, R. R., Davis, M. G., Robinson, T. N., Stone, E. J., McKenzie, T. L. and Young, J. C. (2007). Promoting Physical Activity in Children and Youth: A Leadership Role for Schools, *Circulation;* 114: 1214–24.

Ravens-Sieberer, U., Gosh, A., Rajmil, L., Erhart, M., Bruil, J., Duer, W., Auquier, P., Power, M., Abel, T., Czemy, L., Mazur, J., Czimbalmos, A., Tountas, Y., Hagquist, C., Kilroe, J and teh European KIDSCREEN Group. (2005). KIDSCREEN-52 quality of life measure for children and adolescents. *Expert Rev.Pharmaco economics Outcomes Res.5* (2).

Tammelin,T. (2005).A review of longitudinal studies on youth predictors adult physical activity**.** *Int J Adolescent Med Health*, 17:3-12.

Telama R, Yang X (2000). Decline of physical activity from youth to young adulthood in Finland**.** *Med Sci Sports Exerc*; 32:17-22.

The KIDSCREEN Group Europe (2006). *The KIDSCREEN Questionnaires – Quality of life questionnaires for children and adolescents*. Handbook. Lengerich: Pabst Science Publishers. World Health Organization (2007). *Global Strategy on Diet, Physical Activity and Health*. Geneva: WHO.