лах, а также акцентировать внимание на психологических закономерностях управленче-
ской деятельности для повышения эффективности качества работы директора и менедж-
мента СОШ.

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МЕНТАЛЬНОСТЬ И САМОКОНТРОЛЬ СТУДЕНТОВ ФАКУЛЬТЕТА 
ФИЗИЧЕСКОГО ВОСПИТАНИЯ КАК СОСТАВЛЯЮЩИЕ 
ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ ПО ФОРМИРОВАНИЮ 
ЗДОРОВОГО СТИЛЯ ЖИЗНИ

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Аннотация

Здоровый стиль жизни, а также внутреннее чувство состояния собственного здоровья 
должны характеризовать лиц, готовящихся выполнять общественно-профессиональную роль рас-
пространителей оздоровительного потенциала физической культуры. Исследования показали, что у 
студентов факультета физического воспитания ментальность и способность к самоконтролю состо-
яния здоровья значительно выше, чем у студентов других факультетов. Данное обстоятельство 
обусловливает большую разницу в их оздоровительных практиках. Значительные различия отме-
чены также в их толерантности относительно влияния других лиц на собственное здоровье. У stu-
dentov факультета физического воспитания ее уровень оказался выше. Результаты шкалы употреб-
ления алкоголя показали высокую взаимосвязь с самоопределением в отношении здорового стиля 
жизни.

Ключевые слова: здоровье, физическое воспитание, здоровый образ жизни, студент.
HEALTH-RELATED BEHAVIOURS AND THE PERCEIVED HEALTH LOCUS OF CONTROL IN PHYSICAL EDUCATION STUDENTS: A PILOT STUDY

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Annotation

While training to fulfil the socio-professional role of an individual fostering physical and health culture, people should be characterized by a high level of health-related behaviors and a perceived internal locus of control with regard to health. The goal of this work is to describe the lifestyle of physical education students in comparison to a reference group and to define the relationships between particular types of health-related behaviors and the perceived locus of health control. A sample of physical education students was compared to the reference group representing the technological science faculty: Automatic Control Engineering and Robotics. The sample was selected for a pilot research in a public university in the south-west of Poland. Self-reported questionnaires were used in the present research: the Health Behavior Inventory (HBI) and the Multidimensional Health Locus of Control (MHLC). Alcohol Drinking Scale (ADS) was assessed by using five questions derived from a questionnaire applied in the research program Universities Free from Addictions (Sierosławski 2004). Physical education students demonstrated higher levels of pro-health behaviors compared to the reference group, especially in Healthy Practices (HP). Moreover, significant differences were noted about the Powerful Others Externality (PHLC); physical education students demonstrated higher level of PHLC compared to the control group. The ADS revealed a negative correlation with Preventive Behavior (PB) and positive correlation with the Internality (IHLC). Research in a larger sample size of students representing various faculties seems justified for the needs of building efficient preventive programs.

Keywords: health-related behaviors, healthy lifestyle, health locus of control, prevention, students.

INTRODUCTION

An appropriate personal predisposition and relevant qualifications seem the most important requirements of physical education teachers. The current tasks of physical education teachers are to be a leader and an animator of various forms of participation in physical culture, as well as to be a preacher of healthy lifestyle. In order to efficient in educating towards a healthy lifestyle, which connects with building and realizing pro-health programs, actions and preventions, the teacher should be seen as an authority figure, identified by his/her students with proper values. There is especially a need of credible leaders in the area of health promotion, which is related to demonstration of a pro-health attitude in private life. As such, a healthy lifestyle should typify candidates for physical education teachers, who will realize the pro-healthy mission in the contemporary school. One of the most efficient strategies of indirect educational impact is to model the behavior of students following the authority of the teacher’s exemplar (Kunowski 2004). Thus, it seems important to diagnose and support health-related behaviors in students of pedagogical faculties.

According to the idea of health promotion, the individual should control his or her health through everyday decisions and choices compliant to the commonly proclaimed slogan “my health is in my hands”. According to the socio-cognitive learning theory (Bandura 1977), a change in behavior results from action-outcome and self-efficacy expectancies. Therefore, in order to undertake any action for the benefit of one’s health, an individual has to be convinced that he or she has adequate competencies allowing for the realization of the planned action.
The internal health locus of control fosters pro-health behaviors that may have magnitude for the prevention and promotion of health. Individuals with an internal locus of control believe that they can control events related to their life, whereas those with an external locus of control tend to believe that real power resides in forces outside themselves and which determine their life (Rotter, 1966). An internal health locus of control constitutes a tendency for undertaking independent decisions concerning one’s own health, irrespective of the influence of other people or environmental factors (random factors). The goal of this research is to specify the level of health-related behaviors and the internal health locus of control in physical education students, in comparison to technological faculty students. The relationships between particular dimensions of health-related behaviors and health locus of control were also examined.

**MATERIAL AND METHOD**

The pilot study was conducted at Opole University of Technology, a medium-sized public university in the South-West of Poland. Two randomized samples of students participated, representing the second year of Bachelor degree studies in the following faculties: Physical Education (PE; n = 20), and Automatic Control Engineering and Robotics (ACER; n = 21). Participants were Caucasian (White), with predominance of men (n = 29; 71%), in ages ranging from 20 to 25 years (M = 21.39; SD = 1.36). Two standardized questionnaires: the Health Behavior Inventory (HBI) and the Multidimensional Health Locus of Control (MHLC), were administered in the research (Juczyński 2009). Alcohol Drinking Scale (ADS) was used for the evaluation of drinking pattern among students. The HBI is a self-reported questionnaire, consisting of 25 statements describing various health-related behaviors, with a 5-degree Likert scale of frequency (1-almost never, 2-rarely, 3-from time to time, 4 – often, 5 – nearly always). The indicator of total health-related behaviors is a sum of all answers, ranging from 24 to 120 points. The healthier lifestyle is related to higher value of the total HBI. According to the test procedure, the results were divided into four categories measuring particular aspects of health-related behaviors: Healthy Habits Nutrition (HHN), Preventive Behavior (PB), Positive Adjustments (PA), and Healthy Practices (HP). In the present study, the internal consistency was satisfactory for the total HBI and sufficient for particular scales HHN, PB, PA and HP, with Cronbach’s alphas .81, .79, .66, .63 and .56, respectively.

The MHLC, comprising 18 self-reported statements concerning opinions in the scope of generalized expectations in three dimensions of health locus of control: Internality (IHLC), Powerful Others Externality (PHLC) and Chance Externality (CHLC). Each category consisted of 6 statements with a 6-degree scale of agreement (from 1 – I completely disagree, to 6 – I fully agree). The results were summarized separately within each scale (with range from 6 to 36 points). The alpha reliabilities for the IHLC, PHLC and CHLC scales were .75, .61, and .59, respectively. The ADS is a 5-item self-reported scale derived from the questionnaire “Students 2004”, that was applied in the framework of the program Universities Free from Addictions (Sierosławski 2004). The ADS comprises five questions, which refer to the frequency and, quantity of alcohol consumption (beer, wine, and spirits) during the past 12-months and the past 30 days. Individuals can answer on a scale (ranging from 5 to 7 degrees). The total ADS is a sum of all questions (ranging from 10 to 54, M = 33.61, SD = 8.9); high result indicates excessive alcohol drinking, with a high risk of alcohol abuse or dependence.

Participation in the questionnaire was voluntary, anonymous, and confidential. This study was approved by the Bioethics Committee of the Opole Medical Chamber. Statistical analyses of the collected material were conducted with the usage of the STATISTICA 8 software.

**RESULTS**

Descriptive statistics, such as means (M), standard deviations (SD), Kolmogorov-Smirnov d statistics (K-S d), and Pearson r-correlation coefficients are presented in Table 1, for
particular scales of the MHCL and the HBI, and also for the total ADS. As expected, all scales of the HBI (HHN, PB, PA, and HP) are highly inter-correlated. On the other hand, only the PA presented statistically significant correlation with IHCL and the CHCL (see table 1). The total ADS revealed negative correlation with the PB and positive correlation with the IHCL.

Table 1

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
<th>K-S d</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IZZ</td>
<td>72.29</td>
<td>12.49</td>
<td>0.09</td>
<td>0.70***</td>
<td>0.78***</td>
<td>0.58***</td>
<td>0.68***</td>
<td>-0.23</td>
<td>-0.02</td>
<td>-0.19</td>
<td>-0.25</td>
</tr>
<tr>
<td>PNZ</td>
<td>2.83</td>
<td>0.82</td>
<td>0.12</td>
<td>0.41**</td>
<td>0.23</td>
<td>0.46**</td>
<td>-0.03</td>
<td>0.06</td>
<td>-0.20</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>ZP</td>
<td>2.72</td>
<td>0.75</td>
<td>0.12</td>
<td>0.41**</td>
<td>0.36*</td>
<td>-0.21</td>
<td>-0.07</td>
<td>-0.13</td>
<td>-0.34*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PNP</td>
<td>3.41</td>
<td>0.66</td>
<td>0.08</td>
<td>0.10</td>
<td>-0.31*</td>
<td>-0.23</td>
<td>-0.32*</td>
<td>-0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PZ</td>
<td>3.04</td>
<td>0.68</td>
<td>0.16</td>
<td></td>
<td>-0.06</td>
<td>0.02</td>
<td>0.09</td>
<td>-0.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>27.20</td>
<td>5.36</td>
<td>0.14</td>
<td></td>
<td>0.17</td>
<td></td>
<td>-0.07</td>
<td>0.34*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>19.15</td>
<td>4.96</td>
<td>0.09</td>
<td></td>
<td></td>
<td>0.29</td>
<td>-0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>18.93</td>
<td>5.57</td>
<td>0.09</td>
<td></td>
<td></td>
<td></td>
<td>-0.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPAS</td>
<td>33.61</td>
<td>8.90</td>
<td>0.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

*p < 0.05; **p < 0.01; ***p < 0.001

As all scales of the present questionnaires demonstrated normal distribution by using K-S d statistics, the t-Student test was applied to assess differences between PE and ACER samples of students. Results are presented in Table 2. PE students had generally higher levels of the total HBI and HP, compared to the control group. Moreover, PE students represented significantly lower levels of the PHCL, compared to the ACER sample. The remaining scales did not show any more statistically significant inter-group differences.

Table 2

Differences between PE and ACER samples in the HBI, the MHLC and the ADS (*p < 0.05)

<table>
<thead>
<tr>
<th>Scale</th>
<th>WF (n = 20)</th>
<th>AiR (n = 21)</th>
<th>t(39)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1. IZZ</td>
<td>77.25</td>
<td>13.50</td>
<td>67.57</td>
<td>9.53</td>
</tr>
<tr>
<td>2. PNZ</td>
<td>3.04</td>
<td>0.86</td>
<td>2.63</td>
<td>0.75</td>
</tr>
<tr>
<td>3. ZP</td>
<td>2.89</td>
<td>0.94</td>
<td>2.56</td>
<td>0.48</td>
</tr>
<tr>
<td>4. PNP</td>
<td>3.56</td>
<td>0.66</td>
<td>3.28</td>
<td>0.65</td>
</tr>
<tr>
<td>5. PZ</td>
<td>3.32</td>
<td>0.51</td>
<td>2.79</td>
<td>0.74</td>
</tr>
<tr>
<td>MHLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. W</td>
<td>25.65</td>
<td>6.20</td>
<td>28.67</td>
<td>4.03</td>
</tr>
<tr>
<td>7. I</td>
<td>17.50</td>
<td>4.47</td>
<td>20.71</td>
<td>5.00</td>
</tr>
<tr>
<td>8. P</td>
<td>18.00</td>
<td>5.16</td>
<td>19.81</td>
<td>5.92</td>
</tr>
<tr>
<td>9. SPAS</td>
<td>32.10</td>
<td>8.85</td>
<td>35.05</td>
<td>8.91</td>
</tr>
</tbody>
</table>

Analysis of variance one-way ANOVA with repeated measures was used for the analysis of differences between particular categories of health-related behaviors in PE and ACER samples of students. A significant effect was found for the HBI in reference to inter-groups differences [F(1, 39) = 6.53, p = 0.01], and also between the HBI scales differences [F(3, 117) = 10.43, p < 0.001], without interaction effect between these variables [F(3, 117) = 0.34, p = 0.80]. Compared to ACER, PE students exhibited significantly higher levels of pro-health behaviors. Moreover, the post-hoc LSD test showed that the PA scale differed significantly from all the remaining scales: HHN (p < 0.001), PB (p < 0.001) and HP (p = 0.007); in addition, the HP scale differed significantly from PB (p = 0.02).
The variance one-way ANOVA analysis with repeated measures was also conducted for the MHLC scales in PE and ACER samples. The main effect was revealed for comparisons between PE and ACER groups [F(1, 39) = 30.53, p = 0.01], and also for particular comparisons between the MHCL scales [F(2, 78) = 36, 31, p < 0.001]. The interaction effect between those variables was insignificant [F(2, 78) = 0.24, p = 0.79]. Compared to PE students, ACER students demonstrated significantly higher levels of control in all of the MHCL scales. The LSD post-hoc test also showed that the IHCL had a significantly higher level than both remaining scales representing an external health locus of control, namely than the scale IHCL (p < 0.001) and PHCL (p < 0.001).

DISCUSSION

For many years in Poland, a disquieting increase in indicators of anti-health-related behaviors among the youth has been observed. When compared with European Union countries, these indicators are higher in Polish young people (Woynarowska et al. 2005). In particular, in the area of physical activity, Polish youth do not have permanently shaped habits (Kuśnierz 2005a, 2006). A well-organized process of physical education and a teacher who identifies him or herself with the pro-health goals of his or her course may improve the described situation (Kuśnierz 2005b). However, research shows that as little as 15% of physical education teachers practice recreation activity every day, and about 30% admit that they do not exercise even occasionally (Madejski et al., 2009). A vast majority of working teachers are aware of the role of personal impact and they are aware that through their personal health-related behaviors they may constitute an exemplar for the youth, whom they work with (Prażmowska et al., 2011).

A disquieting phenomenon is that an important sample of students who may be physical education teachers in the future, lead unhealthy lifestyles and are subject to various addictions (Romanowska-Tloczko 2011). The study of Binkowska-Bury et al. (2010) by using the HBI in the sample of 521 students from the South-Eastern part of Poland, showed that 49% of respondents presented a low level of the total HBI and nearly half of the subjects had a low level of knowledge concerning health. The research by Kozieł et al. (2003) revealed that the majority of medical and health sciences students represented a worryingly low total HBI, however they exceeded the control group in higher levels of the IHCL. Despite the fact that medical and health sciences students have higher consciousness of the responsibility for health, they did not demonstrate this in healthy practices and healthy habits nutrition.

In general, an internal health locus of control is more beneficial, as it fosters the undertaking of autonomous decisions, frequent participation in pro-health activity and stronger perception of responsibility for one’s own health (Juczyński, 2009). Due to this, the internal health locus of control may be the indicator for carrying out preventive behaviors in the scope of individual health. On the other hand, the non-differentiated type of health locus of control, in the internal-external dimension, may be more adaptive to a situation of disease, when the significance of the realization for the commissioned by the physician health tests or treatment may be crucial for full recovery (Heszen & Sęk, 2007).

The study by Gacek (2007), conducted among 600 students at various universities in Krakow (Poland), confirmed that an internal health locus of control fosters health-related behaviour in the context of a healthy diet. Juczyński (1997) revealed that an internal health locus of control is associated with better every day healthy practices and healthy habits nutrition, whereas preventive behaviors are connected with external health locus of control, seen in a sample of 496 adults in age ranged between 30-35 years old. Moreover, the standardizing research (Juczyński, 2009) indicated, that healthy students presented higher results in the IHCL, PHCL and CHCL scales, as compared to the diseased.

The results of the ACER students in the present study seem to correspond with the results of students in Juczyński’s (2009) research. On the contrary, PE students demonstrated lower results in all three scales of the MHCL, as compared with ACER in the present study and
other students (Juczyński 2009) as well. It is worthy to note that not all of the published research has indicated correlations between internal locus of control and health-related behaviors. For example, physical activity (as one of the healthy behaviors) seems appears to be unrelated with internal locus of control (Norman & Bennett, 1995). Moreover, the research on relationships between health locus of control and alcohol drinking has shown many discrepancies: some research shows a link to the internal health locus of control, while others with the external (Norman & Bennett, 1995).

In the present study, it has been shown that ACER students consume more alcohol than PE students, which is inconsistent with the research by other authors (Górksa-Kłęk et al. 2011; Romanowska-Tołłoczko 2011). Moreover, Michalik and Woitas-Śłubowska (2012) showed that the high level of alcohol consumption among Physical Education students increases with consecutive years of study. However, because of the limitations of the present research related to small sample-size, these results should be interpreted with caution.

CONCLUSIONS

- The research showed that PE students represents a higher level of pro-health behaviors compared to ACER students, particularly a large difference occurs in health practices.
- Significant differences were also noted with regards to the PHCL, where PE students demonstrated a lower level compared to the control group.
- The ADS showed negative correlation with the PB and positive with IHCCL.
- For the needs of constructing efficient preventive programs execution of this research with a larger sample-size of students representing numerous faculties would appear to be justified.

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УДК 796

РАЗВИТИЕ ПРОФЕССИОНАЛЬНО-ЗНАЧИМЫХ ДВИГАТЕЛЬНЫХ КАЧЕСТВ СТУДЕНТОК ВУЗОВ СТРОИТЕЛЬНОГО ПРОФИЛЯ НА ОСНОВЕ МЕТОДИКИ КОМПЛЕКСНОЙ НАПРАВЛЕННОСТИ

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Санкт-Петербургский государственный архитектурно-строительный университет (СПБГАСУ)

Аннотация
Одной из важнейшей задачей физической культуры в вузе является подготовка будущих специалистов к высокопроизводительной трудовой деятельности. Требования, предъявляемые к профессиональной деятельности, в современных условиях значительно возросли, что влечет за собой повышения требования к профессиональной физической подготовке студентов в период обучения в вузе. В статье представлена методика комплексной направленности на развитие профессионально-значимых двигательных качеств студентов строительных вузов, выстроенная на основе профессиограммы инженера строителя и требований предъявляемой будущей профессии.

Ключевые слова: профессиограмма, двигательные качества, физическая культура.