PHYSICAL FITNESS OF PRISON OFFICERS

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A Study Design; B Data Collection; C Statistical Analysis; D Manuscript Preparation; E Funds Collection

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Abstract The objective of the study was to investigate the career-choice motives for one’s entering the prison service as an operational officer, and the level of physical fitness.
The study was conducted in April 2015 and included 100 officers employed in Biała Podlaska prison. The examined group consisted of 93 males, aged 23–52, mean age 37.2, and 7 females aged 3–43, mean age 37.7 (30–43). 61 (61%) of the males were employed as security guards, while 39 persons (39%), including 7 females, as clerks in the administration section. The study methods included a physical fitness test consisting of 5 physical performance tests, recommended by the regulation of the Minister of Justice, the International Physical Activity Questionnaire (IPAQ) – long-form, questions designed by the author of the paper.
Career-choice motives turned out to be conditioned purely by economic incentives and the professions’ stability as opposed to other professional specialities. The respondents were fit and engaged in numerous physical activates. The factors which significantly determined the level of one’s fitness depended on age, education, a high self-report on physical fitness, total physical activity and the number of done sports.
The originality of the study is based on investigating the condition of physical fitness of prison officers with the use of currently recommended assessment methods in Poland.

Key words Prison Service officers, physical activity, health

Introduction Working in the uniformed services seems to require special motivation for choosing a job and, undoubtedly, high physical fitness in the employees of these occupational groups. Maintaining a high level of physical fitness requires a regular daily physical activity, which is especially vital in occupations in which physical fitness is an indispensable attribute. The recent studies concerning physical efficacy have been conducted among policemen (Bukowiecka, 2006; Bullock, 2007; Gajewski, Biernat, Jasionek, 2004; Rossomanno, Herrick, Kirk, Kirk, 2012), firemen (Moulsom-Litchfield, Freedson, 1986), security forces officers (Ambroży, Stanek, Ciucińska, 2009; Hoffman, Collingwood, 2005; Klukowski, Raczyński, Mazurek, 1997; Tomczak, 2010), as well as prison service personnel (Bourbonnais,
Malenfant, Vézina, Jauvin, Brisson 2005; Dixey, Woodall, 2011; Jamnik, Thomas, Burr, Gledhill 2010; Jaskowiak, Fontana, 2015; Jaworska, 2015; Łapiński, 2002; Wojciechowski, Bergier, 2016). Scientific reports concerning the physical activity of the uniform services draw attention to the work difficulty and specificity (Moulson-Litchfield, Freedson, 1986), indicating problems with coronary disease and the necessity of regular training programmes, as well as regular work assessment ability.

In recent years, some work on physical fitness tests has been done for candidates and prison service officers (Łapiński, Głuch, Sołtys, Krotoszyńska, Kaczmarek, 2016), which resulted in the creation and publication of a new regulation by the Minister of Justice of 22 September 2015 on physical fitness assessment in the Prison Service (Regulation, 2015; Clause, 1580).

The objective of the study described in this article is to indicate the career-choice motives of those entering the service, the level of physical activity and the factors that condition fitness in Prison Services officers.

**Material and methods**

The study was conducted between 22nd and 23rd of April 2015 and included 100 out of 119 officers in Biała Podlaska prison. The absence of the remaining officers resulted from sick leaves, vacation leaves or business trips. The research tool which was used involved a test on physical fitness consisting of 5 performance elements that enabled measuring the officer’s basic motor skills, i.e., speed, agility, strength, power (jumping), and suppleness (Regulation, 2011). The tests were conducted in the following order: standing long jump; 2 kg medicine ball forward throw; forward bend (from standing position); 3 × 5 rectangle zigzag run (metres); 10 × 10 (metres) shuttle run, or in the case of women and men from the security section who are above 50, a 6 × 10 (metres) shuttle run. The officers performed the first 3 tests 3 times, and only the best result was included in the final assessment. The last 2 tests were performed only once. The results obtained were used to determine the number of scores using a 7-degree scale, where the score 0 would indicate a negative evaluation, and 6 – a very high evaluation.

In addition, physical activity was assessed using the International Physical Activity Questionnaire (IPAQ), long-form, supplemented with questions designed by the author concerning motives for choosing the occupation, a self-report on physical fitness, amount of leisure time, done sports, and those which the respondents would like to do, as well as the body weight and height, which enabled measuring the BMI. In addition, the metric survey included questions on gender, age, education and weight and height, which enabled calculating the BMI.

The statistical analysis was performed by the STATISTICA v. 10 software. Non-parametric U Mann-Whitney and Kruskal-Wallis tests were used to detect statistically significant differences for quantitative values. As for the qualitative analysis, a table was prepared and the Pearson Chi-square test was used. In all analyzed cases, the assumed significance level was p = 0.05.

**Results**

**Characteristics of the prison officers examined**

The study group consisted of 93 males aged 23–52, mean age 37.2, and 7 females aged 30–43, mean age 37.7. In the group of males, 61 were employed in the security service, including 32 persons (52%) with secondary school education and 29 (48%) with university education. As for the administrative staff (32 persons), 5 employees (16%) had secondary school education and 27 (84%) university education. While on duty, the security service
Physical Fitness of Prison Officers

officers perform tasks typical of the prison environment (Regulation, 2011) consisting of surveillance, delivery, escorting offenders, patrolling the area of the unit, checking the technical-security protection system, searching rooms and persons. The administrative group's duties involved considerably more varied service tasks, consisting of correction, education, socialization and welfare. Besides, they were responsible for typical office jobs relating to information technology, nursing, maintenance and repair, depository, driving motor vehicles, activities within the area of culture and sports, rearing and education, as well as those within the scope of management (management of the facility) (Pływaczewski, Pomiankiewicz, 2014).

All women involved in the study were employed in the administrative section and possessed university education. Considering the small number of women (N = 7), which is typical of this profession (Wojciechowski, Bergier, 2016), the authors could not demonstrate significant correlations between males and females in regard to physical fitness and factors that affected it. Thus, women have been characterized only in terms of their total physical fitness in regard to other assessment norms and physical activity, including sports disciplines.

Profession-choice motives

Considering the fact that the work of a prison officer in the administration and security service differ considerably, as the security group have direct contact with offenders, the analysis was performed to indicate the carrier-choice motives for each group separately. In both groups, similar motives were observed; however, with different ones being highlighted. In security guards, the motive of a stable job in a state institution prevailed, followed by earlier retirement rights − 64%, economic incentives (salary) − 49%, and work with people − 28%. What was surprising was that only 8% of the respondents pointed to the job being interesting and diversified.

In the administrative group, the primary motive behind choosing the profession was the economic incentives − 62%, followed by a stable job in a state institution − 49%, and work with people − 38%. Work for the good of the
society was also mentioned and obtained high indicators – 23%, which was followed by interesting and diversified work – 21.0% (Figure 1).

**Level of physical activity**

The mean fitness of prison officers (both males and females) calculated after 5 tests was 4.83, which, according to the present standards, allows for a good or very good evaluation of the workers’ fitness. In females, the evaluation result was within the 4–6 range, mean value 5.14, while in males within the 2–7 range, mean value – 4.81. Because of the small number of females (N = 7), further research concerning age and specialisation was done only in males (N = 93). Males doing administrative work were characterized by higher physical fitness (mean evaluation 5.38) than those working in security service (mean evaluation 4.51), although in both cases the evaluation was good. As for the age factor, the younger personnel showed better results in both groups (Table 1).

**Table 1.** Evaluations of physical fitness test in prison service officers with regard to gender, specialty and age

<table>
<thead>
<tr>
<th>Age</th>
<th>Females</th>
<th>Males – administration</th>
<th>Males – security service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>range of evaluations</td>
<td>mean evaluation</td>
<td>range of evaluations</td>
</tr>
<tr>
<td>Up to 29</td>
<td>–</td>
<td>–</td>
<td>6–6</td>
</tr>
<tr>
<td>From 30 to 39</td>
<td>5–6</td>
<td>5.33</td>
<td>4–7</td>
</tr>
<tr>
<td>From 40 to 49</td>
<td>4–6</td>
<td>5.00</td>
<td>4–6</td>
</tr>
<tr>
<td>Over 50</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td>4–6</td>
<td>5.14</td>
<td>5.38</td>
</tr>
<tr>
<td>Mean evaluation – males</td>
<td></td>
<td>4.81</td>
<td></td>
</tr>
<tr>
<td>Mean evaluation – males and females</td>
<td></td>
<td>4.83</td>
<td></td>
</tr>
</tbody>
</table>

Further analysis of scaled test results (in scores), i.e. a) below 18 scores, b) 18–22 scores, c) more than 22 scores, did not show more significant differences within the occupational specialities (Table 2). It is noteworthy that in the security service specialty a higher number of officers showed lower fitness; that is, below 18 scores (29.5%), when compared to administration employees (12.5%). On the other hand, a high level of physical fitness (more than 22 scores) was observed in the security service specialty (27.9%), when compared to administration (18.8%).

**Table 2.** Number of scores obtained in physical fitness tests by prison service officers with regard to age and specialty (%)

<table>
<thead>
<tr>
<th>Age</th>
<th>Males – administration</th>
<th>Males – security service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;18 scores</td>
<td>18–20 scores</td>
</tr>
<tr>
<td>Up to 29</td>
<td>–</td>
<td>66.7</td>
</tr>
<tr>
<td>From 30 to 39</td>
<td>6.3</td>
<td>62.5</td>
</tr>
<tr>
<td>From 40 to 49</td>
<td>23.1</td>
<td>76.9</td>
</tr>
<tr>
<td>Over 50</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td>12.5</td>
<td>68.8</td>
</tr>
</tbody>
</table>
Factors conditioning physical fitness

It was found that the factors which are significantly related with a higher level of physical fitness included age, education, self-reported physical efficacy, and the number of practised sports disciplines. However, no significant relationship was found between the level of physical fitness and the amount of possessed leisure time, and the BMI index (Figure 2).

<table>
<thead>
<tr>
<th>Amount of leisure time possessed</th>
<th>sufficient amount</th>
<th>insufficient amount</th>
<th>lack</th>
<th>p = 0.6764</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>normal weight</td>
<td>overweight</td>
<td>obesity</td>
<td>p = 0.0631</td>
</tr>
<tr>
<td>Age</td>
<td>up to 29</td>
<td>30–39</td>
<td>40–49</td>
<td>p = 0.00842</td>
</tr>
<tr>
<td>Education</td>
<td>secondary school</td>
<td>university</td>
<td>p = 0.3133</td>
<td></td>
</tr>
<tr>
<td>Self-reported physical fitness</td>
<td>low</td>
<td>medium</td>
<td>high</td>
<td>p = 0.0010*</td>
</tr>
<tr>
<td>No. of sport disciplines practiced</td>
<td>0</td>
<td>1–2</td>
<td>3–4</td>
<td>p = 0.0296*</td>
</tr>
<tr>
<td></td>
<td>5 or more</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant difference at p < 0.05.
** Groups between which statistically significant differences were observed.

Figure 2. Factors conditioning physical fitness of Prison Service officers

Higher physical efficacy was found in the group of the youngest officers, i.e., those aged up to 29, and within the range 30–39, and was subsequently lower, with the worst result at the age of 50 and over.

Also, higher physical fitness was observed in the group with a university education, compared to those with the secondary one.

The highest results concerning physical fitness concerned those respondents who perceived their fitness as high, and decreased with the level of self-reported fitness, reaching the lowest level in those with low self-esteem. The respondents who practised the largest number of sports, i.e., 5 and more disciplines, and 3–4, were
characterized by the highest physical fitness, compared to the less active ones. However, there was found no significant correlation between higher physical fitness and the amount of free time and BMI.

**Physical activity and physical fitness**

Considering the commonly emphasized role of the level of physical activity in one's lifestyle, its self-reported level was analyzed in males and females. To do the study, the International Physical Activity Questionnaire (IPAQ extended-form) was used.

The total level of physical activity in the examined males was 3.618.5 MET-min/week, while in females − 2.335.6 MET. Thus, it was significantly higher among males.

In males, the highest percentage of physical activity concerned moderate efforts and intensive efforts – 1,620.3 MET and – 1,555.5 MET respectively, whereas walking accounted for 442.7 MET. In females, moderate efforts were clearly dominant – 1,410.9 MET, whereas intensive ones – 582.9 MET. The activities related to walking accounted for 341.8 MET (Figure 3).

![Figure 3. Level of physical activity and its domains in prison service officers broken down by gender](image)

Significant relationships were observed between the level of physical activity and the level of physical fitness (Figure 4).

The respondents with the highest level of fitness (22–28 scores) showed the highest level of total physical activity – 3,955.9 MET, i.e., a significantly higher level when compared to the group with the lowest physical fitness (10–17 scores), in which the level of total physical activity was the lowest –2,955.9 MET.

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1 The abbreviation „MET” will be used further in the paper.
Significant relationships were also found between physical activity in the area of participation in sports and the level of physical fitness, where the respondents with the highest fitness (22–28 scores) achieved the level of 1,716.6 MET, i.e., significantly higher compared to the group with fitness assessed within 18–20 scores – 1,220.3 MET, and the group with the lowest fitness results (10–17 scores) – 309.9 MET (Figure 4).

**Forms of physical activity**

Physical activity was also assessed with respect to the forms of the activity (sports disciplines) practised by the respondents, and those which they would like to do. Males most often mentioned cycling – 60.2% and walks – 47.3%, which was followed by running – 34.4%, swimming – 33.3%, football – 26.9%, and fishing – 25.8% (only those forms are indicated which obtained a minimum of 20% of the choices) (Tab. 3).

Similarly to males, the majority of females preferred bicycle riding – 71.4%, and walks – 47.3%, which was followed by swimming, aerobic/fitness and dancing – each scoring 28.6% (Table 3).

**Table 3.** Forms of present physical activity undertaken by prison service officers broken down by gender

<table>
<thead>
<tr>
<th>Forms of physical activity</th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>ranking position</td>
<td>%</td>
<td>ranking position</td>
</tr>
<tr>
<td>Cycling</td>
<td>60.2</td>
<td>1</td>
<td>71.4</td>
<td>1</td>
</tr>
<tr>
<td>Walking</td>
<td>47.3</td>
<td>2</td>
<td>47.3</td>
<td>2</td>
</tr>
<tr>
<td>Running</td>
<td>34.4</td>
<td>3</td>
<td>14.3</td>
<td>6</td>
</tr>
<tr>
<td>Swimming</td>
<td>33.3</td>
<td>4</td>
<td>28.6</td>
<td>3</td>
</tr>
<tr>
<td>Football</td>
<td>26.9</td>
<td>5</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Fishing</td>
<td>25.8</td>
<td>6</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

In the future, the respondents would like to practice slightly different sports disciplines, among which males mentioned mainly running – 19.4%, swimming – 17.2%, going to the gym – 17.2%, and cycling – 11.8% (only those
activities were included that obtained a minimum of 10% of the choices) (Table 4). Women would like to do things related to running – 42.9%, as well as cycling, swimming, and horse riding – each scoring 28.6%. It should be noticed that the respondents had relatively modest requirements concerning new forms of physical activity.

Table 4. Forms of physical activity which the prison service officers would like to practice in the future broken down by gender

<table>
<thead>
<tr>
<th>Forms of physical activity</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>ranking position</td>
</tr>
<tr>
<td>Running</td>
<td>19.4</td>
<td>1</td>
</tr>
<tr>
<td>Swimming</td>
<td>17.2</td>
<td>2</td>
</tr>
<tr>
<td>Working out</td>
<td>17.2</td>
<td>2</td>
</tr>
<tr>
<td>Cycling</td>
<td>11.8</td>
<td>4</td>
</tr>
<tr>
<td>Horse riding</td>
<td>2.7</td>
<td>14</td>
</tr>
</tbody>
</table>

Discussion

Considering the career-choice motives involved in one’s becoming the Prison Service officer, the phenomenon of occupational burn-out should also be remembered (Mickiewicz, Herkt, 2016; Piotrowski, Mazurkiewicz, 2012; Sęk, 2000;). The conducted studies showed that the officers who have direct contact with offenders are especially exposed to occupational burn-out; therefore, they should show appropriate personality traits (Mickiewicz, Herkt, 2016; Sęk, 2000;). Various reasons for choosing the job were observed in the examined prison officers. As for the employees of the security service specialty, the dominant motive was a secure job in a state institution, while in the administration specialty – the economic incentives; the ones that directly affect the benefits related to following this occupation. The motives which referred to work for the good of society, the prestige of the occupation, or interesting work (especially in the security service group) turned out to be much less motivating while choosing such a difficult job. Therefore, it may be assumed that the motives behind the choice of the carrier were, to a large extent, accidental. Other researchers also indicate that the decision concerning taking a job in the Prison Service is accidental (persuasion by a friend), or results from a very difficult situation on the labour market and lack of prospects in the learned profession (Urlińska, Urlińska, 2015).

Undoubtedly, the persons working in Prison Service, the formation responsible for public safety (Basińska, 2013), should be physically fit, which, according to the results of the presented study, is the case in the examined group as all officers as their level was assessed as a good or even very good. Younger officers achieved higher evaluations in the physical fitness test and these assessments gradually decreased with the age of the examined persons, with the exception of the security service specialty, in which the highest mean result was achieved by males aged 30–39. In Poland, doing physical fitness tests is obligatory for the officers of all uniform services, i.e., army, police, the prison system, border guards and fire department (Decision, 2005; Regulation, 2014; Regulation, 2015, Clause 1121; Regulation, 2005). Despite a number of the tests performed, their scope and obtained scores, there is too much variation between the services, which makes it difficult to compare the results. Of all the above-mentioned uniform services, only in the Prison Service are there different evaluation categories in the physical fitness test for the security officers and administration personnel, with slightly lower requirements put on the latter.
The lower requirements, when compared to those demanded from for instance police officers, result from the workplace specificity of the prison guards, who need to focus mainly on penal and educational activities.

While looking at the factors conditioning the level of physical fitness, it was confirmed that the most significant ones include age, education, self-reported physical fitness and the number of practised sports disciplines. A considerable decrease in physical fitness with age is especially evident in the oldest age group, i.e., aged 50 and above, who probably require special programme activities. A higher level of physical fitness in the group of employees with university education may result from their greater knowledge of the role of physical efficacy in one's lifestyle, including such a specific occupation. The fact that the highest level of the results concerning physical fitness was observed in the group which expressed the highest self-evaluations of their own fitness proves that these persons know themselves well. The number of sports disciplines practised, much possibly resulting from what the persons did in the youth, presently conditions their level of physical fitness in a positive way.

The lack of a significant relationship between a more substantial amount of leisure time possessed and the level of fitness may indicate that it is not the amount of free time at one's disposal that counts, but the awareness of how significant one's fitness is. It is somewhat surprising that no relationship was found between physical fitness and the value of the BMI index, although it should be noted that the persons with a normal BMI value were characterized by slightly higher physical fitness.

It should also be stated that both males and females were mainly involved in doing traditional forms of physical activity, i.e. cycling and walking. As for the less popular pastimes, males pointed to fishing, whereas females – dancing. What was worrying was that the tested persons did not express any desire to get involved in other forms of activity. The number of positive indications was very low. Apart from the traditional forms, both males and females mentioned swimming and running, as well as working out – in case of men, and horse riding – in the case of women. Such a situation is possibly conditioned by too few opportunities of practising various other forms of physical activity available in the local environment. What is also noteworthy is that, apart from being evaluated well in the measured physical fitness tasks, Prison Service officers are also involved in a number of activities in various areas of daily life (work, mobility, duties at home and around the household, sports and forms of spending free time), which allows for a positive assessment of physical activity as an essential component of their lifestyle.

Accordingly, it may be said that the high evaluation of the total level of fitness is due to the relationship between higher physical fitness results obtained in the norms regarding the force requirements and the level of physical activity resulting from everyday life activities.

**Conclusions**

The results of the study concerning the career-choice motives, level of fitness and physical activity in the Prison Service officers, allow for formulating the following conclusions:

1. The decisions for choosing the occupation seem to be too random for such a specific job, and the distinction between those relating to the security officers and administration are insufficient.
2. The level of fitness and physical activity is high, irrespective of the work specialty.
3. The factors which significantly condition the state of physical fitness are age, education, self-reported physical fitness, number of disciplines practised, and the level of physical activity.
4. The domains of practised forms of physical activity as well as those desired are very traditional, both in males and females.
5. The survey results show that there is a large group of respondents who are overweight and obese, which creates the need for participation in fitness programmes.

References


