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Minimum body height requirements for police officers – an international comparison

The use of defined minimum body height standards for police officers was analyzed for all countries of the European Union and some European non EU countries. More than 50 % of the countries of the European Union defined minimum height requirements for police officers. However the variation of such requirements within Europe is quite high. Cut offs range from 152 cm in Belgium to 170 cm in Greece, Malta and Romania. The majority of countries defined gender specific cut off values, few countries such as Germany showed no uniform practice because each federal country defined its own height standards. In all countries the defined cut off values are not the result of scientific evaluation.

INTRODUCTION

Standards for height and sometimes for weight are widely used to screen or evaluate job applicants for various occupations (Judge/Cable 2004; Case/Paxson 2008). Nearly everybody has already heard about minimum height standards for fashion models or cabin crews of many airlines, but minimum height standards are also defined for fire fighters, members of army corps and police officers (Kuruganti/Rickards 2004). Especially the job of policing is widely assumed to require a great deal of physical prowess. Adequate physical strength was described as essential for tasks such as intervening in physical disputes, aggressive conflicts or simple pulling victims from wrecked cars (Lonsway 2003). Therefore tallness and physical strength were assumed as appropriate somatic characteristics of police officers. In many police forces around the world standards of body height were set and minimum body height requirements were defined. Applicants not meeting these standards would not be considered. The history of these minimum height requirements is quite long. At the end of the 19th century minimum body heights for British policeman were defined (Shpayer-Makov 2004). The measurement of body height was obligatory for recruits and soldiers since the 18th century and many policemen had served at the army before changing to the police forces (Hoffman 1918; Emsley 2000). Body height and especially tallness symbolized strength, status and power, characteristics which were essential for a policeman who represented the State. Furthermore at this time (19th century) stature height was also a very useful instrument to diagnose effectively malnutrition and some other somatic deficiencies, conditions which were considered as inappropriate for police officers (Bogin 1999). During the 19th century and the first half of the 20th century police work was extremely physically demanding. Policemen had to
walk their beat or had to go by bicycle or on horseback in all kinds of weather, up and down hills and less urban environment. Physical confrontation happened regularly and the policeman had to be able to defend himself (Bonneau/Brown 1995). It was supposed that large men were better able to do this kind of work. During the second half of the 20th century and especially during the last 30 years police work has changed. According to recent research policework is largely sedentary and 80% to 90% of the job is devoted to tasks that require only limited physical abilities (Bonneau/Brown 1995). Another problem was the increasing number of female police officers (Sultan/Townsey 1981, Balkin 1988). In many countries non gender specific height standards were defined and therefore a disproportionate number of female applicants were screened out from the selection process because they were simply to short. In the United States the courts rejected height standards as discriminatory under the Title VII of the 1964 civil rights act. Minimum height requirements were called discriminatory and the term “heightism” was introduced (Rosenberg 2009). However it lasted until 1983 that height standards for police officers were generally abolished in the USA (Lonsway 2003). Great Britain, Australia, New Zealand and some European countries followed. Minimum body height standards were replaced by various other indicators of physical fitness, mainly the body mass index (BMI) and physiological tests (Maher 1984; Ash et al. 1990; Avery et al. 1992; Gaines et al. 1993; Bonneau/Brown 1995; Trotter/Browen 1995; Lonsway 2003; Copay/Charles 1998, Sörensen et al. 2000; Weyand/Davis 2005). The rejection of minimum height standards for policemen however was not based on results of appropriate scientific research, it was mainly a decision of politically correctness because beside female applicants members of ethnic minority groups were discriminated by height standards defined for a male white population (Hoffman/Hickey 2005). The critical discussion of the appropriateness of defined height standards for police officers still continues. Height standards were defined sometimes more than 50 years ago for a homogeneous male population. The process of secular acceleration however, has resulted in a drastic increase of mean body heights in nearly all industrialized countries (Bielicki/Charzewski 1983; Bogin 1999). Furthermore international migration and globalization lead to ethnic heterogeneous populations with different mean body heights (Sälzler 1967; Huh/Bloch 2003, Behr 2010). This is also true of Austria. Minimum height standards were defined in 1954, more than 50 years ago. However Austria defined separate height standards for male and female police officers, this was an exception at this time. Until today the minimum body height for police applicants in Austria is 168 cm for men and 163 cm for women. But are these minimum height requirements up to date? Reliable scientific studies concerning the use and sense of minimum height standards for policemen are extremely rare. Therefore the aim of the present study was to carry out an international comparison of minimum height requirements.

**STUDY DESIGN AND METHODS**

**Data collection**

Data collection for the present study took place between February and March 2010. In a first step quantitative data regarding minimum body height requirements for police officers were collected using of a short questionnaire which was specially developed for the present investigation. This questionnaire was send via email to
all CEPOL addresses. CEPOL email addresses were available for all member states of the European Union but also for the following associated countries: Norway, Iceland and Switzerland. Additionally the questionnaire was send to police academies and Ministries of Internal Affairs. For all other European countries police academies and Ministries of Internal Affairs were contacted only. The return rate was exceptionally high for the European Union countries, Switzerland, Norway and Iceland (100%). All contacted CEPOL contact persons returned the questionnaire. Unfortunately the return rate from European non EU countries was very low. It was only possible to collect data from Serbia and Turkey. From all other countries of Former Yugoslavia (Croatia, Macedonia, Bosnia-Herzegovina, Montenegro, Kosovo), Albania, and the countries of the Former Soviet Union (Russia, Belarus, Moldova, Ukraine, Georgia) no data are available.

**The Questionnaire**

The short questionnaire was specially developed for the present investigation. It contained eight questions concerning the existence of minimum height requirements for police officers. In detail information regarding gender- and ethnicity specific height requirements and the reasons for the use of minimum height requirements were asked. If non minimum height requirements were defined it was asked when and why former minimum height requirements were abolished and what kind of physical tests have replaced the old body height standards. The questionnaire was available in German, English and French.

**Statistical Analysis**

The statistical analyses were carried out by means of SPSS program Version 16.0. Absolute and relative frequencies were calculated.

**RESULTS**

**International comparison**

The use of obligatory body height standards for police officers is extremely heterogeneous organized within the European Union countries. At the moment more than 50% of the EU countries define obligatory minimum body heights for police officers and job applicants. In 14 of the 27 EU countries (51.8%) a defined minimum body height is required to become a police officer. In contrast 48.2% of the EU countries recruit police officers without any defined standards of body height. Some of these countries have abolished minimum height requirements more than 20 years ago.

As to be seen in figure 1 minimum height requirements were abolished mainly in northern and some parts of western Europe (Denmark, Finland, Sweden, Norway, Iceland, Great Britain, Ireland, Netherlands, Luxembourg) as well as in some states of the former Eastern bloc (Estonia, Lithuania, Latvia, Slovenia, Slovakia, Czech Republic). In central Europe and the Southern parts of Europe minimum height standards are still in use. In table 1 (see page 44)
minimum body heights for police officers according to gender are listed, regional differences within the individual countries in minimum body height requirements are not mentioned. In case of countries with regional differences in height standards such as Germany or Switzerland the mean values of height standards are listed.

### Table 1: Minimum body height requirements within the European Union

<table>
<thead>
<tr>
<th>Country</th>
<th>Minimum body height (in cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>male</td>
</tr>
<tr>
<td>Austria</td>
<td>168</td>
</tr>
<tr>
<td>Belgium</td>
<td>152</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>168</td>
</tr>
<tr>
<td>Cyprus</td>
<td>165</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>–</td>
</tr>
<tr>
<td>Denmark</td>
<td>–</td>
</tr>
<tr>
<td>Germany</td>
<td>164</td>
</tr>
<tr>
<td>Estonia</td>
<td>–</td>
</tr>
<tr>
<td>Finland</td>
<td>–</td>
</tr>
<tr>
<td>France</td>
<td>160</td>
</tr>
<tr>
<td>Greece</td>
<td>170</td>
</tr>
<tr>
<td>Hungary</td>
<td>165</td>
</tr>
<tr>
<td>Iceland</td>
<td>–</td>
</tr>
<tr>
<td>Ireland</td>
<td>–</td>
</tr>
<tr>
<td>Italy</td>
<td>165</td>
</tr>
<tr>
<td>Latvia</td>
<td>–</td>
</tr>
<tr>
<td>Lithuania</td>
<td>–</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>–</td>
</tr>
<tr>
<td>Malta</td>
<td>170</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>–</td>
</tr>
<tr>
<td>Norway</td>
<td>–</td>
</tr>
<tr>
<td>Poland</td>
<td>165</td>
</tr>
<tr>
<td>Portugal</td>
<td>165</td>
</tr>
<tr>
<td>Romania</td>
<td>170</td>
</tr>
<tr>
<td>Serbia</td>
<td>170</td>
</tr>
<tr>
<td>Slovakia</td>
<td>–</td>
</tr>
<tr>
<td>Slovenia</td>
<td>–</td>
</tr>
<tr>
<td>Spain</td>
<td>165</td>
</tr>
<tr>
<td>Sweden</td>
<td>–</td>
</tr>
<tr>
<td>Switzerland</td>
<td>167</td>
</tr>
<tr>
<td>Turkey</td>
<td>167</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>–</td>
</tr>
</tbody>
</table>

As to be seen in table 1 minimum height requirements differ markedly within Europe, from 152 cm in Belgium up to 170 cm in Greece, Malta and Romania. Exceptionally tall have to be applicants for the Swiss Guard of the Vatican. Here is a minimum height of 178 cm required.

### Gender specific minimum height requirements

In the majority of European countries gender specific minimum height standards are defined (Bulgaria, Germany [some federal states], Italy, Austria, Malta, Poland, Portugal, Romania, Spain, Hungary and Cyprus but also Serbia, Switzerland and Turkey). Exceptions are only Belgium, Greece and France as well as some federal states of Germany. In these countries the same minimum height standards are defined for male and female applicants. In Belgium this is not discriminatory against women because the minimum height requirement is 152 cm and therefore only 2 % or 5 % of the adult population of Belgium are too small to become a police officer. In Greece however a disproportionate number of women may be screened out from the selection process, because of a minimum height requirement of 170 cm. The mean body height of adult Greek women is 164 cm.

As to be seen in figures 2 and 3 (see page 45) the body height standards vary considerably in the different European countries. Especially high values are defined by Greece, Malta and Romania for male as well as for female applicants.

### Minimum height requirements according to rank and regions

Bulgaria, Spain and Italy defined separate minimum height standards for different ranks within the police force. Officers have to be taller than “normal” policemen. In France for example for members of the Gendarmerie the minimum height standard is 170 cm, for normal policemen in contrast the height standard is 160 cm only. Three EU countries, Germany, Spain and Italy, but also Switzerland define different minimum height standards for different federal countries. Especially confusing is the situation in Germany where five federal countries (31.2 %) define no minimum height standards, seven federal countries (43.8 %) define the same stan-
standards for men and women and four federal countries (25 %) define gender specific minimum height requirements.

**Reasons for minimum height standards**
The reasons to define minimum height standards are presented in figure 4 (see page 46). The main reasons for minimum height standards were esthetic ones (78.5 %). Tallness implicates power and status and it looks good. Another important reason for minimum height standards is the postulated association between tallness and physical fitness (57.1 %). Furthermore the psychological importance of tallness (35.7 %) was mentioned. More than 20 % stated that no reasons for minimum height standards are known and no minimum height standard was based on the results of scientific studies.

**Reasons for abolishment of minimum height standards**
As to be seen in figure 5 (see page 46) the main reasons for the abolishment of minimum height standards were politically ones. 92.3 % mentioned the problem of discriminatory effects of minimum height standards. According to 76.9 % minimum height standards would not improve daily police work and 69.2 % mentioned stature height is not associated with physical fitness. The decision to abolish minimum height standards was never based on the results of scientific studies.

**DISCUSSION**
The results of the present study show that within Europe and especially within the European Union non uniform standards regarding physical requirements for police officers exist. Today minimum height requirements are defined in more than 50 % of the European Union countries, however the standards used vary considerably. Astonishingly none of these defined height standards are based on the results of appropriate scientific research. This is really a pity and an evaluation of current height standards and an analysis concerning sense and usefulness of minimum height standards seems to be of top priority. Here we are confronted with the question which scientific disciplines should be involved in such analyses. On the one hand body height is a classical anthropo-
Figure 4: Reasons for defined height standards for police officers

Figure 5: Reason for abolition of minimum height standards

metric parameter and therefore bioanthropology seems to be the correct field. On the other hand minimum height standards are defined because stature height is used as an indicator of physical fitness. Additionally the psychological effects of body height are mentioned as extremely important for police officers. These two points of view plead for a sports-antropological investigation and a psychological-ethological one too. Unfortunately only very few bioanthropological studies focusing on anthropometric characteristics of police officers exist (Sörensen et al. 2000; Zorec 2009). Both studies revealed that the physical demands of that specific profession are high, and the authors recommended the evaluation of muscle strength, weight status and body composition of policemen every year. Stature height standards only seem not to be an appropriate inclusion criterion for job applicants. Another important bioanthropological aspect which demonstrates the weakness of the definition of minimum height standards for policemen is the fact that the individual body height is not constant. Anatomically body height is a composite of the linear dimensions of the skull, the vertebral column, the pelvis and the legs, however with increasing age body height decreases. Between the age of 30 and the age of 60 years body height decreases between 3 cm and 5 cm in all healthy individuals (Sorkin et al. 1999). This is mainly due to a compression of the intervertebral discs. On the other hand a diurnal variation in stature height is described (Siklar et al. 2005; Krishan/Vij 2007). According to these studies stature is maximum in the morning and less by 1.5 cm to 3.0 cm in the evening. This circadian decrease in stature is also caused by a reduction of the intervertebral discs, a consequence of human biped locomotion. According to these observations we have to be aware that body height changes circadian in the course of day and as a result of the general ageing process through adulthood. These changes in body height show that minimum height requirements with strict cut offs for policemen are not useful because a police officer who met the criterions in the morning hours at the age of 20 will not meet them in the evening or at the age of 50 years. A further bioanthropological problem of minimum height requirements are the use of correct anthropometric measurements. It seems to be very easy to measure body height, but reliable and valid body height data are only available if correct methods for body height measurement are applied (Knuss-
Minimum height standards make only sense if well trained personal takes the measurements otherwise technical errors may occur. One argument for the usefulness of minimum height standards for policemen is the assumption that stature height is an appropriate indicator of physical fitness. Since no reliable scientific paper concerning the association between stature height and physical fitness of police officers exists up to now, we have to analyse the results of sportsanthropology. Today a lot of papers exists which describe the interaction between stature height and running performance or stature height and shooting scores (Khosla 1978; Bernhard/Jung 1998; Weyand/Davis 2005, Raschka 2006; Mononen et al. 2007). However it turned out that stature height only is not enough to predict physical fitness, much more important are the body mass index (BMI) or the amount of muscle mass. From a sportsanthropological point of view stature height alone is not an appropriate indicator of physical fitness.

It is unquestionable that policework, which is generally quite sedentary, includes sometimes extreme physical stress, which includes running, tackling, pushing, pulling and wrestling. Several of these tasks are extremely physically challenging (Bachman/Coker 1995, Euwema et al. 2004).

The inability to perform these duties would clearly endanger police officers themselves, their fellow officers and the general public (Anderson/Plecas 2001). Stature height alone however is not enough to predict the physical ability of a person to cope with these somatic stress phases. The critical discussion of the usefulness of minimum height standards for police officers is not complete without the discussion of psychological and ethological aspects. Stature height especially among males is directly related to dominance and social status (Freeman 1979; Buunk et al. 2008). Many studies focused on the complex interaction between stature height and economic success, workplace success and social status but also reproductive success (Mueller/Mazur 2001; Judge/Cable 2004, Swami et al. 2008). All these studies reported a positive association between tallness and a successful life. Evolutionary psychology explains this positive association between tallness and success with the observation that tallness is interpreted with dominance and danger. Schwartz (Schwartz et al. 1982) interpreted tallness as a non-verbal symbol of dominance. Police work is characterized by coping with physical conflicts. The results of several studies plead for a positive association between physical strength antisocial behaviour and aggression (Ishikawa et al. 2001; Archer/Thanzami 2007). Therefore police officers are often involved in conflict situations with tall and muscular individuals. Therefore increased body height of police officers may represent an advantage because the tallness of police officers may lead to a de-escalation of the situation. This may be also due to the fact that a tall police officer symbolizes power, dominance and physical strength. Unfortunately no scientific studies concerning this interesting topic are available up to now.

CONCLUSION
What can we conclude from the results of this study? The main problem is the lack of reliable research concerning the effects of body height on the duties of daily police work. This lack of information leads to the great variation of handling minimum height requirements for police officers in European countries. From a bioanthropological and a sportsanthropological point of view the strict definition of minimum height standards is not useful. The positive
experiences in countries where minimum height requirements are abolished, pleads for a critical re-evaluation of defined min-
imum body heights as obligatory selection criterions for police officers.

1 Legend: dark grey = no minimum height require­ments, bright grey = defined minimum height requirements, white = no data available.

Sources of information


Sorkin, J. D./Muller, D. C./Andres, R. (1999). Longitudinal change in height of men and women: Implications for the interpretation of the body mass index, American Journal of Epidemiology (150), 969–977.


