

Thesis of Doctoral (PhD) Dissertation

**The characteristics and interrelationships of
health awareness and health behaviour among
law enforcement officers**

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I. The aim of the thesis and the scope of the topic

The aim of this dissertation is to provide an insight into the health behaviour of professional police officers working at the Szabolcs-Szatmár-Bereg County Police Headquarters. It aims to provide an overview of the proportions of health-risking and health-promoting behaviours. A further aim is to identify groups that could serve as target groups for a health promotion plan. The research fills a gap, as no survey of this nature has yet been conducted in Hungary.

The theoretical framework of the dissertation is the biopsychosocial model (Engel, 1980), supplemented by Jessor's (Jessor, 1991) problem-behaviour theory. In my dissertation, the integration of these two theoretical approaches creates an opportunity for a more comprehensive interpretation of health behaviour. The dissertation aims to explore how biological (e.g. age, BMI, physical symptoms), psychological (e.g. health orientation), social (social support) and lifestyle factors (e.g. nutrition, exercise

habits) lead to the formation of specific health behaviour clusters. The dissertation follows two main strands. One strand concerns the police, the other health. The two strands are linked through health promotion and workplace health promotion. Following a description of the police organisation and its competency system, patterns of health-related behaviours relevant to the research are presented in the light of public health surveys. The EHIS¹ reports are surveys conducted every five years in accordance with Regulation (EC) No 1338/2008 of the European Parliament and of the Council². These surveys are based on subjective assessments of health status, health determinants and lifestyle factors. The EHIS is thus a health survey harmonised with the European Union, providing data on the population aged 15 and over. (Papdi and Rikkné Benkei, 2011; Monostori et

¹European Health Interview Survey

²Regulation (EC) No 1338/2008 of the European Parliament and of the Council of 16 December 2008 on Community statistics on public health and health and safety at work (Text with EEA relevance)

al., 2021) The data for 2019 are presented in the dissertation, along with the trends observed over the years. The Hungarostudy surveys have been monitoring the health status of the population since 1988. They focus on those aged 18 and over, physical and mental health, attitudes towards healthcare and self-care, and the mapping of psychosocial risk factors. Over the decades, the core questionnaire has been revised and expanded. (Susánszky et al., 2007; Susánszky and Székely, 2013) The questions used in the present study are also based on the Elef and Hungarostudy surveys, and may therefore be suitable for cautious comparison, considering that the strict health criteria of the police may result in bias. The ‘healthy worker effect’ (McMichael, 1976; Chowdhury et al., 2017) is particularly pronounced, since compared to the general population, this cohort consists exclusively of healthy individuals who meet strict occupational health criteria. In addition to public health surveys, I also present the results of international and domestic research on the armed

forces, so that the results of this study can be presented within this framework later..

Behavioural characteristics related to health behaviour rarely occur in isolation; rather, different patterns tend to appear in combination. Different health behaviour patterns influence the synergistic interactions of health behaviour, and thus mortality and morbidity. (Mudryj et al., 2019) Examining the relationship between health behaviour habits and lifestyle patterns provides significant assistance in the design of targeted health promotion programmes. People from the same subculture or social class with similar occupations do not necessarily have the same lifestyle; therefore, lifestyle is difficult to characterise using purely demographic characteristics (e.g. gender, age, educational attainment, income). Lifestyle reflects cultural and subcultural behavioural patterns within a community. (Szakály et al., 2013; Töröcsik et al., 2019) Following this line of thought, the question arose as to whether correlations could be demonstrated in the present study across various areas

related to health behaviour, and whether groups could be identified based on health behaviour patterns.

Taking into account that cardiovascular diseases account for 48% of all deaths in Europe (Allender et al., 2008), and that the prevalence of hypertension in Europe ranges between 30–45% (Nemcsik et al., 2024), as well as the fact that, according to GPs' morbidity reports, the incidence of hypertension has increased significantly among those aged 19 and over (KSH, 2024), it seemed justified to investigate the extent to which the participants in this study were affected by the development of hypertension and whether any differences in health behaviour habits could be detected.

To conclude the literature review section, the thesis outlines the current health promotion opportunities in line with national regulations and the programmes implemented in the county. Finally, in light of the findings, recommendations are formulated to support the existing health promotion programme at, outlining how the appropriate and conscious support and

organisation of the various existing elements could contribute to the development of a more comprehensive system.

II. Outline of the methods used

The study was approved by the Joint Research Ethics Committee (EPKEB) (reference number: 2021-70 (amendment to 2020/24). The questionnaire, designed to map the health behaviours of the entire professional police force in Szabolcs-Szatmár-Bereg County, was completed as part of the mandatory psychological aptitude test³. Due to the Covid-19 pandemic, the collection of questionnaires spanned a long period between 2020 and 2022. The county's professional police force numbers approximately 2,200 officers, 1,719 of the completed questionnaires were usable.

³Joint Decree 57/2009 (30 October) Joint Decree 45/2020 (16 December) of the Ministry of the Interior, based on the procedure for health, psychological and physical fitness examinations of professional law enforcement personnel, which enters into force on 1 January 2021

The *socio-demographic* questions were simple and easy to answer, covering the following: age, gender, educational attainment, length of service, and work schedule. These data provided an opportunity to explore the socio-demographic correlations between health status and health behaviours in subsequent analyses. The examination of *health-risk behaviours* focused primarily on smoking and alcohol consumption. Questions regarding smoking assessed smoking status (never smoked, previously smoked, currently smokes), the duration of smoking in years, and the number of cigarettes smoked per day. The frequency of alcohol consumption was measured on a five-point scale ranging from complete abstinence to drinking alcohol at least four times a week.

In *assessing health status*, in addition to subjective health status and BMI, the PHQ-15 somatic symptom inventory and a 19-item list of illnesses were included in the questionnaire. Subjective health status was measured using a single-item question in accordance with the Hungarostudy 2013 questionnaire. The PHQ-

15 is a scale listing somatic symptoms, compiled and validated by Kroenke et al. (2002). The complaints include musculoskeletal complaints (e.g. lower back and back pain); gastrointestinal symptoms (e.g. stomach ache); circulatory system problems (e.g. chest pain) and other symptoms (e.g. fatigue, lack of energy). The 19-item list of diseases was used in the 2013 Hungarostudy survey . It measures the prevalence of chronic and serious illnesses treated during the respondent's lifetime and in the past year (Susánszky and Székely, 2013).

Several sets of questions appeared in the questionnaire to map *health-promoting behaviours*. Participation in screening tests was measured by a single question, which asked not only about frequency but also about the type of tests (e.g. lung screening, gynaecological, mammography, prostate, dental and internal medicine screenings). Physical activity was assessed using two questions: one concerned the frequency of sporting activities, and the other concerned strenuous physical activity outside of sport. These questions were also

based on items used in the Hungarostudy surveys. Regarding dietary habits, the frequency of consumption of various food groups (vegetables, fruit, meat, sweets, dairy products, etc.) could be indicated in tabular form. To measure social support, the Caldwell Social Support Questionnaire was used, which examined the various sources of support and their perceived strength. I used the Hungarian adaptation by Kopp and Skrabski (Kopp et al., 1992). The subjective aspects of quality of life were captured by two questions measuring life satisfaction and happiness, on a 1–10 Likert scale. (Susánszky and Székely, 2013)

The *Health Orientation Scale* (HOS) (Snell et al., 1991) was used to assess the psychological factors underlying health behaviour. The 50-item questionnaire measures health-related personality variables across ten subscales, such as health awareness, health-related anxiety, health motivation, and internal and external health control.

Characteristics of the study sample:

Characteristic	Data
Total sample (N)	1,719
Gender: male / female	86.1% (n=1,480) / 13.9% (n=236)
Average age (SD)	39.18 years (SD=8.13); range: 21–62 years
Educational attainment: secondary / higher	59.6% / 34.1%
Average length of service (most common category)	16–25 years (~42%)
Work schedule: on-call (most common)	53.0% (n=911)
Data collection period	2020–2022

III. Summary of the results

1. The members of the professional staff of the Szabolcs-Szatmár-Bereg County Police Headquarters exhibit more favourable health behaviour compared to the general population in terms of subjective health status, alcohol consumption, happiness and satisfaction, and social support, whereas no significantly more favourable patterns can be demonstrated with regard to certain lifestyle factors (smoking, diet, sport and physical activity).

In terms of *subjective health status*, more than 80% of respondents feel that they are in good or excellent health, only 15% consider their health to be average, and only a negligible percentage feel that their health is poor or very poor. These results exceed both national (Elef2019: KSH2019a; Hungarostudy 2021: Kopp Mária Institute, 2022) and regional statistical data (Northern Great Plain region: KSH, 2019a; Jávorné Erdei et al., 2014; Hüse, 2015; Jávorné Erdei and Takács, 2018). However, when interpreting the

results, it should be noted that this study included police officers fit for duty in the sample population, so a subjectively perceived good state of health was to be expected. The findings are consistent with those of Lockie et al. (2022), who found that, compared to the general population, police officers generally have a good health and fitness profile. This is also confirmed by Garbarino and Magnavita (2015), who add that, nevertheless, work-related stress can trigger metabolic syndrome.

With regard to *alcohol consumption*, the proportion of abstainers is lower, despite a similar frequency of consumption. The proportion of those who never consume alcohol is lower than the results of domestic surveys (OLAAP 2019: Elekes et al., 2023; Paksi and Arnold, 2021; Elef2019: KSH, 2019b; Hungarostudy 2021: Kopp Mária Institute, 2022). When compared with Hungarian law enforcement data (Gordos, 2022; Borbély, 2019b; Erdős, 2022b; Erdős, 2024), it is worth noting that the present study presents a more favourable picture of alcohol consumption.

Willingness to participate in *screening tests* is almost identical to, or in some respects better than, that of the general population. Based on self-reports, women's willingness to participate in mammography screening is more favourable when compared with the Elef 2019 surveys (KSH, 2019c). Compared to the results of a survey covering the region (Berencsiné Madácsi et al., 2013), it is significantly better. However, it falls short of the results of the Hungarostudy 2021 (Döbrössy et al., 2022). Participation in gynaecological screening is higher than in both the Elef 2019 and Hungarostudy 2021 surveys. With regard to prostate screening for men, the figures are almost identical to the national average (KSH, 2019c). It must be noted, however, that these screening tests are mandatory as part of law enforcement health screening (see thesis: chapter on 'The Police Fitness Examination System').

The population studied generally has good indicators of *happiness and satisfaction*. In terms of happiness and satisfaction, the present sample shows values identical to those of the 2021 Hungarostudy data

(Mária Kopp Institute, 2022), whilst compared to the 2019 national data (KSH, 2020), the happiness and satisfaction scores of police officers are significantly higher.

The *social support network* is strong; comparing the results of the present study with those of Hungarostudy 2013 (Szabó et al., n.d.), it can be concluded that the average score for all forms of support is higher in the present study. Presumably, law enforcement officers therefore have a closer, stronger social support network. In both studies, support from spouses, children, friends and parents ranks first, followed in the Hungarostudy 2013 study by support from relatives, whilst in the present study it is support received from colleagues. In law enforcement, if we take frequency and average values as a basis, it appears that they can count on support from colleagues, but not to the same extent as from immediate family members.

The prevalence of *smoking* is in line with regional rates.. Among the county's police force, the

proportion of smokers (32%) exceeded the national average reported in various surveys (GBD, 2021; EHIS, 2019; Brys et al., 2022), whilst trends closely matching those of other surveys can be observed (OLAAP: Urban and Péntzes, 2021; Elef2019: KSH, 2019d; Hungarostudy: Kopp Mária Institute, 2022). The proportions are similar when considering this geographical region (Elef Northern Great Plain: KSH, 2019e; Nyíregyháza panel: Rákóczi et al., 2019). However, domestic law enforcement research is consistent with the present findings (Mácsár et al., 2017; Borbély, 2019b; Faragó, 2013; Erdős, 2022a). In terms of *dietary habits*, daily fruit and vegetable consumption is clearly insufficient. The composition of meals does not meet the recommendations (MDOSZ, 2021). There is a lack of multiple daily servings of fruit and vegetables and daily consumption of dairy products, alongside higher consumption of sweets. Consumption of fruit and vegetables falls short of both national results (KSH, 2019f) and regional results (Sárváry et al., 2019).

However, it is more favourable than the national law enforcement figures (Gordos, 2022). A high proportion have a BMI index exceeding the average. The BMI index appears less favourable among law enforcement personnel compared to population data (KSH, 2019g; Susovits et al., 2022; Sárváry et al., 2019). A higher proportion fall into the overweight or obese categories. When interpreting the BMI index, it must not be overlooked that increased muscle mass also falsely inflates BMI values (Weir and Jan, 2023). However, a study of the Hungarian Armed Forces found that BMI was closely correlated with body fat percentage, and that a gradual increase could be observed over the years, in parallel with a decline in physical performance (Juhász, 2011).

2. A correlation can be demonstrated between sociodemographic factors and health-related behaviours

Higher educational attainment is associated with more favourable health behaviours. According to the findings of the study, the prevalence of smoking is lower among those with higher educational attainment, which is consistent with the findings of other studies (Brys et al., 2022; Urban and Péntzes, 2021). Among those with higher education qualifications, the proportion of both those who have never smoked and those who have stopped using tobacco products is higher, meaning that current smokers account for only 25.1%. Based on the results of this study, there is also a significant difference in sporting habits, with regular exercise being more common among those with higher educational attainment. In terms of their dietary habits, they pay greater attention to consuming cooked food daily and are more likely to use dietary supplements. However, their consumption of fruit and vegetables is lower than

that of those with secondary education, whilst their consumption of sweets is higher. There is no significant difference between the two groups in terms of alcohol consumption habits, nor in terms of participation in screening tests or BMI values.

Based on the results of Elef 2019, educational attainment can be linked to several components of health behaviour. The higher the level of educational attainment, the more likely a person is to believe that they can do a lot for their health. The likelihood of engaging in physical activity also increases. For women, the proportion engaging in sport increases as the level of educational attainment rises. Fruit and vegetable consumption also increases in line with educational attainment, as does the proportion following a special diet, and the proportion participating in health screening tests also rises. (KSH, 2019c) Higher educational attainment is associated with better health behaviours, resulting in a better health-related quality of life; moreover, health behaviours explain differences in health and well-

being better than educational attainment (Olsen et al., 2023; Dürge, 2024)

Women score significantly better on certain health behaviour indicators (alcohol consumption, screening tests, attention to diet, BMI), but no significant difference is observed for other indicators (smoking, exercise habits, dietary habits). Based on domestic surveys, the prevalence of smoking is lower among women than among men (EHIS, 2019; Rákóczi et al., 2019; Paksi et al., 2021; Brys et al., 2022). Women also present a more favourable picture with regard to alcohol consumption (Paksi and Arnold, 2021; Elekes et al., 2023). Their dietary habits reflect a healthier picture (KSH, 2019f; Sárváry et al., 2019), and indicators are also better for women in terms of nutritional status calculated using the BMI index, with a lower proportion of those who are overweight or obese, although men show a slightly more favourable picture in terms of sporting habits (Kopp Mária Institute, 2022)

Health status and health behaviour are less favourable *in older age* groups. Generally, there is either no significant difference between older individuals with longer service records and younger people, or older individuals exhibit less favourable habits, with the exception of smoking. Alcohol consumption is slightly, but significantly, higher among older people. Overweight and obesity are more common among older people. Smoking is more common among young people, but their participation in screening tests is more regular. It should be noted that, based on the findings of the research, motivation and the sense of internal control decrease with increasing age, whilst physical condition is perceived as poorer and the prevalence of diseases, such as hypertension, increases. However, this is not accompanied by a shift towards a healthier lifestyle, so their health is likely to deteriorate further. Generally speaking, in adulthood, health awareness and the adoption of beneficial health behaviours increase in parallel with ageing. (Teleki, 2022) The prevalence of smoking is highest among

those aged 18–34 (Boros, 2005, 2019), a finding confirmed by the Elef 2019 report, as a higher proportion of the 18–34 age group smoke compared to the 35–64 age group. (KSH, 2019d). With regard to alcohol consumption, the frequency of alcohol consumption is higher among young people; among older people, not only is consumption lower, but the proportion of abstainers is also higher. (KSH, 2019b; KSH, 2019h; KSH, 2019i) The dietary habits of the older age group are more appropriate, with higher consumption of fruit and vegetables; however, the nutritional status and BMI of younger people are more optimal (KSH, 2019f). Young people typically exercise more than older people. (KSH, 2019j)

3. Among health behaviour factors, correlations that are mostly significant but of weak strength can be identified

This study identified statistically significant associations based on Spearman's rank correlation and the structure revealed by cluster analysis.

However, most of the correlations found were weak or of negligible strength.

Several studies have found that the co-occurrence of risk behaviours is high (Schuit et al., 2002; Galán et al., 2005; Tobias et al., 2007; Silva, 2013; Noble et al., 2015; Meader et al., 2016). Among health-damaging behaviours, alcohol consumption and smoking show the strongest association. Several components of an unhealthy lifestyle often co-occur in individuals' lives (Schuit et al., 2002; Noble et al., 2015; Ding et al., 2015; Meader et al., 2016). Experience shows that two, three (Schuit et al., 2002) or even four risk behaviours are often present simultaneously (Tobias et al., 2007; Silva, 2013), resulting in an accumulation of unhealthy behaviours.

A low prevalence of health-promoting behaviours has also been observed; that is, those who lead a healthy lifestyle do not smoke, do not consume alcohol, engage in sufficient physical or sporting activity, and ensure an adequate intake of fruit and vegetables (Tobias et al., 2007)

4. The prevalence of hypertension is high among the police force of the Szabolcs-Szatmár-Bereg County Police Headquarters; however, the incidence is significantly lower than in the general population, yet its presence is not associated with more favourable health behaviour patterns.

The prevalence of hypertension is significantly lower than average. 11.45% of the study participants are being treated for high blood pressure. The prevalence of hypertension among the adult population in Europe is 30–45% (Nemcsik et al., 2024). The prevalence is higher among law enforcement officers than in the general population (Zimmerman, 2012; Magnavita et al., 2018; Chauhan et al., 2022). Thus, overall it can be concluded that, alongside strict and continuous diagnostic monitoring, the prevalence of high blood pressure within the workforce is quite favourable.

According to the results of research conducted in the county, with regard to physical activity, almost half (47.9%) of those living with high blood pressure

exercise less than once a week; and since the rate of physical activity is similar but exercise is less frequent, it is likely that daily physical activity is lower among those struggling with hypertension. I found no difference in smoking or alcohol consumption between those treated for hypertension and those not treated. In terms of social support, a significant difference was observed in the support received from parents and grandparents, which may be due to the loss associated with advanced age. Those treated for hypertension have higher levels of health anxiety but lower motivation to maintain their health, which may be linked to less favourable health behaviours. There is no significant difference in lifestyle between those treated for hypertension and those not treated; in fact, those treated for hypertension are characterised by lower levels of physical activity.

In the general population, a variety of lifestyle change patterns can be observed: diagnosis was associated with improvements in diet, smoking cessation or

increased physical activity (Scheltens et al., 2010; Neutel, 2008; Ahn et al., 2023; Pitsavos et al., 2006; Gee et al., 2012). However, other studies suggest that lifestyle changes are only partially implemented, or not at all, and that unhealthy habits persist. (Steptoe et al., 2009; Barros et al., 2014; V. Dionato et al., 2021; Wicaksana et al., 2022)

5. The health behaviour of law enforcement is organised into multidimensional, interrelated health behavioural patterns.

With regard to the formation of clusters, it can be observed that both domestic (Nárai, 2009; Szakály et al., 2014; Balku and Vitrai, 2016; Balku et al., 2017; Törőcsik et al., 2019; Birkás et al., 2020) and international studies (Mawditt et al., 2016; Conry et al., 2011; Fleary and Nigg, 2019; Rabel et al., 2019), homogeneous groups could be established based on health behaviour indicators, just as in studies conducted among the armed forces (Novák et al., 2019; Irizar et al., 2022). The results of the present

study also confirm that distinct groups with coherent health behaviour profiles can be identified based on health behaviour habits, social support and health orientation. The formation of these groups enabled the exploration of internal heterogeneity within the cohort.

Based on this research, four groups can be distinguished according to health behaviour patterns and demographic data:

Health optimists: A slightly younger age group. They are characterised by the highest levels of happiness and satisfaction. Smoking is less common among them, and alcohol consumption is the lowest. They tend to take part in sport, but other physical activities are not at all characteristic of them. Their BMI is the lowest. In terms of dietary habits, they are the least favourable group. They consume vegetables, fruit and dairy products less frequently, whilst their consumption of sweets is the highest. The onset of physical symptoms is not at all typical of them. Their social support is good.

Risk-takers: Proportionally, the highest number of men are in this group. This group has the highest number of smokers and alcohol consumers. They attend screening tests less frequently. They do not exercise. Their BMI is the highest. They are the least health-conscious. They are not motivated to avoid ill health or maintain their health. They feel they have little control over their health and tend to attribute changes in their health status to external factors.

High vulnerability group: The group with the highest average age. Their subjective assessment of their health is the most unfavourable in this group. The occurrence of physical symptoms is most common in this group. Their participation in screening tests is the highest. Their health-related anxiety is the highest, alongside low health-related self-assessment. They are the most pessimistic regarding both their current health status and its future prospects. Of all the clusters, they receive the least support.

Health-conscious: Their subjective health status is the most favourable. This group has the fewest smokers. They exercise the most and pay the most attention to their eating habits. They are characterised by the highest consumption of vegetables, fruit and dairy products, alongside the lowest consumption of sweets. Their BMI is lower. They are best characterised by health consciousness. At the same time, they are the least happy and satisfied group. Their social support is good.

IV. Discussion

Overall, the results of the study suggest that the health status of police officers in Szabolcs-Szatmár-Bereg County is favourable, and elements of health-conscious behaviour are present; however, certain risk factors – particularly smoking, sport and physical activity, as well as dietary habits – warrant further intervention.

The main limitations of the research include the fact that it is fundamentally descriptive in nature, and therefore unsuitable for exploring causal relationships. The questionnaire is based on self-reporting, which carries the potential for bias. When compiling the questionnaire, I based it on the questionnaires used in the Elef2019 and Hungarostudy 2013 studies, which have changed over time. The composition of the questionnaire must therefore be revised for future use, and further consideration is required regarding the Social Support and Health Orientation questionnaires in terms of their usability and the applicability of their theoretical

background. Recommendations are formulated at the end of the thesis, both from an organisational perspective and from an individual standpoint. The main pillars of the organisational approach highlighted are organisational communication, training, the role of managers, and the norms established for health as a value. The individual approach is framed in terms of a health promotion team, as the police force includes a doctor, dentist, psychologist, sports officer and occupational health and safety inspector. In both approaches, I was able to build on the police force's existing resources. Specifically regarding hypertension, I also formulated recommendations in line with the literature. The clusters identified during the research enabled me to formulate specific recommendations based on health behaviours and lifestyle, whilst establishing an order of priority.

The novelty of the research lies in the fact that it focused on a population that has not previously been the subject of research in such detail. No research has

yet been conducted among professional police officers within the police force to map their health behaviours; in this sense, the research fills a gap.

I hope that this research will contribute to a comprehensive understanding of the health behaviours and psychological health orientation of law enforcement personnel, which may provide a basis for the design of targeted health promotion programmes.

References

- Ahn, S. V., Ro, H. & Lee, S. (2023). Changes in health behaviors following a hypertension diagnosis: The Korean genome and epidemiology study (2003-2018). *Journal of Hypertension*, 41(3) Abstract
<https://doi.org/10.1097/01.hjh.0000941248.05294.09>
- Allender, S., Scharbotough, P., Peto, V., Rayner, M., Leal, J., Luengo-Fernández R. & Gray A. (2008). *European cardiovascular disease statistics: 2008 edition*. London British Heart Foundation
- Balku E. & Vitrai J. (2016). Egészségkommunikációs Felmérés Eredményei I.– Felnőtt felmérés. *Egészségfejlesztés*, 57 (2), 2-18.
<http://dx.doi.org/10.24365/ef.v57i2.32>.
- Balku E., Tóth G., Nárai E., Zsiros E., Varsányi P. & Vitrai J. (2017). Methodology for identification of healthstyles for developing. *Journal of Public Health*. 25, 387–400.
<https://doi.org/10.1007/s10389-017-0799-y>.

Barros, A. A., Guedes, M. V. C., Moura, D. de J. M., Menezes, L. C. G. de, Aguiar, L. L. & Xavier, G. A. (2014). Health behaviors of people with hypertension: health belief model. *Rev Rene*, 15(3) <https://doi.org/10.15253/2175-6783.2014000300018>.

Berencsiné Madácsi, E., Bokor A. & Jávorné Erdei, R. (2013). Milyen a nyíregyházi nők vélt egészsége és szűrési hajlandósága 2012-ben? *Acta Medicinae et Sociologica*. 4(10), 171-182. <https://doi.org/10.19055/ams.2013.4/10/12>.

Birkás B., Tóth G., Balku E., Nárai E., & Vitrai J. (2020). Defining healthstyles to plan behavior change interventions in representative samples of children and adults. *Psychology, Health & Medicine*. 26(5), 566-570. <https://doi.org/10.1080/13548506.2020.1762903>

Borbély Zs., (2019b). Egészségmagatartás és mentális egészség - nemi különbségek a munkahelyi stressz megélésében. *Belügyi Szemle*, 67(7-8), 37-50. <https://doi.org/10.38146/BSZ.2019.7-8.3>.

Boros, J. (2005). *Egészségmagatartás*. Budapest: Országos Epidemiológiai Központ.

Boros, J. (2019). *A felnőtt magyar népesség egészségmagatartása*. [Nem publikált doktori disszertáció] Pécsi Tudományegyetem Bölcsészettudományi Kar Demográfiai és Szociológiai Doktori Iskola

Brys Z., Tóth G., Urbán R., Vitrai, J., Magyar G., Bakacs M., Berezvai Z., Ambrus Cs. & Péntes M. (2022). A dohányzás és az e-cigaretta-használat epidemiológiája a felnőtt magyar népesség körében 2018-ban. *Orvosi Hetilap*, 168(1), 31-38.
<https://doi.org/10.1556/650.2022.32319>.

Chauhan, V. S., Bansal, M., Sharma, V. & Gupta, R. (2022). Prevalence and Risk Factors of Hypertension among Police Personnel of District Gwalior- A Cross Sectional Study. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 47(3), 379–385.
https://doi.org/10.4103/ijcm.ijcm_1154_21.

Chowdhury, R., Shah, D., & Payal, A. R. (2017). Healthy Worker Effect Phenomenon: Revisited with Emphasis on Statistical Methods - A Review. *Indian journal of occupational and environmental medicine*, 21(1), 2–8 .

https://doi.org/10.4103/ijoom.IJOEM_53_16

Conry, M. C., Morgan, K., Curry, P., McGee, H., Harrington, J., Ward, M. & Shelley, E. (2011). The clustering of health behaviours in Ireland and their relationship with mental health, self-rated health and quality of life. *BMC Public Health*, 11, 692.

<https://doi.org/10.1186/1471-2458-11-692>.

Ding, D., Rogers, K., van der Ploeg, H., Stamatakis, E. & Bauman, A. E. (2015). Traditional and Emerging Lifestyle Risk Behaviors and All-Cause Mortality in Middle-Aged and Older Adults: Evidence from a Large Population-Based Australian Cohort. *PLoS Medicine*, 12(12),

<https://doi.org/10.1371/journal.pmed.1001917>.

Döbrössy B., Susánszky A., Boros J. & Girasek E. (2022). A mammográfiás emlőszűrésen való

részvételt befolyásoló tényezők. In Engler Á., Purebl Gy., Susánszky É. & Székely A. (szerk.) *Magyar Lelkiállapot 2021. Család-Egészség-Közösség. Hungarostudy 2021 Tanulmányok.* (pp. 311-332). KINCS Kopp Mária Intézet a népesedésért és a családokért.

Dürgő H. (2024) Cikkismertetés: Az oktatás és az egészségmagatartás relatív jelentősége az egészség és a jóllét szempontjából. *Multidiszciplináris Egészség és Jóllét*, 2(1), 36-41.
<https://doi.org/10.58701/mej.14960>.

EHIS European health interview survey Eurostat. Statistic explained. (2019).

[https://ec.europa.eu/euro%20C2%ACstat/statistics-explained/index.php?title=Glossary:European_%20health_interview_survey_\(EHIS\)](https://ec.europa.eu/euro%20C2%ACstat/statistics-explained/index.php?title=Glossary:European_%20health_interview_survey_(EHIS))

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Elekes Zs., Németh Á. & Paksi B. (2023). Önbevallásos vizsgálatok Magyarországon. In Elekes Zs. (szerk) *Alkoholhelyzet Magyarországon. Tények, adatok, elemzések.*

- (pp.231-324). ELTE PPK - LHarmattan Kiadó, 2023.
- Engel, G. L. (1980). The clinical application of the biopsychosocial model. *The American Journal of Psychiatry*. 137(5), 535-544.
- Erdős Á. (2022a). A rendészeti felsőoktatás hallgatóinak dohányzási szokásai. *Scientia et Securitas*, 3(1), 61-68.
<https://doi.org/10.1556/112.2022.00079>.
- Erdős Á. (2022b). Kockázatos alkoholfogyasztás a rendészeti hallgatók körében. *Belügyi Szemle*, 70(6), 1257-1272.
<https://doi.org/10.38146/BSZ.2022.6.7>
- Erdős Á. (2024). A fiatal rendőrök alkoholfogyasztása és az alkoholhasználat motivációja. *Szociológiai Szemle*. 34(1), 28-47.
<https://doi.org/10.51624/SzocSzemle.2024.1.2>
- Faragó I. (2013). *Fiatal felnőttek dentális egészségének és az ezzel összefüggő tényezők kapcsolatának vizsgálata rendészeti szakközépiskolában* . [Nem publikált doktori

értekezés] Semmelweis Egyetem, Klinikai
Orvostudományok Doktori iskola.

Fleary, S. E. & Nigg, R. C. (2019). Trends in Health
Behavior Patterns among US Adults, 2003–2015.
Annals of Behavioral Medicine, (1), 1-15.

<https://doi.org/10.1093/abm/kay010>

Galán, I., Rodríguez-Artalejo, F., Tobías, A., Díez-
Gañán, L., Gandarillas, A. & Zorrilla, B. (2005).
Clustering of behavior-related risk factors and its
association with subjective health. *Gaceta
Sanitaria*, 19(5). 370-378.

<https://doi.org/10.1157/13080135>

Garbarino, S. & Magnavita, N. (2015). Work Stress
and Metabolic Syndrome in Police Officers. A
Prospective Study. *PloS one*, 10(12), e0144318.

<https://doi.org/10.1371/journal.pone.0144318>

GBD, 2019 Tobacco Collaborators (2021). Spatial,
temporal, and demographic patterns in prevalence
of smoking tobacco use and attributable disease
burden in 204 countries and territories, 1990-2019:
a systematic analysis from the Global Burden of

- Disease Study 2019. *Lancet* (London, England), 397(10292), 2337–2360.
[https://doi.org/10.1016/S0140-6736\(21\)01169-7](https://doi.org/10.1016/S0140-6736(21)01169-7)
- Gee, M. E., Bienek, A., Campbell, N. R., Bancej, C. M., Robitaille, C., Kaczorowski, J., Joffres, M., Dai, S., Gwadry-Sridar, F., & Nolan, R. P. (2012). Prevalence of, and barriers to, preventive lifestyle behaviors in hypertension (from a national survey of Canadians with hypertension). *The American journal of cardiology*, 109(4), 570–575.
<https://doi.org/10.1016/j.amjcard.2011.09.051>.
- Gordos M. (2022). Az Országos Rendőr-főkapitányság dolgozóinak fittségi állapota és életminősége közötti összefüggések. *Rendvédelem*. 11(1), 39-48.
<https://doi.org/10.53793/RV.2022.1.3>.
- Hüse L. (2015). A szubjektív egészségi állapot tényezői és azok változása Nyíregyházán és vonzáskörzetében. *Acta Medicinae et Sociologica*. 6(18-19), 96-120.
<https://doi.org/10.19055/ams.2015.6/18-19/7>

- Irizar, P., Gage, S.H., Fallon, V. & Goodwin, L. (2022). A latent class analysis of health risk behaviours in the UK Police Service and their associations with mental health and job strain. *BMC Psychiatry* 22. 426. <https://doi.org/10.1186/s12888-022-04054-3>
- Jávoriné Erdei R. & Takács P. (2018). Szubjektív egészségi állapot és annak változásai Nyíregyházán. *Acta Medicinae et Sociologica*, 9(27), 96-109. <http://dx.doi.org/10.24365/ef.v60i5.524>
- Jávoriné Erdei R., R. Fedor A. & Berencsiné Madács E. (2014). A nyíregyházi lakosok szubjektív egészségi állapota és annak változásai. *Acta Medicinae et Sociologica*, 5(12-13), 189-206.
- Jessor R. (1991). Risk behavior in adolescence: a psychosocial framework for understanding and action. *The Journal of adolescent health : official publication of the Society for Adolescent Medicine*, 12(8), 597–605. [https://doi.org/10.1016/1054-139x\(91\)90007-k](https://doi.org/10.1016/1054-139x(91)90007-k)

Juhász Zs. (2011). *A magyar katonák külföldi katonai szolgálatra történő fizikai alkalmasságvizsgálatának tapasztalatai*. [Nem publikált doktori értekezés] Zrínyi Miklós Nemzetvédelmi Egyetem. Bolyai János Hadmérnöki Kar Hadmérnöki Doktori Iskola

<https://doi.org/10.17625/NKE.2012.009>

Kopp M., Skrabski Á. & Neukem L. (1992). Magyar lelkiállapot. Végeken Alapítvány.

Kopp Mária Intézet. (2022). *A magyarok testi és lelki egészségét leíró főbb mutatók a Hungarostudy felmérések adatai alapján (2006, 2013, 2021)*. KINCS Kopp Mária Intézet a Népesedésért és a Családokért.

[https://www.koppmariaintezet.hu/docs/A_magyarok_testi_es_lelki_egeszseget_leiro_fobb_mutatok_a_Hungarostudy_felmeresekek_adatai_alapjan_\(2006,%202013,%202021\).pdf](https://www.koppmariaintezet.hu/docs/A_magyarok_testi_es_lelki_egeszseget_leiro_fobb_mutatok_a_Hungarostudy_felmeresekek_adatai_alapjan_(2006,%202013,%202021).pdf)

(letöltés

ideje:2024.12.16.)

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2002). The PHQ-15: validity of a new measure for

evaluating the severity of somatic symptoms.
Psychosomatic medicine ,64(2), 258–266.
<https://doi.org/10.1097/00006842-200203000-00008>

KSH, Központi Statisztikai Hivatal (2019i).
Alkoholfogyasztás, 2019.
https://www.ksh.hu/docs/hun/xftp/idoszaki/elef/alkoholfogyasztas_2019/index.html#tovbbiadatokinformcik. (letöltés:2024.12.18.)

KSH, Központi Statisztikai Hivatal. (2019a). Európai
Lakossági egészségfelmérés. A KSH kapcsolódó
kiadványai, adatai. Vélt egészség (excell táblázat)
<https://www.ksh.hu/elef/archiv/2019/kiadvanyok.html>

KSH, Központi Statisztikai Hivatal. (2019b).
Fenntartható fejlődési célok. Az egészséges élet
biztosítása és a jóllét előmozdítása minden
korosztály valamennyi tagjának.
Alkoholfogyasztás. Alkoholfogyasztási szokások,
2019. <https://www.ksh.hu/sdg/1-15-sdg-3.html>
(letöltés:2024.12.18.)

KSH, Központi Statisztikai Hivatal. (2019c).
Tehetünk az egészségünkért. Szűréseken való
részvétel.

https://www.ksh.hu/docs/hun/xftp/idoszaki/elef/te_2019/index.html#szrsekenvalrszvtel

(letöltés:2024.11.30.)

KSH, Központi Statisztikai Hivatal. (2019d)
Dohányzási szokások 2019.

https://www.ksh.hu/docs/hun/xftp/idoszaki/elef/dohanyzas_2019/index.html (letöltés: 2024.01.20.)

KSH, Központi Statisztikai Hivatal. (2019e). Európai
Lakossági egészségfelmérés. A KSH kapcsolódó
kiadványai, adatai. Dohányzás (excell táblázat)

<https://www.ksh.hu/elef/kiadvanyok.html>

(letöltés:2024.01.20.)

KSH, Központi Statisztikai Hivatal. (2019h).

Letöltések, módszertan és kapcsolódó adatok. A
népesség megoszlása alkoholfogyasztási szokások
szerint

https://www.ksh.hu/stadat_files/ege/hu/ege0038.html (letöltés: 2024.12.18)

KSH, Központi Statisztikai Hivatal. (2019f).
Táplálkozás, tápláltság, 2019.
[https://www.ksh.hu/docs/hun/xftp/idoszaki/elef/ta
plalkozas_2019/](https://www.ksh.hu/docs/hun/xftp/idoszaki/elef/ta
plalkozas_2019/) (letöltés:2024.12.06.)

KSH, Központi Statisztikai Hivatal. (2019g).
Fenntartható fejlődés indikátorai. A túlsúlyosak
aránya. [https://ksh.hu/s/kiadvanyok/fenntarthato-
fejlozes-indikatorai-2023/1-20#3-abra](https://ksh.hu/s/kiadvanyok/fenntarthato-
fejlozes-indikatorai-2023/1-20#3-abra)
(letöltés:2024.12.15.)

KSH, Központi Statisztikai Hivatal. (2019j).
Testmozgás, 2019.
[https://www.ksh.hu/docs/hun/xftp/idoszaki/elef/te
stmozgas_2019/index.html](https://www.ksh.hu/docs/hun/xftp/idoszaki/elef/te
stmozgas_2019/index.html) (letöltés:2024.12.15.)

KSH, Központi Statisztikai Hivatal. (2020).
Magyarország 2019. Budapest.
[https://www.ksh.hu/evkonyvek/2019/magyarorsza
g-2019/pdf/magyarország_2019.pdf](https://www.ksh.hu/evkonyvek/2019/magyarorsza
g-2019/pdf/magyarország_2019.pdf)
(letöltés:2025.09.30.)

KSH, Központi Statisztikai Hivatal. (2024).
Fenntartható fejlődés indikátorai. Krónikus
betegségek előfordulási aránya az

- össztlakosságszám arányában.
- <https://ksh.hu/kiadvanyok/fenntarthato-fejlodes-indikatorai/2024/1-17> (letöltés:2025.02.01)
- Lockie, R. G., Dawes, J. J., & Orr, R. M. (2022). Health and fitness data for police officers within a health and wellness program: Implications for occupational performance and career longevity. *WORK*, 73(3), 1059–1074. <https://doi.org/10.3233/WOR-211089>
- Mácsár G., Bognár J. & Plachy J. (2017). Sportolási és életmódszokások kérdőíves vizsgálata a Budapesten szolgálatot teljesítő rendőrállomány körében. *Recreation*, 7(3), 13–15. <https://doi.org/10.21486/recreation.2017.7.3.1>
- Magnavita, N., Capitanelli, I., Garbarino, S. & Pira, E. (2018). Work-related stress as a cardiovascular risk factor in police officers: a systematic review of evidence. *International archives of occupational and environmental health*, 91(4), 377–389. <https://doi.org/10.1007/s00420-018-1290-y>

Mawditt, C., Sacker, A., Britton, A., Kelly, Y. & Cable, N. (2016). The clustering of health-related behaviours in a British population sample: Testing for cohort differences. *Preventive Medicine*, 88, 95-107.

<https://doi.org/10.1016/j.ypmed.2016.03.003>

McMichael A. J. (1976). Standardized mortality ratios and the "healthy worker effect": Scratching beneath the surface. *Journal of Occupational Medicine*, 18(3), 165–168.

<https://doi.org/10.1097/00043764-197603000-00009>

MDOSZ (2021). Magyar Dietetikusok Országos Szövetsége Okostányér

<https://mdosz.hu/hun/wp-content/uploads/2016/03/okostanyer.pdf>

(letöltés:2024.12.03.)

Meador, N., King, K., Moe-Byrne, T., Wright, K., Graham, H., Petticrew, M., Power, C., White, M. & Sowden, A. J. (2016). A systematic review on the clustering and co-occurrence of multiple risk

- behaviours. *BMC Public Health*, 16, 657.
<https://doi.org/10.1186/s12889-016-3373-6>
- Monostori J., Őri P. & Spéder Zs. (2021). *Demográfiai portré 2021. Jelentés a magyar népesség helyzetéről.* KSH Népeségtudományi Kutatóintézet.
- Mudryj, A. N., Riediger, N. D. & Bombak, A. E. (2019). The relationships between health-related behaviours in the Canadian adult population. *BMC Public Health*, 19, 1359.
<https://doi.org/10.1186/s12889-019-7674-4>
- Nárai E. (2009). *Egészségstílus szegmentáció, egészség-attitűdök.* [Nem publikált doktori értekezés] Eötvös Lóránd Tudományegyetem, Pedagógiai és Pszichológiai Kar Pszichológiai Doktori Iskola.
- Nemcsik J., Takács J., Pásztor D., Farsang Cs., Simon A., Páll D., Torzsa P., Dolgos Sz., Koller Á., Habony N. & Járαι Z. (2024). A rendelői vérnyomásmérések gyakorisága és a vérnyomás szezonális ingadozása hazánkban: a Magyar

Hipertónia Regiszter eredményei. *Hypertonia és Nephrologia*, 28(4), 152-158.

<https://doi.org/10.33668/hn.28.023>

Neutel, C. I. & Campbell, N. (2008). Changes in lifestyle after hypertension diagnosis in Canada. *The Canadian journal of cardiology*, 24(3), 199–204. [https://doi.org/10.1016/s0828-282x\(08\)70584-1](https://doi.org/10.1016/s0828-282x(08)70584-1).

Noble, N., Paul, C., Turon, H. & Oldmeadow, C. (2015). Which modifiable health risk behaviours are related? A systematic review of the clustering of Smoking, Nutrition, Alcohol and Physical activity ('SNAP') health risk factors. *Preventive medicine*, 81, 16–41. <https://doi.org/10.1016/j.ypmed.2015.07.003>

Novák A., Nyakas Cs., Rázsó Zs. & Sótér A. (2019). Egészségmagatartási tényezők klaszteranalízise a Magyar Honvédségben. *Testnevelés, sport, tudomány*, 4(3-4), 42-52. <https://doi.org/10.21846/TST.2019.3-4.4>

- Olsen, J. A., Chen, G. & Lamu, A. N. (2023). The relative importance of education and health behaviour for health and wellbeing. *BMC Public Health*, 23(1), <https://doi.org/10.1186/s12889-023-16943-7>
- Paksi B. & Arnold P. (2021). Alkoholfogyasztás. In Paksi B. & Demetrovics Zs. (szerk.), *Addiktológiai problémák Magyarországon. Helyzetkép a lakossági kutatások tükrében. I. Szerhasználó magatartások.* (pp. 106-143). ELTE PPK - LHarmattan Kiadó.
- Paksi B., Pillók P., Magi A., Demetrovics Zs. & Felvinczi K. (2021). Az Országos Lakossági Adatfelvétel az Addiktológiai Problémákról 2019 (OLAAP) reprezentatív lakossági felmérés módszertana. *Neuropsychopharmacologia Hungarica*. 23(1), 184-207.
- Papdi J. Á. & Rikkné Benkei R. (2011). Hogyan mértük fel a lakosság egészségi állapotát? *Területi statisztika*. 51(3), 297-306.

Pitsavos, C., Milias, G. A., Panagiotakos, D. B., Xenaki, D., Panagopoulos, G. & Stefanadis, C. (2006). Prevalence of self-reported hypertension and its relation to dietary habits, in adults; a nutrition & health survey in Greece. *BMC public health*, 6(206), <https://doi.org/10.1186/1471-2458-6-206>.

Rabel, M., Laxy, M., Thorand, B., Peters, A., Schwettmann, L. & Mess, F. (2019). Clustering of Health-Related Behavior Patterns and Demographics. Results From the Population-Based KORA S4/F4 Cohort Study. *Frontiers in Public Health*, (6), 387.

<https://doi.org/10.3389/fpubh.2018.00387>

Rákóczi I., Sárváry A., Gyulai A., Takács P. & Jávorné Erdei, R. (2019). A felnőtt lakosság dohányzási szokásai Nyíregyházán. *Egészségfejlesztés*, 60(5), 76-86. <https://doi.org/10.24365/ef.v60i5.522>

Sárváry A., Szelesné Árokszállási A., Gyulai A. & Jávorné Erdei R. (2019). Nyíregyháza felnőtt lakosságának táplálkozási szokásai, tápláltsági

- állapota. *Egészségfejlesztés*. 60(5), 28-35.
<https://doi.org/10.24365/ef.v60i5.515>
- Scheltens, T., Beulens, J. W., Verschuren, W. M., Boer, J. M., Hoes, A. W., Grobbee, D. E. & Bots, M. L. (2010). Awareness of hypertension: will it bring about a healthy lifestyle? *Journal of human hypertension*, 24(9), 561–567.
<https://doi.org/10.1038/jhh.2010.26>.
- Schuit, A. J., van Loon, A. J., Tijhuis, M. & Ocké, M. (2002). Clustering of lifestyle risk factors in a general adult population. *Preventive medicine*, 35(3), 219–224.
<https://doi.org/10.1006/pmed.2002.1064>
- Silva, D. A., Peres, K.G., Boing, A.F., González-Chica, D. A. & Peres, M.A. (2013). Clustering of risk behaviors for chronic noncommunicable diseases: a population-based study in southern Brazil. *Preventive Medicine*. 56(1), 20-24.
<https://doi.org/10.1016/j.ypmed.2012.10.022>
- Snell, W. E., Johnson, G., Lloyd, P. J., & Hoover, M. W. (1991). The Health Orientation Scale: A

measure of psychological tendencies associated with health. *Journal of Personality*, 5(2), 169-183.
<https://doi.org/10.1002/per.2410050208>

Steptoe, A. & McMunn, A. (2009). Health behaviour patterns in relation to hypertension: the English Longitudinal Study of Ageing. *Journal of hypertension*, 27(2), 224–230.
<https://doi.org/10.1097/HJH.0b013e3283193e6e>.

Susánszky É. & Székely A. (2013). A Hungarostudy 2013 felmérés módszertana. In Susánszky, É., & Szántó, Zs. (szerk.), *Magyar Lelekiállapot 2013*. (pp.13-21). Semmelweis Kiadó.

Susánszky É., Székely A., Szabó G., Szántó Zs., Klinger A., Konkolý Thege. B. & Kopp M. (2007). A HUNGAROSTUDY egészség panel (HEP) felmérés módszertani leírása. *Mentálhigiéne és Pszichoszomatika*, 8(4), 259-276.
<https://doi.org/10.1556/Mental.8.2007.4.1>

Susovits K., Bakacs M., Illés É., Feigl E. & Zenta A. (2022). „Az vagy amit megeszel”- Az egészségvesztést okozó kockázati tényezők

megértése. Hazai táplálkozási felmérések legújabb eredményei - Tények, összefüggések az OTÁP és a COSI vizsgálatok tükrében OGYÉI Országos Gyógyszerészeti és Élelmezés-egészségügyi Intézet

https://ogyei.gov.hu/dynamic/12_az_vagy_am_it_megeszel_az_egeszseg_veszteseget_okozo_ko_ckazat (letöltés ideje: 2024.12.06.)

Szabó G., Susánszky É. & Szánt, Zs. (nd). *Magyarország közérzete. 25 év a lelkiállapot tükrében.*

https://www.hungarostudy.hu/files/magyarorszag_kozerzete_teljes2.pdf (letöltés ideje: 2025.02.25.)

Szakály Z., Pető K., Soó M. & Szenté V. (2013). Az életstílus hatása az egészségmagatartásra és a funkcionális élelmiszerek fogyasztására. *Élelmiszer, Táplálkozás és Marketing*, 9(1), 3-11.

Szakály Z., Szabó S., Jasák H., Szenté V. & Kiss M. (2014). A személyes értékek hatása az egészségmagatartás változására és a tudatos

élelmiszervásárlásra. *Táplálkozásmarketing*, 1(1-2), 57-71. <https://doi.org/10.20494/TM/1/1-2/9>

Teleki Sz. Á. (2022). *Szív-ügyünk- A szívkoszorúér-megbetegedések bio-pszicho-szociális szempontjai, az elsődleges, másodlagos és harmadlagos megelőzés lehetőségei*. Budapest. Akadémia Kiadó

Tobias, M., Jackson, G., Yeh, L. C. & Huang, K. (2007). Do healthy and unhealthy behaviours cluster in New Zealand? *Australian and New Zealand Journal of Public Health*, 31(2), 155-163. <https://doi.org/10.1111/j.1753-6405.2007.00034.x>

Töröcsik M., Szűcs K., Nagy Á. & Lázár E. (2019). Életstíluscsoportok Magyarországon a digitalizáció korában. Életstílus kutatások és a marketing. *Replika*, (111), 63-86. <http://doi.org/10.32564/111.5>

Urbán R. & Péntes M. (2021). Dohányzás és e-cigaretta-használat. In Paksi B. & Demetrovics Zs. (szerk.), *Addiktológiai problémák Magyarországon. Helyzetkép a lakossági*

- kutatások tükrében. I. Szerhasználó magatartások.* (pp.166-197). LHarmattan Kiadó.
- V.Dionato, F. A., Enes, C. C. & Nucci, L. B. (2021). Factors associated with not adopting healthy behavior among hypertensive individuals: a population-based study in Brazil. *Journal of human hypertension*, 35(8), 718–725.
<https://doi.org/10.1038/s41371-020-0382-9>.
- Weir, C., B. & Jan, A. (2023). BMI Classification Percentile and cut off points. In Weir, C., B. & Jan, A. (Eds.), *Study Guide from StatPearls Publishing, Treasure Island (FL)*.
<https://www.ncbi.nlm.nih.gov/books/NBK541070/>
(letöltés ideje: 2024.09.25.)
- Wicaksana, A. L., Artawan, I. P. A. A. & Destiana, A. K. (2022). Health-promoting behaviors among hypertensive adult patients with and without comorbidities in Indonesia: a cross-sectional study. *Frontiers of Nursing*, 9(3), 255-261
<https://doi.org/10.2478/fon-2022-0031>.

Zimmerman, H. F. (2012). Cardiovascular disease and risk factors in law enforcement personnel: a comprehensive review. *Cardiology in review*, 20(4), 159–166.

<https://doi.org/10.1097/CRD.0b013e318248d631>



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Doctoral School: Doctoral School of Human Sciences
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List of publications related to the dissertation

Hungarian scientific articles in Hungarian journals (3)

1. **Ambrusz, A.**, Németh, F., Borbély, Z., Malét-Szabó, E.: A szubjektív egészségi állapot és a dohányzás összefüggése rendfenntartó dolgozók körében.
Orv. hetil. 165 (15), 584-594, 2024. ISSN: 0030-6002.
DOI: <http://dx.doi.org/10.1556/650.2024.33006>
IF: 0.9
2. **Ambrusz, A.**, Borbély, Z., Malét-Szabó, E.: A kiegészítő vizsgálat a Szabolcs-Szatmár-Bereg Megyei Rendőr-főkapitányság hivatásos állománya körében.
Belügyi Szemle. 70 (12), 2569-2589, 2022. ISSN: 2062-9494.
DOI: <http://dx.doi.org/10.38146/BSZ.2022.12.2>
3. **Ambrusz, A.**, Pettyánszki, G., Malét-Szabó, E.: Egészségfejlesztés és egészségvédelem a Szabolcs-Szatmár-Bereg Megyei Rendőr-főkapitányság állományában.
Belügyi Szemle. 70 (7), 1507-1527, 2022. ISSN: 2062-9494.
DOI: <http://dx.doi.org/10.38146/BSZ.2022.7.9>

Foreign language scientific articles in international journals (2)

4. **Ambrusz, A.**, Borbély, Z., Malét-Szabó, E.: Health Behaviour of Police Officers in Relation to Hypertension. Observations from a Hungarian County.
Studia UBB Psychol.-Paed. 69 (1), 227-255, 2024. ISSN: 1221-8111.
DOI: <http://dx.doi.org/10.24193/subbpsyped.2024.1.12>
5. **Ambrusz, A.**: Relationships between smoking habits, subjective health status, life satisfaction, and happiness among the police officers of a Hungarian region.
Studia UBB Psychol.-Paed. 68 (1), 61-73, 2023. ISSN: 1221-8111.
DOI: <http://dx.doi.org/10.24193/subbpsyped.2023.1.03>

Hungarian conference proceedings (1)

6. **Ambrusz, A.**, Batizi, O., Borbély, Z., Malét-Szabó, E.: Társas támasz a nyugdíj előtt álló rendőrök körében.
Magy. gerontol. 15, 123-125, 2023. ISSN: 2062-3682.





Hungarian abstracts (6)

7. **Ambrusz, A.**, Malét-Szabó, E.: A mentális egészség megőrzése a rendvédelem területén.
Psychiatr Hung. 39 (Suppl.), 45, 2024. ISSN: 0237-7896.
8. **Ambrusz, A.**, Malét-Szabó, E.: A jelen lehetőségei és kihívásai az egészségfejlesztés.
In: Hogyan építsünk hidakat? Kérdések, kihívások, megoldások a pszichiátriában. A Magyar Pszichiátriai Társaság XXV. Vándorgyűlése. Absztrakt-kötet, Magyar Pszichiátriai Társaság, Budapest, 54-54, 2022.
9. **Ambrusz, A.**, Hajdú, N., Malét-Szabó, E.: A Rendvédelem hivatásos állományának egészségmagatartási szokásait feltérképező Prevenációs kérdőív tapasztalati.
In: XIV. Nemzetközi nyíregyházi doktorandusz és posztdoktori konferencia : Absztraktkötet. Szerk.: Rusinné Fedor Anita, Tóth Dalma, Zakor-Broda Rita, Debreceni Egyetem Egészségügyi Kar, Nyíregyháza, 67, 2022. ISBN: 9789634904755
10. **Ambrusz, A.**, Malét-Szabó, E.: Az áthajlás korúak egészségmegőrzési lehetőségei a Rendvédelemben.
Magy. gerontol. 14 (Kisz.), 58-60, 2022. ISSN: 2062-3682.
DOI: <http://dx.doi.org/>.
11. **Ambrusz, A.**, Borbély, Z., Malét-Szabó, E.: Idősödő rendvédelem.
Magy. gerontol. 13, 55-56, 2021. ISSN: 2062-3682.
DOI: <http://dx.doi.org/10.47225/mg/13/Kulonszam/10589>
12. **Ambrusz, A.**: Munkahelyi egészségpszichológiai tevékenység a Szabolcs-Szatmár-Bereg Megyei Rendőr-főkapitányságon.
In: Európai Unió Szakpolitikák Műhelykonferencia Absztraktkötet. Szerk.: Kiss Rebeka, Doktoranduszok Országos Szövetsége, Budapest, 16-16, 2021. ISBN: 9786158186766

Total IF of journals (all publications): 0,9

Total IF of journals (publications related to the dissertation): 0,9

The Candidate's publication data submitted to the Tudóstér have been validated by DEENK on the basis of the Journal Citation Report (Impact Factor) database.

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