

# Non-communicable diseases in Bulgaria: Knowledge, Behaviors, and Risk Profiles

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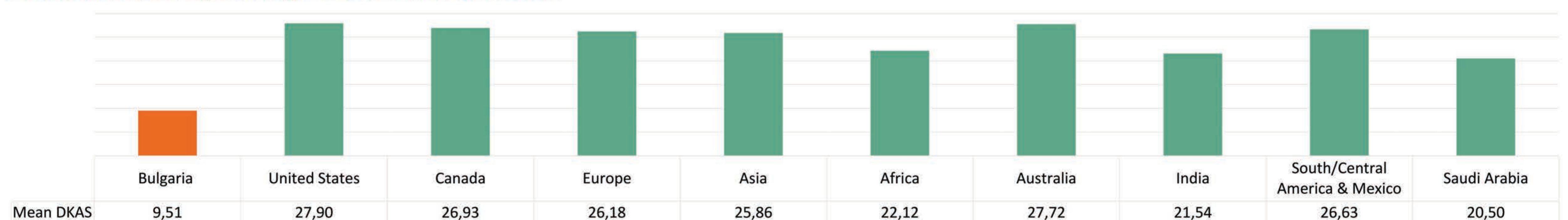
## INTRODUCTION

Non-communicable diseases (NCDs) are a global health issue causing millions of deaths annually. Despite the high prevalence, NCDs are considered preventable as the main risk factors contributing to their onset involve unhealthy diets, physical inactivity, smoking, and alcohol misuse. Bulgaria has one of the highest rates of premature mortality due to NCDs in the European Union, mostly attributed to poor lifestyle habits. Thus, a significant number of the cases in Bulgaria might be prevented through education and improved awareness on the topic. Unfortunately, community knowledge and concepts of these diseases in Bulgaria are poorly understood. In return, this limits the effectiveness of any interventional initiatives, since their success is heavily predicated on how well they capture the existing knowledge gaps.

## RESULTS

Only half of the respondents correctly recognised dementia symptoms from a vignette. The average DKAS score was 9.51. Dementia knowledge was linked to education, marital status, employment, ethnicity, experience with dementia, and informational sources. 56.7% of the respondents thought dementia was a normal part of ageing and 74.8% did not know a healthy lifestyle reduces the risk of dementia. The average number of identified risk factors was eight (out of 17), with many mistakenly citing dental fillings, laziness, and witchcraft as contributors to dementia.

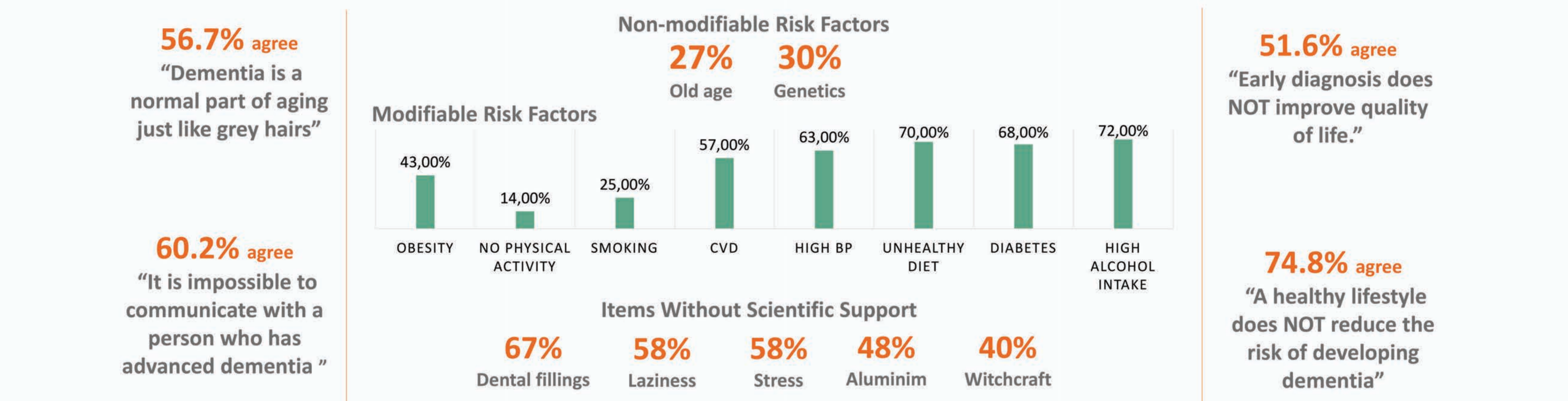
### Dementia knowledge in Bulgaria and around the world



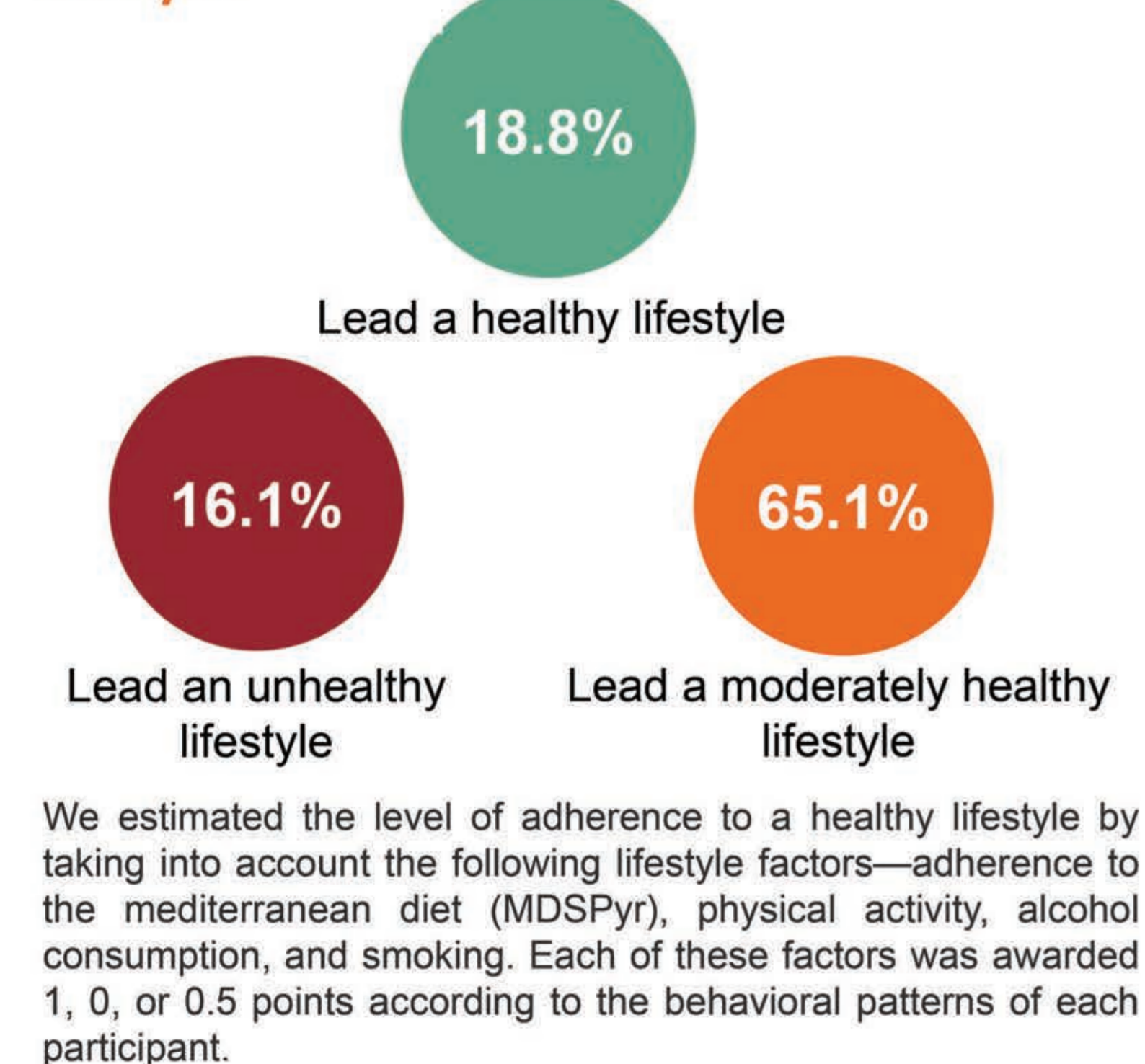
DKAS is a Likert scale questionnaire with 25 items, designed to structurally assess dementia knowledge. Participants were asked to express their (dis)agreement with each of the statements using a 5-point Likert scale, ranging from "false" to "true" with an auxiliary option "I don't know". The questionnaire has a total score of 50 points.

### Which items contribute to the onset of dementia?

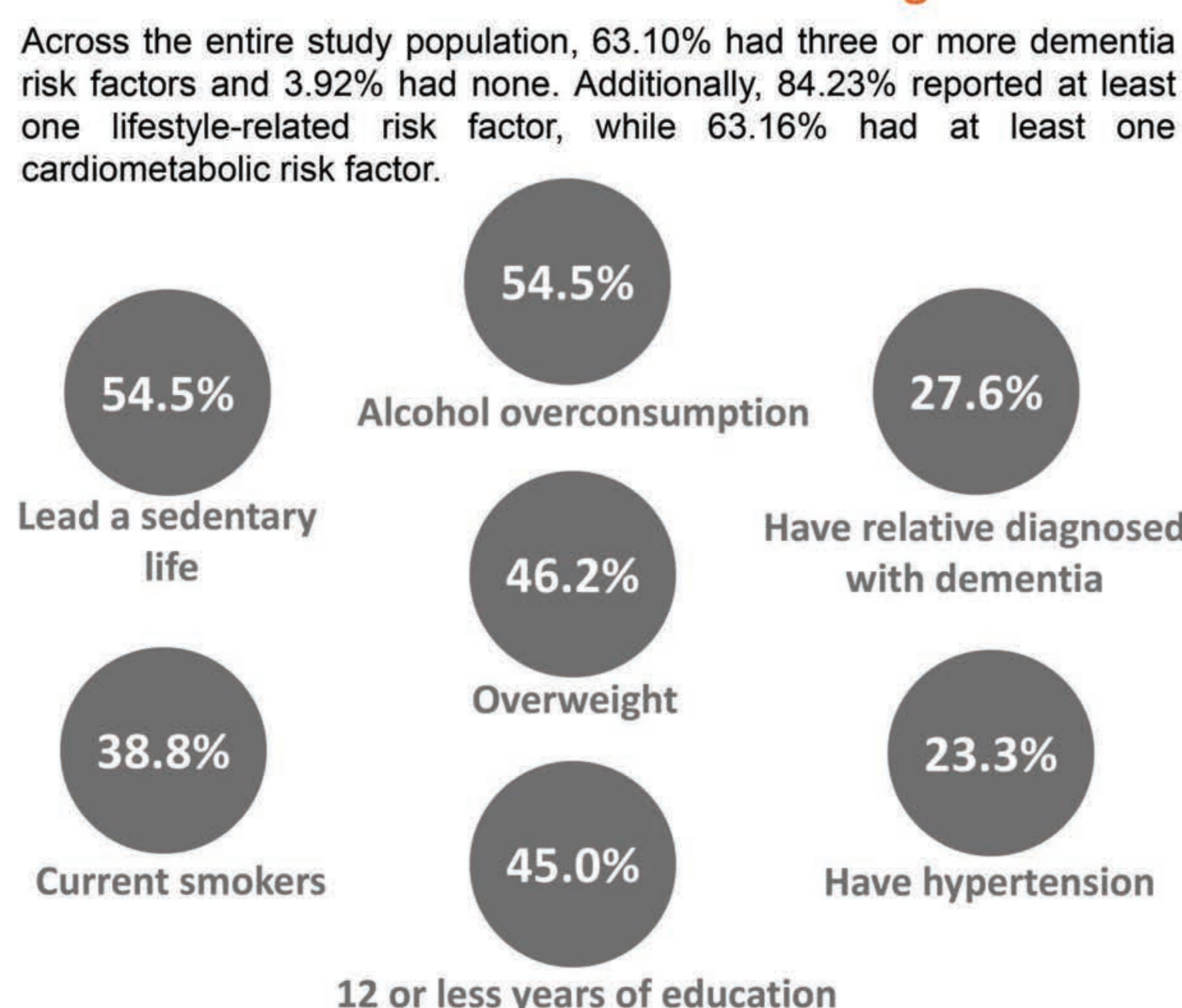
Selected items (32 items given in total). Percentage of individuals that marked the item as a contributor to dementia.



### Lifestyles



### Prevalence of dementia risk factors in Bulgaria



### Predictors of healthy lifestyle

Married individuals had 36% lower odds (OR = 0.639; 95% CI = 0.409, 0.997) of being in the healthy lifestyle group compared to single individuals and widowed individuals had over four times the odds (OR = 4.364; 95% CI = 1.426, 13.355) of having a healthy lifestyle compared to singles. Living with others was associated with higher odds of living a healthier lifestyle (OR = 1.707; 95% CI = 1.113, 2.619).

### NCDs and healthy lifestyle

Pre-obesity and obesity were associated with more than 20% lower odds of leading a healthy lifestyle. In contrast, those underweight had over 10 times the odds of having a healthy lifestyle compared to those with a normal BMI. Individuals with type 2 diabetes had 82% lower odds and those with insulin resistance had 61% lower odds of living healthily. Similarly, hypertension was associated with lower odds of achieving a healthy lifestyle (OR = 0.202; 95% CI = 0.128, 0.318). Interestingly, individuals diagnosed with cardiovascular disease had 71% higher odds of living healthily compared to those without such conditions.

## CONCLUSIONS

Most adult Bulgarians have a moderately healthy lifestyle with a lot of them consuming high amounts of alcohol, smoking, and/or leading a sedentary life. More research should be directed towards identifying the barriers to healthy living for different social groups including individuals diagnosed with NCDs. Additionally, Bulgarian society should be further educated on the importance of maintaining a healthy lifestyle in the prevention and management of NCDs. Furthermore, we found that the Bulgarian society has a poor understanding of dementia, holds stigmatic beliefs and false beliefs. These observations highlight the need for improved awareness and education. Policy-makers should prioritise dementia as a social issue and take coordinated actions to educate society and eradicate harmful misconceptions.

## PUBLISHED ARTICLES

Lazarova, S., & Petrova-Antonova, D. (2024). Establishing a unified global framework for studying dementia knowledge: Insights from a narrative review. *Archives of Public Health*, 82(1), 242. <https://doi.org/10.1186/s13690-024-01476-1>  
Lazarova, S., & Petrova-Antonova, D. (2025). Health-Promoting Behaviors in Bulgaria: A Cross-Sectional Study on Non-Communicable Diseases and Lifestyle. *Societies*, 25(2), 15. <https://doi.org/10.3390/soc15010015>  
Lazarova, S., & Petrova-Antonova, D. (2025). Gaps in dementia knowledge: a nationwide study of public awareness and misconceptions in Bulgaria. *PsychoGeriatrics*, 15(1), 15. <https://doi.org/10.1111/psvg.70016>