Type D Personality, Stress Level, Life Satisfaction, and Alcohol Dependence in Older Men

Grzegorz Bejda¹, Agnieszka Kulak-Bejda²*, Napoleon Waszkiewicz² and Elzbieta Krajewska-Kulak³

¹ The School of Medical Science in Białystok, Białystok, Poland; ² Department of Psychiatry, Medical University of Białystok, Białystok, Poland; ³ Department of Integrated Medical Care, Medical University of Białystok, Białystok, Poland

Alcohol consumption among older adults is becoming an increasing public health problem due to the rapidly growing elderly population. There is a theory that Type D personality is positively correlated with alcohol dependence. The study aimed to assess the style of coping with stress, emotions and anxiety in older men addicted to alcohol and the relationship between the above. The study included 170 men aged 60 years and older (mean age - 63 ± 3.1 years) addicted to alcohol staying in the Department of Alcohol Addiction Therapy for Men. They were tested with the questionnaire sheet and the following scales: Perceived Family Wealth (PFW), Family Affluence Scale (FAS), Cantril’s Ladder of Life Scale, Satisfaction with Life Scale, Type D Personality Scale-14 (DS14), and the 10-item Perceived Stress Scale (PSS-10). The respondents’ wealth on a scale of 1–5 points was assessed on avg. 3.1 ± 0.2. The above was confirmed by the results of the FAS scale study, where the respondents obtained an average of 3.9 ± 1.9 (min. 1, max. 8), which proves their average level of affluence. The evaluation of the satisfaction with life using Cantril’s Ladder showed that the respondents were also satisfied with life on average (on average 5.5 ± 1.9). The assessment of life satisfaction using the Satisfaction with Life Scale (SWLS) scale allowed for the conclusion that the respondents were very dissatisfied with their lives (mean 17.2 ± 4.9). The evaluation of the measurement of perceived stress (PSS-10 scale) showed that the respondents obtained an average of 23.5 ± 3.7, and on the sten scale, a mean of 7.7 ± 0.98, which proves a high level of perceived stress. The study using the DS14 scale showed that the respondents were in the negative emotionality (NE) subscale - 17.4 ± 4.5 points, and in the HS scale - 16.2 ± 3.2, which proves that they can be classified as a Type D personality. The participants were very dissatisfied with their lives, with a high perceived stress and Type D personality.

Keywords: elderly, alcohol dependence, stress, life satisfaction, personality
INTRODUCTION

Alcoholism, as a multidimensional phenomenon, can be considered in interdisciplinary categories, i.e., on the physiological, medical, psychiatric, psychological and social levels, due to both its specific conditions and specific consequences.

It should be emphasized that alcohol addiction becomes a social and medical problem in the case of older adults (1). The risk of developing alcohol problems does not decrease with age. Unfortunately, there are cases of medical misdiagnosis that attribute the effects of alcohol to the aging process, e.g., cognitive impairment, malnutrition and unsteady gait (1).

Alcohol use disorder (AUD) has been associated with neurodegenerative diseases such as Alzheimer’s and Parkinson’s disease (2). Prolonged excessive alcohol intake contributes to increased production of reactive oxygen species that trigger neuroimmune response and cellular apoptosis and necrosis via lipid peroxidation, mitochondrial, protein and DNA damage. In addition, long-term binge alcohol consumption upregulates the glutamate receptors, glucocorticoids. It reduces the reuptake of glutamate in the central nervous system, resulting in glutamate excitotoxicity and eventually mitochondrial injury and cell death.

In this review, we delineate the following principles in alcohol-induced neurodegeneration: (1) alcohol-induced oxidative stress; (2) neuroimmune response toward increased oxidants and lipopolysaccharide; (3) glutamate excitotoxicity and cell injury; (4) interplay between oxidative stress, neuroimmune response and excitotoxicity leading to neurodegeneration; and (5) potential chronic alcohol intake-induced development of neurodegenerative diseases, including Alzheimer’s and Parkinson’s disease.

The literature on the subject emphasizes that alcohol is the drug most often chosen by older adults, although the frequency of its consumption decreases with age. It should be remembered that the consumption of alcoholic beverages among people of post-working age is hazardous due to the more severe health consequences of drinking in this group than in younger people. High alcohol levels in the body last longer because these individuals experience a decline in muscle mass and increased body fat. Drinking large amounts of alcohol contributes to osteoporosis, liver cirrhosis, atherosclerosis and heart attack, neurological disorders and breast cancer. Also, alcohol consumption is hazardous among people who take medications or suffer from chronic diseases. Unfortunately, chronic, progressive disease, common in seniors, and the inability to accept it, may be an additional cause of addiction (3–5).

Reasons for reaching for alcoholic beverages may also be problems resulting from the aging process, dependence on other people, low social and economic status and loss of a close family member. People with problems of old age start drinking alcohol most often after reaching the age of 65, and the symptoms of intoxication are masked by the environment (5).

Gerstenkorn and Suwala (6) report that half of the seniors had exposure to alcohol in the year prior to their research to varying degrees. Karakiewicz et al. (7) emphasizes that 25% of men over 65 with heart disease drink up to four glasses of vodka a day.
equivalence (19). The type D personality is a vulnerability factor for future episodes of emotional stress such as depressive episodes, anxiety and addiction to alcohol (16, 17, 20, 21).

In a cross-sectional study, 862 participants (mean age 26.1 years) completed the Type D Personality Scale, Drinking Motives Questionnaire and Severity of Alcohol Dependence Questionnaire; Type D personality was positively correlated with alcohol dependence. Furthermore, this relationship was mediated by coping and conformity drinking motives (16). Williams et al. (17) studied whether Type D personality was associated with higher levels of alcohol use in a group of 138 young participants (mean age 31.8 years). Their results report that Type D was associated with higher levels of alcohol use, stress and desire for alcohol at stressor and recovery.

The present study aimed to assess the style of coping with stress, emotions and anxiety in elder men addicted to alcohol and the relationship between the above. Furthermore, the correlation of Type D personality with alcohol dependence was assessed.

The following research questions were formulated:

- Are people addicted to alcohol satisfied with their lives?
- What level of stress do they feel?
- Do they present Type D personality? People with negative emotionality, social withdrawal, prone to experiencing strong emotions (fear, anger, hostility or irritation), tend to avoid social contact for fear of lack of approval, with a tendency not to manifest their emotions and behavior.
- Is there a statistically significant relationship between the age of the respondents and life satisfaction, having a Type D personality and the stress level presented?

MATERIALS AND METHODS

Study Group

One hundred seventy men aged 60–68 years (mean age - 63 ± 3.1 years), mostly from a rural environment (78%), participated in the study. Twenty-two percentage of people who live in the city. The respondents had primary education (23%), vocational (45%), secondary (22%), or higher (10%). The respondents’ wealth on a scale of 1–5 points was 3.1. The type D personality is a vulnerability of the respondent's family (22%). Four questions form the basis of FAS: Does your family have a car or a multi-person car (van)? - response categories: no; yes one; yes, two or more; Do you have your room for your use? Response categories: no, yes. How many times in the last 12 months have you taken your family away from home for holidays or holidays? Response categories: I did not travel at all, once, two times, more than two times; and How many computers does your family have? Response categories: none, one, two, more. The FAS scale ranges from 0 to 7 points. For this study, it was divided into four ranges: 0–1 points (extremely poor families); 2–3 points (relatively poor); 4–5 points (average wealth); 6–7 points (wealthy families) (22).

The Satisfaction with Life Scale (SWLS) is five statements participants may agree or disagree with. Instructions are as follows: Using the 1–7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in responding: 7—Strongly agree; 6—Agree; 5—Slightly agree; 4—Neither agree nor disagree; 3—Slightly disagree; 2—Disagree; 1—Strongly disagree (23). The scores obtained were summed up, and the overall result was the participant’s degree of satisfaction with his own life. The range of results could be from 5 to 35 points; the higher the score, the greater the sense of satisfaction with life: 31–35 points—extremely satisfied; 26–30 points—satisfied; 21–25 points—slightly satisfied; 20 points—neutral; 15–19 points—slightly dissatisfied; 10–14 points—dissatisfied; 5–9 points—extremely dissatisfied. In the interpretation of the result, the properties characterizing the sten scale were also applied. Results in the ranges 1–4 of the sten were treated as low; 7–10 as high; and 5 and 6 as average. The reliability index (Cronbach's alpha) of SWLS is 0.81. The scale stability index, determined in the double study of 30 people with an interval of 6 weeks, was 0.86 (23).

Cantril's Ladder (self-anchoring scale) has a graphical form of a ladder, with steps marked with consecutive numbers from 0 to 10. Next to the ladder, a text explains that the top (10) is the best life there can be, and the bottom (0) is the worst life (24, 25). The respondent is to decide what his life is like at the moment and put an X in the appropriate place on the ladder. It is assumed that 0–5 points are obtained by people dissatisfied with their life; 6–8 points—average satisfaction; 9–10 points—very satisfied (24, 25).

The PSS10 contains 10 questions about various subjective feelings related to personal problems and events, behaviors and ways of coping (23). The respondents answered by entering the
**TABLE 1 | Assessment of life satisfaction of the respondents assessed using the SWLS scale.**

| Item                                                                 | Strongly agree | Agree | Slightly agree | Neither agree nor disagree | Slightly disagree | Disagree | Strongly disagree |
|----------------------------------------------------------------------|----------------|-------|----------------|----------------------------|-------------------|----------|------------------|
| In most ways, my life is close to my ideal                           |                |       |                |                            |                   |          |                  |
| The conditions of my life are excellent                              | 17.6%          | 29.4% | 17.6%          | 17.6%                      | 11.8%             | 11.8%    | 23.4%            |
| I am satisfied with my life                                          | 11.8%          | 29.4% | 17.6%          | 17.6%                      | 11.8%             | 11.8%    | 5.9%             |
| So far I have gotten the important things I want in life             | 5.9%           | 17.6% | 41.2%          | 29.4%                      | 5.9%              |          |                  |
| If I could live my life over, I would change almost nothing          | 17.6%          | 11.8% | 17.6%          | 29.4%                      | 23.6%             |          |                  |

The study included 170 men treated in the Alcohol Addiction Therapy Department for Men. The longest duration of alcohol consumption was 35 years, the shortest-15 years (24.3 ± 14.2 years). The therapy lasted from 1 to 7 weeks (3.5 ± 2.1 weeks).

The subjects used Cantril’s Ladder to decide what their life was like at the examination time. The respondents obtained an average of 5.5 ± 1.9 points. The respondents most often marked 5 points (47.1%) and least frequently marked 9.8, and 4 (5.6%). The results obtained indicate that the respondents were, on average satisfied with their lives.

According to the SWLS scale, the respondents were very dissatisfied with their lives (17.2 ± 4.9). Detailed results are presented in Table 1. In the group dissatisfied with their lives, 5.9%, very dissatisfied with their lives—17.6%, rather dissatisfied with their lives—41.2%, neither satisfied nor dissatisfied with their lives—5.9% and somewhat satisfied with their lives—29.4%.

There was no significant correlation between the age of the respondents and life satisfaction ($p = 0.36339$), having a Type D personality, age ($p = 0.20274$) and wealth ($p = 1.000$). Significant correlations between age and stress level ($p = 0.00524$) and between affluence and life satisfaction ($p = 0.00077$) and level of stress ($p < 0.001$) were found. Detailed results are presented in Tables 2, 3.

**DISCUSSION**

The study aimed to assess the style of coping with stress, emotions, and anxiety, Type D personality in elder men addicted to alcohol, and the relationship between the above.

The participants were very dissatisfied with their lives, with a high level of perceived stress and Type D personality. There was no significant relationship between the respondents’ age and life satisfaction or respondents’ age, having a Type D personality, and wealth. However, there was a correlation between age and level of stress and wealth, life satisfaction and stress level.

It is estimated that 2.3 billion people worldwide drink alcohol today. In terms of average consumption per capita, Europe is the leader, even though alcohol consumption has fallen by more than 10% since 2010. According to WHO, global alcohol consumption will increase in the next 10 years, especially in Southeast Asia, the Western Pacific and the Americas. Europeans and Americans drink the most alcohol, averaging 9.8 and 8 L of pure ethyl alcohol per day, respectively (28). In 2019, among men, respondents aged 45–54 used alcohol most often; in this group, it is practically common at 99%, and 83% in people over 65. Vodka was used by 22% of people aged 55–64 and 26% of people over 65. Seventy-three percentage of people over 65 used alcohol more often with their family than with friends (29).

It is worth emphasizing that alcohol abuse among seniors does not always have to refer to the stereotypical consumption of alcohol during loud feasts, and sometimes it may refer to drinking one’s favorite beer before bedtime or a large glass of wine every evening (28, 29). The problem begins when alcohol becomes a habit, and a person cannot imagine a day without it. Unfortunately, in recent times, the context...
of alcohol use and aging is a common phenomenon, both among men and women. Such alcohol consumption causes irreversible changes and damage to internal organs and consequently, reduces the life expectancy and condition of the senior’s body drastically. Excessive alcohol consumption causes individuals to neglect daily duties, including, for example, missing regular visits to the doctor and not carrying out tests. Addicts often ignore the disease symptoms and do not care about their health until it is, unfortunately, too late to start treatment. Furthermore, hyperkatifeia is a very interesting phenomenon. It is defined as the negative emotional state of drug withdrawal. It drives the negative reinforcement source of motivation for compulsive-like alcohol seeking and using. Moreover, hyperkatifeia can drive impulsivity like relapse in the preoccupation or anticipation stage and then a return to the binge or intoxication stage (30).

Data from the UK (31) summarizing hospital admissions related to alcohol abuse indicate that among the 337,110 people admitted, 56,240 were aged 64–75, and 43,910 were over 75 years of age. Thus, the cited data confirm a relatively large percentage of seniors in this group.

In a Polish study (5) that included 110 older adults living in Lubelskie Voivodeship, Poland, most seniors (83.6%) used alcohol occasionally. In this study, alcohol consumption was more common among older adults from rural rather than urban environments, and the majority of alcohol drinkers had primary education and were single. Indeed, the low level of education implies minor criticism of the older adults in relation to the

### Table 2: Assessment of perceived stress using the PSS-10 scale.

| Stress Item                                                                 | Never | Almost Never | Sometimes | Fairly Often | Very Often |
|----------------------------------------------------------------------------|-------|--------------|-----------|--------------|------------|
| In the last month, how often have you been upset because of something      |       |              |           |              |            |
| that happened unexpectedly?                                               | 58.8% | 23.5%        |           |              | 17.7%      |
| In the last month, how often have you felt that you were unable to control | 23.5% | 17.6%        |           |              | 41.1%      |
| the important things in your life?                                        |       |              |           |              | 17.8%      |
| In the last month, how often have you felt nervous and “stressed”?        | 33.5% | 17.6%        |           |              | 24.2%      |
| In the last month, how often have you felt confident about your ability    | 5.9%  | 10.9%        |           |              | 35.3%      |
| to handle your personal problems?                                         |       |              |           |              | 17.6%      |
| In the last month, how often have you felt that things were going your way?| 16.8% | 24.4%        |           |              | 35.3%      |
| In the last month, how often have you found that you could not cope with   | 9.5%  | 10.9%        |           |              | 41.2%      |
| all the things that you had to do?                                        |       |              |           |              | 17.6%      |
| In the last month, how often have you been able to control irritations in  | 5.9%  | 17.6%        |           |              | 41.2%      |
| your life?                                                                |       |              |           |              |            |
| In the last month, how often have you felt that you were on top of things? | 17.7% | 17.6%        |           |              | 5.9%       |
| In the last month, how often have you been angered because of things that  | 11.8% | 24.4%        |           |              | 46.2%      |
| were outside of your control?                                              |       |              |           |              | 17.1%      |
| In the last month, how often have you felt difficulties were piling up so   | 5.8%  | 5.9%         |           |              | 35.3%      |
| high that you could not overcome them?                                     |       |              |           |              | 11.8%      |

### Table 3: Type D personality in the study group.

| Personality Trait                                      | False  | Rather False | Neutral | Rather True | True   |
|--------------------------------------------------------|--------|--------------|---------|-------------|--------|
| I make contact easily when I meet people               | 11.8%  | 23.5%        | 41.2%   | 23.5%       |        |
| I often make a fuss about unimportant things           | 11.8%  | 23.5%        | 41.2%   | 23.5%       | 39.8%  |
| I often feel unhappy                                   | 5.9%   | 23.5%        | 24.9%   | 28.1%       | 17.7%  |
| I am often irritated                                   | 5.9%   | 17.6%        | 24.9%   | 35.3%       | 17.7%  |
| I often feel inhibited in social interactions          | 17.6%  | 23.5%        | 41.2%   | 17.6%       |        |
| I take a gloomy view of things                         | 5.9%   | 11.8%        | 41.2%   | 23.5%       | 35.3%  |
| I find it hard to start a conversation                 | 5.9%   | 24.9%        | 41.2%   | 23.5%       | 19.4%  |
| I am often in a bad mood                               | 5.9%   | 11.8%        | 41.2%   | 23.5%       | 32.5%  |
| I am a closed kind of person                           | 5.9%   | 35.3%        | 24.9%   | 17.6%       | 16.3%  |
| I would rather keep other people at a distance         | 5.9%   | 17.6%        | 5.9%    | 58.8%       | 11.8%  |
| I often find myself worrying about something           | 5.9%   | 23.5%        | 5.9%    | 41.2%       | 23.5%  |
| I am often down in the dumps                           | 35.3%  | 17.6%        | 24.9%   | 22.2%       |        |
| When socializing, I don’t find the right things to talk | 35.3%  | 23.5%        | 20.4%   | 20.8%       |        |
The majority of respondents came from the country. In the study conducted by Wadd and Papadopoulos (32), older adults experienced high levels of alcohol-related harm but drink less than younger adults, and levels of alcohol-related harm in older adults are increasing. Similar findings were described in a US study (33), where single people (without support from family members, divorced, widowed) were more likely to seek consolation through drinking alcohol.

Researchers studying with alcohol addiction have long been looking for factors that may play an essential role in the genesis of addiction and the course of treatment (34). Only a small number of articles have been published on the life satisfaction and quality of life of alcohol addicts.

In the analysis of life satisfaction of the elderly population in the example of Sweden, Austria and Germany, the author found that aging does not necessarily worsen one's perception of life. Based on the data shown here, there is no evidence from Austria and Spain that all people systematically, regardless of the year of birth, go through a stage of a lower level of life satisfaction. An important factor of life satisfaction is health self-assessment (35).

Data from the literature indicate the coexistence of anxiety, depressive disorders, somatization and phobias to a greater extent in women addicted to alcohol than in men. Also, the role of fear, optimism, self-efficacy and life satisfaction was studied (34). People also see alcohol as a way to cope with economic stress, stress at work and marital problems, often due to a lack of social support (36). Whether an individual will drink under stress depends on many factors, including genetics, the individual's drinking behavior, type of stressor, personal sense of control stress and the range of stress coping methods (36–39).

Some researchers believe that high levels of stress impact alcohol consumption when there are no alternative resources; when alcohol is available, the person believes alcohol will help reduce stress (36–39). This is confirmed by the current study, which shows that those respondents had a high level of perceived stress.

However, according to Pohorecky (36), whether people drink under stress beyond their control is not obvious. In his review of research on the relationship between alcohol consumption and stress, Pohorecky took into account several studies that examined people living in areas affected by a natural disaster. One study found a 30% increase in alcohol consumption in the 2 years following the Buffalo Creek floods in West Virginia. Similar increases were recorded in cities near Mount St. Helens after a volcanic eruption (35). However, after the Three Mile Island nuclear power plant disaster, alcohol was rarely used to deal with stress (39). Some studies show that drinking can occur when stress is anticipated or experienced (40).

It is also worth remembering that, in non-drinking people addicted to alcohol, personally threatening, severe and chronic life stressors can lead to alcohol relapse (37, 41). Brown (41) conducted a study on a group of men who discontinued inpatient therapy and then experienced acute and chronic psychosocial stress. The researchers found that patients who relapsed experienced acute and chronic stress twice as often before returning to drinking as those who continued abstinence.
Women have different prognostic factors for alcohol abuse than men. Intoxication occurs in women after drinking less alcohol; chronic alcohol abuse causes more deaths in women; and alcohol has a more harmful effect on women’s health than in men.

Despite these limitations, the results of this study may constitute a starting point for further research into the problems of older people addicted to alcohol. Optimally, these findings should be verified in a longitudinal examination and extended to a control group.

CONCLUSIONS

The men surveyed were very dissatisfied with their lives, had a high level of perceived stress and displayed personality traits of Type D. No significant relationships were found between the age of the respondents and life satisfaction and their wealth and having a Type D personality. Significant associations between age and the level of stress and affluence and the level of stress and life satisfaction were found.

REFERENCES

1. Bronowski P, Sawicka M. Kluczyńska S. Prevalence of using alcohol among general hospital patients at the age over 60. Gerontologia Polaka. (2011) 19:47–52.
2. Kamal H, Tan GC, Ibrahim SF, Shaikh MF, Mohamed IN, Mohamed R, et al. Alcohol use disorder, neurodegeneration, Alzheimer’s and Parkinson’s disease: interplay between oxidative stress, neuroimmune response and excitotoxicity. Front Cell Neurosci. (2020) 14:282. doi: 10.3389/fncel.2020.00282
3. Barret P, Vogel-Sprott M. Age, drinking habits and the effects of alcohol. J Stud Alcohol Drugs. (1984) 45:517–21. doi: 10.15288/jsa.1984.45.517
4. Ross S. Alcohol use disorders in the elderly. Psychiatria po Dyplomie. (2005) 4:17–28. doi: 10.5281/tendemo.55179
5. Bartoszek A, Kocka K, Zielonka E, Lutycz M, Rzaca M, Deluğa A, et al. The problem of the use of drugs among seniors living in the home environment. J Educ Health Sport. (2016) 6:235–44.
6. Gerstenkor A, Suwala M. Smoking and drinking alcohol in the metropolitan elderly population. Psychogeriatria Polaka. (2006) 4:191–200.
7. Karakiewicz B, Kozielec T, Pniak J, Szałacka A. Selected health behaviors of elderly patients under the care of family doctors and cardiovascular diseases. Polska Medycyna Rodzzenia. (2000) 2:159–61.
8. Dabrowska K, Wiczorek L. Report on the implementation of the study: analysis of risk factors and factors protecting the use of psychoactive substances among seniors. Inst Psychiatr Neuronal. (2018).
9. Lehmann SW. Fingerbreadth Muscle. Substance-use disorders in later life. N Engl J Med. (2018) 79:2351–60. doi: 10.1056/NEJMra1805981
10. Trofimova IN, Sulis W. A study of the coupling of FET temperament traits with major depression. Front Psychol. (2016) 7:1848. doi: 10.3389/fpsyg.2016.01848
11. Russo M, Mahon K, Shanahan M, Ramjas E, Solon C, Braga RJ, et al. Affective temperaments and neurocognitive functioning in bipolar disorder. J Affect Disord. (2014) 169:51–6. doi: 10.1016/j.jad.2014.07.038
12. Oren-Yagoda R, Bjorgvinsson T, Aderka IM. The relationship between positive affect and negative affect during treatment for major depressive disorder. Psychother Res. (2018) 28:958–68. doi: 10.1080/10503307.2017.1292966
13. McCrae RR, John OP. An introduction to the five-factor model and its applications. J Pers. (1992) 60:175–215. doi: 10.1111/j.1467-6494.1992.tb00970.x
14. Siddiqi SH, Chokalingam R, Cloninger CR, Lenze EJ, Cristancho P. Use of the temperament and character inventory to predict response to repetitive transcranial magnetic stimulation for major depression. J Psychiatr Pract. (2016) 22:193–202. doi: 10.1097/PRA.0000000000000150

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Local Ethical Committee of the Medical University of Bialystok. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

GB created the research concept. AK-B and GB were collecting materials to the study and prepared the initial version of the manuscript, which was corrected, supervised, and completed by NW and EK-K. EK-K conducted data analysis. All authors contributed to the article and approved the submitted version.
28. Poznyak V, Rekve D, Akselrod S, Saxena S, Fleischmann A, Gehring E, et al. Global Status Report on Alcohol and Health 2018. Geneva: World Health Organization (2018).

29. Bozewicz M. Alcohol Consumption in Poland. Warsaw: Komunikat CBOS 151 (2019).

30. Kooch GE, Powell P, White A. Addiction as a coping response: hyperkatatiea, deaths of despair, and COVID-19. Am J Psychiatry. (2020) 177:1031–7. doi: 10.1176/appi.ajp.2020.20091375

31. Alcohol-Related Hospital Admissions - Statistical Tables for England. Available online at: https://fingertips.phe.org.uk/profile/local-alcohol-profiles/supporting-information/additional-data (accessed January 12, 2021).

32. Wadd S, Papadopoulou C. Drinking behaviour and alcohol-related harm amongst older adults: analysis of existing UK datasets. BMC Res Notes. (2014) 7:741. doi: 10.1186/1756-0500-7-741

33. Brennan P, Moos R, Schutte K. Predicting the development of late-life late-onset drinking problems: a 7-year prospective study. Alcohol Clin Exp Res. (1998) 6:1349–58. doi: 10.1111/j.1530-0277.1998.tb03918.x

34. Chodkiewicz J. The role of personal resources in maintaining abstinence by men dependent on alcohol. Alkohol Narkomania. (2015) 14:277–87.

35. Kutubaeva Rh. Analysis of life satisfaction of the elderly population on the example of Sweden, Austria and Germany. Popul Econ. (2019) 3:102–16. doi: 10.3897/popecon.3.e47192

36. Pohorecky LA. Stress and alcohol interaction: an update of human research. Alcohol Clin Exp Res. (1991) 15:438–59. doi: 10.1111/j.1530-0277.1991.tb00543.x

37. Jennison KM. The impact of stressful life events and social support on drinking among older adults: a general population survey. Int J Aging Hum Dev. (1992) 35:99–123. doi: 10.2190/F6G4-XLV3-5KW6-VMBA

38. Sadava SW, Pak AW. Stress-related problem drinking and alcohol problems: a longitudinal study and extension of Marlatt’s model. Can J Behav Sci. (1993) 25:446–64. doi: 10.1037/h0078841

39. Volpicelli JR. Uncontrollable events and alcohol drinking. Br J Addict. (1987) 82:381–92. doi: 10.1111/j.1360-0443.1987.tb01494.x

40. Kasl SV, Chisholm RF, Eskenazi B. The impact of the accident at the Three Mile Island on the behavior and well-being of nuclear workers. Part II: job tension, psychophysiological symptoms, and indices of distress. Am J Public Health. (1981) 71:484–95. doi: 10.2105/AJPH.71.3.484

41. Brown S. Safe Passage. Warszawa: IPZiT (1995).

42. Brown SA, Vik PW, McGuaid JR, Patterson TL, Irwin MR, Grant I. Severity of psychosocial stress and outcome of alcoholism treatment. J Abnorm Psychol. (1990) 99:344–8. doi: 10.1037/0021-843X.99.4.344

43. Cloninger CR, Sigvardsson S, Bohman M. Type I and type II alcoholism: an update. Alcohol Health Res World. (1996) 20:18–23.

44. Gmel G, Marmet S, Studer J, Wicki M. Are changes in personality traits and alcohol use associated? A cohort study among young Swiss men. Front Psychiatry. (2020) 23:591003 doi: 10.3389/fpsyt.2020.591003

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher’s Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.