

Міністерство освіти і науки України
Південноукраїнський національний педагогічний
університет імені К. Д. Ушинського

ІСТОРИЧНИЙ ДОСВІД І СУЧАСНІСТЬ

**Матеріали
XXIX наукової конференції
здобувачів вищої освіти**

Випуск 45

С Т А Т Т І

Одеса – 2023

УДК: 001:005.745

I – 90

Збірник містить **статті** окремих учасників **XXIX** наукової конференції здобувачів вищої освіти **«Історичний досвід і сучасність»**.

Редакційна колегія збірника:

Богданова І. М., докто педагогічних наук, професор,
Букач В. М., кандидат історичних наук, приват-професор,
Наумкіна С. М., доктор політичних наук, професор,
Сокаль М. А., кандидат філологічних наук, доцент,
Сухотеріна Л. І., доктор історичних наук, професор.

Відповідальний редактор – Букач В. М.

Друкується за рішенням Вченої ради ДЗ «Південноукраїнський національний педагогічний університет імені К. Д. Ушинського» від 25 травня 2023 року, протокол № 12.

(С) Південноукраїнський національний педагогічний університет імені К. Д. Ушинського (м. Одеса), 2023.

(С) Букач В. М., упорядник, 2023.

збірник наукових праць /За ред. С. В. Ківалова, Ю.С. Шемшученка.
Одеса: Фенікс, 2013. 352 с

7. Компаративістика в системі юриспруденції. *STUDIES*. URL:
<https://studies.in.ua/krestovska-nm-teorija-derzhavy-i-prava/1503-15-komparativstika-v-sistem-yurisprudencyi.html>

THE CONTRIBUTIONS OF HEALTHY UPBRINGING FOR DEMENTIA PREVENTION IN OLDER AGE

Okul Illia

Abstract. *This work deals with articles dedicated to the contributions of healthy upbringing for dementia prevention in older age. Dementia is a pressing issue for the world's aging population, especially in low- and middle-income countries. We reviewed the impact of SES at birth on the risk of dementia later in life and found that extreme poverty, parental education and SES disadvantages, household crowding, single-father family, and region of living are well-established risk factors for dementia. Looking at reports of gender differences in risks, we found that they may be due to genetic, biological factors or unequal access to education. We examined the validity of predictors such as childhood exposure to secondhand smoke, childhood trauma, and malnutrition, but concluded that studies of these factors are weakly validated. In the end, we highlighted the methodological issues of the research and made recommendations for applying the research findings.*

Keywords: *Healthy Aging, Dementia Prevention, Early Childhood Protective Factors, Early Childhood Risk Factors, SES, Healthy Upbringing*

Dementia is a major public health concern worldwide, affecting millions of people and their families (World Health Organization, 2021). Despite advances in medical research, there is currently no cure for dementia. As a result, the focus has shifted towards prevention strategies, which include identifying risk factors and promoting healthy lifestyles. One potential factor that has received increasing attention is the role of early-life experiences in maintaining brain health and reducing the risk of dementia later in life.

Williamson and Leroi (2019) discusses the economic burden that dementia has on a society, and draws attention to the modifiable factors of childhood, which

can and should be influenced so that the economies of countries can withstand the challenge of an increase in the older population.

The most influential study that prompted us to explore this issue is “Dementia prevention, intervention, and care: 2020 report of the Lancet Commission” (Livingston et al., 2020). Their analyses suggest modifying the 12 risk factors they identify might prevent or delay up to 40% of dementia cases worldwide. They point out that while dementia treatment is improving, populations are aging, and low- and middle-income countries are bearing the brunt of the burden of dementia. Thus, the incidence of dementia in 2016 doubled compared to the level of 1990. The authors divide the risk factors into early age, up to 45 years (education), middle age, from 45 to 65 (hypertension, obesity, hearing loss, TBI and alcohol abuse) and later in life, after 65 (smoking, depression, physical inactivity, social isolation, diabetes and air pollution). In this paper, we will occasionally return to this research, intending to clarify and find the development of these thoughts in other studies.

This paper aims to explore the contribution of healthy upbringing to the prevention of dementia in older age. Specifically, we will review the literature on the impact of childhood experiences, such as passive smoking, socioeconomic status in childhood, and nutrition, on cognitive function and the risk of dementia.

We intend to report on the main findings of research in this area, highlight strengths and weaknesses, address limitations and gaps in selected studies, and outline prospects for further research.

Typically, SES refers to income level, education level, and occupation. This is an important indicator in psychological research that can affect many aspects of our lives, including health and the psyche. Assessing the consequences of development in childhood, the authors take into account the dynamics of SES throughout life.

We have found three studies dedicated to this research topic and conducted on different populations: a US sample (Cha et al., 2021), a South African sample (Kobayashi et al., 2019), and a Finnish sample (Korhonen et al., 2022). The first

and third articles measured SES directly, while the African study used growth as a proxy. This was due to the risks of the vulnerable situation of the people of South Africa, where low family SES led to hunger, which affected the development of the child, and as a result, the height of children. The authors used data from a population-based cohort study of 5,059 black men and women over the age of 40. The results show that height and cognitive function have a positive relationship. However, education helps reduce or even neutralize this relationship among older people. The main argument of the study is that education can play an important role in mitigating the negative cognitive effects of poor cumulative net nutrition in early age, which the authors see as the cause of developmental and growth features (Kobayashi et al., 2019).

Education as a particularly important aspect of SES is also highlighted by Cha and colleagues (2021) too. Their study found that education was the most important socioeconomic factor associated with dementia-status life expectancy. Researchers examined the relationship between lifetime socioeconomic status (SES) and risk of dementia and life expectancy among older Americans. The authors compared the effect of SES in childhood (using the number of childhood SES disadvantages), SES in adulthood, and level of education on dementia risk. The authors suggest that improving SES after childhood can significantly mitigate the negative effects of childhood adversity and reduce the lifetime burden of dementia by increasing the number of years of life without dementia, although the burden of SES disadvantages in early age still retains influence on the risk of dementia at an older age (Cha et al., 2021).

Similar work has been done by Korhonen and colleagues (2022), who analyzed the relationship between socioeconomic status in childhood and dementia in later life and assessed the mediating role of potentially modifiable risk factors, including socioeconomic status in adulthood and cardiovascular health. Disadvantage in childhood has been found to be a determinant of the development of dementia. People who lived in crowded households, with a single father, or in eastern and northern Finland as children had an increased risk of developing

dementia later in life. The study found that socioeconomic status in adulthood, in particular, was part of a mechanism linking household crowding in childhood to risk of developing dementia. The study also shows a consistent direct effect of socioeconomic status in childhood on dementia risk, suggesting that risk accumulation begins early in life. These results were obtained by controlling the level of education received in adulthood. The study also shows that childhood socioeconomic conditions contribute as much to the development of early-onset dementia as they do to the development of dementia in general (Korhonen et al., 2022).

As we can see, on the one hand, the conclusions of all three authors are consistent with the findings of Livingston and colleagues (2020): they all indicate that education as part of SES has an impact on the risk of dementia. The effect of education is especially emphasized by Kobayashi and colleagues (2019) and Cha and colleagues (2021). On the other hand, despite the compensatory effect of education, all authors provide data in favor of the influence of other aspects of socioeconomic status in childhood on the risk of dementia in older age: extreme poverty (Kobayashi et al., 2019), parental education and SES disadvantages (Cha et al. , 2021), household crowding, single-father family, and region of living (Korhonen et al., 2022). However, is the obtained data reliable and trustworthy?

However, we also need to evaluate whether the received data is reliable and trustworthy.

The strengths of the reviewed studies include the sample size (from 5,000 to 95,000 participants). The design of two of them (Cha et al. , 2021; Korhonen et al., 2022) is longitudinal, which also increases the reliability of the conclusions drawn: Cha and colleagues (2021) used of a nationally representative sample and 16 years of longitudinal data, which increases the generalizability of the findings and examined socioeconomic status across the life course, from childhood to later life, which provides a comprehensive understanding of the association between SES and dementia (Cha et al. , 2021). However, the study by Korhonen and colleagues (2022) is more powerful, as in their longitudinal design they consistently obtained

objective data from childhood to adulthood rather than retrospectively. This study used prospectively collected census and population register data, which avoided bias arising from inaccurate recollections of adverse childhood circumstances (Korhonen et al., 2022).

Taken separately, these studies would be limited by their samples, but together they make it possible to judge the universality of the patterns found. This is also supported by the use in the Finnish study of the Carlson-Holm-Breen method for assessing associations between socioeconomic status in childhood and risk of dementia, which allowed reliance on the variance of the general population even without the availability of such data (Korhonen et al., 2022).

Speaking about the possible limitations of these studies, the shortcomings of the chosen methodology should be discussed. Longitudinal design is preferred to answer the question of the relationship between childhood and later outcomes. The main limitation of African study concerns the inconsistency between the stated goals and the study design: using a cross-sectional design, the authors cannot say whether the level of cognitive functioning is due to degeneration due to dementia or a stable level of functioning (Kobayashi et al., 2019). Other research problems may lie in the inaccuracy or subjectivity of measurements. In African study Kobayashi and colleagues (2019) used height as a measure of cumulative net nutrition during periods of early growth that could be an inaccurate measure because of the possible influence of genetic factors, disease, or other determinants of physical growth (Kobayashi et al., 2019). Similar difficulties are caused by the methods of US research: the measure of dementia used in the study is based on self-reports and reports of trusted individuals, which may not be as accurate as clinical diagnosis performed by a specialist and a subjective assessment of the level of well-being of one's family in childhood was used, which also may be inaccurate (Cha et al., 2021). The Finnish study people with dementia could be identified only if their diagnosis was recorded in a hospital or death log, or if they were prescribed anti-dementia medication that may not cover all cases. Also in this study, the impact of the region of residence on the risk of dementia was not

properly explained, although the authors suggested that this may be due to genetic factors (Korhonen et al., 2022).

Despite the inclusion of various covariates in the reviewed studies, it seems important to us to also consider the risk factors noticed by Livingston and colleagues (2020) as covariates in order to be able to assess the unique contribution of new predictors in addition to those already found. In this regard, it is possible to once again note the quality of the Finnish study, which took into account cardiovascular morbidity (Korhonen et al., 2022).

Taking into account the advantages and disadvantages of the reviewed articles, it seems reasonable to include SES in childhood as a predictor of the risk of dementia in older age.

Russ and colleagues (2017) examined the association between cognitive abilities in childhood and the incidence of dementia in a large cohort study of more than 35,000 men and women. The results show that the association between lower IQ in childhood and an increased risk of dementia was clearly evident in women, but less so in men.

As with previous studies (Cha et al. , 2021; Korhonen et al., 2022), this one also has good sample size, which increases the statistical power of the results, but also it has limited amount of potential covariates. Following Korhonen and colleagues (2022), Russ and colleagues (2017) used only objective data sources such as IQ tests and electronic medical records that protected them from subjectivity. In the same time the use of electronic medical records also has negative effects, creating several problems in the form of fewer cases available for the study (more than half of the sample was lost), the possibility of a person having dementia without an entry in the electronic medical record (due to medical error or evasion of medical examination by the patient) (Russ et al., 2017).

To discuss the possible causes of gender differences in the incidence of dementia, we wish to draw on additional data. Rocca and colleagues (2014) report several possible reasons for these differences: first, genetic differences (they mention the APOE and E4 genes), second, biological (in this context, they discuss

early menopause and the decrease/cessation of estrogen production, which neuroprotective function), and thirdly, a different level of education, which is a thing of the past in progressive countries, but in some places still remains a problem (Rocca et al., 2014).

Here it should be noted that Russ and colleagues (2017) used data from the Scottish cohort in 1921. Scotland at that time was part of the British colonial empire, a rather conservative monarchical state. So taking into account these data and the data already reviewed, highlighting the importance of education as a predictor of dementia, we might assume that most of the gender differences could be explained by unequal opportunities in access to education (Russ et al., 2017).

Zhou and Wang (2021) examined the relationship between exposure to secondhand smoke in childhood and long-term risk of dementia, Alzheimer's disease and stroke in adulthood. Using data from the Framingham Heart Study, the study found that secondhand smoke exposure was associated with an increased risk of all three conditions, even after adjusting for age, sex, BMI, diabetes, hypertension, and smoking at the time of the study. Participants whose parents smoked less than 1 pack per day and more than 1 pack of cigarettes per day had a significantly increased risk of dementia in offspring (79 and 186% higher risk respectively) and dementia in Alzheimer's disease (97 and 213% higher risk respectively) compared to those who have not been exposed to secondhand smoke (Zhou and Wang, 2021).

Like the articles above, this study used a large sample, but also it consisted of several generations with long-term follow-up, which makes the results reliable, and took into account numerous covariates, such as age, gender, BMI, diabetes, and others. This approach makes this study methodologically close to research of Korhonen and colleagues (2022). But at the same time, despite the available data on education, the level of education of both parents and offspring, this important predictor was not included with others in the regression model for predicting dementia risk. For example, it is known that women with lower levels of education tend to continue to smoke even during pregnancy, so there is reason to consider

mediation between education and smoking in predicting dementia risk, which has not been done.

Also the number of incidents was relatively low, which could lead to selection bias and the study did not investigate the specific mechanisms by which passive smoking affects dementia. But unlike Cha and colleagues (2021), Zhou and Wang (2021) used up-to-date reports on the number of cigarettes smoked, thereby avoiding recall bias.

To sum up, although the Lancet Commission (Livingston et al., 2020) considered smoking as a risk factor for dementia in older age, and the authors of this article offer a new perspective on smoking, where part of the problem may have roots in early life, we must use this evidence with caution, because it seems to us that it carries the burden of serious limitations (Zhou and Wang, 2021).

Radford and colleagues (2017) examined the relationship between childhood stress and cognitive, physical and emotional health outcomes in older age in older Australian Aboriginal people. The sample included 336 Aboriginal people from different parts of Australia, but the authors say that the sample is representative (61% of the general population). Childhood stress was assessed using the Childhood Trauma Questionnaire (CTQ) and other measures. The study found that higher CTQ scores were significantly associated with other indicators of childhood stress or adversity, including moving frequently, growing up in a big city, poor childhood health, and so on. The study also showed that higher CTQ scores were significantly associated with dementia of various etiologies and dementia with Alzheimer's disease, as well as other mental health problems. The relationship between childhood stress and dementia was independent of age, depression, and anxiety/PTSD (Radford et al., 2017).

Despite the fact that the sample is relatively small, it is very representative due to the small population, which is unlike other studies we've reviewed so far. Also following Russ and colleagues (2017), Radford and colleagues (2017) used a well validated measure for their purposes (Childhood Trauma Questionnaire (CTQ) for measuring childhood stress and trauma). The diagnosis of dementia was

made by medical professionals, which suggests that the data on the disease were obtained objectively and directly. This approach distinguishes this work from studies of Korhonen and colleagues (2022) and Russ and colleagues (2017), who used medical records.

As in study of Kobayashi and colleagues (2019), Radford and colleagues (2017) used a cross-sectional design that limits the ability to establish a causal relationship between childhood stress and outcomes in older age such as dementia, and in addition, the results of questionnaires that were obtained from people who have been diagnosed with dementia, despite the psychometric advantages of the instrument, may be skewed. Moreover, this led to the fact that people with dementia had to answer questions along with healthy people. As a result, a significant number of cases of dementia were also excluded from the study due to the severity of cognitive impairment and failure to respond to the CTQ, which may also skew the results. It makes us consider a large amount of information that was obtained on the basis of the self-report of the subjects as biased (for example, the question of hypercholesterolemia).

Thus, having weighed the evidence of the article, we cannot rely on the information it contains.

Momtaz and colleagues (2022) focused on the impact of early malnutrition on the risk of dementia later in life. The researchers speculated that impaired brain development due to early age malnutrition could lead to less efficient brain function. The results of the analysis showed that the risk of dementia is associated with all the covariates chosen by the authors: age (the risk increases with age), gender (the risk is higher in women), marital status (the risk is higher in those who are not married), ethnicity (they compared Malaysian ethnic groups), education (risk decreased with higher levels of education), stratum (rural dwellers had a higher risk than urban dwellers), and starvation (it increased the risk of dementia). It also found that, after adjusting for the effects of all these covariates, childhood malnutrition increased the risk of dementia later in life by 81% (Momtaz et al., 2022).

Discussing the works of Rocca and colleagues (2014) and Russ and colleagues (2017), we have already dwelled in more detail on the possible reasons for gender differences in the risk of dementia. However, it is worth noting that Malaysia, the country in which Momtaz and colleagues (2022) conducted their study, has a state religion - Islam, which may support gender inequality in access to various benefits, including education.

The advantages of this study are the large sample size and the inclusion of a large number of covariates, among which, however, there are no those related to health, which we already discussed when evaluating articles on SES.

The advantages of this study are the large sample size and the inclusion of a large number of covariates, among which, however, there are no those related to health, which we already discussed when evaluating articles on SES. At the same time, the study is cross-sectional, so all the criticisms that we expressed regarding the study by Radford and colleagues (2017) apply to it: the bias of people experiencing dementia, the difficulty in answering retrospective questions. It can especially appear in this study, where there was only one question about the sufficiency of food in childhood. So although the authors argue for its validity, the question was answered by older people, some of whom had dementia. In addition, dementia was determined on the basis of passing a computer test that matches the doctors' diagnoses by 76%, which may be suitable for a preliminary study, but seems insufficient for a convincing scientific research.

Thus, although the data of Momtaz and colleagues (2022) are consistent with Kobayashi and colleagues (2019), we have to admit that the evidence is rather weak.

The need for longitudinal research. The simplicity (and therefore cost-effectiveness) of cross-sectional research can be countered endlessly with the many advantages of longitudinal research. However, we will focus on the observed discrepancy between the goals and the result in the reviewed studies.

First, the cross-sectional design made it impossible for the researchers to establish whether the observed measures of cognitive functioning were due to

intellectual decline or simply to the respondent's persistently low functioning. Secondly, this type of design forced researchers to get answers to various questions (often requiring a good memory) in people whose memory was impaired as a result of the disease. In this case, there is no way to get answers from healthy people, and then, after a while, to monitor their state of health. And thirdly, often, though not always, the researchers were unable to find answers to their questions in the surviving sources of information, and they had to resort to asking respondents about their past, which can lead to distortion of the results. Fourth, often the authors had to exclude from the study those who could not answer questions because the dementia was too severe. Such missing data is likely to be biased (Kobayashi et al., 2019; Momtaz et al., 2022; Radford et al., 2017).

Objectivity of research tools. The first and simplest drawback is the use of methods whose validity and reliability we cannot speak with certainty. On the one hand, we can rely on validated questionnaires, then to some extent we can justify the apparent validity of some questions, but it seems to us a bad idea to use narrow statements to report a broader phenomenon (for example, talking about nutrition in childhood by height in older age) or self-reports to obtain data that requires external self-assessment (for example, presence/absence of a disease) (Kobayashi et al., 2019; Momtaz et al., 2022).

The second is the use of reliable methods in the wrong way. So, it can be argued that a particular method has validity and reliability does not mean that it can be applied in any situation. Restrictions may include language, ethnicity, age and health status. For example, a reliable questionnaire may not work when given to a person with dementia (Radford et al., 2017).

Also here can be attributed the disadvantages of indirect measurement. For example, the use of medical records forces us to assume that every person in our study uses medical services, which may not be the case. When using direct measurement, we can be sure that we have obtained the best results that our method and tools allow us to obtain (Korhonen et al., 2022; Russ et al., 2017).

Accounting for possible covariates. Currently, the number of works on related topics is growing, and it no longer looks like something self-sufficient to detect the influence of one variable on another. There is a possibility of some variables being mediated by others, so the real challenge is to find the best set of predictors for this or that phenomenon, and to include a new predictor, to prove that it does not duplicate others, but will be a good addition that can increase the predictive power of the model. For possible predictors, we think we can refer to Livingston and colleagues (2020). So, for example, when examining SES, we might also include into research such covariates as depressive symptoms, body mass index, alcohol consumption, and others (Livingston et al., 2020).

Above, we have listed the main and most common research shortcomings. We also encountered that the number of years of follow-up was insufficient, or that the number of cases was insufficient for a reliable statistical analysis. But that didn't happen very often (Zhou and Wang, 2021).

If we talk about the reasons for the identified shortcomings, then they include the large expenditure of resources for conducting longitudinal studies, as well as conducting a secondary analysis of data from longitudinal studies conducted by others, which is why the authors use the data that they have and try to get from this maximum possible benefit.

Prospects for further research. Not so much a question as a promising task, it seems to me, is to conduct special longitudinal studies on the risk of dementia, taking into account the maximum number of known possible covariates, adhering to the rules of objective direct measurement of the studied phenomena. It also seems to me important to repeat studies on different samples to justify the representativeness of the findings.

Speaking about specific issues, Korhonen and colleagues (2022), the authors of perhaps the best study reviewed in this article, suggested that genetic factors could explain some of the territorial differences in the risk of dementia in different regions of Finland. So one question would be, is this really the case?

For example, to support the hypothesis that different areas of Finland have different genetic risks for dementia, genetic analysis can be performed on residents of those areas, and the genetic code of healthy people and people with dementia of the same age can be compared. This will give us information about which genes predict dementia (as was done in the study by Rocca and colleagues (2014), and will also allow us to compare whether there is a difference in the prevalence of these genes among different regions of the country.

Also worth mentioning are the ideas of Akhutina, Alexandrov, and Bugrimenko (2022), who, based on an analysis of predominantly American studies, showed that executive functions are highly dependent on SES in childhood, and then mediate not only SES in adulthood life, but behaviors related to health (healthy habits, addictive behavior, timely seeking medical help). Therefore, this perspective also deserves its own separate consistent study.

In the main part of the paper, we pointed out the strengths and weaknesses of various studies, which, upon critical examination, casts doubt on the reliability of the conclusions in various studies, so it would be good to see better versions of articles answering the questions:

- Does secondhand smoke in childhood really predict such a high risk of dementia after adjusting for educational attainment?
- To what extent can the level of education mediate SES factors in childhood and developmental characteristics?
- Do nutritional problems in childhood really increase the risk of dementia?

Dementia, along with many other diseases, poses a threat to healthy aging, as it disrupts cognitive processes, makes a person dependent and progresses. Medicine does not offer any cure for dementia, so it is important to focus on prevention. Healthy aging does not mean the absence of disease in a general sense, but rather invites us to focus on quality of life, but since dementia poses a serious threat to it, it is very important to avoid such an outcome.

Livingston and colleagues (2020) gives us a systematic view of how to avoid or delay dementia in 4 out of 10 cases. Good education is useful for prevention, as

well as fitting a hearing aid if hearing has been impaired, prevention of hypertension and obesity (which may include diet and physical activity - the last one is also the predictor), avoidance of head injuries (TBI), alcohol rationing, smoking cessation, psychocorrection of depression and behavior leading to social isolation (if it's needed), living in an area without air pollution, as well as the prevention of diabetes, if possible.

Based on the sources reviewed, we would like to add to the list other aspects of SES besides education, namely: extreme poverty, parental education and SES disadvantages, household crowding, single-father family. Place of residence and factors from other articles, in our opinion, require further study.

Speaking about the practical application of what has been learned, most of these factors can be perceived and taken as a guide by individuals for the personal prevention of dementia. At the same time, these data should be promoted and communicated to people of different ages as part of holistic disease prevention. After all, education, smoking and physical inactivity are risk factors for many diseases.

At the same time, SES is a factor that is difficult to correct. Akhutina and colleagues (2022) collected information on how strongly SES at birth influences later development and how poverty reproduces itself. The mediator in this vicious circle is executive functions, so the best way to prevent SES is kindergartens, elementary schools and specialized programs for children aimed at developing executive functions: planning, goal setting, concentration, external and internal communication. Such programs require funding, so the help of communities and the state will come in handy (Akhutina et al., 2022).

-
1. Aleksandrov, D. A., Akhutina, T. V., Bugrimenko, E. A. Poverty and child development. M.: Rukopisnye pamyatniki Drevnej Rusi, 2022. 392 p.
 2. Cha H., Farina M. P., Hayward M. D. Socioeconomic status across the life course and dementia-status life expectancy among older Americans. *SSM-population health*. 2021. V. 15. 100921 pp.
 3. Kobayashi L. C. et al. Education modifies the relationship between height and cognitive function in a cross-sectional population-based study of older adults in Rural South Africa. *European journal of epidemiology*. 2019.

- V. 34. 131-139 pp.
4. Korhonen K. et al. Childhood socio-economic circumstances and dementia: prospective register-based cohort study of adulthood socio-economic and cardiovascular health mediators. *International Journal of Epidemiology*. 2023. V. 52. №. 2. 523 - 535 pp.
 5. Livingston G. et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *The Lancet*. 2020. V. 396. №. 10248. 413 - 446 pp.
 6. Momtaz Y. A. et al. Does food insufficiency in childhood contribute to dementia in later life? *Clinical interventions in aging*. 2015. 49 - 53 pp.
 7. Radford K. et al. Childhood stress and adversity is associated with late-life dementia in Aboriginal Australians. *The American Journal of Geriatric Psychiatry*. 2017. V. 25. №. 10. 1097 - 1106 pp.
 8. Russ T. C. et al. Childhood cognitive ability and incident dementia. *Epidemiology*. 2017. V. 28. №. 3. 361 - 364 pp.
 9. Rocca W. A. et al. Sex and gender differences in the causes of dementia: a narrative review. *Maturitas*. 2014. V. 79. №. 2. 196 - 201 pp.
 10. Williamson W., Leroi I. Thinking about dementia: is childhood too early? *International Psychogeriatrics*. 2019. V. 31. №. 12. 1689 - 1690 pp.
 11. World Health Organization. World report on hearing. World Health Organization, 2021.
 12. Zhou S., Wang K. Childhood secondhand smoke exposure and risk of dementia, Alzheimer's disease and stroke in adulthood: a prospective cohort study. *The journal of prevention of Alzheimer's disease*. 2021. V. 8. 345 - 350 pp.

ВНЕСОК ЗДОРОВОГО ВИХОВАННЯ У ПРОФІЛАКТИКУ ДЕМЕНЦІЇ В СТАРШОМУ ВІЦІ

Окул І.

Анотація. У цій роботі розглядаються статті, присвячені внеску здорового виховання в профілактику деменції в старшому віці. Деменція є гострою проблемою для старіючого населення світу, особливо в країнах з низьким і середнім рівнем доходу. Ми розглянули вплив соціально-економічного статусу (СЕС) при народженні на ризик деменції в подальшому житті та виявили, що крайня бідність, освіта батьків і недоліки СЕС, скупченість домогосподарства, сім'я з одним батьком і регіон проживання є добре встановленими факторами ризику деменції. Переглядаючи повідомлення про гендерні відмінності в ризиках, ми виявили, що вони можуть бути зумовлені генетичними, біологічними факторами або нерівним доступом до освіти. Ми досліджували достовірність таких прогностичних факторів, як вплив пасивного куріння в дитинстві, дитячі травми та недоїдання, але дійшли висновку, що дослідження цих факторів недостатньо перевірені. Наприкінці ми висвітлили методологічні питання дослідження та дали рекомендації щодо застосування результатів дослідження.

Ключові слова: здорове старіння, профілактика деменції, захисні фактори раннього дитинства, фактори ризику раннього дитинства, СЕС, здорове виховання