

Motor activity of the male and female population in modern society

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Abstract:

Purpose: The aim of our work is to identify the main factors of the lifestyle of different groups of the population of Ukraine that affect the state of health and their life expectancy. Material: 1564 schoolchildren of 5-11 grades and 420 men and women 21-60 years old took part in sociological research. Results: The results of our own studies indicate that bad habits (smoking, drinking alcohol, drugs) are inherent in a significant number of schoolchildren from the age of 10 and progressively increase in adulthood. *Conclusions:* These factors, together with insufficient volume and intensity of motor activity, negatively affect the indicators of physical, mental and social health, which leads to a reduction in the life expectancy of the population of Ukraine.

Key words: physical activity, health, quality of life, schoolchildren, adults.

Introduction.

When they talk about a person's quality of life and his well-being, they most often associate this with economic well-being and only then pay attention to health (Hardman, Stensel, 2003; Cavill, Kahlmeier, Racioppi, 2006; Круцевич, Безверхня, 2010). The health of the population is now being discussed in all the media in connection with the medical reform in Ukraine, as a result of which, after 10 years, the number of people can be reduced by 20%. Therefore, an urgent problem at present is the dissemination of information about non-drug methods of strengthening one's health and prolonging one's жизни (Imas, Dutchak, Trachuk, 2013; World Health Organization, 2018; National strategy for health-improving activities in Ukraine for the period up to 2025 "Moving activity - healthy way of life - healthy nation". Decree of the President of Ukraine on September 9, 2016 No. 42/2016.).

The ability of people to lead a healthy life is closely related to the conditions in which they are born, grow, work and age. In states where the majority of the population feels disadvantaged and powerless, disproportionately poor outcomes are observed both in terms of health and other social determinants. A systematic assessment of the impact on health of rapidly changing environmental conditions, especially the impact of technology, working conditions, energy production and urbanization, is very important, and this assessment should be followed by actions aimed at obtaining health benefits (Lee, Shiroma, Lobelo, Puska, Blair, Katzmarzyk, 2012; World Health Organization 2013; Imas, Dutchak, Trachuk, 2013).

The "Physical Activity Strategy for the WHO European Region, 2016–2025" states that it is communities of people with broad rights that take proactive measures to respond to new or adverse situations in order to prepare the population for economic and social changes to make it easier to transfer crisis and adversity, which is right and timely for Ukraine (World Health Organization Regional Office for Europe, 2013).

Material and method.

The aim of our work is to identify the main factors of the lifestyle of different groups of the population of Ukraine that affect the state of health and their life expectancy. 1564 schoolchildren of 5-11 grades and 420 men and women 21-60 years old took part in sociological research.

For calculations, the following methods were used: theoretical analysis, synthesis, questioning, functional tests, mathematical statistics.

Results.

Due to the critical importance of the problem of the influence of lifestyle, physical activity on the duration and quality of life of the population of Ukraine, which, unfortunately, differs from the statistical indicators inherent in the countries of the European Union, it is necessary to determine the main lifestyle factors of different groups of the population of Ukraine that affect health and their life expectancy.

Every decade since 1987, we conduct a study of the priorities of species in the types of employment of adolescents in their free time. These priorities are changing every decade, which is probably due to socio-economic, political conditions and material support of the family. The dynamics of the involvement of

adolescents in a particular type of employment is worthy of separate consideration and interpretation (Krutsevich, Ishchenko, Imas, 2014).

Type of leisure activities	1987 (n=120)	1997 (n=100)	2007 (n=100)	2018 (n=100)
Reading of books	47,5	23,6	17,6	14,0
Playing sports	27,7	40,5	24,5	25
Watching TV Shows	3,8	51,7	54,8	48,4
Walking with friends	23	51,4	51,7	54,2
Helping parents	1,1	40,1	14,4	11,2
Relaxation	1,3	8,7	9,6	4,1
Cinema	4,8	1,3	3,7	—
Classes in circles	10,6	0,9	1,4	4,5
Music lessons	11	1,4	7,1	3,7
Computer work	—	3,2	8,6	26,7
Computer games	—	24,6	33,7	41,2
Do my homework	—	—	—	45,4
I attend a disco	—	—	—	11,6
Doing physical training on my own	—	—	—	11,8

We draw attention to a sharp decrease in reading fiction from 47.5 % to 14 % in 2016. An increase in the percentage of employment in computer games from 0 to 40.2 % and watching TV shows is about 50 %. 25 % of students dedicate time to sports (Table 1).

Table 1. Types of employment of adolescents in Kiev in their free time,%

A survey of schoolchildren in Kiev starting from the fifth grade indicates that as early as 11 years old 70 % of boys and 56 % of girls have bad habits (they tried to smoke, alcohol, toxic substances). And in the 10th and 11th grades, the number of girls who smoke and drink alcoholic beverages exceeds the number of boys by 5-10 % (Fig. 1), which is an alarming and negative factor affecting the health status of schoolchildren.

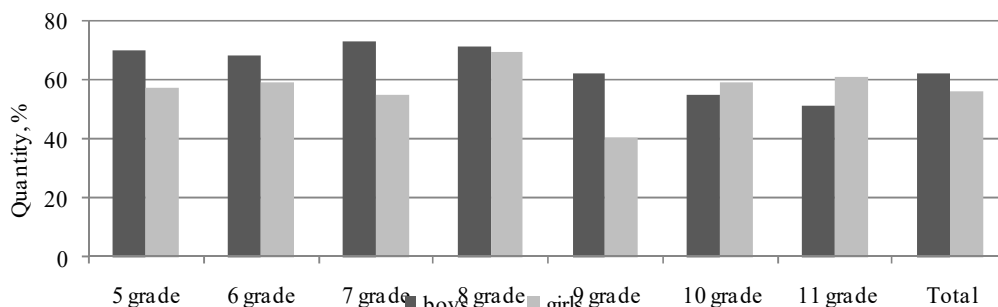


Fig.1 The presence of bad habits in students

To find out the reasons underlying the differences in the life expectancy of men and women living in Ukraine, we randomly sampled people of mature age using Zapesochnyi's method, which allows us to identify risk factors for the development of cardiovascular diseases (Krutsevich, Bezverhnia, 2010; Krutsevich, Imas, 2013). According to research, we divided respondents by age from 21 to 60 years and stratified samples by biological gender. In each age decade, at least 50 men and women were represented.

In fig. 2-7 presented the dynamics of six factors out of ten identified. Thus, the number of people who drink alcohol once a week increases with age from 24 % in men aged 21-30 to 40 % in 51-60 years, and from 10 % to 30 % in women (Fig.2).

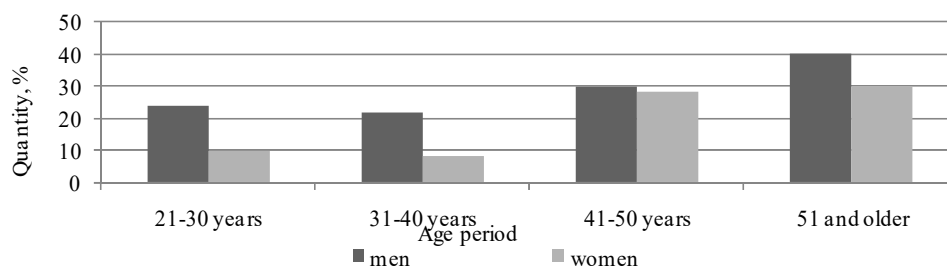


Fig.2 The presence of bad habits of men and women (drinking once a week)

There is some optimism about the decrease in the number of men and women who smoke tobacco products in men from 53 % at 21-30 years old to 28 % at 51-60 years old, and the positive dynamics is especially

visible in women from 21-30 years old – 38 % of smokers, at 31-40 years – 20 %, and after 50 years – 5 % (Fig. 3).

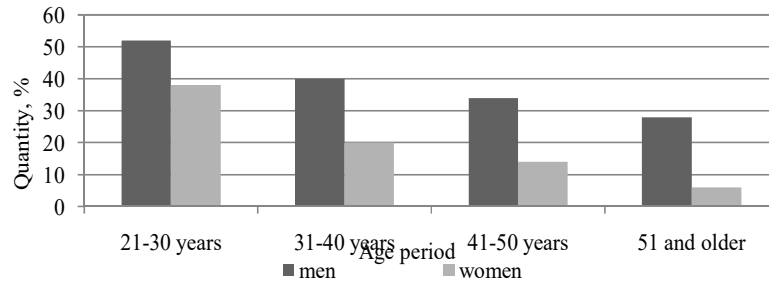
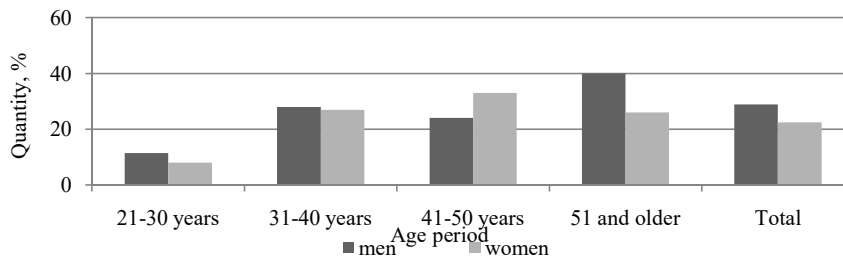


Fig.3 Presence of bad habits in men and women (smoking)

When analyzing the test answers on the issue of the presence of stress in men and women, it turned out that in the bulk of the men experience stress 10 % more than women. In the age period of 41-50 years, this condition changes. Women associate stressful situations with problems in family relationships and often with family breakdown. However, after 50 years, up to 40 % of men experience stress 15 % more than



women.

Fig.4 The presence of stress in men and women of mature age

The state of stress and the presence of excess body weight (BMI ≥ 30) affects blood pressure (Fig. 5, 6).

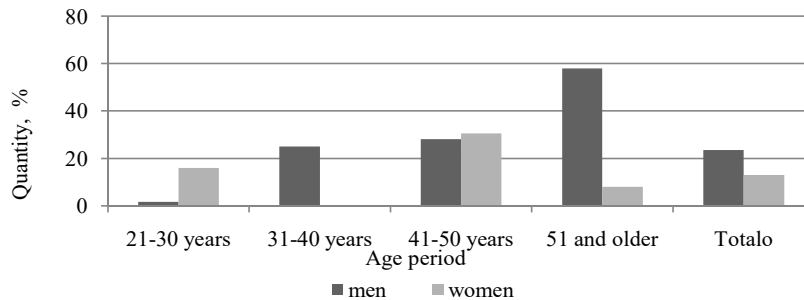


Fig.5 The presence of excess body weight of men and women of mature age

Men aged 51 years and older, up to 55 % have excess body weight, up to 40 % have stress conditions and only 30 % have a blood pressure norm (Fig.6).

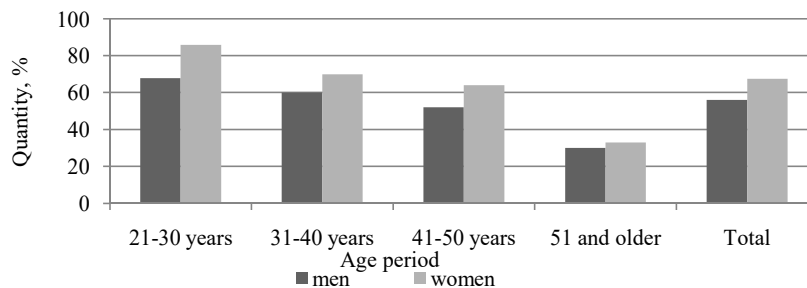


Fig. 6 The presence of normal blood pressure in men and women of mature age

The types of employment of men of mature age in their free time are somewhat different from the female contingent (Tabl. 2, 3)

Table 2. Women's leisure activities

Types of employment	21-30 age		31-40 age		41-50 age		51 and older.		Total	
	n=50		n=50		n=50		n=50		n=200	
	n	%	n	%	n	%	n	%	n	%
Reading fiction	28	56	22	44	18	36	25	50	93	46,5
Watching TV	13	26	18	36	22	44	39	78	92	46
Listening to music	25	50	10	20	10	20	3	6	48	24
Visit nightclubs	5	10	4	8	2	4	-	-	11	6,5
Chatting with friends	28	56	22	44	25	50	19	58	94	47
Play computer games	3	6	2	4	-	-	2	4	7	3,5
Engaged in PHG	15	30	8	15	5	10	3	6	31	15,5
Hobby	3	6	8	16	7	14	3	6	21	10,5
Doing household chores	40	80	40	80	43	86	43	86	166	83
Car repair	-	-	-	-	-	-	-	-	-	-
Hiking	6	12	4	8	3	6	3	6	16	8
Fishing	-	-	4	8	3	6	7	14	14	7
Parenting	30	60	28	56	20	40	11	22	89	44,5
Cinema	8	16	6	12	3	6	1	2	18	9
Theater visit	3	6	4	8	5	10	8	16	20	10
Knitting, embroidery	-	-	4	8	7	14	9	18	20	10

The results of the studies indicate that the types of motor activity are chosen by men and women, guided by external motives that are specified by the target settings that reflect the values formed for a given period.

The formation of life values and means of achieving them is influenced by external and internal factors. External include socio-economic conditions, family relations, material security, the presence of interesting work and moral attitudes in the production team, contributing to or hindering the realization of the personality of their claims. Internal factors include personal qualities, the ability to adapt to external socio-economic, moral standards of the team, as well as age-related characteristics of people of mature age.

Table 3. Types of employment of men in their free time

Types of employment	21-30 age		31-40 age		41-50 age		51 and older		Total	
	n=50		n=50		n=50		n=50		n=200	
	n	%	n	%	n	%	n	%	n	%
Reading fiction	11	22	16	32	7	14	3	6	37	18,5
Watching TV	15	30	18	36	35	70	44	88	112	56
Listening to music	15	30	14	28	8	16	3	6	40	20
Visit nightclubs	6	12	2	4	-	-	-	-	8	4
Chatting with friends	21	42	22	44	19	38	12	24	74	37
Play computer games	15	30	-	-	2	15	-	-	17	8,5
Engaged in PHG	10	20	15	30	5	10	2	4	32	16
Hobby	6	12	6	12	7	14	3	6	22	11
Doing household chores	11	22	7	14	18	36	26	52	62	36
Car repair	18	36	10	20	13	26	15	30	56	28
Hiking	6	12	7	14	15	30	8	16	36	18
Fishing	8	16	9	18	15	30	18	36	50	25
Hunting	-	-	5	10	4	8	4	8	13	6,5
Cinema	10	20	7	14	-	-	-	-	17	8,5
Visiting theaters, concerts	7	14	4	8	3	6	2	4	16	8
Parenting	-	-	-	-	4	8	3	6	7	3,5
Reading the press	8	16	18	36	14	28	21	42	61	30,5

As a result, this complex of negative indicators of the lifestyle of the male population leads to the presence of clearly expressed maximum risk factors for the development of cardiovascular diseases, which increase with each age decade of life - after 30 years - by 10 %, after 40 years - by 20 %, after 50 years - by 15 % (Fig.7)

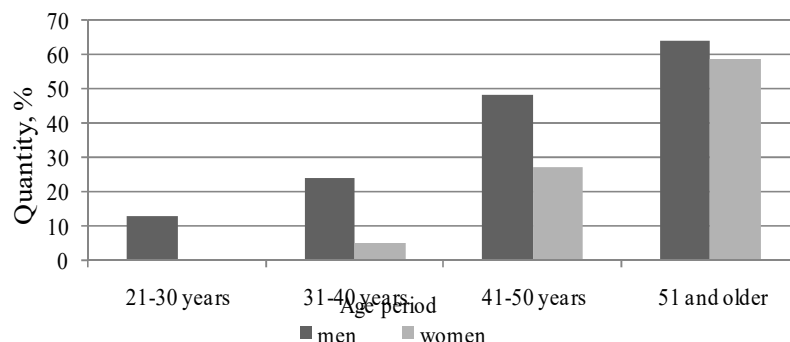


Fig.7 The presence of pronounced and maximum risk factors for the development of cardiovascular disease in men and women

In this regard, it can be noted that the critical period in the life of the male population begins after 30 years, which must be represented both in the periodical press (men read the press 45% more than women), in social advertising and in special scientific publications. Imperfection of the healthcare system, a low level of awareness of the value of health as equity, and the overwhelming majority of the population in conditions of socio-economic instability led to the creation of conditions unfavorable for a healthy lifestyle.

Discussion.

Scientists conclude that there is a correlation between the well-being and objective health indicators at the squared correlation coefficient level equal to 0.14, that is, health affects well-being, and subjective well-being affects life extension by 7-10 years (World Health Organization, 2007, 2013, 2018).

It has already been proven that there is a negative relationship between stress and subjective well-being, the higher the threshold value of stress, the worse the quality of human life (Fig. 8).

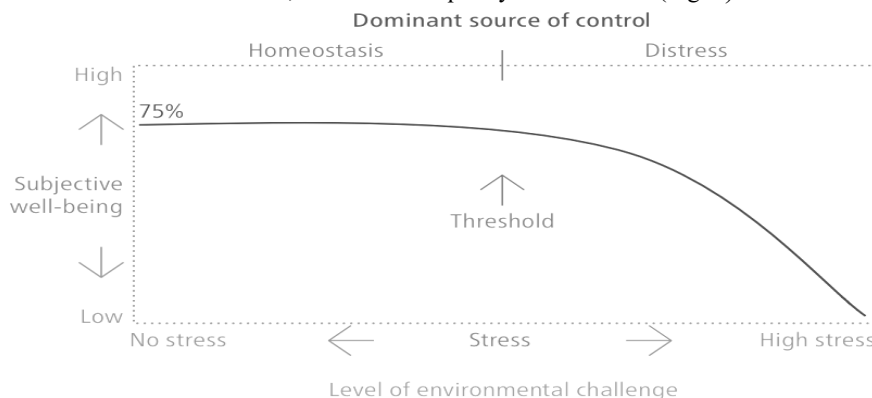


Fig. 8 The relationship between stress and subjective well-being (World Health Organization, 2013)

The quality of life problem is, on the one hand, the problem of ensuring a safe life for people, that is, life without war, oppression, discrimination, material deprivation, bureaucratic manipulation of the human person, and on the other hand, the problem of organizing such a life in which there is a significant place in the relationship between people belong to friendship and trust, and where next to the work that brings pleasure, the rational spending of leisure, active leisure, which is understood as an activity full of positive emotions feelings of physical improvement and health, that is, everything that brings people pleasure and good mood.

Despite the well-known benefits of physical activity, there is a global downward trend in its daily levels. Worldwide, one-third of adults do not reach recommended levels of physical activity. In the European Region, insufficiently active lifestyles lead more than a third of the total adult population (Hallal, Andersen, Bull, Guthold, Haskell, Ekelund, 2012).

According to the latest data (World Health Organization, 2007, 2013), in the European Union (EU), six out of ten people aged 15 years and over never exercise or rarely do it, and more than half of people never do or rarely do other physical activities, such as cycling, dancing, or gardening (European Health Report. Wellness Course: World Health Organization, 2012).

The results of the All-Ukrainian survey show that at the beginning of the XXI century, only 3% of the population aged 16 to 74 years had an adequate level of improving physical activity (at least 4-5 lessons per week lasting at least 30 minutes), the average level (2- 3 lessons per week) – 6 %, low level (1-2 lessons per

week) – 33 % of the population (National strategy for health-improving activities in Ukraine for the period up to 2025 "Moving activity - healthy way of life - healthy nation". Decree of the President of Ukraine on September 9, 2016 No. 42/2016).

As a result, lack of physical activity has become one of the leading health risk factors. In the WHO European Region, one million deaths (about 10% of the total) and 8.3 million years of healthy life per year are attributed to it. It is estimated that a lack of physical activity accounts for 5% of the burden of coronary heart disease, 7% of the burden of type 2 diabetes, 9% of the burden of breast cancer and 10% of the burden of colon cancer (World Health Organization, 2004; World Health Organization Regional Office for Europe, 2013).

According to the World Health Organization, the lack of proper motor activity leads to economic losses of 150-300 euros per person per year World Health Organization, 2007, 2008; World Health Organization Regional Office for Europe, 2013).

Overweight and obesity over the past few decades have risen (and continue to rise) in many countries in the Region. The following facts cannot but cause alarm: in 46 countries of the Region (87 % of countries) the prevalence of overweight and obesity among adults exceeds 50 %, and in several of them it reaches almost 70 % of the total adult population. Overweight and obesity are very common among children and adolescents, especially in southern Europe. Inadequate physical activity has been shown to upset energy balance, which leads to weight gain (Health 2020, 2013; European Union, 2014).

According to studies by foreign scientists, the contribution of various factors to maintaining health is uneven. About 54 % is a lifestyle in which a significant role is played by negative factors of unbalanced nutrition, smoking, lack of motor activity, excessive alcohol consumption (Cavill, Kahlmeier, Racioppi, 2006; Kirk-Sanchez, Mc Gough, 2014).

As one of the most important indicators of health and well-being - the life expectancy of the population. Comparing WHO statistics for Ukraine and EU countries, we note a difference in life expectancy of 10 years not in favor of Ukraine. The number of years of dysfunctional life is also noteworthy, that is, when a person begins to struggle with emerging diseases. In Europe, this figure is 9-11, and in Ukraine 11-13 years.

According to the World Health Organization, the ratio of costs to income from implementing healthy lifestyle programs is 1 to 8 (Cavill, Kahlmeier, Racioppi, 2006; World Health Organization, 2010).

Ukraine is no exception in the number of teenagers who watch TV 2 or more hours a day, according to WHO, we are in 20th place in Europe (World Health Organization, 2013)

However, the low level of health of adolescents in Ukraine is alarming. According to WHO, more than 30 % of girls and 17 % of boys of fifteen consider their health to be either satisfactory or poor, which is the fourth result among European countries (World Health Organization, 2013).

It is well known that maintaining a healthy lifestyle for people to maintain and improve their health is five times more effective than medical diagnostic procedures (Gesell, Tesdahl, Ruchman, 2012; Health-Enhancing Physical Activity, 2013; Hotting, Roder, 2013).

Based on state-of-the-art scientific evidence, the American Physical Activity Guide (U.S. Department of Health and Human Services, 2008; 2018) states that today, about half of all adult Americans — 117 million people — have one or more preventable chronic diseases. Seven of the ten most common chronic diseases are favorably affected by regular exercise. However, nearly 80 percent of adults do not comply with the basic recommendations for aerobic and muscle activity, while only half comply with the basic recommendations for aerobic physical activity. This lack of physical activity is associated with approximately \$ 117 billion in annual health care costs and about 10 percent of premature deaths.

An analysis of the latest documents of the World Health Organization regarding the motor activity strategy for the European Region determines the reasons that affect the health status and life expectancy of the Ukrainian population (World Health Organization, 2008, 2010, 2013, 2018).

By examining statistics on the population of Ukraine, WHO identifies the main risk factors that affect health status and life expectancy (Health 2020, 2013; World Health Organization, 2018).

Among them: smoking, the prevalence of which among people aged 18-29 years is 43 %; smoking accounts for 13 % of the burden of disease; according to a survey conducted in schools, the prevalence of smoking among thirteen-year-olds is 9 % among boys and 4 % among girls.

Alcohol consumption: the total recorded level of alcohol consumption is 4.8 liters per person per year; annually 22 new cases of alcoholic psychosis are recorded per 100,000 population; alcohol consumption accounts for 12 % of the disease burden; according to a school survey among fifteen-year-old students, 19 % of girls and 29 % of boys use alcohol weekly. Illicit drug use: marijuana is the most common illicit drug in the country; over the past year, 3.6 % of the population consumed it. The prevalence rates for drug abuse during the year are: 0.8 % for opiates, 0.2 % for amphetamines and 0.1 % for both ecstasy and cocaine; illicit drug use accounts for 3 % of the total burden of disease; in 2003, the number of initial visits to drug treatment facilities was equal to 133394; a survey among fifteen-year-old schoolchildren showed that over the previous 12 months, 8 % of girls and 21 % of boys used marijuana. Obesity: according to estimates, obesity (BMI 30) accounts for 9 % of the disease burden, and 6 % for inadequate physical activity; 7 % of men and 19 % of women suffer from obesity; according to a survey of thirteen-year-old schoolchildren conducted in schools, 5 % of boys and 3 % of girls suffer from overweight.

Conclusion.

An analysis of the data on the place of motor activity in the lifestyle of different age groups of the population from childhood to the borders of old age indicates: firstly, the insufficiency of its volume and intensity and the mismatch between hygienic and physiological standards of both a growing and a mature organism. This factor, combined with negative lifestyle habits, affects the indicators of physical, mental and social health, which leads to a reduction in the life expectancy of the population of Ukraine.

Conflict of Interest. The authors declare that there is no conflict of interest.

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