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Research Article

Influence of Lifestyle on Sleep and Health of Teens and Youth (Based on Survey Results)

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Abstract

The paper provides an analysis of 705 questionnaires of young people, which contained information about age, gender, area of residence, duration of sleep, number of awakenings at night, the nature of dreams, remembering dreams, ease of waking up, well-being after waking up, activities before bed, eating before bed, eating at night, time at the computer, smoking, smoking before bed, smoking in the room, the presence of chronic diseases, acute diseases, recent complaints. An assessment of the mutual influence of these factors made it possible to obtain reliable data on a number of positions.

Keywords: *Health; Sleep; Youth*

Introduction

The influence of lifestyle on a person's sleep has been known and proven for a long time [1]. An inverse relationship has also been proven - the need for quality sleep for normal functioning [2]. At the same time, rapidly changing living conditions that affect our behavior and sleep form new cause-and-effect relationships, the analysis of which continues to be of interest. In particular, the current military situation is stressful not only for direct participants in hostilities, but also for the civilian population, in particular young people.

In this regard, an online survey was conducted and an analysis of the influence of the studied factors on sleep and health was carried out.

Materials and Methods

A survey of 705 young people aged 14 to 25 years was conducted.

The questionnaire included the following items: age, gender, area of residence, duration of sleep, number of awakenings at night, nature of dreams, remembering dreams, ease of waking up, well-being after waking up, activities before bed, eating before bed, eating at night, time at the computer, smoking, smoking before going to bed, smoking in the room, the presence of chronic diseases, past acute diseases, recent complaints.

Statistical data processing and analysis of the research results were carried out using Microsoft Office Excel 7.0 and Statistica 7.0. For qualitative characteristics, the value of the share indicator (M%) and its standard error (m%) are given. The significance of the difference in relative values was calculated using pairwise comparison of proportions (using Student's t-test).

Results and Discussion

705 respondents were surveyed. Not everyone answered all the questions, so the sum of answers to a specific question usually does not exceed 705. Men - 180, women - 525. Average age - 19 years 6 months.

414 respondents (58.9%) sleep soundly at night (without waking up), 197 (28%) wake up once, 56 (8%) wake up twice, 36 (5.1%) wake up three or more times.

Average sleep duration: on weekdays - 6 hours 49 minutes, on weekends - 9 hours 17 minutes.

348 people (49.2%) wake up easily, 294 (42.2%) wake up with difficulty, 60 (8.6%) - both.

550 respondents live in areas that were not shelled; they made up group I; 134 respondents live in hazardous areas (group II).

The sleep quality indicator was assessed by how one felt after waking up.

It was found that respondents in group I were significantly less likely than in group II to experience lethargy, drowsiness and irritability after waking up (respectively, 74.9 ± 1.85% versus 82.0 ± 3.31%, $p < 0.05$). At night, 12.6% of people in group I wake up 2 or more times, and in group II - 24% (the difference is not significant). In addition, in group II there were significantly more frequent complaints of headaches (47.0 ± 4.31% versus 32.9 ± 2.00%, $p < 0.005$), as well as a combination of increased fatigue and headaches (20.2 ± 3.47 versus 9.5 ± 1.25%, $p < 0.005$). In group II, cardio-rheumatological complaints are more common (not significant).

A difference in the frequency of colds was revealed. In the first group, 10.0 ± 1.28% get colds 5 or more times a year, while in group II - 15.7 ± 3.14 ($p < 0.05$).

The number of chronic diseases, quality of dreams, ease of awakening, bad mood, memory and appetite were approximately the same in both groups.

To assess the impact of lifestyle on sleep quality and the impact of sleep quality on health, respondents were divided into two groups: lethargic and/or irritable in the morning and active after waking up.

It turned out that the quality of sleep does not significantly affect the frequency of infectious diseases, although a certain trend has been identified: with an increase in the number of transmitted infectious diseases, the number of "vigorous" people decreases. A similar situation can be observed with smoking: smokers, especially those smoking indoors, are more likely (but not reliably) to be lethargic and less cheerful than non-smokers. In addition, respondents who tend to eat in the middle of the night are more likely (but again not reliably) to be lethargic and less likely to be active. The very fact of eating before bed did not affect the quality of sleep, while a significant relationship was revealed with other activities before bed (Table 1).

As can be seen from the table, respondents who read or listen to music before going to bed feel the best in the morning; who study before going to bed, who sit on social networks and in general near any screen feel significantly worse in the morning.

	Work before bed	n	Lethargy after sleep			Vigorous		
			abs	%%	Difference between rows	abs	%%	Difference between rows
1	Listening to music or reading	138	89	64,5 ± 4,17	1 & 2 p < 0,005 1 & 3 p < 0,001 1 & 4 p < 0,01	45	29,8 ± 4,99	1 & 2 p < 0,005 1 & 3 p < 0,001 1 & 4 p < 0,005
2	Staying in front of a screen (computer, TV, phone)	340	266	78,02 ± 2,24		66	19,4 ± 2,15	
3	Studies	189	133	70,4 ± 3,32		25	13,2 ± 2,48	
4	Social network	180	141	78,3 ± 3,07		32	17,8 ± 2,81	

Table 1: *The influence of the nature of activities before bedtime on its quality.*

As a completely expected result, a correlation was revealed between time on the computer and sleep quality (Table 2).

Sub-groups	Computer time	n	Lethargy after sleep			Vigorous		
			abs	%%	Difference between rows	abs	%%	Difference between rows
1	< 2 hours	23	11	47,8 ± 10,65	1 & 2 p < 0,05 1 & 3 p < 0,01 1 & 4 p < 0,001	10	43,5 ± 9,99	1 & 2 p < 0,05 1 & 3 p < 0,01 1 & 4 p < 0,001
2	2 - 5 hours	216	155	71,8 ± 3,06		55	25,5 ± 3,15	
3	> 5 - < 10 hours	316	245	77,5 ± 2,35		57	18,8 ± 2,48	
4	> 10 hours	127	108	85,0 ± 3,15		15	11,8 ± 3,11	

Table 2: *The effect of computer time on sleep quality.*

As can be seen from the table, who spend less than 2 hours at the computer at the computer are significantly more alert in the morning than everyone else, and compared to subgroup 4, the difference is 4 times.

It also turned out that men are more alert than women in the morning (28.9 ± 3.18% versus 16.8 ± 1.63%, p < 0.005).

Morning lethargy is a multiple of the number of times ones wake up during the night, but the difference is not significant.

Those who sleep soundly, compared to the "whenever" group, are significantly more likely to be lethargic in the morning (64.9 ± 6.32 versus 79.0 ± 2.39, p < 0.05).

A relationship has been discovered between how anybody feel in the morning and the nature of dreams-who either do not have dreams or have neutral ones are more alert in the morning.

Conversely, bad, half-bad and strange dreams are accompanied by a deterioration in morning well-being (Table 3).

	Dreams	n	Lethargy		Vigorous		
			abs	%%	abs	%%	Difference between rows
1	Bad	110	89	80,9	21	19,1	2 & 5 p < 0,05
2	Neutral	22	14	62,6	5	27,7 ± 9,14	
3	Good	420	313	74,5	90	21,4	
4	There are none	13	7	53,9	4	30,8	
5	50 to 50	59	45	76,3	11	18,6 ± 5,07	
6	Strange	31	26	83,9	5	15,6	

Table 3: *The nature of dreams and well-being.*

Taking into account the identified interdependence, we also checked the influence of various factors on the nature of dreams. Group A included those who see good, neutral dreams and their absence; group B included bad, 50/50 (that is, 50% bad) and strange (Table 4).

Group	n	They don't wake up at night		They wake up at night		Including more than 3 times		Computer time				Smoking	
					≤ 2 hours		≥ 10 hours						
		abs	%%	abs	%%	abs	%%	abs	%%	abs	%%	abs	%%
"A"	455	280	61,5	173	38,0 ± 2,28	12	2,6 ± 2,25	19	4,2 ± 0,94	74	16,2 ± 1,73	69	15,2 ± 1,18
"B"	200	103	51,5	97	48,5 ± 3,53	23	11,5 ± 2,26	3	1,5 ± 0,86	46	23,0 ± 2,98	48	24,0 ± 3,02
				p < 0,02		p < 0,001		p < 0,05		p < 0,05		p < 0,02	

Table 4: *The influence of some everyday factors on the nature of dreams.*

People from group A wake up significantly less often at night; in group A there are significantly more of those who sit at the computer for less than 2 hours and significantly fewer of those who sit for more than 10 hours; There were significantly fewer smokers in group A than in group B.

Based on the survey results, not only the impact of anything on sleep was assessed, but also the impact of sleep on well-being, by the complaints of the respondents (Table 5).

Complaints	Lethargy after sleep (537)		Vigorous (140)		
	abs	%%	abs	%%	
No complaints	54	10,1 ± 1,30	25	17,9 ± 3,24	p < 0,05
Make complaints	483	89,9 ± 1,30	115	82,1 ± 3,24	p < 0,05
Headache	206	38,4 ± 2,10	32	22,9 ± 3,55	p < 0,001
Fatigue	424	78,9 ± 1,76	92	65,7 ± 4,01	p < 0,005
Bad dream	115	21,4 ± 1,77	13	9,3 ± 2,45	p < 0,001
Bad mood	192	35,8 ± 2,07	28	20,0 ± 3,38	p < 0,001

Table 5: *Sleep quality and complaints.*

Among the "sluggish" respondents, people without complaints are significantly less common, and, naturally, on the contrary, people with complaints are more often found. These include significantly more frequent complaints of headache, fatigue, poor sleep (which is understandable) and bad mood.

Conclusion

1. Most young people report poor quality of sleep.
2. The quality of sleep is significantly better among those who read or listen to music before bed than among those who spend time in front of a screen.
3. Smoking increases the frequency of poor morning health and worsens the nature of dreams.
4. Increasing time at the computer for more than 5 hours a day reduces the duration of night sleep and increases the frequency of poor health.
5. The quality of sleep is affected by the number of waking up at night.
6. The quality of sleep is reflected in the nature of dreams, in particular, bad and strange dreams characterize poor sleep quality.
7. Deterioration in sleep quality leads to a significant increase in complaints, in particular, headaches, fatigue, poor sleep and mood.
8. Prolonged stress associated with military operations certainly worsens the mental and physical health of young people.

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