

What are the reasons, consequences of lack of sleep and its solutions?

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Global Perspectives and Project Work

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Abstract

The main aim of this study to analyze the current situation of the sleep issue among high school students and find consequences, reasons and solutions. Via the help of quantitative data obtained from the survey, patterns were found that this issue is the reason of other issues as health problems, bad academic performance, phone addiction.

Key words: health problems, bad academic performance, phone addiction, respondents, high school students, sleep issue

Бұл зерттеудің негізгі мақсаты жоғары сынып оқушылары арасындағы ұйқы мәселесінің қазіргі жағдайын талдау және оның салдарын, себептерін және шешу жолдарын табу. Сауалнамадан алынған сандық деректердің көмегімен бұл мәселе денсаулық проблемалары, нашар оқу үлгерімі, телефонға тәуелділік сияқты басқа да мәселелердің себебі болып табылатын заңдылықтар анықталды.

Негізгі сөздер: денсаулық проблемалары, нашар оқу үлгерімі, телефонға тәуелділік, респонденттер, жоғары сынып оқушылары, ұйқы мәселесі

Основная цель данного исследования проанализировать современную ситуацию с проблемой сна среди старшеклассников и найти последствия, причины и пути решения. С помощью количественных данных, полученных в результате опроса, были обнаружены закономерности того, что эта проблема является

причиной других проблем, таких как проблемы со здоровьем, плохая успеваемость, телефонная зависимость.

Ключевые слова: проблемы со здоровьем, плохая успеваемость, телефонная зависимость, респонденты, старшеклассники, проблема сна.

Introduction

Today lack of sleep is very big problem in high school students. Students prefer to prepare to exams, homeworks, and etc, so they usually sleep few hours and this issue has got many consequences connected with health, stress and etc. According to the “National Sleep Foundation and the American Academy of Sleep Medicine and Sleep Research Society” at least 60% of college students have poor quality sleep and garner, on average, 7 hours of sleep per night. So, by this statistic we can see the relevance of this problem and the measure of this problem. My topic is about lack of sleep among high school students.

According to the “National Institutes of Health” sleep deficiency is linked to many chronic health problems, including heart disease, kidney disease, high blood pressure, diabetes, stroke, obesity, and depression. Sleep deficiency is also linked to a higher chance of injury in adults, teens, and children.

Centers for Disease Control and Prevention (CDC) claim that the study identifies a few potential reasons for getting little sleep, including early start times for school, pressure to perform well academically, involvement in extracurricular activities, and use of electronic gadgets.

The “National Institute of Health” claims that lack of sleep is linked to numerous negative consequences for students, such as subpar academic performance, a higher risk of accidents and injuries, and mental health issues, among other things. What is going to be suggested? This paper proposes a number of ways to support teens' good sleep habits, including delaying the start of school, maintaining regular sleep schedules, and refraining from screen time before bed.

Mei-Yen Chen, K Wong, and Yi-Jong (2006) claim that After adjusting for variables including gender and grade level, adequate sleep, defined as between 6 and 8 hours per night, appeared to be linked to a decreased chance of becoming overweight or obese. Individuals who were well rested in adolescence had stronger perceived health and they engaged in health-risk activities less than counterparts who reported lower sleep duration. Teenagers often struggle with sleep deprivation. Their natural sleep-wake cycle changes during puberty, making them want to go to bed later. However, they often have to wake up early for school, which conflicts with their biological rhythms. The constant use of electronic devices also interferes with sleep. According to the “BMC Public Health” the blue light from screens suppresses the production of melatonin, a hormone that helps us fall asleep. Finally, teenagers' busy schedules with school, friends, and activities leave little time for adequate sleep. This ongoing sleep loss can have serious consequences for their health. Teenagers may experience anxiety or depression and perform poorly in school since it is harder for them to learn, remember, and feel good. By this we can see how lack of sleep can affect us. So, this article is important to people who has this issue.

According to "The effects of not getting enough sleep for U.S. high school students: Why it's important to think about relative deprivation":
Principal points Bad outcomes are linked to sleep deprivation:
Teenagers in high school who don't get enough sleep are more prone to engage in risky behavior (such as carrying a weapon). I'm really concerned. Experiencing health issues (such as being overweight) performing poorly in school What matters is the severity of it: If the sleep deprivation is more severe, the consequences worsen. The greatest risk is for those who get less than five hours of sleep each night. A lack of sleep (six to seven hours) is not necessarily associated with negative outcomes. In summary, American high school kids worry a lot about not

getting enough sleep because it is detrimental to their development and health.

Aims

So, by these articles we can see how lack of sleep can affect us, our parts of body, for our mind and etc. By this I think that I could show you the measure of issue. I chose this topic because I am high school student and I see how my classmates, friends suffer from this.

I also suffered from this problem, and after my health became worse and I understood that it is because of few hours of sleep. So my goal was show to high school students or to school students who suffer from this problem how their health can become if they won't stop.

Q1: Why students have problem with sleep?

Q2: Why they choose to prepare for exams or to watch phones than go to sleep?

Q3: How to reduce issue of sleep?

These questions will help me to provide and to collect information about sleep issue and after I could answer to my RQ.

Literature Review

This Centers for Disease Control and Prevention (CDC) report deals with the rate of short sleep duration among American middle and high school students as per 2015 data. Most students don't get enough sleep, with over 73% falling short. This is especially alarming for middle and high schoolers, who need 9 and 8 hours of sleep per night. In fact, a shocking 57.8% of middle schoolers and 72.7% of high schoolers reported not meeting the recommended sleep guideline. Sleep deprivation among students varies. Female students face it more often than males, while ninth graders are less affected. Black and Asian students experience higher rates compared to White and Hispanic students. The CDC found that sleep deprivation also differs across locations, ranging from 50.2% to 64.7%. Factors contributing to sleep issues include early school times, academic stress,

extracurricular activities, and technology use. The consequences of sleep loss for students are significant, including poor grades, increased accident risks, and mental health problems.

Sleep deprivation among students is prevalent due to various factors such as early school schedules, academic pressures, extracurricular activities, and the distractions of electronic devices. This insufficient sleep has detrimental effects on students' overall well-being. A report has identified the negative consequences of sleep deprivation, including diminished academic achievement, heightened risk of accidents, and mental health concerns. To combat this issue, the report suggests adjustments to school start times, promotion of regular sleep-wake cycles, and the discouragement of screen use in the hours leading up to bedtime.

On “Sleep Deficiency, Sleep Health Problems and High School Students Performance” article an overview based on the information I found that the main factors of bad sleep are the worse quality of sleep, shorter duration and more health problems related to this can be connected with earlier morning school start. So it common with significant negative impact on their academic performance. There was a connection between insufficient sleep, bad night’s rest and lower grades, test results and self-reported scores in school life. This research proves that there are a lot of high school students who do not get enough sleep and suffer from other sleep-related conditions. And this affects their academic results negatively. The findings imply that student performance could improve if schools push back their start times till later in the day thereby enhancing the quality of student’s sleeps. The study emphasizes the importance of teaching healthy sleeping habits to young adults in high schools to eliminate those factors which may also cause sleeping problems.

According to the **Mei-Yen Chen, K Wong, Yi-Jong** nights of sleep that were adequate, which is between 6 and 8 hours per night, seemed to be associated with a lower risk of being overweight or obese after accounting for factors such as gender and grade level.

Individuals who were well rested in adolescence had greater perceived health and they engaged in health-risk behaviors less than counterparts who reported shorter sleep duration.

The significance of adequate sleep in adolescent health is also emphasized by the study, as it affects both physical and behavioral aspects of well-functioning.

The sleep adequacy that the authors of this study define as 6-8 hours might not represent the entirety of adolescents.

The study used reported duration of sleep, which may have resulted in some levels of misreporting.

More investigations should be carried out in the area of causation between sleep and health outcomes during adolescence.

In conclusion, this study would recommend that adequate sleep is very essential in promoting health and discouraging such negative habits among adolescents.

A quick look at "The effects of not getting enough sleep for U.S. high school students: Why it's important to think about relative deprivation": Main points: Lack of sleep linked to bad results: High school students who don't get enough sleep are more likely to have various bad things happen, like: Doing dangerous things (e.g., carrying weapons) Feeling very worried Having health problems (e.g., being too heavy) Doing badly in school How bad it is makes a difference: The bad things that happen get worse if the lack of sleep is more serious. Students who sleep less than 5 hours per night are at the biggest risk. Not getting enough sleep (6-7 hours) isn't always linked to bad things happening. Bottom line: Not getting enough sleep is a big worry for U.S. high school students, and it's very bad for their health and growth. Helping students who don't get enough sleep a lot could be very important.

Quick look at "Why Are Teenagers So Sleep-Deprived?" by Juliann Garey: Teens often face challenges getting the recommended amount of sleep. Several factors contribute to this issue, including biological changes, screen usage, and busy schedules.

Firstly, puberty disrupts sleep patterns. During this time, the body produces melatonin, a sleep-promoting hormone, later at night. This natural tendency to feel tired later clashes with early school start times, making it difficult for teens to fall asleep early enough for sufficient rest. The mismatch between their internal clock and external demands sets them up for sleep deprivation.

Secondly, according to the "ChildMind" electronic devices significantly interfere with sleep. The blue light emitted from phones, tablets, and laptops suppresses melatonin production, making it harder to fall asleep and stay asleep. Studies have shown that screen time right before bed delays sleep onset and reduces overall sleep quality. This compromised sleep quality due to screens negatively impacts teens' health and academic performance. Teens also juggle demanding schedules that leave less time for sleep. Schoolwork, extracurricular activities, social commitments, and chores all compete for their time. A "ChildMind's" survey found that teens often prioritize these activities over sleep, leading to sleep deprivation. The lack of sleep due to these busy schedules hinders their ability to focus, remember information, and perform well academically.

So we can understand that we need to go to bed early because of the early start of the school, prepare to homeworks early, turn off all electronic devices before go to bed. Because all these things affect our sleep, so our sleep depends on these.

These factors all contribute to a significant problem: insufficient sleep in teenagers.

Methods

Research design is the framework of research methods and techniques chosen by a researcher to conduct a study. The design allows researchers to sharpen the research methods suitable for the subject matter and set up their studies for success. To analyze my problem I decided to use a quantitative research method. Quantitative research is the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations (Pritha Bhandari, 2020). I chose a survey, because in survey you take into account the opinions of many people, when in qualitative you take into account of 2-3 people. So, I think my issue need many options. This was a ideal information collection strategy for various reasons. The point of the information collection was to superior get it the encounter of high school students. On the other hand, qualitative inquire about plan isn't a extraordinary choice due to the enormous measure of the populace. "Qualitative investigate includes collecting and analyzing non-numerical information to get it concepts, conclusions, or encounters. It can be utilized to assemble in-depth bits of knowledge into a issue or produce unused thoughts for investigate. Qualitative research is the opposite of quantitative research, which involves collecting and analyzing numerical data for statistical analysis" (Pritha Bhandari, 2019). Individuals can be asked identical questions in surveys, therefore it helps to collect more reliable information.

I am high school student from NIS Aktobe, so I can say that as a student that we suffer from sleeplessness, which cause to other health issues, to our performance and etc. Researchers found that 73% of students exhibited some form of sleep problem(Yves Paul Vincent Mbous,2022). Consequently, it's a huge issue among high school students.

I completed a survey from 10 questions which are relevant for the issue.

1. Basic 3 questions which I include to find out if the person taking the survey has sleep problems.
2. 4 questions to find out the response's causes of sleeplessness
3. 3 questions to find out the consequences of sleeplessness.

I include these questions to know more about what causes, consequences people may have because of sleep deprivation. My questions have 3-4 opportunities and students need to choose only one necessary answer which is related for them. By this survey I knew that is huge problem because more than half of my responses answered that they have sleep deprivation, about 35% of them have sleep issue because of deadlines, homeworks, summatives and almost of them have bad performance at school, the become more aggressive after a bad sleep. So, I understood that by 100 respondents, because it's very difficult to set information from every student in the world, so I share the link with my friends, classmates and with high schhol students from different school in Aktobe.

The data collection stage of the research was the most challenging, as the survey was hard to conduct and the number of participants was low because of the lack of appropriate instruments.I have used only quantitative research

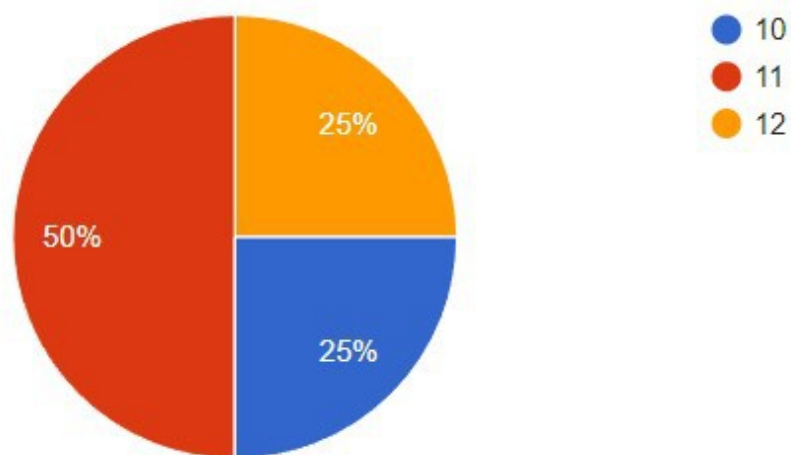
to analyze and summarize my research topic. That is why it is a very important part of my research question.

Limitations are survey only NIS students and survey only students who study from 10th to 12th grade.

Results

On May 18, 2024, there were 70 participants in this survey, which is not enough. The results of the survey may therefore be considered unreliable. However, despite the paucity of information collected, some correlations are evident.

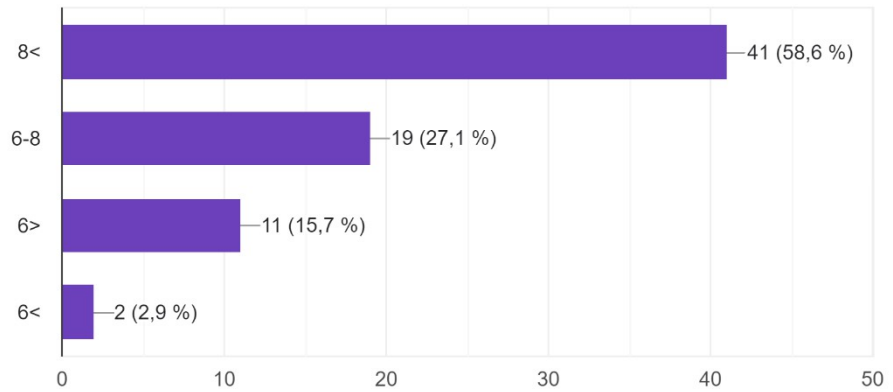
What class are you in?



The survey participants were divided by grade group. The half of respondents are from 11th grade.

1. How much sleep do you get daily?

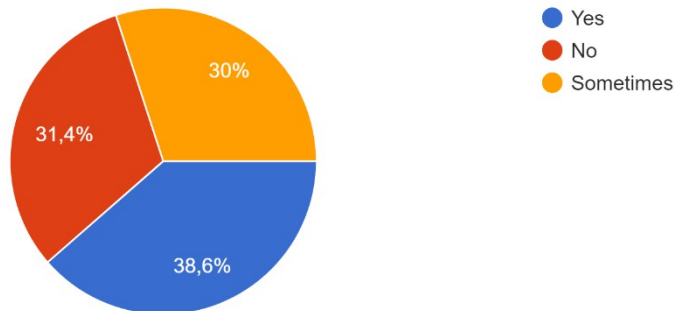
70 ответов



Most of the participants have a good sleep, but about 20% have bad sleep. So, this issue is becoming more relevant among high school students.

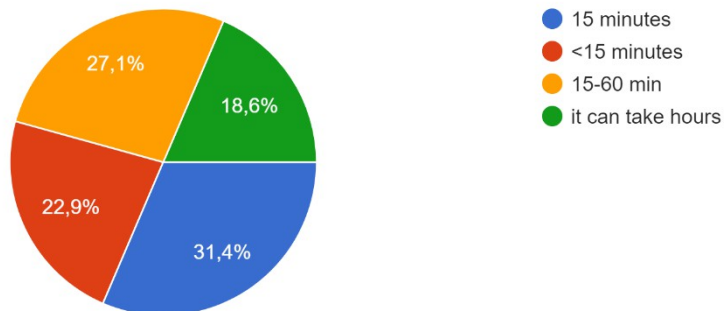
3. Do you have good sleep (you don't wake up at night and etc.)?

70 ответов



How long does it take you to fall asleep?

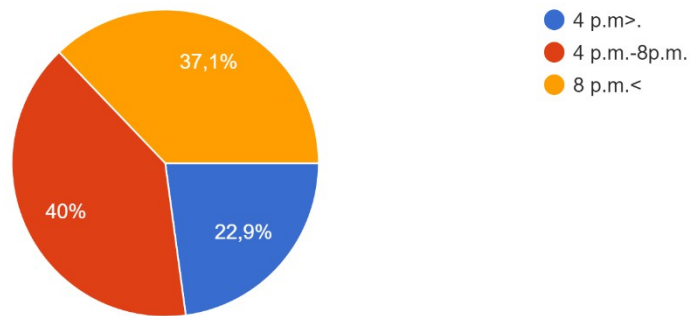
70 ответов



Difference between participants who have good sleep(not about time of sleep) and who hasn't is small. They usually wake up at night and it take more than 15 minutes, sometimes it can be hours to take fall asleep. Only 22,9% of respondents spend less than 15 minutes to fall asleep.

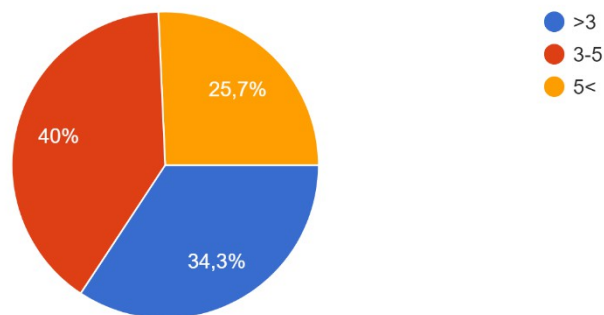
When you start doing your homeworks?

70 ОТВЕТОВ



How many hours do you spend to watch TV, telephone and etc?

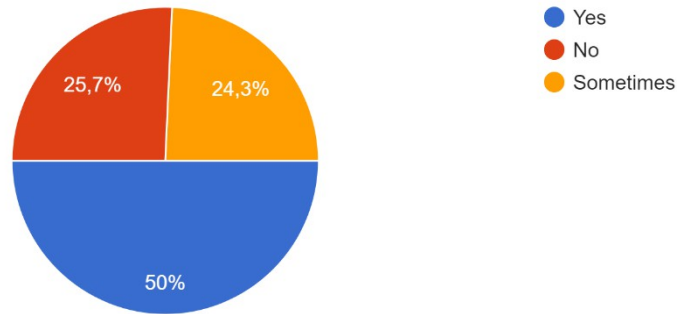
70 ОТВЕТОВ



The main reasons of bad quality of sleep are doing homeworks lately and spending lot of time to watch TV, telephone and other devices, which negatively affect to our mind. So, only 23% start doing hometasks until 4 p.m. and only 34% waste less than 3 hours for devices. Other respondents start their works lately and spend lot of time to devices, why they go to the bed lately.

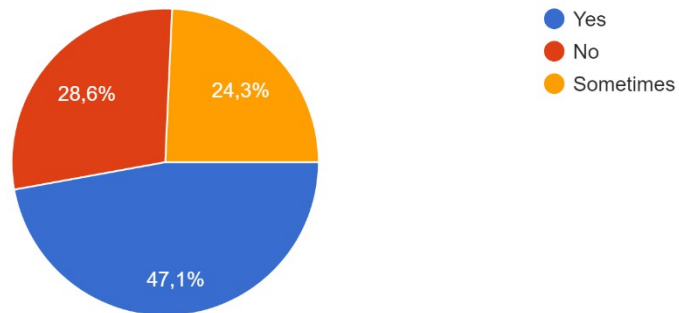
2. Do you feel tired while working?

70 ответов



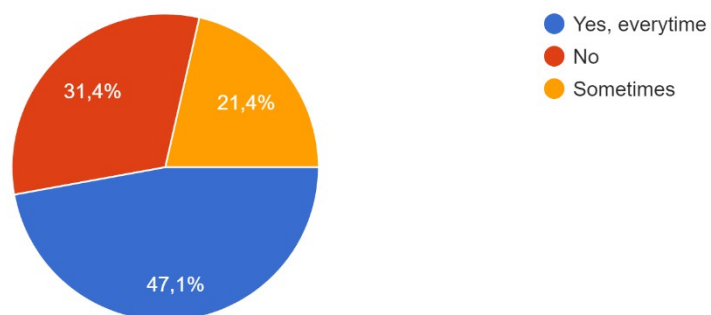
When you don't sleep enough, do you feel aggressive?

70 ответов



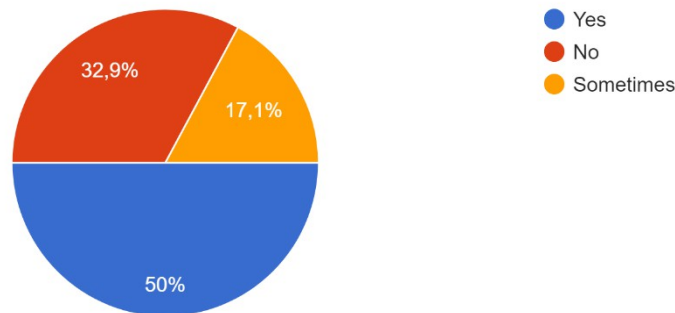
When you don't sleep enough, do you have health problems as headache, weakness and high temperature?

70 ответов



Do it affect to your marks at school?

70 ОТВЕТОВ



These figures show us that half of the respondents usually feel tired while working and 24% sometimes feel tired, other 24% don't feel tired while working. Also 47,1% usually feel aggressive when they don't sleep enough, 24,3% feel aggressive sometimes, other 28,6% don't feel aggressive. When respondents don't sleep enough, the 47,1% have problems with health every time, 21,4% have sometimes and only other 31,5% haven't got health problems, when they don't sleep enough. Moreover, lack of sleep affect to the school performance to the half of respondents, 32,9% don't effect and 17,1% sometimes. By these figures we saw that insomnia may effect to the nervous system, feelings, health and school performance.

Conclusion

Lack of sleep is a serious problem among high school students. Students suffer every day, which leads to stress and depression. Teachers and parents force them to study continuously, which is why students come home and start studying and preparing at night, which also leads to health problems. It is worth noting another important cause of insomnia - addiction to gadgets. The guys look at their phones until the night and begin to live on them, as a result of which they cannot sleep at night and start doing their daily works. In the first part I suggested to add some solutions for the people's life who has sleep insomnia. They are: Start do your tasks, work earlier, turn off all technics before one hour to go to bad, to create new, normal schedule for everyday, save the time management. Only with these solutions students will safe their teenage years and won't have problems with health in the future.

Evaluation and Further Research:

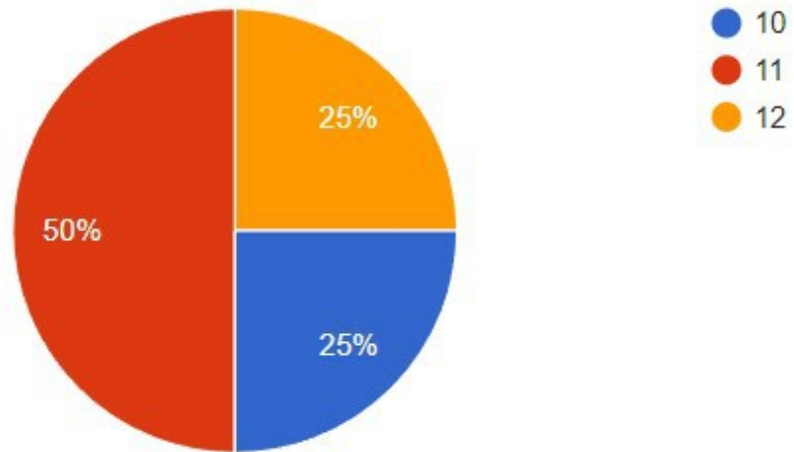
The research was fairly successful as it reached its main aims and was completely able to answer the research questions. However the research is still lacking as it is in need of further research. The data collection process was fully focused on the sleep issue of students. Thus, to popularize this problem among high school students, the study should provide a lot of reliable and new information and statistics to show how serious this problem is. At least 100 respondents are needed to complete the qualitative work. In addition, reliability requires the proper conduct of a survey.

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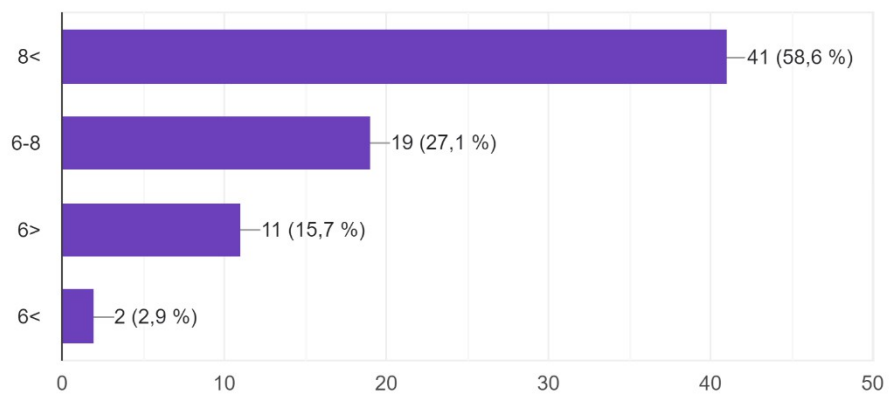
Appendix

What class are you in?



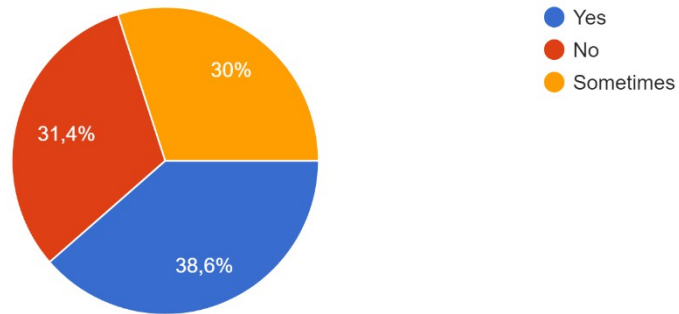
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70 ответов



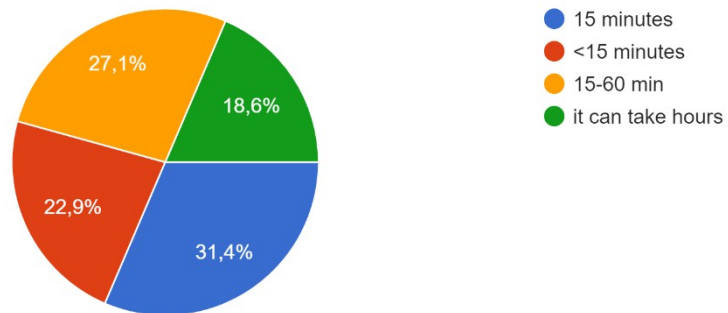
3. Do you have good sleep (you don't wake up at night and etc.)?

70 ответов



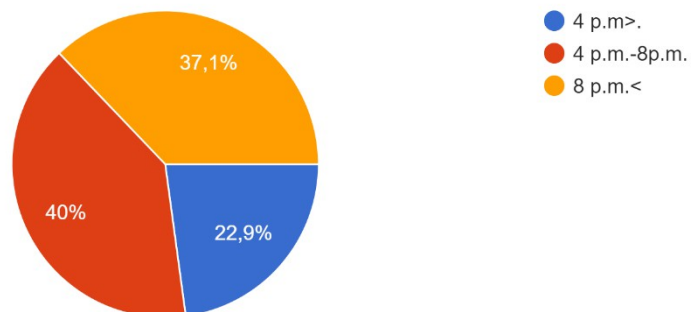
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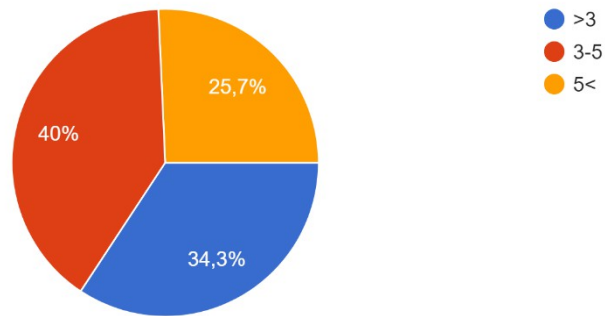
When you start doing your homeworks?

70 ответов



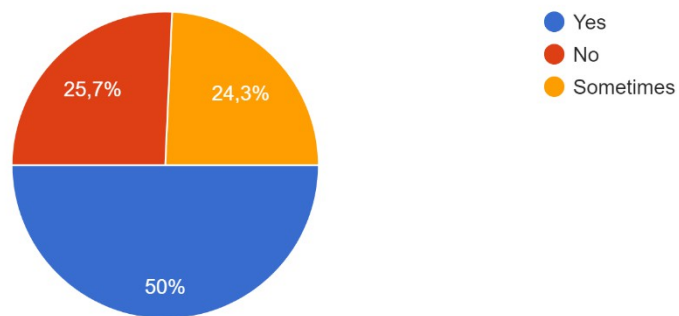
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70 ОТВЕТОВ



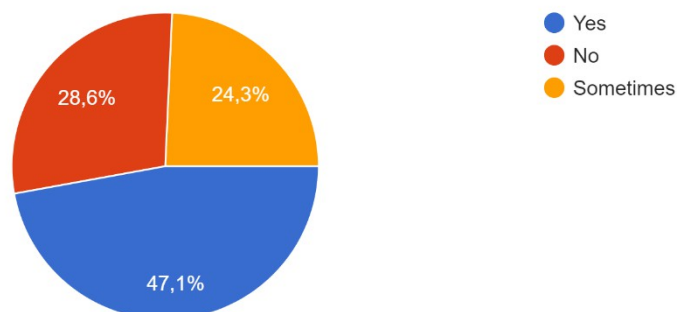
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70 ОТВЕТОВ



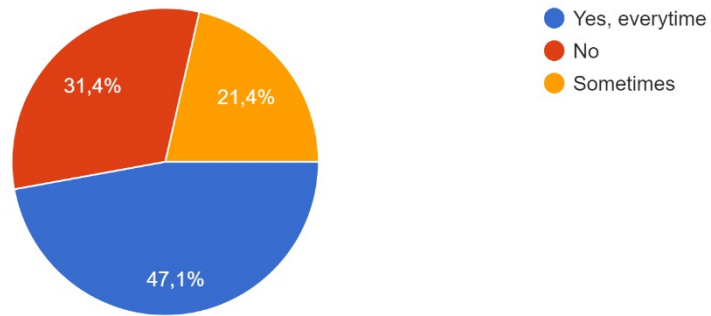
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