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| After reviewing our data, and doing statistical tests on it we discovered there is definitely a difference in the number of hours of sleep and the quality of that sleep in stressed people. The control in our experiment was the way the test was administered, which was that all surveys were administered the same way, people were all asked to fill out he survey honestly and give all the time needed to complete it. Our data revealed that a whopping 74% of people who identified themselves as being highly stressed never or only occasionally received the proper eight hours of sleep healthy people need. When a chi-squared test was administered to see if the numbers were simply the result of chance it yielded a massive 30.87 chi-squared statistic.  The odds of it simply being chance were less the one tenth of one percent. From this we concluded that highly stressed people do not get the proper 8 hours of sleep as often as lower-stressed individuals. From this we went on to see if these highly stressed people also got less sleep the less stressed individuals, or if it was just that they didn't receive eight hours of sleep as often. From our data we computed that well over half of the highly stressed individuals only received 5-6 hours of less a night! Where as over 69% of the lower stressed individuals received at least 7-8 hours of sleep a night, furthermore 13% of lower stressed people slept 9-10 hours each night compared to only 2% of highly stressed people getting 9-10 hours each night. Once again, these number could simply be the result of chance, so we did a chi-squared test and tested at a low 5% significance level. The result: a massive chi-squared statistic of 15.8 and a p-value of 3.68X 10 to the �4. Without a doubt, stressed people received less sleep then lower stressed people.  Although this was interesting we decided that highly stressed people would probably get less sleep because they couldn't fit it into their fast track lives. After answering our first question of whether or not stressed individuals got less sleep, we posed another question. Now what we wanted to see is if it was a matter of highly stressed people simply going to bed later and therefore getting less sleep or if it was the high stress levels effecting the QUALITY of the sleep or preventing them from falling asleep. To test this we asked what time each person normally retired to bed. Then we separated the stressed people from the non-stressed and crunched the numbers. This is what we found: one third of highly stressed people went to bed between 9 and 10:30, over 59% of lower-stressed people went to bed between these times. Roughly 8% of highly stressed people went to bed after 12, compared to roughly 6% of low stressed people who went to bed at the same time. When we ran a significance test on the results we found that the p-value was .179, not significant enough to reject the null hypothesis that stated that there was no difference between the bed times of highly stressed people and lower stressed people.  This result led us to hypothesize that if stressed and non-stressed people go to bed at relatively the same time, then it must be the quality of the sleep that differs in between the two groups. So we reviewed the numbers on the question that asked how often one had trouble falling asleep, i.e. takes a long time to fall asleep, restless sleep, and frequent bathroom use. The results: over 39% of highly stressed individuals ALWAYS had trouble falling asleep, compared to 0% of non stressed individuals. Also, quite glaring was the fact that over 28% of stressed people had trouble sleeping at least sometimes compared to only 8% of non stressed people. We ran it through a chi-squared test and received a 17.99 statistic and a p-value that was significant at the 1% level. Less then 1 percent of the time we would get these results simply by chance. With all these results we cannot refute our hypothesis that states that the more stressed you are, the less you will sleep, and the less restful that sleep will be. However, in our experiment we found that jobs, sports, girlfriends, or boyfriends, AP classes, divorce, eating habits, and self-image didn't directly effect hours of sleep in our survey, although we beleive that these could be good subjects of future experiments.  [(next)](http://docs.google.com/conclusion2.html)  [[Home](http://docs.google.com/home.html)][[Introduction](http://docs.google.com/introduction.html)][[Hypothesis](http://docs.google.com/hypothesis.html)][[Procedure](http://docs.google.com/procedure.html)][[Data](http://docs.google.com/data.html)][[Conclusions](http://docs.google.com/conclusions.html)][[Bilio/Links](http://docs.google.com/biblio.html)]  [[2001 Projects](http://docs.google.com/index.html)][[2000 Projects](http://docs.google.com/AP2000/index.html)][[1999 Projects](http://docs.google.com/AP99/index.html)][[1998 Projects](http://docs.google.com/AP98/index.html)] |

CONCLUSION