

Sleep Tracking Research

The topic I investigated is amount of sleep one gets by being an early riser, late to going to bed, or having no sleep pattern at all. The levels were:

1. Those who usually sleep no earlier than 12AM or "Night Owls"
2. Those who usually wake up no later than 7AM or "Early Birds"
3. Those who usually have no sleep pattern at all

The response variable of interest is the number of hours on average one gets of sleep at night. The data was collected by using a Qualtrics survey to see if those fell into those three categories. If they did, they had a range of 0-12 for average number of hours of sleep at night.

The hypothesis tested: Do peoples natural sleep pattern, or lack of pattern, determine the number of hours they are able to get of sleep at night.

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Night Owl Average				
Hours of Sleep	32	218	6.8125	2.41532258
Early Birds Average				
Hours of Sleep	26	202	7.76923077	1.62461538
No Sleep Pattern				
Average Hours of Sleep	23	164	7.13043478	1.75494071

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	13.3330185	2	6.66650925	3.37437265	0.03930897	3.11379226
Within Groups	154.09908	78	1.97562923			
Total	167.432099	80				

The mean response for Night Owls was: 6.8125

The mean response for Early Birds was: 7.76923077

The mean response for no pattern was: 7.13043478

Due to the results of the data collected we can reject H_0

With our P-value being less than 0.05 we can say that we are **at least** 95% confident that the data has significance and correlation. This means that those who are Early Birds get more sleep in the nighttime then those who have no pattern or are Night Owls. Those with no pattern get more than Night Owls but not as much as Early birds.

The outcome on this experiment was not as predictable as I imagined it would be. Although I did expect early birds to get more sleep, I expected those with no sleep pattern to get the least. I think the logic behind this is since early birds plan to get up early, they plan to sleep early as well. Night Owls may plan to sleep in more but due to daily responsibilities may not have that option so their sleep pattern keeps them up longer than they may intend. One could also think that those with no sleep pattern “go with the flow” and sleep in when they can but also sleep early when want too. It seems that having a pattern may hold one back from being fluid with ones changing schedule.