

# Statistics

Psychology



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Statistical Report The study here is conducted to see whether the time a child spends in watching TV back home has any visible relationship with the time the child has spent napping at his preschool. A total of 14 children were observed and a correlation was run to see whether or not they possessed any relation.

Hypothesis Testing:

$H_0$  = Time spent in watching TV is correlated with Nap Time.

$H_a$  (unidirectional) = Time spent in watching TV is positively correlated with Nap Time.

$H_a$  (non - directional) = There is no correlation between TV viewing and Nap Time.

Variables:

TV viewing after preschool = Y = is the dependent variable

Nap Time at preschool = X = is the independent variable

Difference between correlation study and experimental study

In correlation studies a researcher looks for associations among naturally occurring variables, whereas in experimental studies the researcher introduces a change and then monitors its effects. Here under this correlation study has been done to verify if there is any possible relationship of a child spending time to watch TV back home with the time the child has spent napping at his preschool.

Pearson's  $r$

The Pearson coefficient of correlation value was calculated to be 0.

59741828.

Interpretation of correlation coefficient

The correlation coefficient has come out to be 0. 59741828 which is not a

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very high degree of relation between the two variables. This means that the null hypothesis that nap time (X) in school is correlated with the TV watching (Y) can be rejected and the alternate hypothesis  $H_a$  (non - directional) holds true.

Findings and Some conclusions regarding the data set

The results show that the degree of correlation between the two variables X & Y is close to 0. 6. This is a positive relation implying that they are related to each other to some degree but are not as strongly correlated as they stand around the 0. 5 levels. This shows that that nap time and TV time has limited influence on each other. It confirms the myth that watching too much TV affects a child's napping routine with limited confidence level.

Reference

Kyung-Sook Lee “ The Relationship Between Children’s Computer Game Usage And Creativity In Korea”, Office Of Graduate, Studies Of Texas A&M University December 2005.

Appendix

Confidence level

0. 95 and 0. 99 Confidence Intervals of rhoQ

Lower Limit

Upper Limit

0. 95

0. 098

0. 856

0. 99

-0. 087

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0. 898

Scatter Plot

Scater plot of Nap Time Vs TV Time. The range of nap time does not changes with increase in TV time

DATA

Child

TV time(Hrs)

Nap Time(Hrs)

1

0

37

2

0

60

3

1

28

4

1

33

5

1

37

6

2

42

7

2

51

8

2

60

9

3

42

10

3

48

11

4

52

12

4

78

13

5

61

14

5

63