

# Nursing

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Nursing Research due: Nursing Research Part A The dependent variable in this scenario is the caloric intake since it changes depending on whether there is a lifestyle management intervention which is the independent variable.

2) To determine the group which had the greatest reduction in caloric intake, a t-test would give us the best results, specifically a t-test for independent groups. It is usually used to test the difference between two different group means (Jackson, 2012) which is the case here.

3) To get accurate results from an independent group t-test, the following assumptions will have to be met (Leedy & Ormrod, 2005):

- The measurement of the data is either interval or ratio
- Random sampling was done from the population
- The data is normally distributed
- Population variances between the two groups are equal

#### Part B

1) According to the analysis, there exists a positive relationship between BMI and caloric intake, meaning as the caloric intake increases, so does the BMI. This is shown in the table by the positive correlation coefficient (0.792) which is very close to 1.00 meaning the relationship is very strong. The p value is less than 0.001 which indicates that the data obtained are statistically significant. This, therefore, means that one should decrease their caloric intake; to maintain a low BMI because a high BMI puts one at a risk of getting lifestyle diseases such as high blood pressure and type 2-diabetes.

2) There is a very strong link between BMI and HDL cholesterol because according to the results, the correlation coefficient is very close to -1.00 (0.

794). The relationship is however negative meaning as the BMI of an individual increases, the level of HDL cholesterol decreases. The p value is also less than 0. 001 meaning that the results are statistically significant. Since it is healthy to have high HDL cholesterol levels, one should, therefore, aim at reducing their BMI to acceptable levels.

3) The relationship between the caloric intake and age of the respondents is not strong as indicated by the correlation coefficient (0. 129) which is neither close to 1. 00 nor - 1. 00. The corresponding p value (0. 588) also supports the results since it is far much greater than 0. 001 indicating that the degree of significance is very low.

4) Using correlations as a statistical test has got several shortcomings. The correlation does not mean a cause-and-effect link between variables and so cannot be used for certain research questions which seek to determine that kind of relationship (Munro, 2005). For instance, it does not show if an increased caloric intake leads to a high BMI or high BMI causes one to take fewer calories. It also quantifies only the strength of the linear relationship and does not provide other details concerning the relationship between the variables. Correlations are also bivariate meaning they only compare two variables from two data sets at a time which may increase chances of making errors since this rarely occurs in reality (Trochim, 2006). This makes it unsuitable for researchers looking for interconnected relationships and effects.

## References

Jackson, S. L. (2012). Research methods and statistics: A critical thinking approach. Belmont, CA: Wadsworth Cengage Learning

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Munro, B. H. (2005). Statistical methods for health care research (Vol. 1). Lippincott Williams & Wilkins.

Trochim, W. (2006, October 20). Correlation. Social Research Methods. Retrieved October 16, 2014, from [http://www. socialresearchmethods. net/kb/statcorr. php](http://www.socialresearchmethods.net/kb/statcorr.php)