

# Inadequate literacy is a barrier to asthma knowledge

Sociology



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The study results show that the mean scores for Asthma knowledge descended with lower reading levels ( $15.1 \pm 2.5$ ,  $13.9 \pm 2.5$ ,  $13.4 \pm 2.8$ , and  $11.9 \pm 2.5$ ). On the other hand, the Standard deviations for all four groups were nearly the same. That shows that the groups were relatively similar in their spread of scores. The consistently descending mean scores show that there are qualitative differences associated with the groups of participants qualifying at different reading levels. The similarity of S. D's though, helps us compare these groups with relative ease, as the homogeneity of the variance values shows us that we can compare the groups with some confidence.

There are some ethical concerns with gathering demographic and survey data that need to be kept in mind. Such research can be viewed as an invasion of privacy, as a lot of personal data is gathered. It is necessary to ensure complete confidentiality for all participants. Also, survey data depends on what the participant chooses to respond to, and how the participant chooses to respond. Thus, those who do respond may form only a part of the total population and may differ from others significantly - a fact that may not get considered. Also, there is no way to always check the veracity of the collected responses.

#### References:

Kerlinger, F. N.; 1986. Foundations of behavioral research. Orlando, FL: Holt, Rinehart, and Winston, Inc.

Snodgrass, J. G., Levy-Berger, G., & Haydon, M.; 1985. Human experimental psychology. Oxford university press. New York. The USA. Print.

Williams, M. V., Baker, D. W., Honig, E. G., Lee, T. M., & Nowlan A., 1998

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Inadequate Literacy Is a Barrier to Asthma Knowledge and Self-Care. CHEST. Vol. 114 (4), pp. 1008-1015.

2. Review the quantitative research article you described in the other threaded discussion, and describe what tests were used (e. g., t-tests and chi-squares). Given the p-values related to the tests, how do you interpret the results? Read the researcher's conclusions, and share some alternate explanations for the results of the study.

The study chosen was the Williams et. al. (1998) study wherein the researchers attempted to evaluate the extent to which patient literacy was related to their knowledge of asthma and effective use of the MDI. This study uses different statistical techniques like Correlation, Regression analyses, and Chi-Square to test for trends in order to verify the hypotheses. The study also used t-tests in order to verify that there was no difference in the data collected over two locations.

The correlation coefficients were all found to be highly significant. The main relationship measured here was that of Mean knowledge scores and reading level; where the correlation coefficient was found to be ( $r = 0.36$ ). This relationship was significant beyond the 0.01 level of significance. This shows that there is a distinct relationship between the extent to which a person is educated and the extent to which he/she is able to care for themselves regards asthma.

The study also used a number of Chi-square calculations to verify the presence of a trend showing that the higher the person's reading scores; the better they did on the knowledge test. For this, the frequency of individuals getting each item right on the Knowledge scale was compared on the basis

of their reading scores. All tests were found to be highly significant (all  $p < 0.001$ ). Tests for trend were also computed for the ability to use an MDI, and again, the same patterns were verified (all  $p < 0.01$ ).

Multivariate Regression showed that reading levels were the best predictors of both, knowledge and MDI use (all  $p < 0.01$ ).

Thus, it is possible to say that reading levels - i. e. - the extent to which a person is educated does allow for prediction of how well they can care for themselves in regards to dealing with asthma. Those who are more educated are more likely to care for themselves effectively as compared to those who are less educated.

The reason this may be happening is that those with higher levels of education are exposed to more people and to more concepts; giving them a wider range of knowledge. They are more likely to come across reading material that helps them understand and cope with the illness better. Those who are better educated are also more likely to ask professionals more questions, as they are confident in understanding the responses, and thus have better knowledge.