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### Using different methods to analyze the pre-post no-matching survey data in medical practical research

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Some problems arise when analyzing pre and post survey studies using anonymous questionnaire. The pre and post data is related, but it is impossible to match the pre and post data of the same responders. Teen drivers have higher crash risk when they drive after consuming alcohol. The American Red Cross Central Illinois Chapter conducts "Operation Prom Night" crash re-enactment programs with local high school students and the Illinois Department of Transportation. The goal is to teach students about the danger of drinking and driving. The survey objective is to measure changes in knowledge and behavior related with drinking and driving. In this situation, some students answered both pre and post survey, some students only answered pre survey or post survey. Pre and post data could not be paired for the same student. The data used was from 13 schools between 2007 and 2011. We used independent sample statistical models to analyze the data in two different ways. One chose all data and another one chose part of the data but independently. In order to create independent samples, we randomly chose 6 out of the 13 schools as group1, and others as group2. The pre or post data was used from group1. By contrast, the post or pre data was used from group2. Both methods decreased the power. The first one was because of extra variability introduced by not knowing the individual, and the second one was because of sample size reduced. All results were compared and had the similar conclusions.

#### Biography

Huaping Wang has completed her PhD in Statistics from University of Alabama in 2007. She is a Research Assistant Professor of the University Of Illinois College Of Medicine at Peoria Division of Research Services. She has worked with various projects from many different medical fields, such as pediatrics, medicine, emergency medicine, neurology, neurosurgery, surgery, OB/GYN, and radiology. She has many years of experience providing statistical consulting to the UIC faculty, residents, MD students, and local medical research investigators.

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