

**Title: Anti-Vaxxers: Parents Fighting Science**

Author: Katie West

Faculty Mentor: Susan Mathews Hardy

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Immunizing children helps protect the health of our community, especially those people who cannot be immunized. Yet, since 1996 after a study was released that linked autism to vaccinations, there has been a trend of parents refusing to vaccinate their children. What are the demographics of the parents who believe their children are better off without vaccines? By knowing where these parents live and what decisions they make for their children's education, counties and medical professionals can provide education and address their concerns.

My research involves data on 116,141 kindergarten classes from 2000-2015 in California. The two vaccine exemption options in California from 2000 to 2015 were personal belief exemptions and personal medical exemptions. This data includes information on MMR, DTP, and Polio vaccination counts within each kindergarten class; where each class is located; whether each class is in a private or public school; how many students are in each class, and how many personal and medical vaccination exemptions are claimed in each class. Since there are different sizes of classes in the sample, the statistics used to analyze the data will be the proportion of students in the class that have those attributes.

I answer the following questions: What is the relationship between demographics and vaccination rates? Which regions are vaccinating their children at a lower rate? Are the three vaccines given at the same rate? Or are some favored over others? Do public or private schools have more vaccinated children? How does California compare to the rest of the nation with regards to vaccination rates? Are the easier to obtain personal belief exemptions being used more often than personal medical exemptions? Through these answers, counties and medical professionals can help build a safer community.