



School Start Time Research

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May 7, 2021

Purpose

What are the academic and recommended sleep impacts of changing start times?



Why answer this research question?

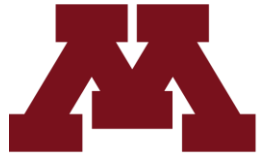
Existing Research

- There have been several studies that show a link between school start times and health outcomes.
 - Minges & Redker (2016)
 - Bowers & Mower, (2016)
 - Wahlstrom & Owens (2017)
- Few studies have shown the academic impact of delaying school start times
 - Dupuis (2015)
 - Sabia et al. (2017)

Need for more academic impact and
Minnesota specific research

Who were the partners in this
research?

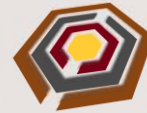
Research Partners



Department of
Educational Psychology

UNIVERSITY OF MINNESOTA

Driven to Discover®



MN Youth Development Research Group

Dr. Michael Rodriguez



BLOOMINGTON
Public Schools

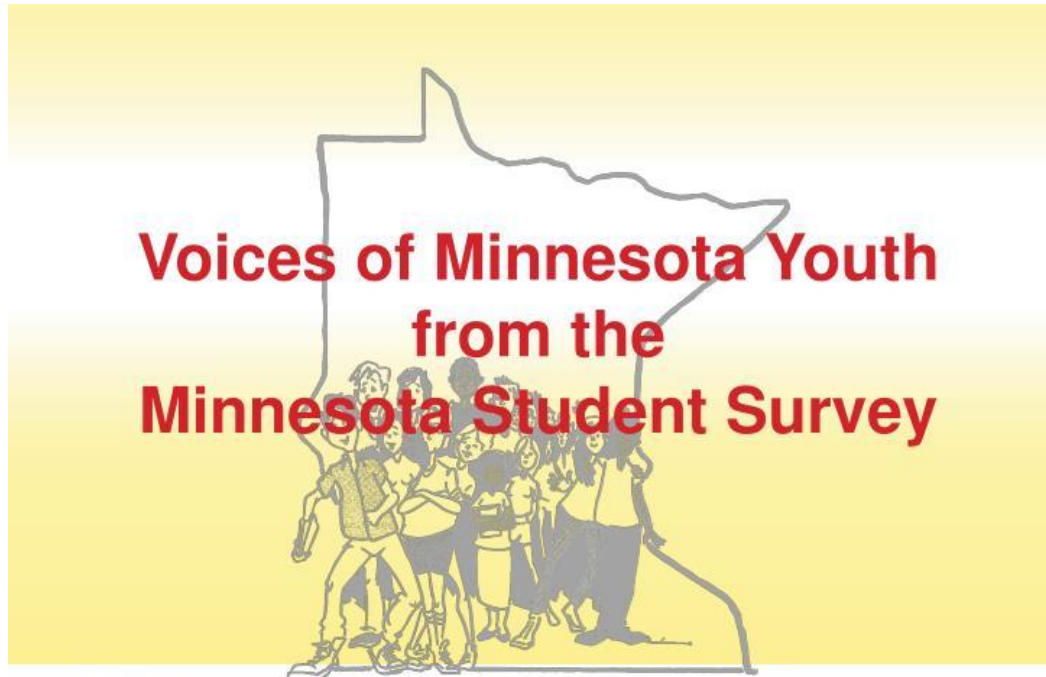
Dr. David Heistad

Dr. Julio Caesar

Rik Lamm (UofM Doctoral student)

What data were analyzed to
answer this research question?

Data Source



Minnesota Department of
Education

- Since 1989, the Minnesota Student Survey (MSS) has been administered every three years
- In 2019, over 81 percent of regular public school districts chose to participate in the survey.
- Students in grades 5, 8, 9 and 11 are surveyed

How would you describe your grades this school year?

- a. Mostly As
- b. Mostly Bs
- c. Mostly Cs
- d. Mostly Ds
- e. Mostly Fs
- f. Mostly Incompletes
- g. None of these letter grades

During a typical school night, how many hours of sleep do you get?

- a. 4 hours or less
- b. 5 hours
- c. 6 hours
- d. 7 hours
- e. 8 hours
- f. 9 hours
- g. 10 or more hours

How were the student responses
to these questions used?

Districts that Changed Start Times

SST Change

Responses before
Start Time Change
2016

Start
time
change

Responses after the
Start Time Change
2019

Control

Responses from
2016 administration

No start
time
change

Responses from
2019 administration

Research Methodology

- Identified districts that changed their start times between 2016 and 2019
- Four districts were selected
- Another four districts were identified as the control group
- All 8 districts had similar proportions of demographic variables

Research Methodology

- Regression analysis was performed with the demographic variables, year, grade, and treatment group predicting GPA to determine the effect of delaying start times on academic outcomes
- Logistic regression was performed to predict the probability of students meeting the recommended amount of sleep using the same variables

Findings

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- Students did report longer sleep times in the delayed start time districts
- There are academic benefits to delaying school start times beyond the health implications
 - The effects are somewhat small

Findings

Group	Grade	Difference Between District Groups
Increase in probability of getting recommended amount of sleep		
	5 th	27%
	8 th	10%
	9 th	5%
	11 th	4%
Increase in GPA points		
	5 th	0.07
	8 th	0.13
	9 th	0.11
	11 th	0.11

Next Steps

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- Next MSS administration is in 2022
 - Examine longitudinal effects of changing start times
- Approach one or more of the four districts for insights and additional information



End