IMPACT OF COVID-19 ON U.S. EDUCATION

Members:

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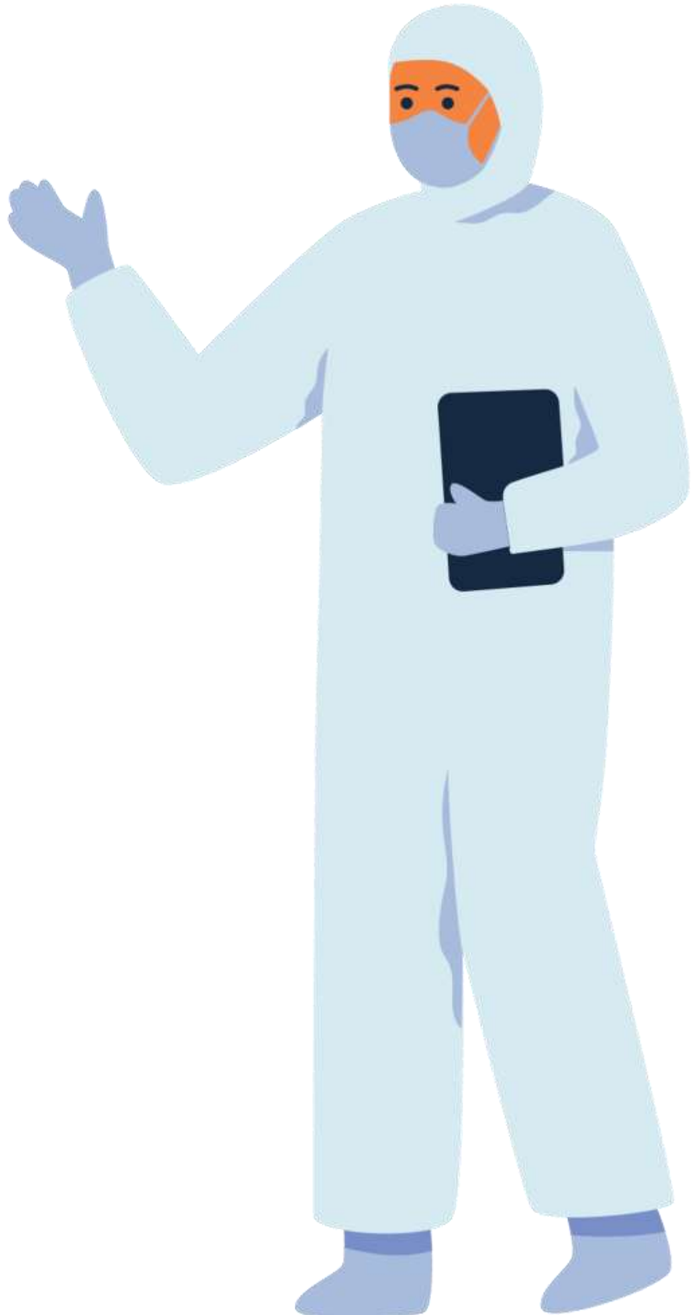
OUR FOCUS:

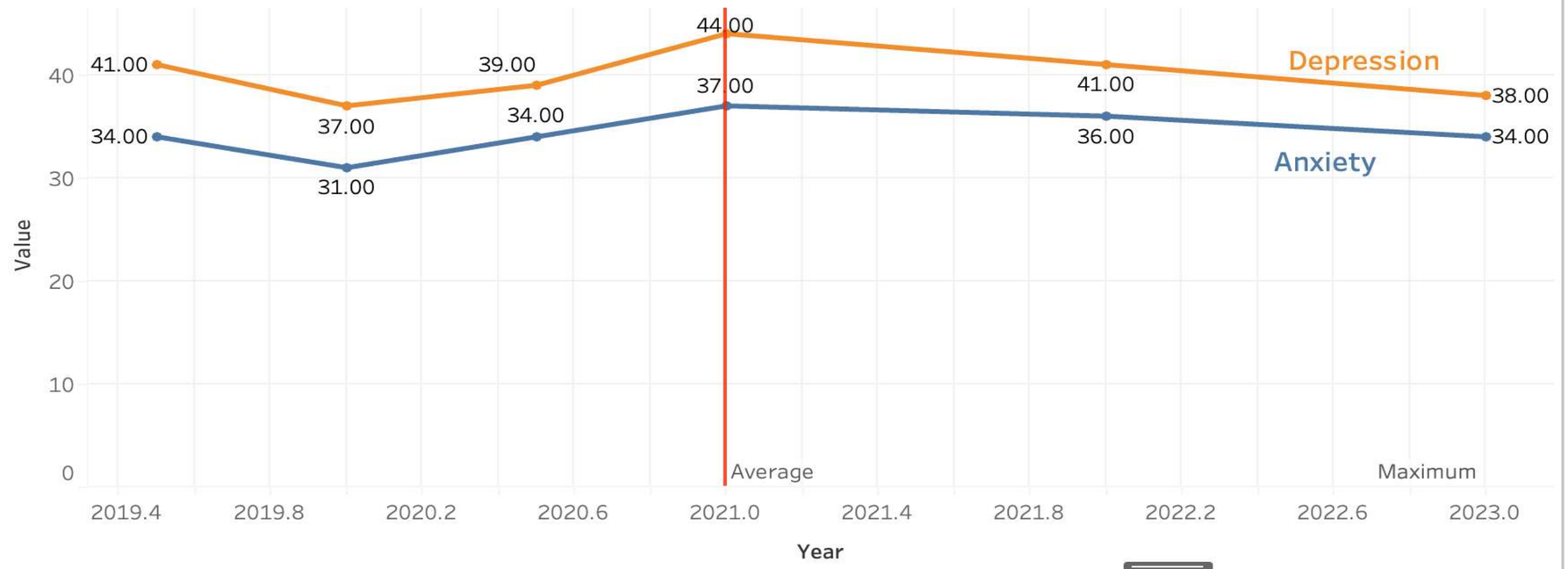
1. Student Mental Health
2. Attendance Drop Rates
3. Grade Performance Decline
4. Retention Rates
5. Drop-out Rates



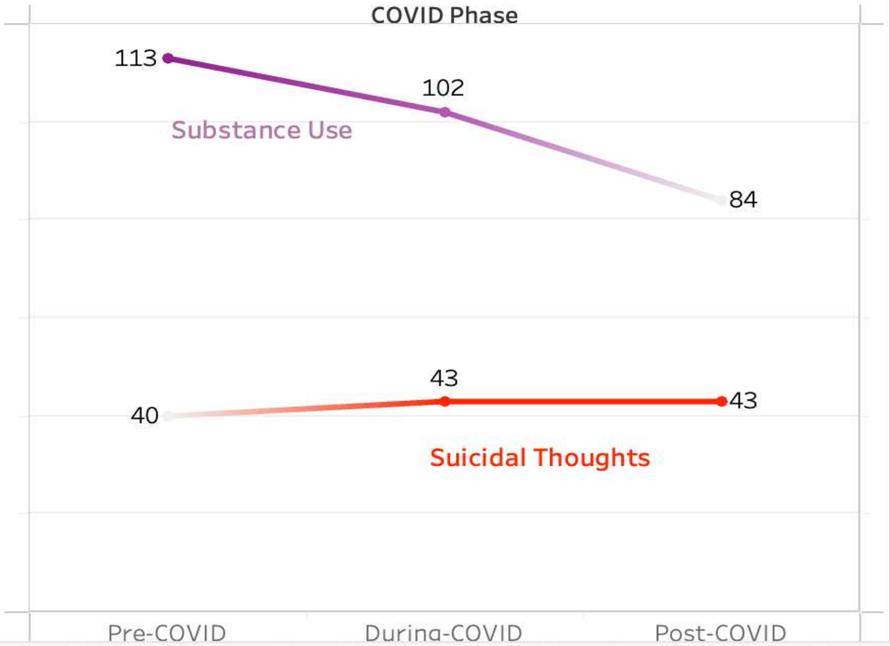
Hypothesis 1:

The COVID-19 pandemic significantly worsened mental health among U.S. college students due to heightened social isolation, academic disruption, and reduced peer support. This led to a peak in depression (44%), persistently high academic impairment (above 45%), increased therapy usage (22% to 35%), and sustained suicidal ideation (around 43%).

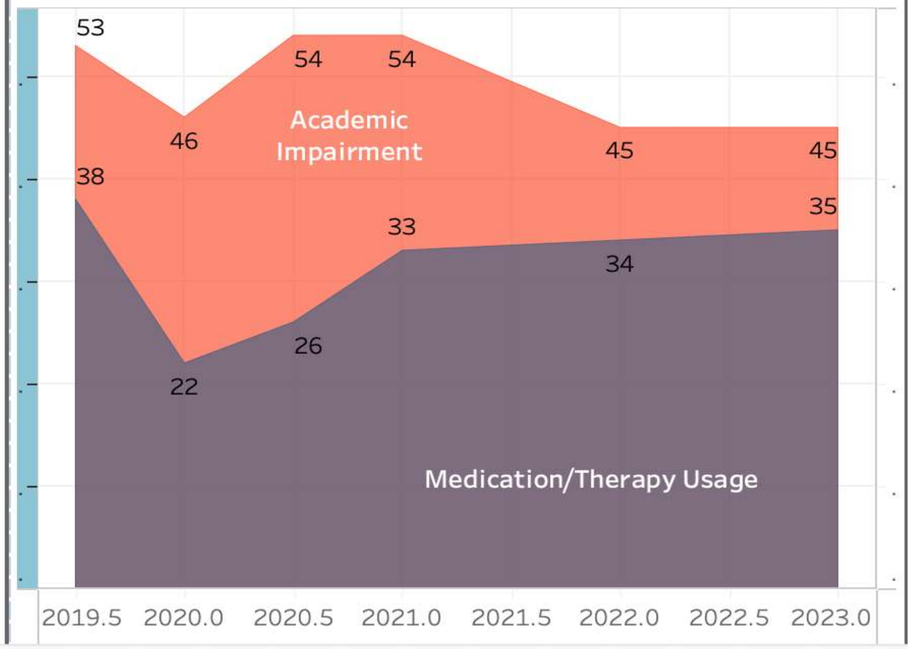
Emotional Trends Across Pandemic Timeline



Suicide & Substance Use by COVID Phase



Academic Stress & Therapy Use



Outcome:

The data supports the hypothesis. These trends indicate lasting emotional and academic impacts on U.S. college students. Even after the peak of the pandemic, rates of depression, anxiety, and suicidal ideation remain elevated, reflecting ongoing psychological strain. The steady increase in therapy and medication use points to a growing dependence on mental health services, while consistently high academic impairment highlights continued struggles with concentration, motivation, and performance. Although substance use declined—possibly due to limited access or changing coping strategies—the persistence of suicidal thoughts underscores the severity of distress. Collectively, these patterns emphasize the urgent need for colleges to establish long-term, accessible mental health and academic support systems.

Hypothesis 2

In Texas public schools, the increase in COVID-19 cases during the 2020–2021 academic year is associated with a statistically significant decrease in student attendance rates by 1.21%, compared to previous years.

4.35K

4.30K

1.21

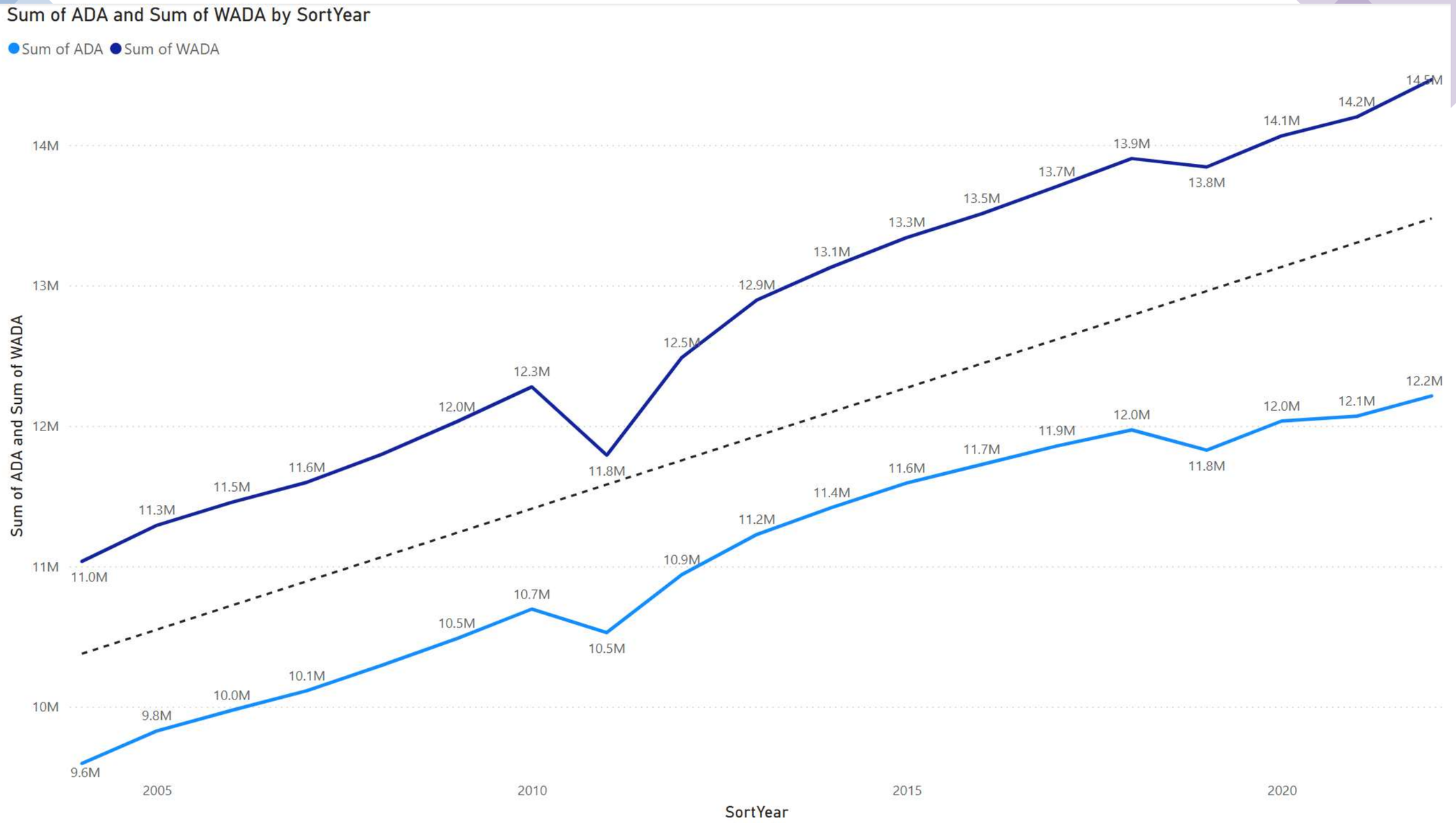
ADA_Drop_Percent

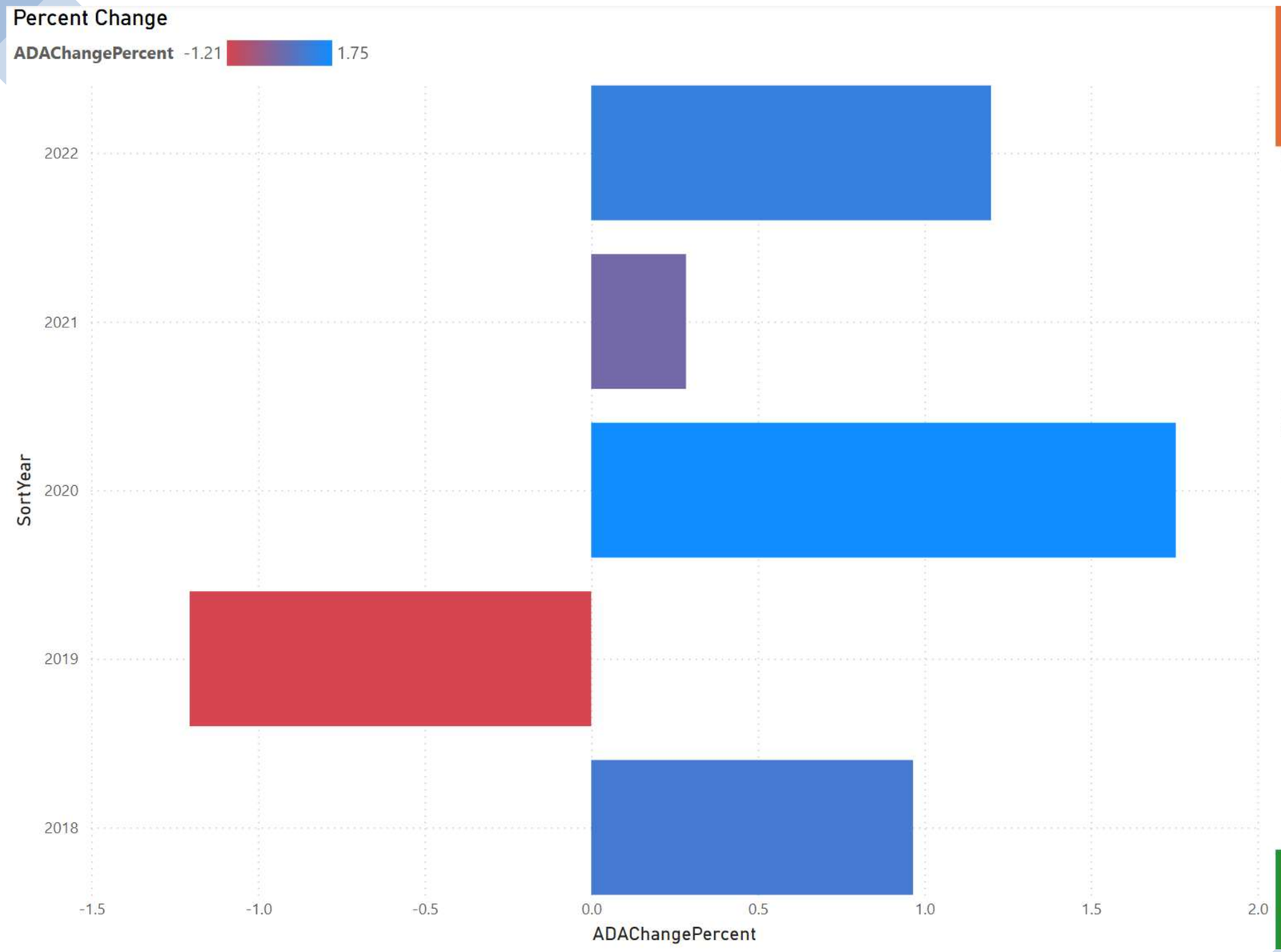
MAX ADA 2020

250.29K

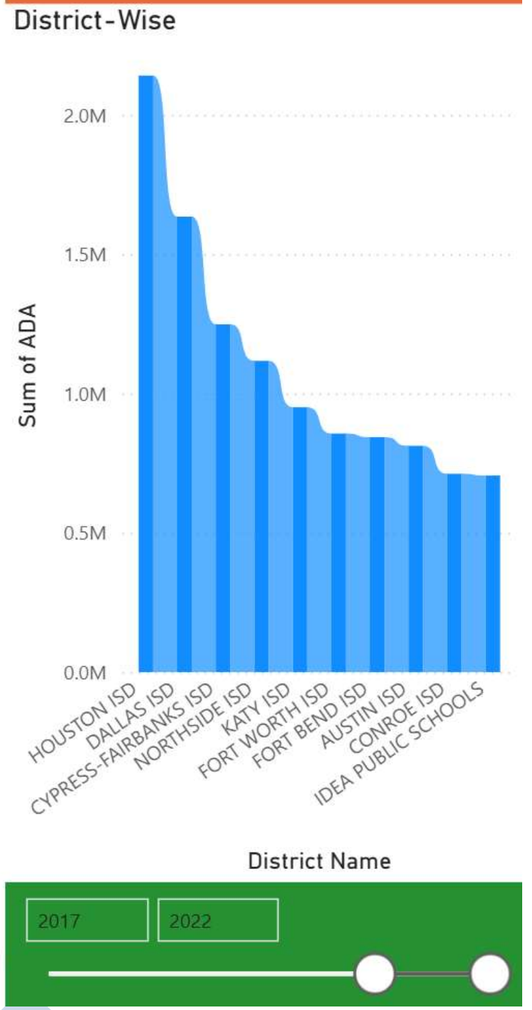
Recovery Rate

1.49


Sum of ADA and Sum of WADA by SortYear
Sum of ADA
Sum of WADA
14M
13M
12M
11M
10M
Sum of ADA and Sum of WADA
11.0M
11.3M
11.5M
11.6M
12.0M
12.3M
11.8M
12.5M
12.9M
13.1M
13.3M
13.5M
13.7M
13.9M
13.8M
14.1M
14.2M
14.5M
9.6M
9.8M
10.0M
10.1M
10.5M
10.7M
10.5M
10.9M
11.2M
11.4M
11.6M
11.7M
11.9M
12.0M
11.8M
12.0M
12.1M
12.2M
2005
2010
2015
2020
SortYear


Percent Change
ADAChangePercent -1.21 1.75
2022
2021
2020
2019
2018
SortYear
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
ADAChangePercent

60.12M
Sum of ADA


District-Wise
2.0M
1.5M
1.0M
0.5M
0.0M
Sum of ADA
HOUSTON ISD
DALLAS ISD
CYPRESS-FAIRBANKS ISD
NORTHSIDE ISD
KATY ISD
FORT WORTH ISD
FORT BEND ISD
AUSTIN ISD
CONROE ISD
IDEA PUBLIC SCHOOLS
District Name
2017
2022

District Name	2004	2005	2006	2007	2008	2009	2010
A W BROWN LEADERSHIP ACADEMY	1,748.96	2,121.72	2,322.83	2,473.32	2,646.40	2,934.37	3,005.17
A+ ACADEMY	2,041.04	2,175.26	2,207.28	2,145.57	2,224.88	2,638.38	2,589.69
A+ UNLIMITED POTENTIAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ABBOTT ISD	729.71	736.42	766.44	736.49	750.28	733.64	726.47
ABERNATHY ISD	1,946.72	1,943.71	1,919.09	1,902.58	1,867.77	1,913.93	1,888.61
ABILENE ISD	36,451.51	36,052.47	35,846.80	35,293.61	35,201.98	35,947.23	36,377.46
ACADEMY FOR ACADEMIC EXCELLENC	1,641.81	1,712.62	1,778.18	1,700.10	1,506.15	1,607.90	1,655.72
ACADEMY ISD	2,193.15	2,230.34	2,295.62	2,369.59	2,484.57	2,446.32	2,523.89
ACADEMY OF ACCELERATED LEARNIN	917.65	1,127.79	1,069.96	928.86	1,112.93	1,051.66	1,101.36
ACADEMY OF BEAUMONT	688.33	647.38	634.73	547.62	429.62	0.00	0.00
ACADEMY OF CAREERS AND TECHNOLOGIE	374.08	364.51	285.21	411.61	438.59	435.09	477.01
ACADEMY OF DALLAS	931.65	897.74	1,083.52	976.50	1,013.63	1,077.28	1,017.08
ACCELERATED INTERMEDIATE ACADE	1,070.15	1,585.24	1,293.78	1,466.20	1,170.21	966.76	633.54
ADRIAN ISD	413.72	412.73	400.29	389.58	399.57	404.30	407.65
ADVANTAGE ACADEMY	949.27	1,429.20	2,473.93	3,202.73	3,292.09	3,537.30	3,398.04
AGUA DULCE ISD	838.69	868.13	891.22	866.87	908.17	881.96	901.40
ALAMO HEIGHTS ISD	9,006.42	9,195.78	9,165.61	9,239.41	9,297.15	9,624.56	9,718.90
ALBA-GOLDEN ISD	2,011.62	2,017.29	2,013.23	2,011.59	1,988.72	2,033.07	2,008.40
ALBANY ISD	1,595.64	1,561.60	1,484.95	1,408.52	1,364.48	1,391.53	1,345.66
ALDINE ISD	123,342.65	126,741.97	128,453.37	130,619.80	132,711.29	136,006.21	136,802.77
ALEDO ISD	7,796.55	8,387.73	8,805.33	9,243.76	9,416.66	9,499.81	9,565.24
ALICE ISD	11,970.31	11,868.57	11,632.16	11,390.31	11,167.23	11,125.77	11,187.96
ALIEF ISD	98,766.22	102,189.69	98,817.72	97,492.16	97,692.78	98,473.36	99,742.67
ALIEF MONTESSORI COMMUNITY SCH	351.57	348.11	352.50	406.85	444.88	506.33	521.71
ALLEN ISD	30,916.17	33,460.93	34,463.30	35,719.51	36,863.25	38,236.35	39,811.26
ALPHA CHARTER SCHOOL	450.69	486.69	573.06	463.52	492.26	453.75	376.15
ALPHONSO CRUTCH'S-LIFE SUPPORT CE	743.39	309.01	311.16	271.41	121.49	0.00	0.00
ALPINE ISD	2,701.74	2,564.09	2,484.36	2,459.67	2,555.26	2,595.20	2,668.07
ALTO ISD	1,614.63	1,618.75	1,676.64	1,662.78	1,616.86	1,628.51	1,656.87
ALVARADO ISD	7,531.75	7,331.41	7,197.96	7,095.88	7,153.66	7,417.45	7,676.18
ALVIN ISD	27,017.90	28,561.14	30,713.08	32,722.25	34,540.63	35,865.38	36,927.99
ALVORD ISD	1,673.65	1,786.06	1,795.85	1,748.57	1,735.45	1,740.28	1,776.33
AMARILLO ISD	63,136.55	63,595.14	64,449.76	64,236.37	64,981.56	66,174.54	67,784.91
AMBASSADORS PREPARATORY ACADEM	0.00	0.00	0.00	293.11	317.38	418.49	582.93

District Name

All

SortYear

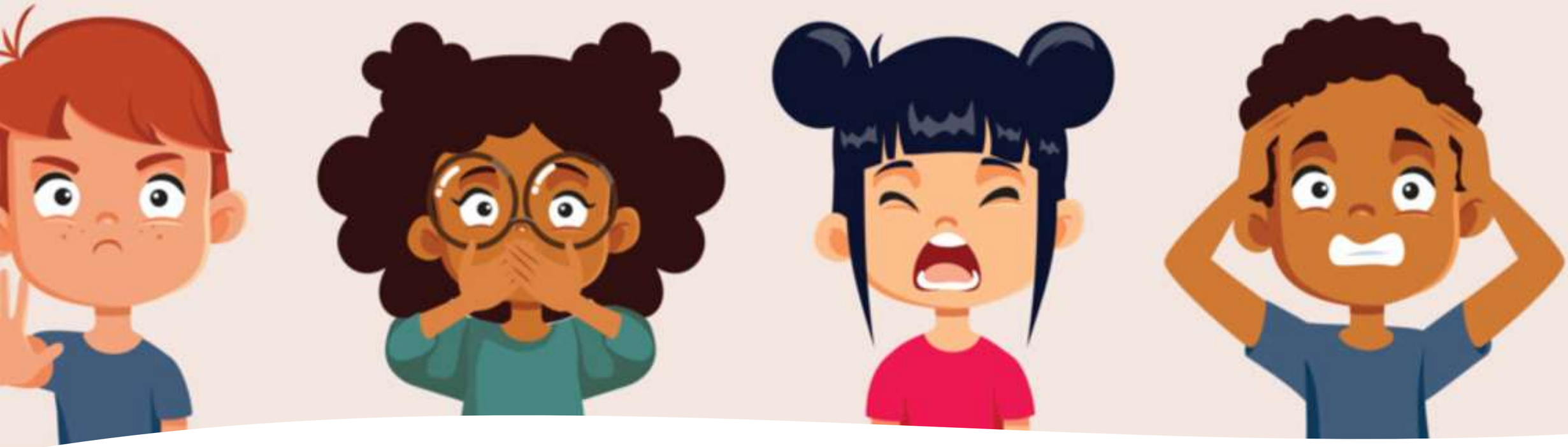
2004 2022

242.83M

Sum of WADA

Outcome

Through our analysis, we were able to validate the hypothesis that student attendance rates in Texas public schools declined during the 2020–2021 academic year as a result of the COVID-19 pandemic. Our visualizations clearly revealed a **1.2% drop in Average Daily Attendance (ADA)** compared to the previous academic year. This decline was consistently observed across multiple districts, suggesting that the impact was widespread rather than isolated.



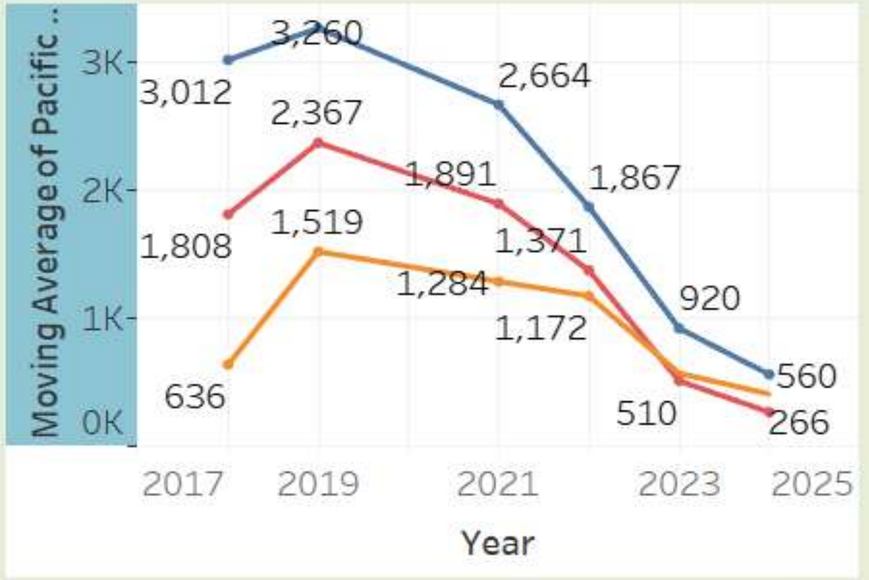
- **Hypothesis 3**

- The transition to remote learning during the COVID-19 pandemic caused a decline of over 60% in the percentage of Hispanic students meeting grade-level standards in Dallas County between 2019 and 2023. Despite the return to in-person learning, recovery has been uneven, with Hispanic and Pacific Islander students showing slower academic recovery compared to other groups, widening existing educational disparities.

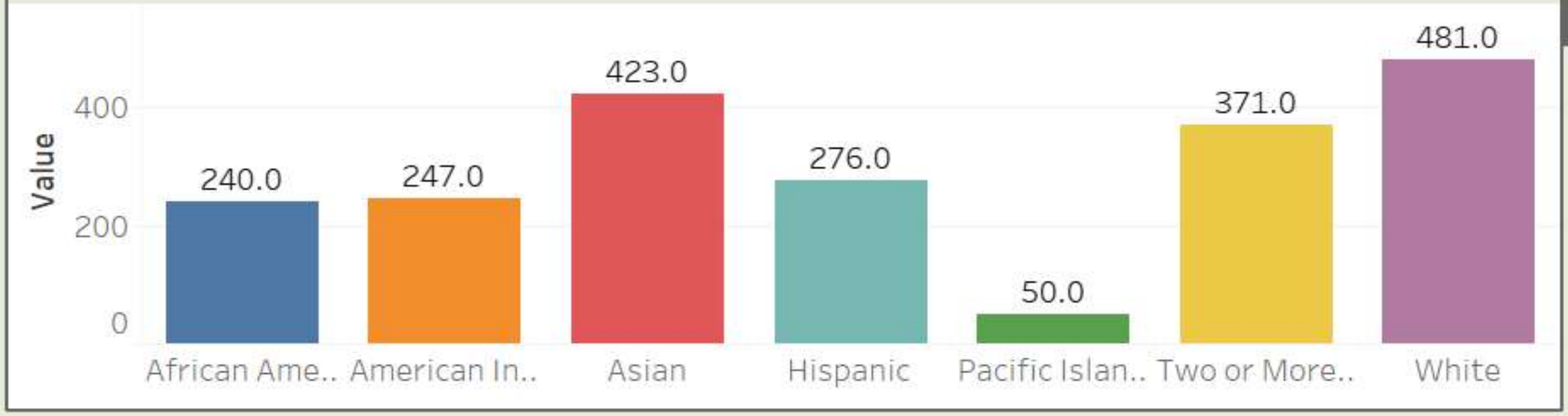
Tracking Academic Decline and Recovery: Dallas County (2018–2024)

Hispanic Student Performance by Subject Over Time

Pacific Islander Performance Trends



"Race Comparison – % Meets Grade Level (Reading 2023)"



Subject

- [x] (All)
- [x] Mathematics
- [x] Reading
- [x] Science
- [x] Social
- [x] Writing

Performance Level

- Approaches Grade Lev..
- Masters Grade Level
- Meets Grade Level or ..

Measure Names

- African American
- American Indian
- Asian
- Hispanic
- Pacific Islander
- Two or More Races
- White

Subject

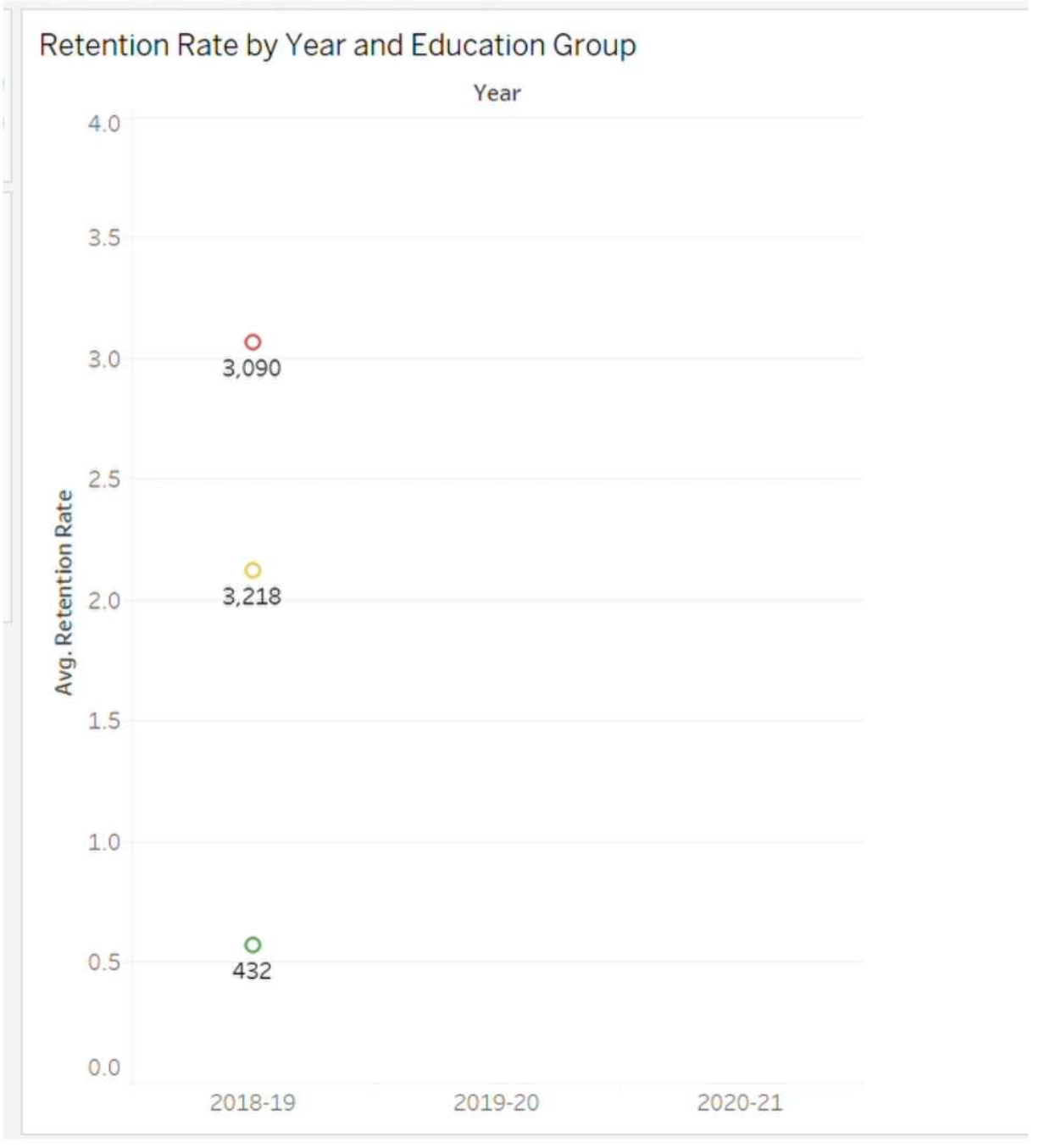
- Mathematics
- Reading
- Science
- Social
- Writing

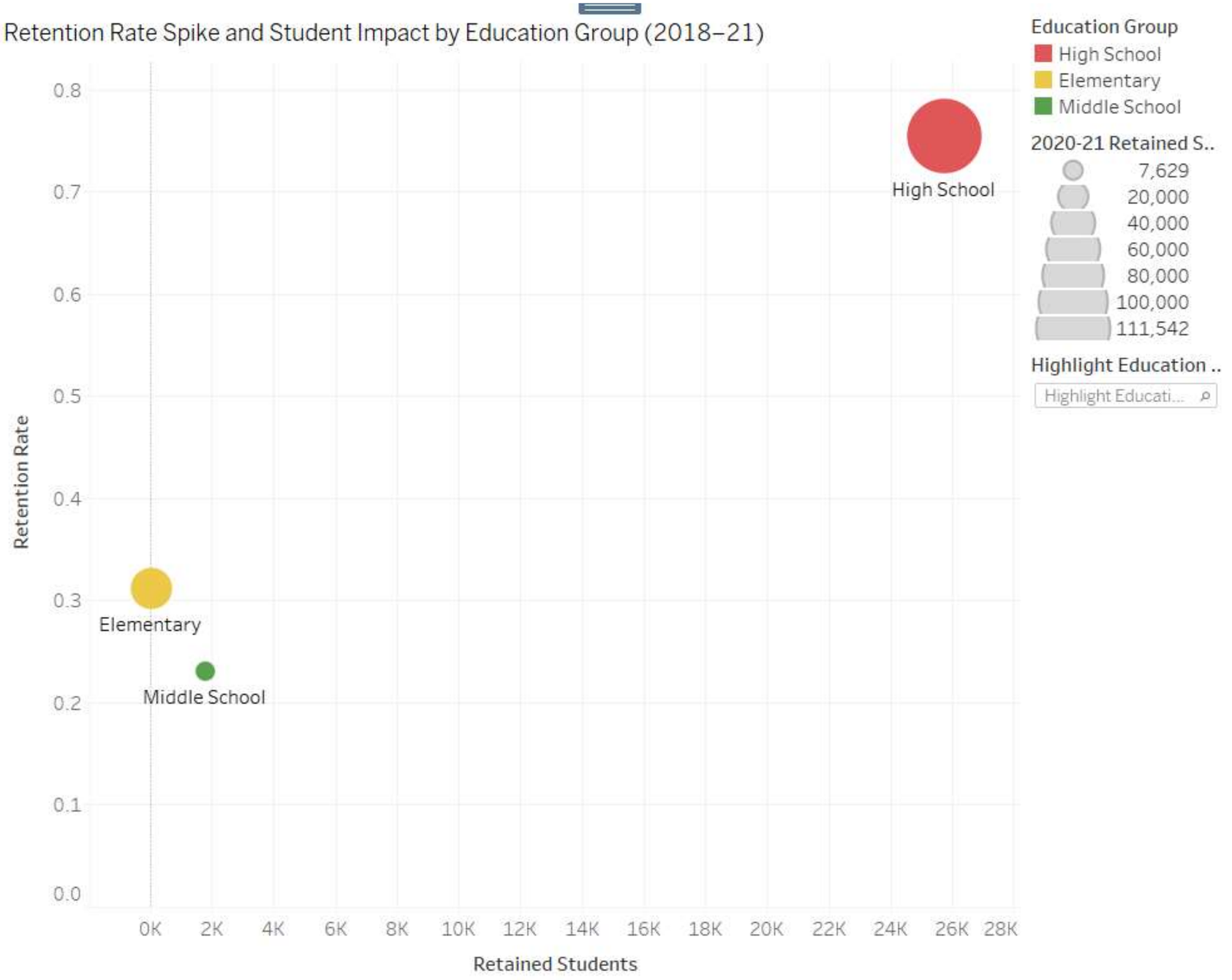
Outcome:

The data strongly supports the hypothesis that **student performance declined significantly after COVID**, particularly due to remote learning. Minority groups — especially **Hispanic and Pacific Islander students** — experienced the steepest declines, and even after schools reopened, **academic recovery has been slow and unequal**, exposing long-standing **educational disparities**.

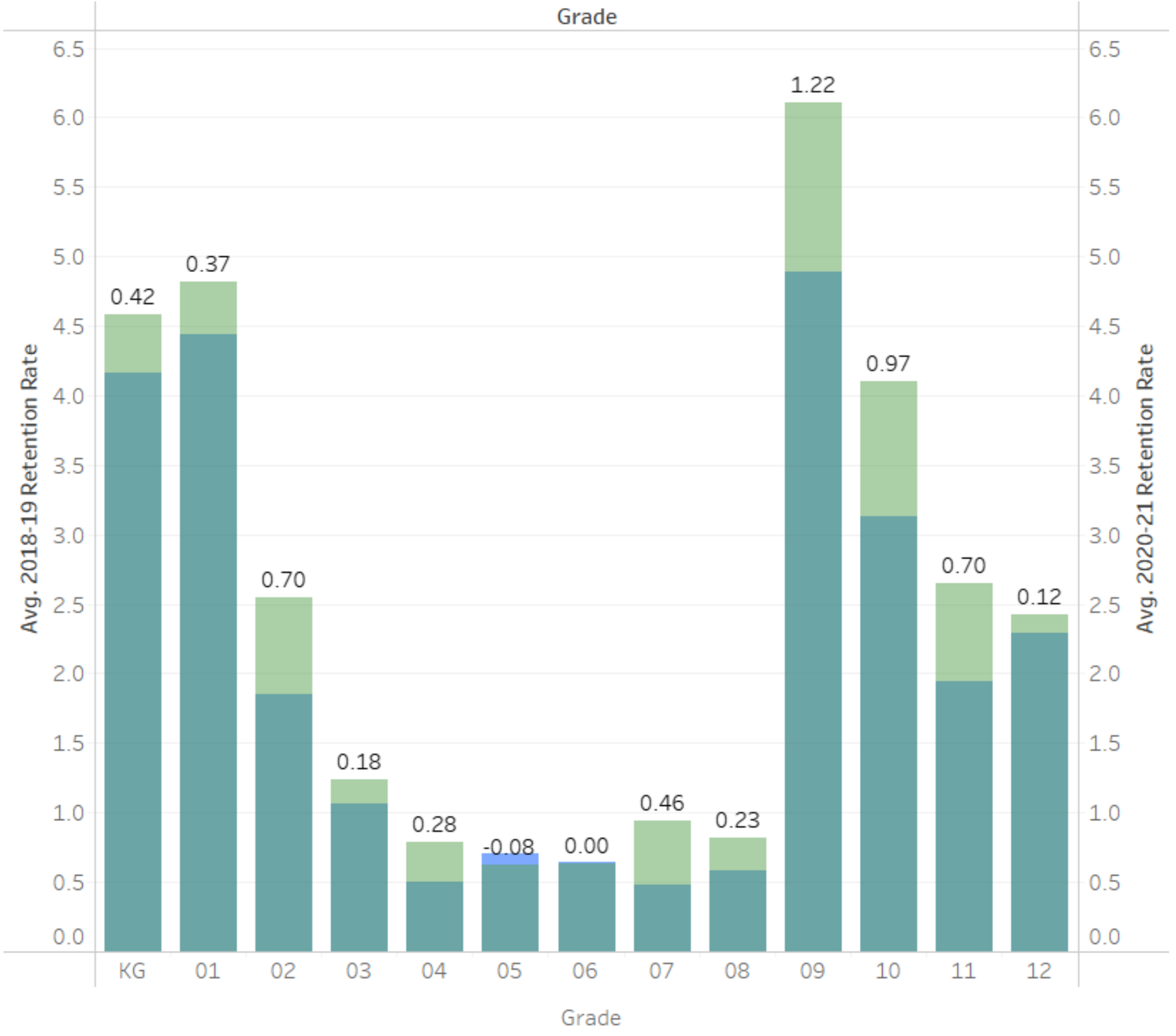
Hypothesis 4:

In Texas counties, high school students (Grades 9–12) observed an approximate 25% increase in retention rates between the 2018–19 and 2020–21 school years, compared to elementary and middle school students. This notable rise suggests that older students may have been more affected by academic disruptions such as difficulties adapting to remote learning environments and reduced teacher interaction during the COVID-19 pandemic.


Retention Rate by Year and Education Group
Year
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Avg. Retention Rate
3,090
3,218
432
2018-19
2019-20
2020-21


Retention Rate Spike and Student Impact by Education Group (2018–21)
Education Group
High School
Elementary
Middle School
2020-21 Retained S..
7,629
20,000
40,000
60,000
80,000
100,000
111,542
Highlight Education ..
Highlight Educati...
Retention Rate
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
High School
Elementary
Middle School
0K
2K
4K
6K
8K
10K
12K
14K
16K
18K
20K
22K
24K
26K
28K
Retained Students

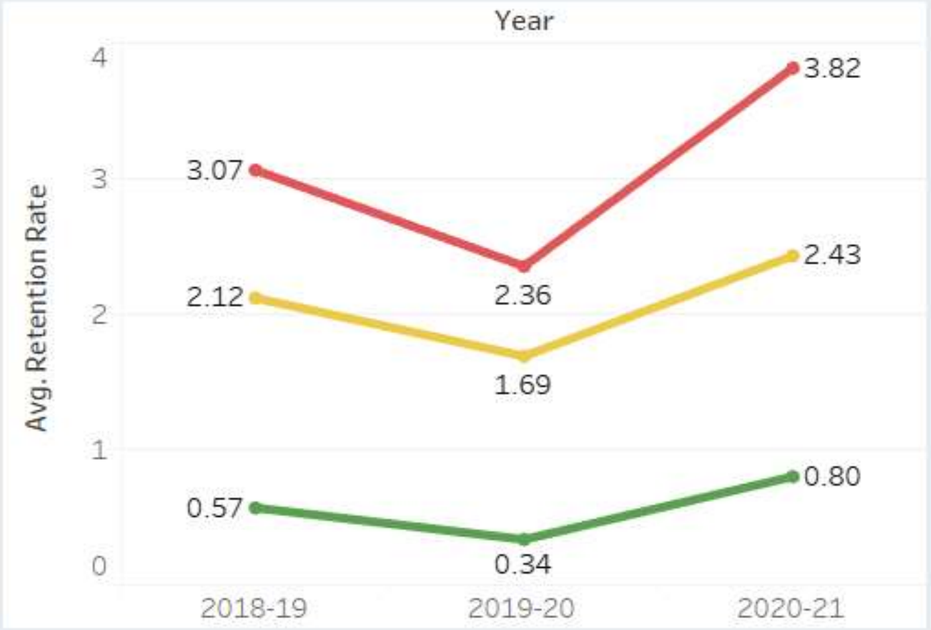
Change in Retention Rate by Grade (2018-19 vs 2020-21)



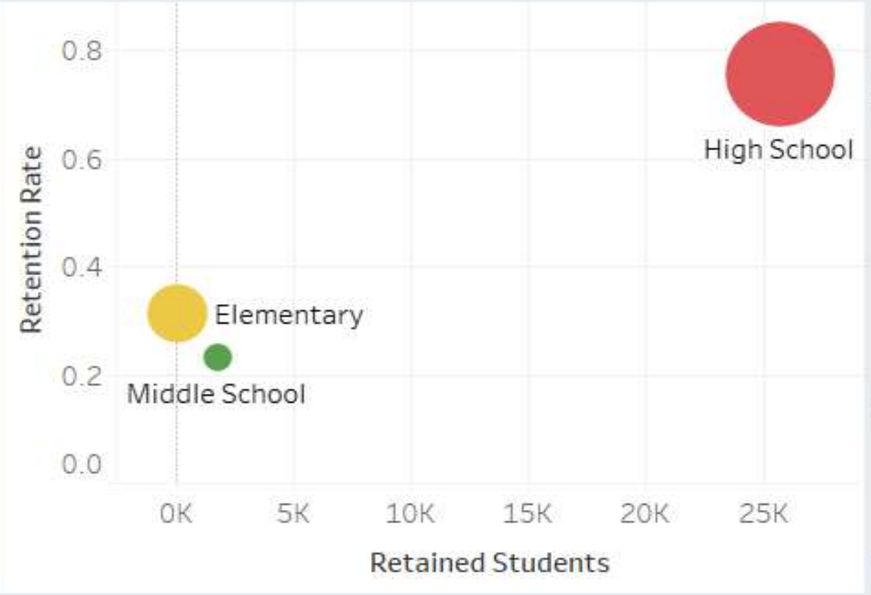
Measure Names

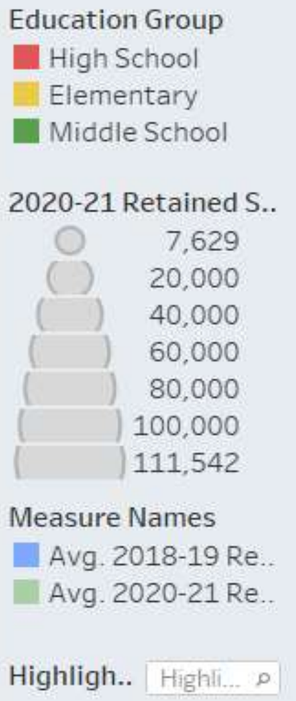
- Avg. 2018-19 Retention Rate
- Avg. 2020-21 Retention Rate

Retention Rate by Year and Education Group

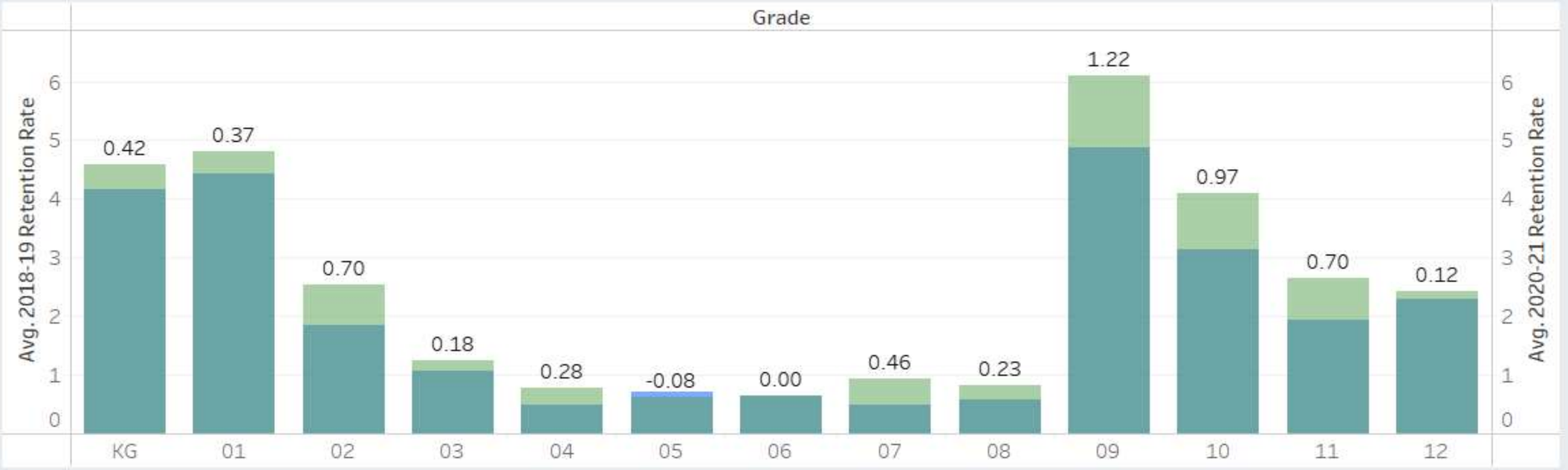


Retention Rate Spike and Student Impact by Education Group (2018–21)





Change in Retention Rate by Grade (2018-19 vs 2020-21)



Outcome:

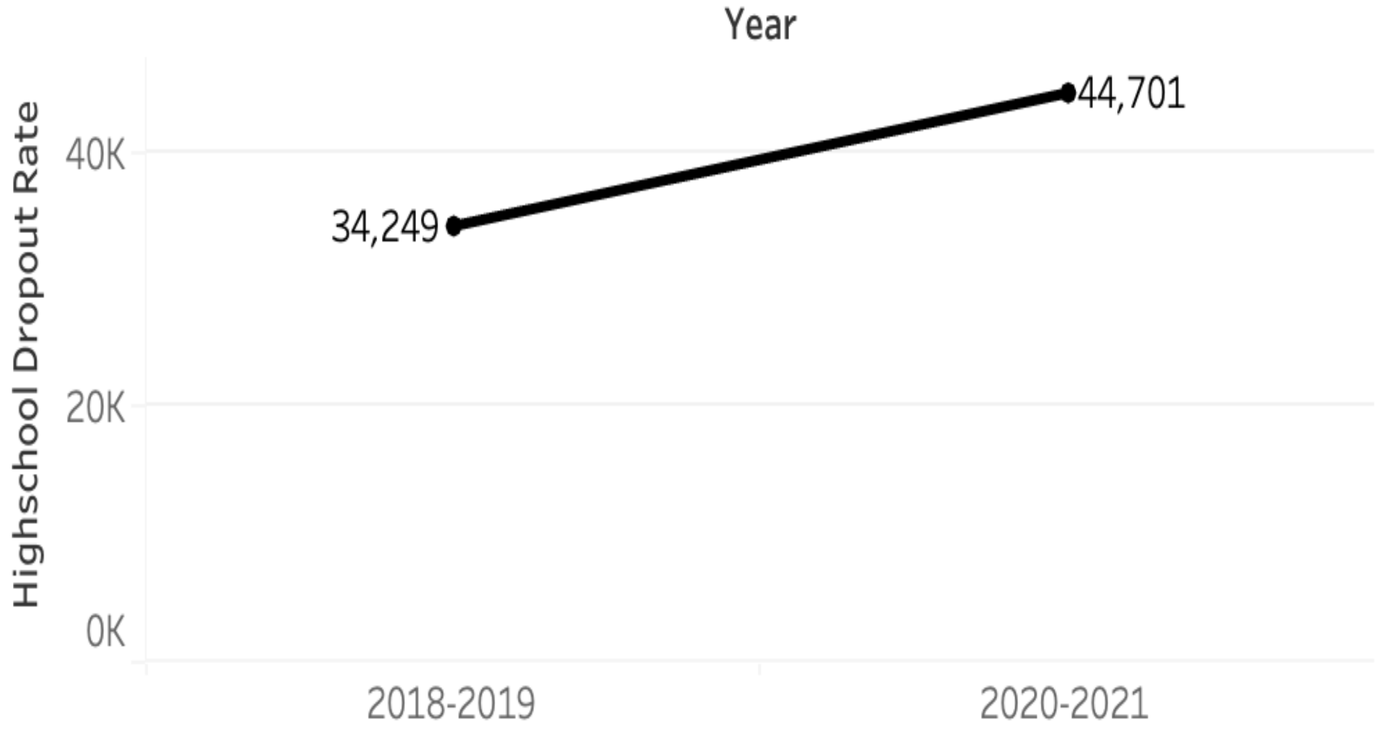
The data confirms that grade level retention rate increased across all education groups in Texas between the year 2018-19 and 2020-21, but there was a significant increase (about 25%) in the High school grades compared to other grades. This trend suggests a deeper impact on academic progression for older students.

Hypothesis 5:

In Texas counties, a 5% increase in poverty between 2018–19 and 2020–21 will lead to an approximate 2% increase in high school dropout rates, suggesting that rising economic disadvantage may be a driving factor in educational disengagement potentially due to disparities in access to internet, technology, and consistent adult support during the pandemic

*Poverty Rate is defined as the rate of students who are eligible for free and reduced lunch as per NCES (National Council)

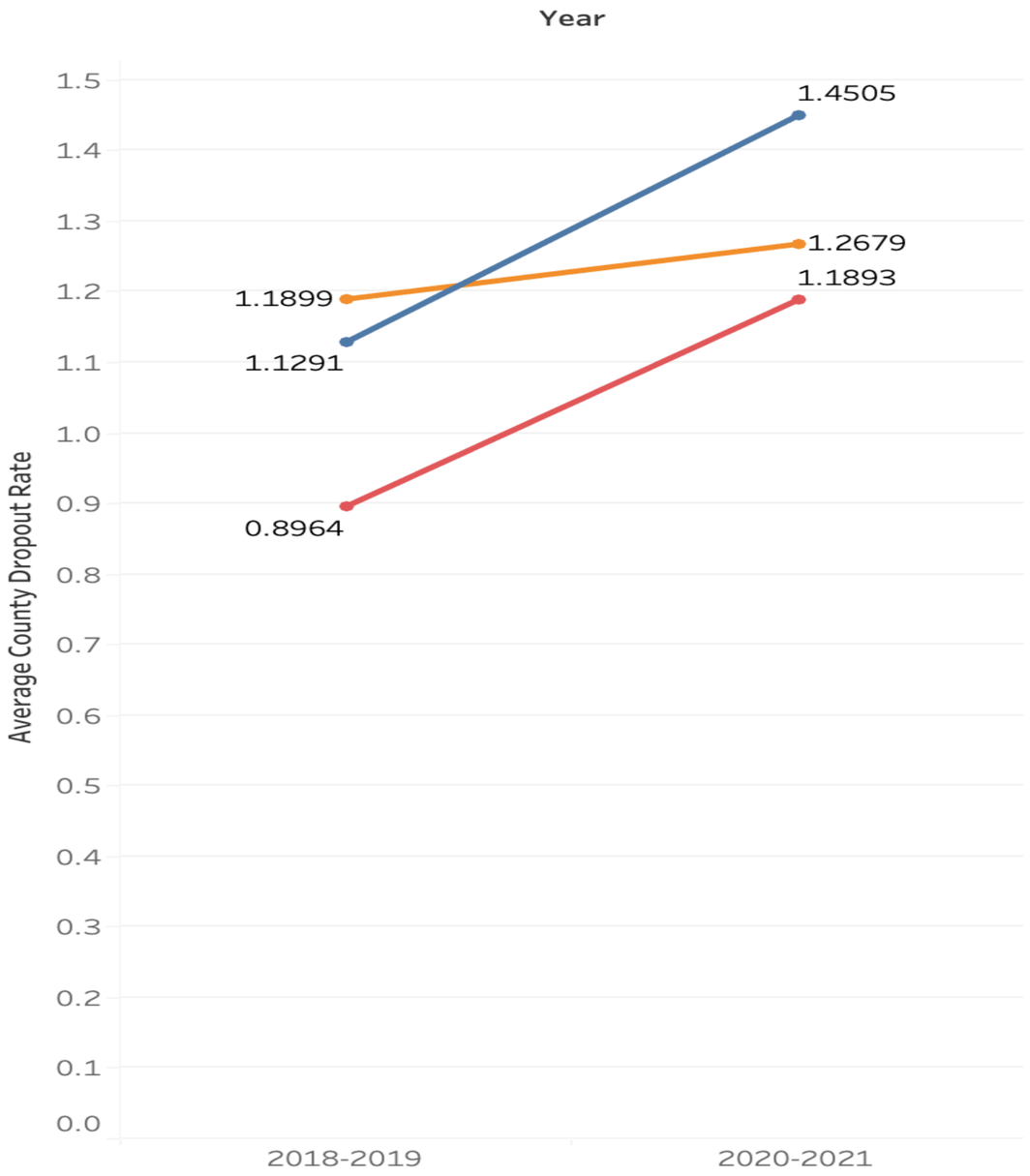
Dropout Trends Before and During Covid (2018-2021)



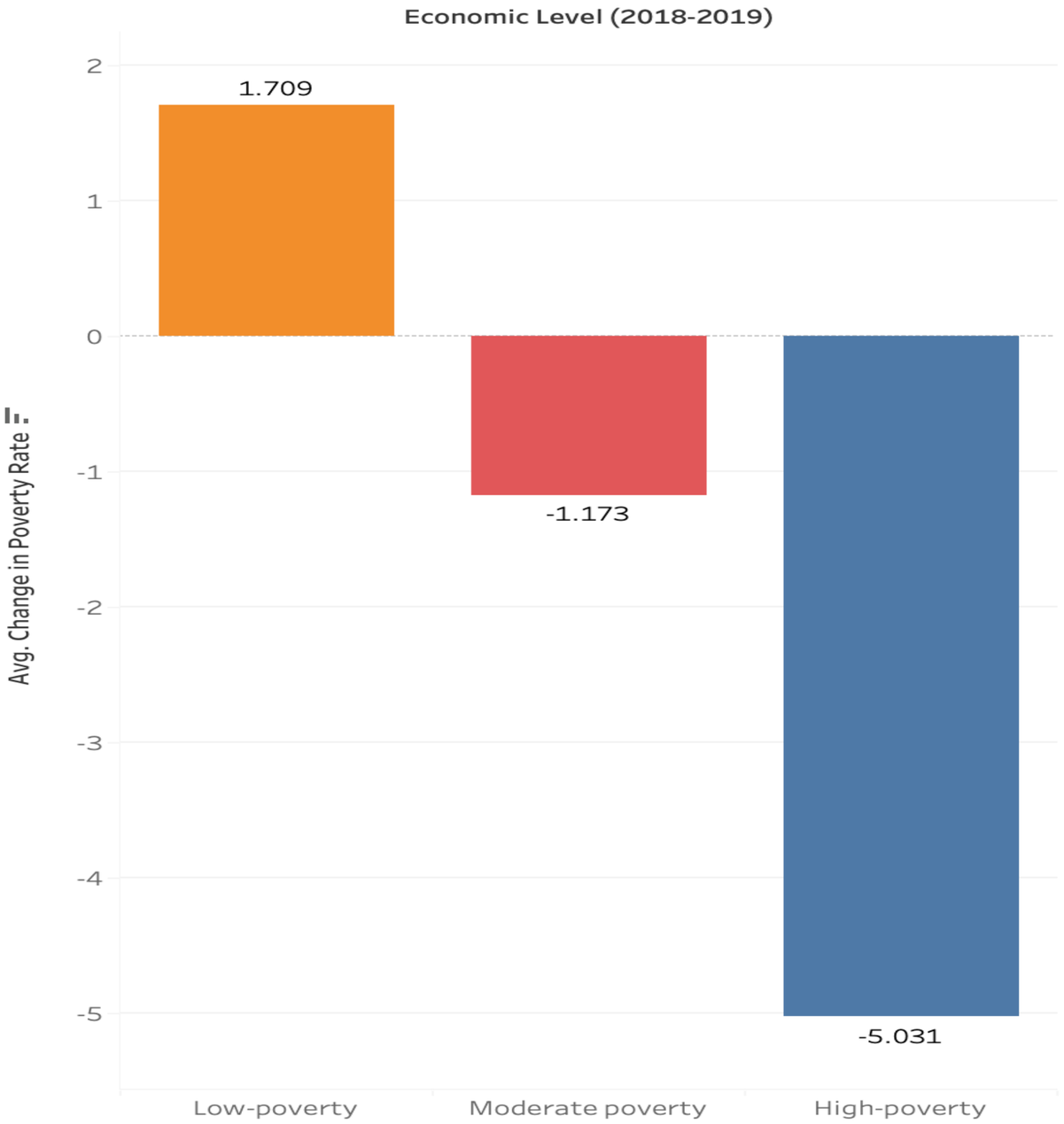
Student and Dropout Breakdown by Poverty Level (2020–2021)

Economic Level (2018..	% of Students in 2020-2021 School Year	% of Total Dropped out Students 2020-2021 Sch..
High-poverty	22.95%	31.55%
Low-poverty	55.37%	47.97%
Moderate p..	21.68%	20.48%

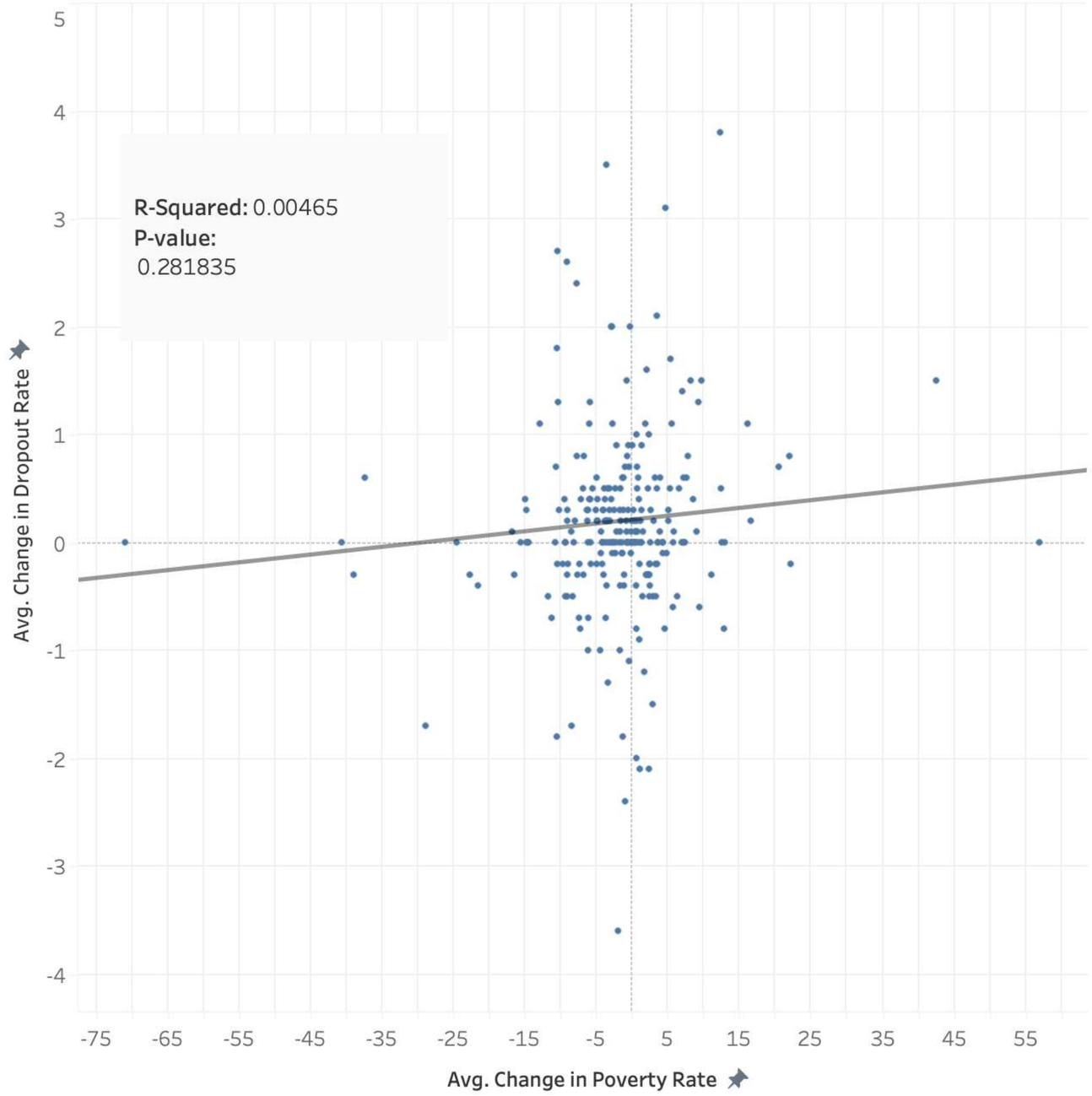
Average Dropout Rate Change by Economic Tier (2018–2019 to 2020–2021)



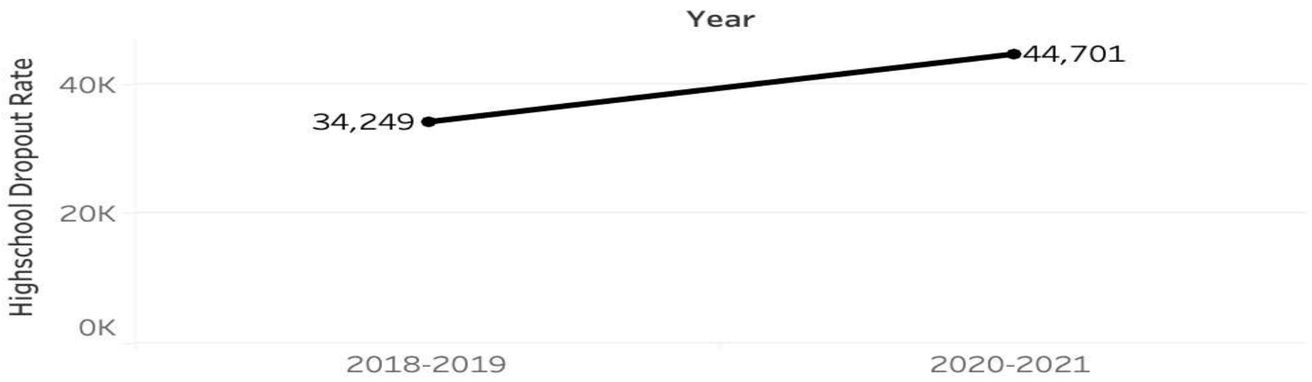
Change in poverty rate by economic tier between 2018-2019 and 2020-2021



Average % change in dropout vs average % change in poverty levels between 2018-2019 and 2020-2021 school year



Dropout Trends Before and During Covid (2018-2021)



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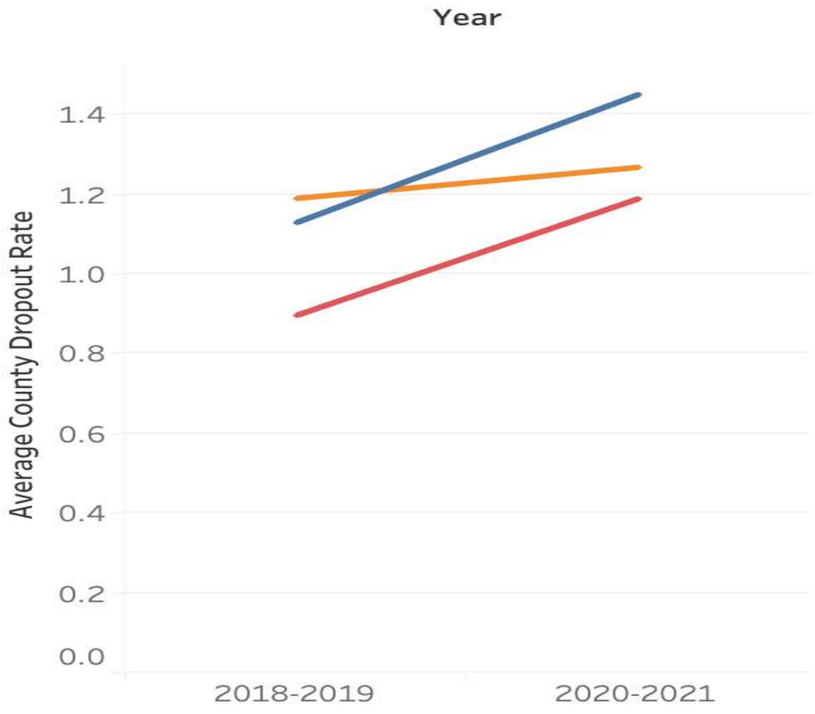
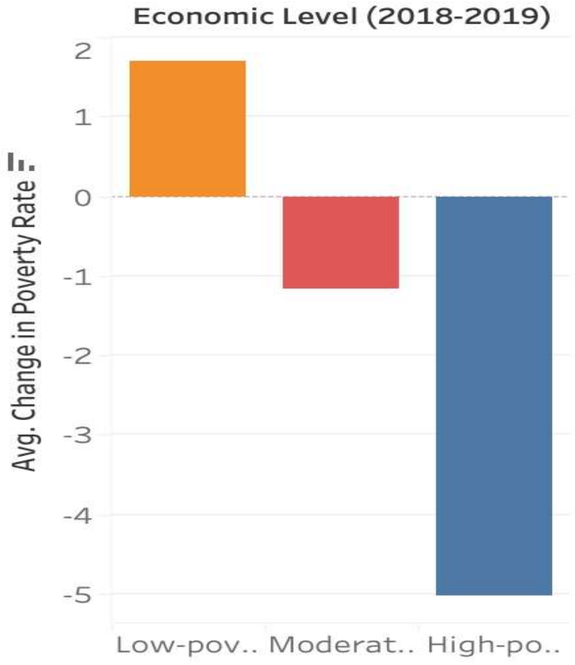
Economic Lev..
High-pov..
Moderat..
Low-pove..

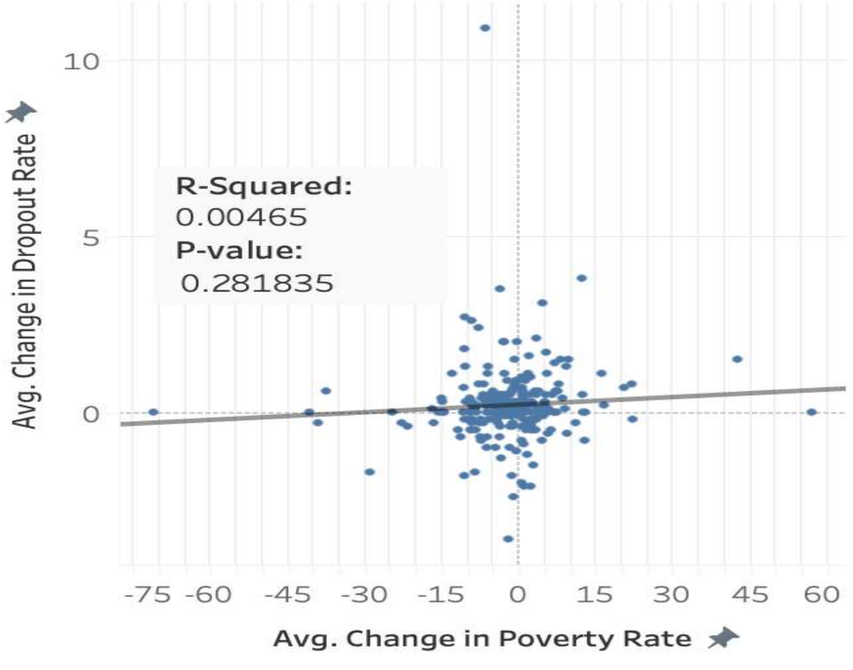
Average Dropout Rate Change by Economic Tier (2018–2019 to 2020–2021)



Change in poverty rate by economic tier between 2018-2019 and 2020-2021



Average % change in dropout vs average % change in poverty levels between 2018-2019 and 2020-2021 school year



Outcome:

Although areas with historical higher poverty levels tended to have higher dropout rates, there does not appear to be a meaningful relationship between increases in poverty and increases in dropout rates. This may be due to misclassification or data inconsistencies during the COVID-19 pandemic, which made tracking poverty more difficult.

Thank You