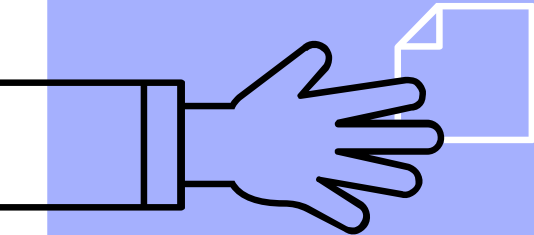
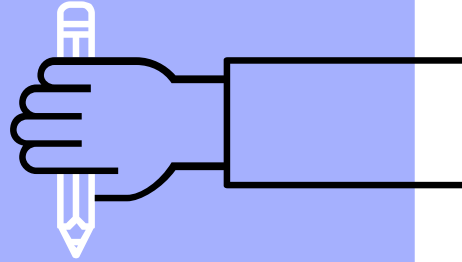


Death Row Analysis

Texas Department of Criminal Justice
(1982 to Present)

Justin Ehringhaus and Lauren Todaro
ALY6015 | Fall A 2022
Roux Institute, Northeastern University
October 26, 2022



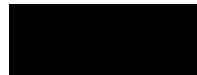
“

I feel as though I'm being tortured! I feel as though *he* is being tortured! I feel as though *my family* is being tortured! They're killing me! They're *killing me!!* You know the judge ordered my son to death, but he actually sentenced me to death. He gave *me* a death sentence!

- Mother of an executed inmate

The most overarching loss of ideal was the families' loss of what their country, America, meant to them. As one father said if 'every person in this country knew how easy it was to put a child to death, the death penalty would end like that.'

- Beck and Jones (2007)





Inspiration

Education

Racial
Equality

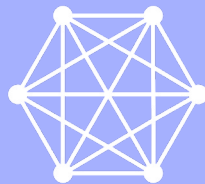
Universal
Healthcare



Dataset

Texas
Department of
Criminal
Justice Death
Row Dataset

1,119 individuals
20 variables



Challenges

Legal
Complexities

Psychiatric
Policy

Psychological
Support



Goal

Understand
relationships
between key
variables to
inform policy
and support for
the incarcerated
individuals and
affected parties

Methods Utilized

Q1 and Q3:

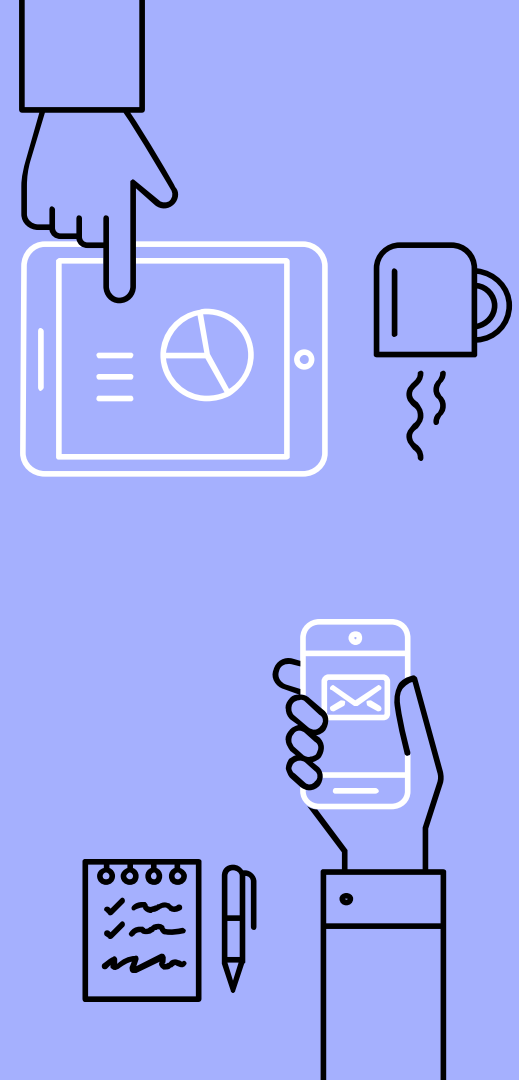
The **Kruskal-Wallis Test** is “a nonparametric test that is used to determine whether three or more samples came from populations with the same distributions”

(Bluman, 2018)

Q2:

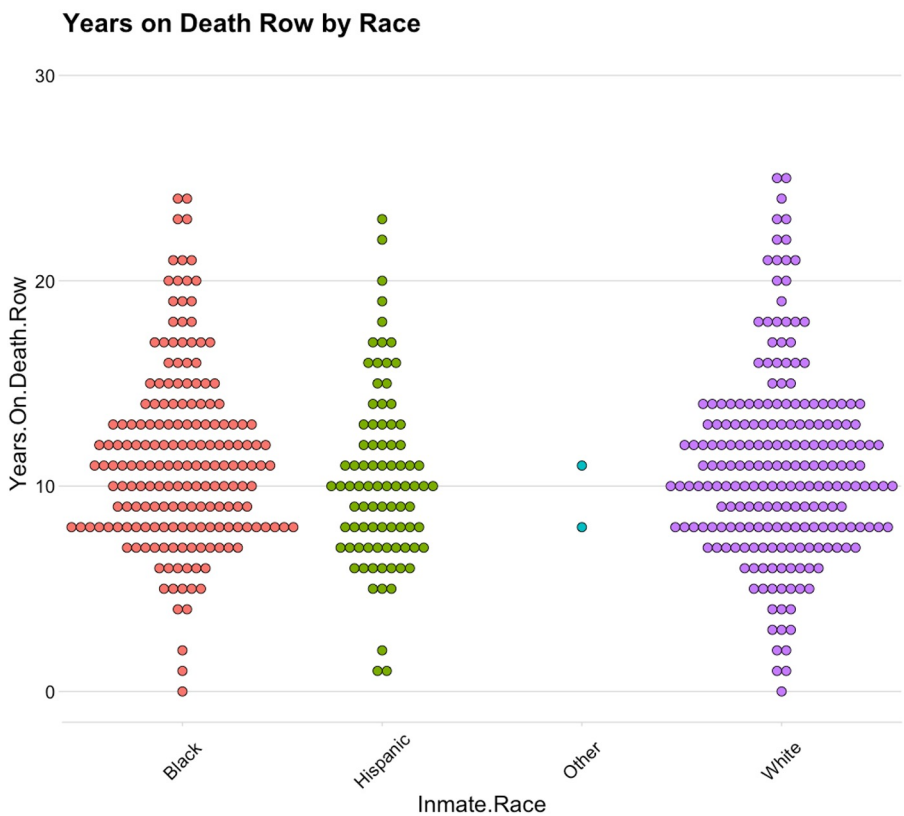
The **Wilcoxon Rank Sum Test** is “a nonparametric test that uses ranks to determine if two independent samples were selected from populations that have the same distributions”

(Bluman, 2018)



Q1

Is there a relationship between the **Race** of inmates and the **Length of Time on Death Row** ?

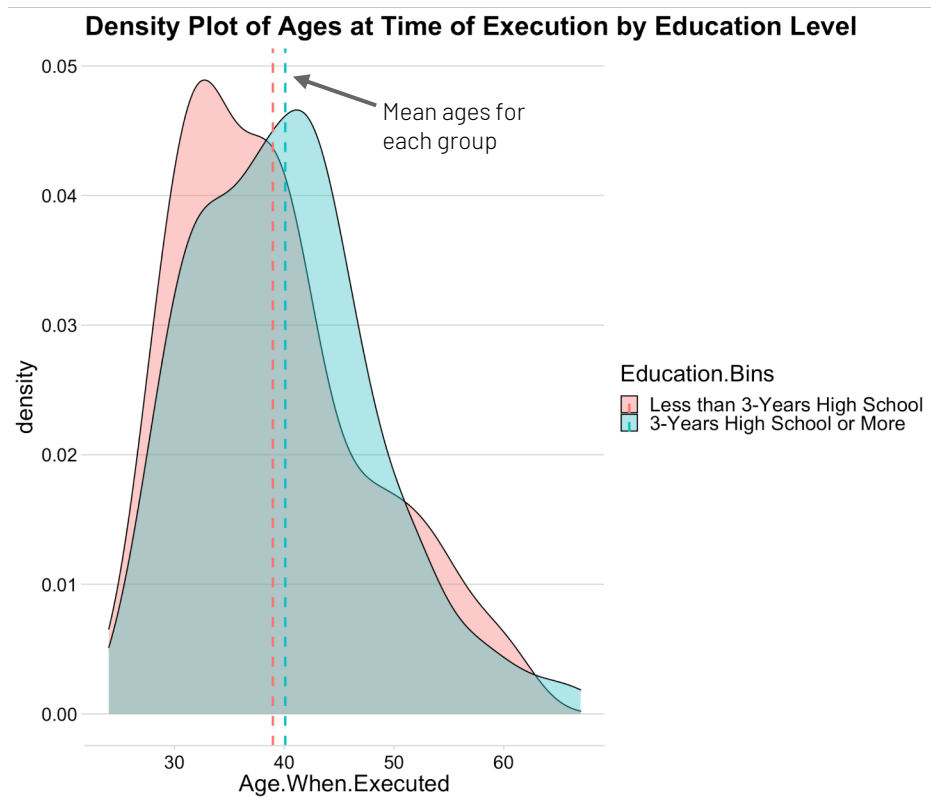


Insight: There is no statistical evidence to support the claim that inmates' **Race** influences **Length of Time on Death Row**.

Method	Kruskal-Wallis Test $\alpha = 0.05$
Hypotheses and Claim	H0: No relationship H1: Relationship (<i>claim</i>)
Kruskal-Wallis Chi-Squared:	2.3447
Test Statistic:	0.504
Decision	Do not reject the null hypothesis.

Q2

Is there a difference in **Age at Time of Execution** between Inmates with **Less Education** versus those with **More Education**?



Insight: There is statistical evidence to support the claim that there is a difference in **Age at Time of Execution** of the **two groups of Education Levels**.

Method	Wilcoxon Rank Sum Test
	$\alpha = 0.05$
Hypotheses and Claim	H0: No difference H1: Difference (<i>claim</i>)
Critical Value:	± 1.96
Test Statistic:	-4.59
Decision	Reject the null hypothesis.

Is there a difference between inmates' **Total Number of Victims** and **Sentiments of Last Statements**?

	Sentiment	Count	Mean.Total.Victims
1	Acceptance	6	1.000000
2	Ambivalence	7	1.000000
3	Anger	5	1.000000
4	Closure	3	1.000000
5	Family	35	1.314286
6	Forgiveness	43	1.209302
7	Goodbye	13	1.230769
8	Gratitude	27	1.444444
9	Injustice	49	1.673469
10	Love	41	1.439024
11	Peace	24	1.666667
12	Positivity	7	1.571429
13	Remorse	81	1.493827
14	Spiritual	60	1.250000
15	Strength	8	1.125000



Insight: There is statistical evidence to support the claim that there is a difference in the **Total Number of Victims** of the **15 groups of Sentiments**.

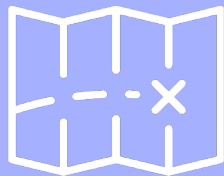
Method	Kruskal-Wallis Test $\alpha = 0.05$
Hypotheses and Claim	<div>H0: No difference</div> <div>H1: Difference (<i>claim</i>)</div>
Kruskal-Wallis Chi-Squared:	23.81
Test Statistic:	0.0483
Decision	Reject the null hypothesis.

Findings & Recommendations



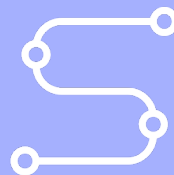
Optimizing Accuracy

Consider **normalizing data** for Q1 through random sampling or collection of **additional data** to apply parametric versions of tests for **increased accuracy**.



Further Research

1. Opportunity to **isolate statistically significant sentiments**.
2. Make suggestions how to **leverage most impactful information** to inform change.



Additional Data

New variables could lend to a more in-depth understanding of **strategies to best support inmates and affected parties** and predict predisposition to **minimize occurrence of future crimes**.



“ References

Bluman, A. G. (2018). *Elementary Statistics: A Step by Step Approach* (10 ed.). New York: McGraw-Hill Education.

Grassian, S. (1983, November 11). *Psychopathological effects of solitary confinement*. New Mexico Legislature. Retrieved October 23, 2022, from <https://www.nmlegis.gov/handouts/CCJ%20102716%20Item%203%20Dr%20Grassian%20Psychopathological%20Effects%20of%20Solitary%20Confinement.pdf>

Hamilton, S., & Goodwin, R. (2003, February 15). *Lifetime comorbidity of antisocial personality disorder and anxiety disorders among adults in the community*. Psychiatry research. Retrieved October 23, 2022, from <https://pubmed.ncbi.nlm.nih.gov/12606017/>

Haney, C. (2003, January). *Mental health issues in long-term solitary and “Supermax” confinement*. Sage Journals. Retrieved October 23, 2022, from <https://journals.sagepub.com/doi/abs/10.1177/0011128702239239>

Hoskin, T. (n.d.). *Parametric and nonparametric: Demystifying the terms*. Mayo Clinic. Retrieved October 23, 2022, from <https://www.mayo.edu/research/documents/parametric-and-nonparametric-demystifying-the-terms/doc-20408960>

Ianmobbs. (2017, June 9). *Texas death row executions info and last words*. Kaggle. Retrieved September 29, 2022, from <https://www.kaggle.com/datasets/ianmobbs/texas-death-row-executions-info-and-last-words>

Jones SJ, Beck E. (2006–2007). *Disenfranchised grief and nonfinite loss as experienced by the families of death row inmates*. Omega (Westport). Retrieved October 26, 2022, from <https://pubmed.ncbi.nlm.nih.gov/18186424/>

Long, W. (n.d.). *Trauma therapy for death row families*. Journal of Trauma and Dissociation. Retrieved October 23, 2022, from <https://pubmed.ncbi.nlm.nih.gov/21967176/>

Nguyen, M. K. (2017, December 31). *Last words of death row inmates*. Kaggle. Retrieved September 29, 2022, from <https://www.kaggle.com/datasets/mykhe1097/last-words-of-death-row-inmates>

Texas Department of Criminal Justice. (n.d.). *Death Row Information*. Retrieved September 29, 2022, from https://www.tdcj.texas.gov/death_row/index.html

Yanofski, J. (2011, February). *Setting up a death row psychiatry program*. Innovations in clinical neuroscience. Retrieved October 23, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3071089/>

