Section 3: Week 8: Present Findings - Transcript

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# Present Findings – Transcript

## Title Slide

Good afternoon, I am Nate Bachmeier. Today I will be reviewing the project proposal for NCU-Cares (NCU-C) next initiative, reducing police violence in America. This presentation embodies eight long weekends of looking at this problem from a unique perspective.

## Agenda

The agenda for this discussion will cover the planning, evaluating, and delivery of an effective strategy to address this issue. Then we will conclude with reflections into learnings, future topics, and conclusions. Each of these sections will further drill into a collection of relevant subtopics. Without further ado, let us jump into the details.

# Planning

## Problem Statement

In May, the death of George Floyd raised to the national debate stage questions around civil rights and police violence. This event triggered a series of global protests that are pointently asking why a disproportionate people of color fall victim. These discussions propose various solutions, such as defunding the police to increase investments into mental health and civil services. Meanwhile, others argue that these actions are the result of a few bad apples, and not evident of a systematic bias.

It is challenging to understand these perspectives, because the problem has become highly partisan, and neither side willing to objectively look at the data. Anytime that preventable death occurs, emotions run high and both parties approach the issue with skeptism, pain and frustration.

NCU-C, our polticially neutral non-profit foundation believes that the truth is rarely at any extreme and generally lies in the middle. If we remove the politics and assess the situation, only then can an efficient strategy be formed, striking at the heart of the problem.

## Hypothesis

The central idea of the Black Lives Matter (BLM) movement is that police violence disproportionally victimizes people of color (Pierce, 2019). Assuming this statement is true, to what extent is this true? Data collectors are quick to cite that “black people represent 24% of all police killings, despite being only 13% of the population (KilledByPolice, 2020).” However, can these two data points be uniformly compared? Alternatively, does a demographically adjusted accounting provide greater insight into racial injustice hotspots? Processes that can uncover such disparity could lead to laser-focused policies versus broad debate on the national stage. These actions would not represent the final stage, but do offer a path for measurable short term improvements.

Another central theme is that shifting funding from police departments to civil services will change the risk calculus. Assuming this statement is true, to what extent? What portion of the population is going through a medical crisis during their time of demise? Until examining the data, it can be challenging to separate the norm from media machines selling advertising. Perhaps a more accurate perspective is that scenario-specific categories exist, and additional training programs can target those situations, reducing the mortality rates.

## Data Collection and Requirements

There are numerous strategies for approaching this problem with varying levels of sophistication and planning. One standard solution is to perform statistical application analysis on the Washington Post’s police shootings data set (Nix, Campbell, Byers, & Alpert, 2017). This data source contains demographic, location, and contextual information on all publically known fatalities of police violence between 2015 to the present (Washington Post, 2020). While there are several limitations to this aggregate feed, it does provides a best-intentioned sampling of the broader population.

For an experiment to be successful, it needs to have sufficient *power* to measure the *effect* in question. Several knobs feed into the power of an experiment, such relaxing the confidence interval, using parametric statistics, converting to a one-tail model, increasing the samples, or adjusting the sensitivity (Donovan, 2016). Choosing an appropriate value is scenario-specific and can be somewhat of an art form.

## Methodology

There are multiple strategies for determining which variable has more effect on a situational outcome. News articles typically approach the problem by looking at the raw descriptive statistics, such as the ratio of victims that were experiencing a mental crisis. A challenge with this solution is that the telemetry only communicates what happened, not why. Consider the extreme example that one hundred percent of all police violence within a given community is against a specific race. While this scenario immediately raises questions around racial profiling, it should also invite a discussion around the diversity of the inflicted population.

DeCarlo (2018) states that quasi-experiments are particularly useful in social welfare policy research (see chapter 12.2). Under a quasi-experiment, the researcher team does not use random assignment and instead looks at different populations. This method could be highly effective for examining the impact of both *race* and *sanity* variables. For example, how does *race* impact police violence when comparing diverse metropolitan areas (e.g., Chicago and Detroit) to homogenous cities (e.g., Brandsen or Sioux Falls)? Likewise, for every dollar that Nevada spends on public health, Alaska invests six (United Health Foundation, 2017). From examining these groups that are both similar and complete opposites, it should lead to a quantitative sense of the underlying effect of these variables.

# Evaluating

## Data Analysis

The research team began with a collection of descriptive statistics, comparing various pivots to ensure sufficient coverage exists for the chosen tests. During this step, it became necessary to reduce the exploration to only focus on Black, Hispanic, and White people, because other groups lacked the required representation.

Our first test plots the distribution by race for all victims between 2015 to 2019. These results are compared with diversity statistics according to the US Census over that same period. From this view a skew becomes evident and this aligns with position of many peaceful protesters. Next, the data set was partitioned along various lines, such as demographics, location, and weapon status. Nix et al. use a similar approach in their article for Nature, which has been cited over 200 times. The contexts of their analysis was reproducable, and our team confirmed their insights, such as Black-people are twice as likely as White-people to die unarmed (5 vs 10%).

## Outcome Inference

Things

## Research Limitations

# Strategy Delivery

## Implementation Plan

## Monitoring Progress

# Reflecting

## Learnings and Future Considerations

## Conclusion

# References

BJS. (2015, October). *Contacts between police and the public*. Retrieved from Bureau of Justice Statistics: https://www.bjs.gov/content/pub/pdf/cpp15\_sum.pdf

BLM. (2020, May 30). *#DefundThePolice*. Retrieved from Blac Lives Matter: https://blacklivesmatter.com/defundthepolice/

Census Bureau. (2019). *Quick facts*. Retrieved from United States Census Bureau: https://www.census.gov/quickfacts/fact/table/US/PST045219

Crary, D., & Morrison, A. (2020, June 11). *Black Lives Matter goes mainstream after Floyd's death*. Retrieved from AP News: https://apnews.com/347ceac3ea08978358c8c05a0d9ec37c

DeCarlo, M. (2018). *Principles of Sociological Inquiry: Qualitative and Quantitative Methods.* Blackstone Textbooks. Retrieved from https://scientificinquiryinsocialwork.pressbooks.com/chapter/12-1-experimental-design-what-is-it-and-when-should-it-be-used/

Donovan, C. (2016, August 30). *Power and effect size*. Retrieved from YouTube: https://www.youtube.com/watch?v=9LVD9oLg1A0

KBP. (2020, August 11). *Police shootings database*. Retrieved from Killed By Police: https://killedbypolice.net/

KilledByPolice. (2020, August 2). *Police Shootings Database*. Retrieved from Killed By Police: https://killedbypolice.net/

Lamb, H., Weinberger, L., & DeCuir, W. (2014). The police and mental health. *Psychiatric Services, 53*(10), 1266-1271. doi:https://doi.org/10.1176/appi.ps.53.10.1266

Lyons, R. (1984, October 30). *How the release of mental-patients began*. Retrieved from The New York Times: https://www.nytimes.com/1984/10/30/science/how-release-of-mental-patients-began.html

McCaskill, N. (2020, July 16). *Trump has tried to make 'Black Lives Matter' a partisan issue. A federal agency says it is not.* Retrieved from Politico: https://www.politico.com/news/2020/07/16/trump-special-counsel-black-lives-matter-366177

Nix, J., Campbell, B., Byers, E., & Alpert, G. (2017, February 8). A bird's eye view of civilians killed by police in 2015. *Criminology and public policy, 16*(1), 309-340. doi:https://doi-org.proxy1.ncu.edu/10.1111/1745-9133.12269

NLEOMF. (2019, April 10). *A year-by-Year breakdown of law enforcement deaths throughout U.S. history*. Retrieved from National Law Enforcement Officers Memorial Fund: https://nleomf.org/facts-figures/officer-deaths-by-year

Parker, R. (1993). Threats to the validity of the research. *Rehabilitation Counseling Bulletin, 36*(3), 130-138. Retrieved from https://search-ebscohost-com.proxy1.ncu.edu/login.aspx?direct=true&db=eric&AN=EJ458938&site=eds-live

Pierce, A. (2019, October 25). Whose lives matter? The black lives matter movement and the contested legacy of philosophical humanism. *Journal of Social Philosophy, 51*(2), 261-282. doi:https://doi-org.proxy1.ncu.edu/10.1111/josp.12305

Smith, C. (2020, Spring). Blue lives matter versus black lives matter: beneficial social policies as the path away from punitive rhetoric and harm. *Vermont Law Review, 44*(3), 463-291. Retrieved from https://search-ebscohost-com.proxy1.ncu.edu/login.aspx?direct=true&db=ofs&AN=143809860&site=eds-liv

Trump, D. (2020, July 1). *@realDonalTrump*. Retrieved from Twitter: https://twitter.com/realDonaldTrump/status/1278324681477689349

United Health Foundation. (2017). *Public health funding*. Retrieved August 16, 2020, from America's health rankings: https://www.americashealthrankings.org/explore/annual/measure/PH\_funding/state/ALL

Washington Post. (2020, August 1). *Data police shootings*. Retrieved from GitHub: https://github.com/washingtonpost/data-police-shootings/commit/2ea87a4ed725b164be1489878e20827fb5944d1b