

# Studying the Relationship Between Walkable Neighborhoods and Quality of Life Outcomes

Blake Bayliss and Sophia Gamon, FMPH 194 Public Health Capstone

UC San Diego

Herbert Wertheim School of Public Health and Human Longevity Science

## Introduction

- Good neighborhood walkability is essential, impacting one's physical and mental well-being.
- San Diego scores a 53/100 in walkability
  - Indicates poor infrastructure for pedestrians and cyclists
  - Poses risks like high-speed traffic, inadequate lighting, and lack of ADA compliance
  - Further exacerbated by San Diego's reliance on cars and weak public transportation
- 81% of UC San Diego students commute
- Better walkability can lower health risks, enhance social interactions, and increase happiness.

## Objectives

- The objective of this study was to determine the association between neighborhood safety and quality of life.

## Methods

In February 2024, we conducted a cross-sectional survey via Google Forms, targeting UCSD students, employees, and the wider San Diego community to investigate the impact of walkable neighborhoods on quality of life. (N=202)

- The survey utilized Likert scale questions and visual prompts to evaluate perceptions of micro-mobility infrastructure's safety, accessibility, and areas for improvement. Questions included:
  - How often do you notice your proximity to the road when walking? Do you notice how fast traffic is going? Do you feel safe?
  - Suppose you are walking in your neighborhood at night, how well lit are the streets you often walk on?
  - Consider any wheelchair or mobility users in your neighborhood, are the sidewalks accessible for these members of the community?
- We conducted Fisher's Exact Chi-Square Test within SPSS.

## Results

Table 1: Demographics (N= 202)

	Category	N (%)
Age	18 to 25	196 (97%)
	26 and over	6 (3%)
Gender	Female	143 (71%)
	Male	49 (24%)
	Other	10 (5%)
Campus Affiliation	Undergraduate	186 (92%)
	Above Undergrad	4 (2%)
	Faculty/Staff	12 (6%)
Place of Residence	On Campus	141 (70%)
	Off Campus	61 (30%)

Figure 1: Exposure Responses

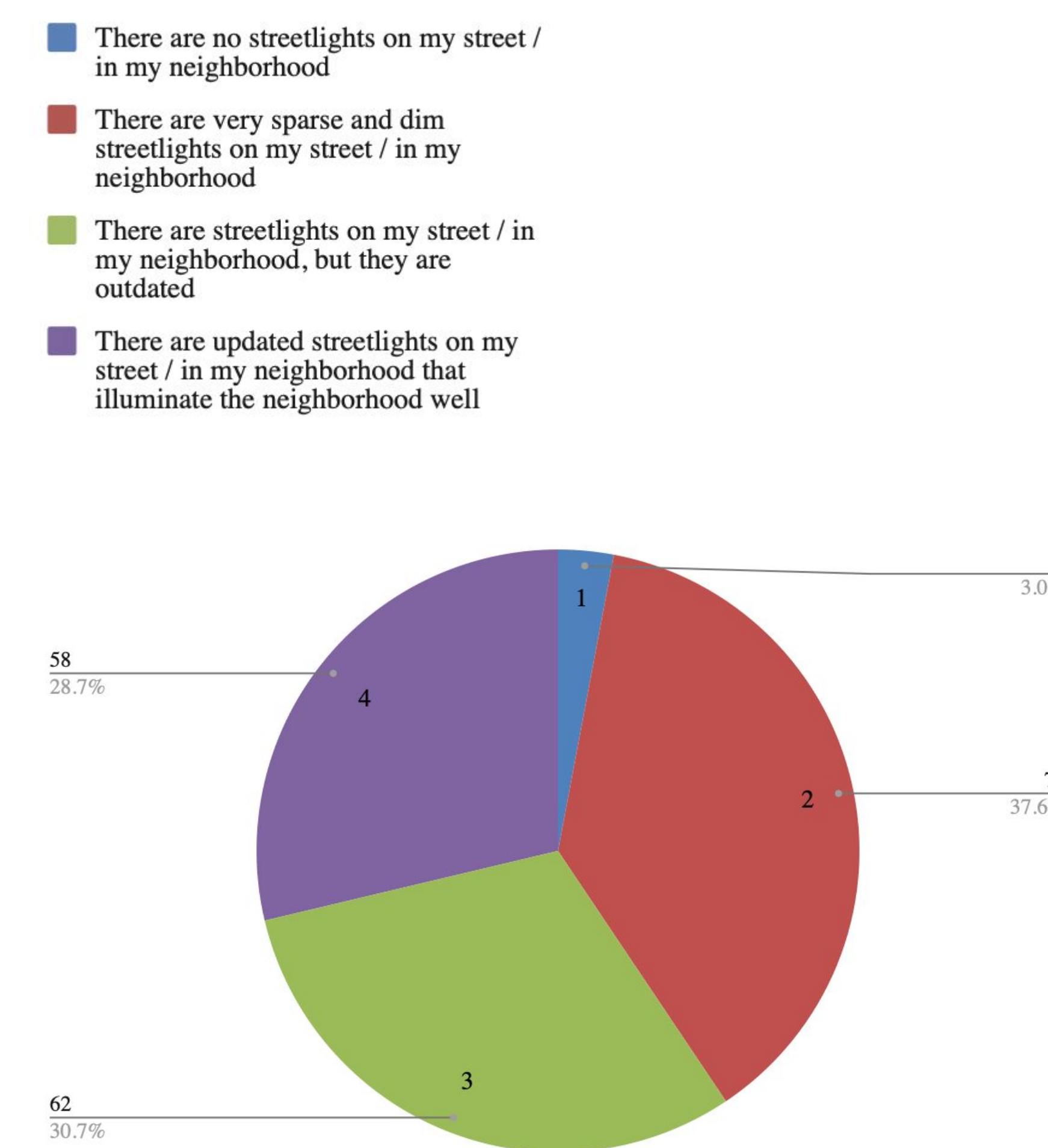


Figure 2: Neighborhood Street Light Safety by Physical Health Rating

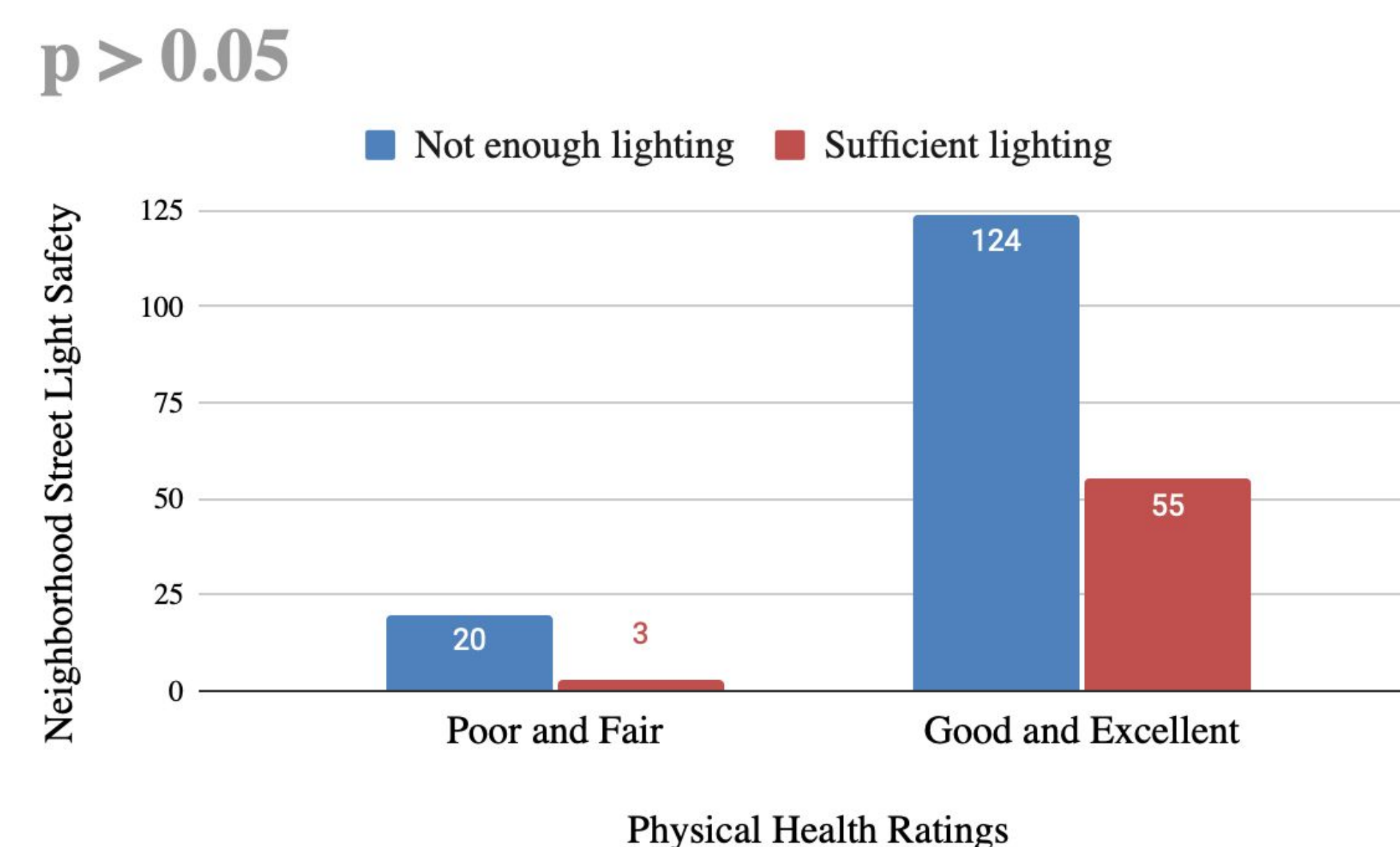
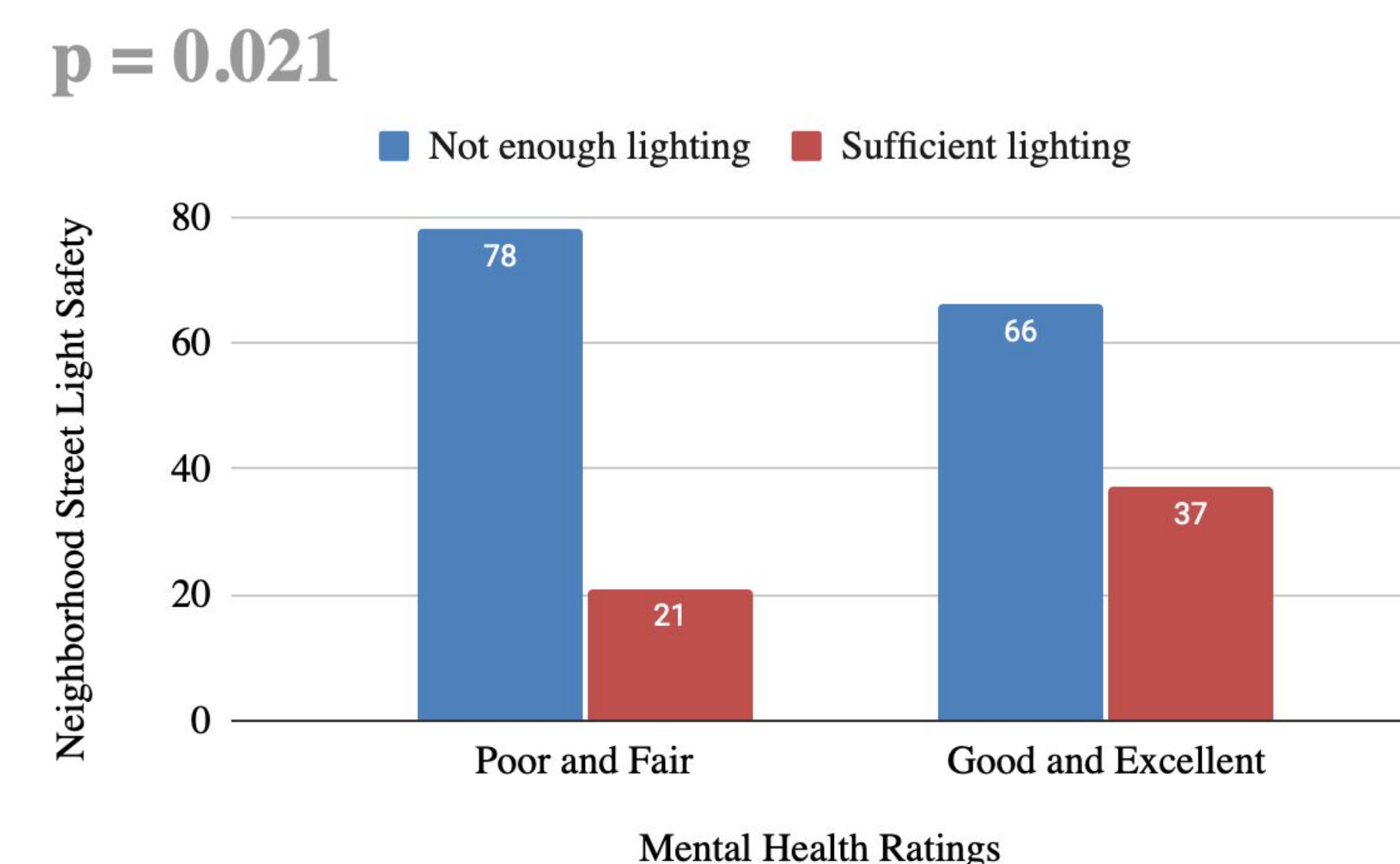


Figure 3: Neighborhood Street Light Safety by Mental Health Rating



## Conclusion

- We found a positive association between well-lit neighborhoods (adequate streetlights and lit walk paths) and increased mental health.
- There was not enough data to interpret a significant association for any other categorical data that we analyzed.

## Policy Implications

Based on the positive association found in this study, it may be crucial to set forth initiatives to improve lighting in neighborhoods to improve mental health.

1. Public Health Initiatives for Mental Health
  - a. Integrate better lighting to reduce societal burden of depression and anxiety
2. Urban Planning and Design for Enhanced Quality of Life
  - a. Incorporate lighting solutions into urban design to promote vibrant communities and safer environments
3. Equity and Access in Urban Planning
  - a. Prioritize equitable access to neighborhood lighting improvements, addressing disparities in safety and mental health

## Acknowledgements

- We would like to thank everyone who participated in our survey, as well as the BSPH Advisors and Faculty who assisted with random disbursement of it.
- Thank you to Professor Sally A. D. Romero, PhD, MPH for providing guidance and support during this research process.

## References

- American Diabetes Association, Stepping Up to Diabetes - The Power of Walking. <https://diabetes.org/health-wellness/fitness/benefits-walking>
- Braveman P, Gottlieb L. The social determinants of health: it's time to consider the causes of the causes. Public Health Rep. 2014 Jan-Feb;129 Suppl 2(Suppl 2):19-31. doi: 10.1177/003335491412915206. PMID: 24385661; PMCID:PMC3863696.
- Roe J, Mondschein A, Neale C, Barnes L, Boukhechba M, Lopez S. The Urban Built Environment, Walking and Mental Health Outcomes Among Older Adults: A Pilot Study. Front Public Health. 2020 Sep 23;8:575946. doi: 10.3389/fpubh.2020.575946. PMID: 33072714; PMCID: PMC7538636.
- Wesley E. Marshall, Daniel P. Piatkowski, Norman W. Garrick, Community design, street networks, and public health, Journal of Transport & Health, Volume 1, Issue 4, 2014, Pages 326-340, ISSN 2214-1405, <https://doi.org/10.1016/j.jth.2014.06.002>, <https://www.sciencedirect.com/science/article/pii/S2214140514000486>