

The Full Moon and Crime in Irapuato, Mexico

The relationship between calls for service and phase of the moon

Agency: Irapuato (Mexico)
Citizen Safety Secretariat

Period: May 2016–August 2019

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Context

The incidence of calls for police service may vary for many reasons. The need for a police presence may be associated with date, time, or weather. Anecdotal reports suggest that more crime occurs during the full moon; however, little research has addressed this topic.

Key Finding

Analysis of data between May 2016 and August 2019 finds no evidence of a “lunar effect” during this period.

*BetaGov trains agency personnel to become research-savvy “Pracademics” who lead trials.

Background

Crime rates may vary with many environmental and seasonal factors. For example, daily high temperature has been associated with increased crime. Anecdotal reports suggest that crime increases when the moon is full; however, the few studies that have addressed this relationship report mixed results. Although folklore suggests that a full moon gives rise to aberrant behavior, little empirical research has investigated this claim.

Belief in a phenomenon, even if unfounded, can change behavior. As such, if police officers believe that crime increases during a full moon, this might affect how they schedule shifts, allocate officers, and respond to service calls. A better understanding of the existence of a purported “lunar effect” would help to inform and optimize policing resources.

Study Design

This study replicates a recent “lunar-hypothesis” investigation conducted with crime data from the Vallejo (CA) Police Department and moon-phase data. The Irapuato Citizen Safety Secretariat provided 40 months of calls-for-service data from May 2016 to August 2019 to support an analysis of the relationship between moon phase and crime in their jurisdiction.

Analysis assessed the total number of police-service calls during full-moon days compared with non-full-moon days. Calls for police service were used as a proxy for crime.

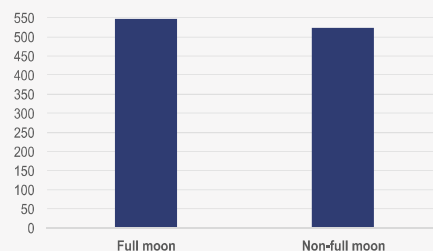
A total of 560,668 calls for service were included in the analyses. Calls were received by a general emergency hotline, but only those that were forwarded to the police dispatch center and which matched pre-selected crime categories were used in analyses.

Results

There was no statistically significant difference in the number of calls for police service during full-moon days compared with non-full-moon days. An average of 547 calls for police service were made on full-moon days and 524 on non-full-moon days. Contrary to anecdotal reports, crime, as measured by calls for service, did not significantly increase on full-moon days in Irapuato during the evaluation period.

These results mirror findings from similar BetaGov studies that were conducted in collaboration with police departments in the United States and Canada.

**Average Number of Calls:
Full Moon vs. Non-Full Moon**



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