

Problem 4: *Does employing a harsher punishment result in a better rule following?*

Hypothesis: It depends.

Justifications:

The question above leaves a lot to be interpreted. Punishments can aim for general deterrence – to deter population at large, or specific deterrence to prevent individual reoffences. Therefore ‘better rule following’ could be a metric regarding the rate of re-offense after punishment. Alternatively, it could measure occurrences of initial offences.

I have prior knowledge of discourse regarding the relationship between punishment severity and the likelihood of re-offences. Under the former interpretation of the question, I would hypothesize that there are greater factors that prevent re-offences.

For the latter scenario, intuition would suggest that for a given rule, it is less likely to be broken when the punishment or repercussions of breaking the rule is harsher given all other factors remain the same.

Constructs:

Potential Metrics of Harsh Punishment

- Deviation from mean Punishment length/fine from mean length/fine similar/identical offences (where punishment is time related or monetary fine)
- Portion of public that viewed the punishment as too severe (survey)
- Portion of maximum legal penalty that has been applied (i.e how much of maximum possible fine was the offender fined)

Potential Metrics of Rule Following

- Offenders caught / population
- Rate of re-offence

Research Design :

A good research plan for the above question could incorporate all four research designs to address different components or interpretations of the above question.

Should pre-existing data be available incorporating observing data, more specifically counting occurrences, into their method allows for researchers to compute certain metrics for both punishments and rule following. For maximum efficiency the data should be approached with a hypothesis that can be either confidently supported or not supported by the data analysis. Analysing data and observing behaviour with a theory or hypothesis that is being tested would prevent insignificant conclusions to be drawn in this step of the research plan.

To support the observation of behaviour, asking questions is an applicable research design for this question. A survey with probability sampling could provide insight into the threshold of punishment severity that would prevent respondents from breaking a given rule. Surveys with non-probability sampling could be constructed in which respondents are all one time offenders and hence the result could provide insight into the research questions but specifically to do with re-offence.

Running a controlled experiment would be beneficial to the research plan due to the capability of large-scale digital experiments. Controlling all variables in an experimental game but changing the punishment for being caught breaking a 'rule' would provide researchers insight into the direct relationship between punishment severity and rule breaking.

Finally, additional data that may benefit research could derive from mass collaboration. In a distributed data collection project, participants could report offences which provides data for rules being broken.

Ethics:

As for all research designs, many ethical considerations must be made. The survey, experiment and mass collaboration components must conform to voluntary participation at any point in the study. All contributors and participants must be informed of the purpose, benefits, risks and funding for the study prior to participation. In all 4 designs personally identifiable data shouldn't be collected and data of participants should be confidential. In the digital experiment all types of harm should be kept to an absolute minimum.

Particularly with the distributed data collection project in the above research plan, potential ethical dilemmas occur. By reporting offences where rules have been broken it potentially places an unwilling subject in jeopardy. To mitigate this the distributed data collection mechanism would have to be limited to where collaborators can only provide minimal data of the observation of a broken rule.

Critique of COVID-19 studies Validity :

The validity of the study that shows countries with more severe punishment having lower cases and deaths during COVID-19 can be dissected into 4 different types of validity.

Firstly, in regards to statistical conclusion validity, given that the study adhered to long standing statistical principles when analysing the data and having peer-reviewed statistical conclusions, there should be no major statistical validity concerns.

Secondly, the internal validity of the experiment should also be sound, since the cases and death data used for each country is at such a large scale it most likely from reputable sources. However in regards to Covid-19, allegations of governments under-reporting deaths and cases to protect international as well as the potential for individuals to misreport cases bring poses a potential problem to the studies internal validity.

The construct validity of the study is relevant, as it requires researchers to design a common metric that would measure severity which inherently is subject to change based on the individual. If the study had formulated a metric that aggregates the severity of punishments for covid-19 related punishments, then the problem of construct validity should at least in part be solved.

Finally and most importantly with this study, the external validity has great potential to be problematic. Suggesting that the trends in covid-19 cases and deaths and punishments are applicable to all 'international and country-level disasters' is a great generalisation. While conclusions could be applicable between countries, it is potentially problematic to draw from the study that under all international/country level disasters, harsher punishments will make citizens more likely to stick to the rules and harmonise their actions.