Rotman School of Management
UNIVERSITY OF TORONTO

Risky but Alluring:
Severe COVID-19 Pandemic Influence Increases Risk Taking

Claire Tsai* and Ying Zeng*

* Equal authorship; Full-text Link: https://doi.apa.org/fulltext/2022-24938-006.pdf

Abstract

In this research, we examined how the change in boredom and perceived benefit influences people's general risk attitudes during the pandemic. Across four studies (two preregistered) using U.S. online worker and Canadian university student samples, we observed that individuals who were severely affected by the pandemic showed higher risk taking toward a variety of risky activities than those who were less severely affected. We attributed this effect to the elevated boredom levels and increased perceived benefits from taking risks among the severely affected group and provided supporting evidence. Data ruled out risk perception, income, employment status, and response biases as alternative explanations. Our findings shed light on the psychological consequences of the COVID-19 pandemic, decision under risk, the role of perceived benefits of risk taking, and effective policy interventions.

Conceptual Framework

Decisions involving risk and the risk-return model

Risk taking(X) = a*Risk perception(X) + b*Perceived benefits(X) + c

- **Risk perception**: the most-studied determinant of risk taking
- **Perceived benefits**: much less-studied
  * Extant literature mainly focused on positive/negative feelings (Finucane et al., 2000), gender (Harris et al., 2006), and personality (Foster et al., 2009)

Research question

- How people's general risk attitude might be influenced by an extreme exogenous shock, such as the COVID-19 pandemic?
- What is the role of risk perception and perceived benefits in explaining the effect?

Boredom and perceived benefits from taking risks

- COVID-19 pandemic causes restrictions imposed on social and entertainment activities
  - Stay-at-home orders, lockdowns; Mandatory quarantines, unemployment, hospitalizations, etc.
  - **Commonalities**: cause individuals to be less likely or able to engage in common, lower-risk activities

- Potential repercussions of long-lasting restrictions
  - **Increased boredom levels**
    * Boredom: "the aversive experience of wanting, but being unable, to engage in satisfying activity" (Eastwood et al., 2012). Boredom increases risk taking across domains (Kılıç et al., 2020; Miao et al., 2020)
  - **Higher perceived benefits from taking risks**
    * Boredom increases reward sensitivity and makes risky activities more tempting (Westgate, 2020)
    * Unavailability of an object can lead to higher valuation and desire for the object in question (Verhallen & Robben, 1994; Dai & Fishbach, 2014), and this spills over to items similar to the unavailable judgment target (Pettibone & Wedell, 2000; Trueblood & Pettibone, 2017)

Hypotheses

H1: Risk taking is higher among those severely affected by the pandemic than those who are less severely affected.

H2: Greater risk taking among those severely affected by the pandemic is linked with higher state boredom and greater perceived benefits from engaging in risky activities.

Overview of studies

Independent Variable: Pandemic Influence

Categorized as severely affected if they or any of their household members encountered at least one of the following situations due to the pandemic: [46.8%, ranging from 35.4% to 60.6%]

(1) substantially reduced income due to unemployment for over one month or substantially reduced working hours, etc. [63.7%]

(2) confirmed as infected or being hospitalized

(3) experienced mandatory quarantine due to traveling or close contact with confirmed cases [51.1%]

(1) other applicable situations. [4.5%]

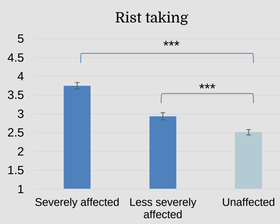
Dependent Variable: Risk Attitudes

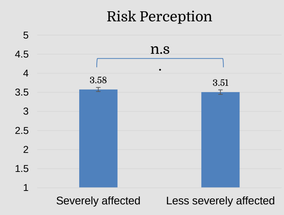
Domain-Specific Risk-Taking Scale (DOSPERT, Blais & Weber, 2006; Weber et al., 2002)

Single-item risk-taking scale (Dohmen et al., 2011, in Study 4)

Study 1

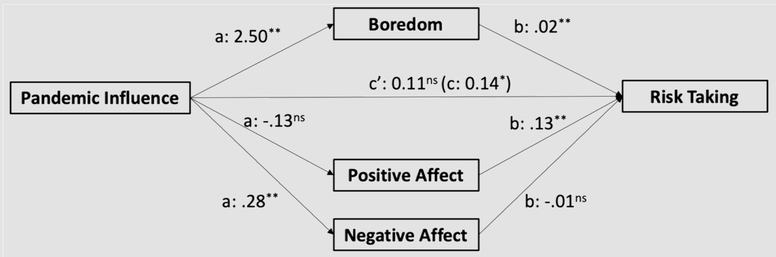
- **Participants**. N = 216 Mturkers after exclusion.
  - *Severely affected: n* = 122 (M_{age} = 37.44, 32.8% female)
    59.8% significantly reduced household income, 28.7% mandatory quarantine, 29.5% confirmed as infected, 26.2% hospitalized
  - *Less severely affected: n = 94* (M_{age} = 36.01, 45.7% female)
  - *Unaffected* as benchmark (n = 120, M_{age} = 34.54, 42.1% female, collected before-pandemic)
- **Measurement**.
  - Each P rate 5 risky activities, randomly drawn from each of the five DOSPERT domains, with the following procedure
    1) Describe 2-3 thoughts come to mind
    2) Rate how risky they perceived each risky activity would be and how likely they were to engage in each risky activity, on a 5-pt scale
    3) Report gender, age and pandemic influence





Additional analysis
- Repeated Measures ANOVA: Robustness check
- Linear regression: Pandemic influence significantly predicts risk taking after controlling for risk perception
- Floodlight analysis: the effect occurs to most risk levels
- Hierarchical linear modeling: the effect holds when allowing for individual-level random intercepts (individual response bias) and controlling for risk perception

Study 2



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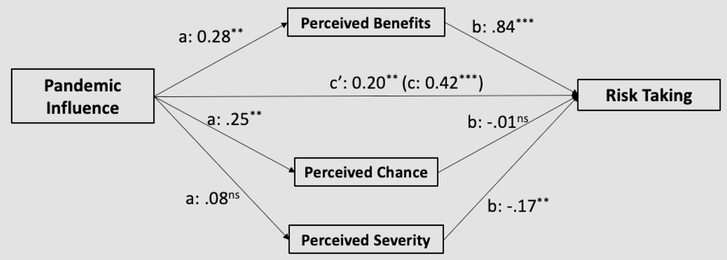
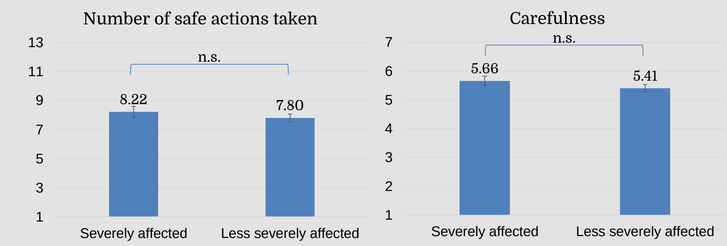
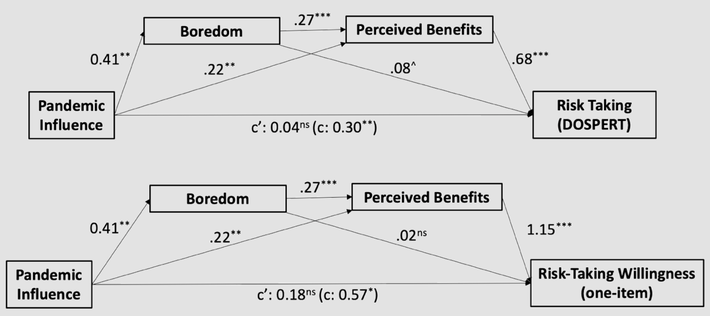


Study 4

Ruled out reverse inference (higher risk-taking tendency causes severe pandemic influence) and demographic variables as alternative explanations.





Conclusions

This study shows that people who have been severely affected by the COVID-19 pandemic are more likely to engage in risky activities relative to those less severely affected. This is because pandemic-related restrictions imposed on people are linked with elevated boredom levels and greater perceived benefits of risk taking within the severely affected group. Because the aforementioned factors differ from risk perception, a typical driver of risk taking behavior, policies aimed at curbing risky behaviors arising from the pandemic should target these factors specifically.

Tsai, Claire I.* and Ying Zeng* (2021), "Risky but Alluring: Severe COVID-19 Pandemic Influence Increases Risk Taking," *Journal of Experimental Psychology: Applied.*