Author’s response to reviews

Title: Mandatory Minimum Sentencing Policies and Cocaine Use in the U.S., 1985-2013

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Author’s response to reviews:

We thank the editor for her thoughtful comments and edits. In response to these comments, we have revised the text to address remaining concerns. These changes are indicated in the enclosed document with additional details described below. We appreciate the opportunity to revise and improve our paper. We hope that with these modifications, the paper may be acceptable for publication.

Sincerely,

Lauryn Walker and Briana Mezuk

COMMENTS FROM THE EDITOR

1. Grammar and language clarification edits are corrected throughout.

2. How can you distinguish prescription drug use from "abuse"? What is the definition of abuse? And in the next paragraph the variable seems to be "use" rather than "abuse".

We agree with the editor that “abuse” is not the appropriate word. We revise the text to read “misuse” and clarify that this is defined as use outside of prescribed indication and dose, or for a non-medical purpose (see page 1, line 37). We make similar clarifications to text regarding misuse of opioids. This language is corrected throughout.

3. Can it be said somewhere in this paragraph that the frenzy was not justified?

To clarify that the media frenzy surrounding crack cocaine was not based on evidence, we added “Despite lack of scientific evidence, crack cocaine, in particular, was seen as a highly addictive
drug that led to unpredictable, often violent behavior, including increased gang-related violence in urban areas (1–4)." (See page 4, lines 70-72).

4. Do you want to explain that there was a racial difference in usage of the two substances? This is a bit cryptic.

We added “This disparity appeared to be in part due to powder cocaine use being more prevalent among white males, while cocaine base use was more prevalent among black males. Black males were also more likely to be prosecuted to the fullest extent of the law than were white males(5,6).” (See page 5, lines 94 – 97).

5. No -- this is not an effectiveness study!! Neither effect nor effectiveness is determined here. "If mandatory minimum sentencing policies ARE ASSOCIATED WITH REDUCED cocaine use..., then the ADAA SHOULD BE ASSOCIATED WITH lower levels of use of both forms..."

Thank you for your comments. We agree that this is not an effectiveness study and have clarified our language throughout. However, the lawmakers writing the mandatory minimum sentence legislation do make a causal claim that mandatory minimum sentence will deter drug use (which we quote on page 6, line 115). We clarify that the goal of the study is to test the intended impact of the law (see page 6, lines 115-122). Our text is describing the lawmaker’s intentions. While the analysis is not causal, the laws were passed under an assumed causal model that deterrence through mandatory minimum sentences leads to less drug use. Our study is a test of whether that causal claim was a reasonable one, but does not itself ascribe causality to reductions in drug use.

6. Mandatory minimums are not always so well understood by the population, and one could easily imagine that any mandatory minimums for drugs could have a chilling effect even with respect to drugs not named in the law. I wonder if some nuance is warranted here.

The Anti-Drug Abuse Act (ADAA) was heavily focused on illicit drugs and was especially publicized for its focus on crack cocaine. In fact, the first iteration of the bill in 1986 only included sentences for drug traffickers. Since prescription drugs are accessed through a doctor as opposed to “a dealer,” misuse or abuse of prescription medications were not a part of the conversation regarding drug deterrence. In fact, at the time of the ADAA, prescription drug misuse was rarely discussed by drug prevention advocates in general and was not seen as a concern(7). It is therefore unlikely that efforts (including legislation) to curb drug use were associated with licit drugs. As we are testing the intent of the law, which is to deter use of the
drugs included in the legislation, we assume that there is no deterrence on drugs not included in legislation. We do, however, acknowledge in the limitations section that this assumption by law makers may not hold. It is possible that the legislation resulted in some spillover effect onto prescription medications. We discuss how this may impact our conclusions in the limitations section (see page 18, lines 393-397). Since prescription drug misuse declined regardless of the type of change made to mandatory minimum sentencing (implementing or relaxing), changes in prescription drug use behavior are unlikely to be directly related to spillover effect.

7. What is the red line in Fig. 1?

The red line represents the deletion of the original figure from the first submission. We updated it with a new figure reflecting the revised sample and methods. While the figures had not previously populated due to errors in formatting, we wanted to show that they had been revised to reflect to the current model. The second figure similarly had a crossed-out original figure and an updated, corrected figure.

8. Were closely correlated? Prediction implies causality. (Same in next sentence.)

The logit model, while not a causal model, is a predictive model (8). The variables used on the right-hand side of model are frequently described as “predictor variables” because their association with the outcome is predictive in nature (9). While we cannot use this model to tell us what caused the occurrence, it does allow us to identify variables that predict the event will happen with more certainty than a coin-flip. We are not implying that race, cigarette use or alcohol use cause powder or crack cocaine use, only that analysis of these factors suggest that they can be used to predict whether or not a respondent reported cocaine use in the past year.

9. "the decline...is unlikely to have been caused by the ADAA" would be more correct.

Thank you for the opportunity for clarification. Our study does not identify a cause for changes in drug use (and we have modified any language based on comments from the editor to remove any such suggestion). It does however, contribute to ruling-out a cause for changes in drug use, specifically mandatory minimum sentences. The intent of the legislation implies a causal relationship between mandatory minimum sentences and deterrence of drug use. We test this assumption and find no evidence that this causal relationship exists. We cannot say what did cause the decline in drug use, but the data are inconsistent with a mandatory minimum sentences as a causal explanation. The language on page 16, line 334 was suggested by a reviewer previously, and we believe reflects our findings. However, we agree that further explanation
may aid in clarifying this distinction and we modified language regarding the FSA. Please see revised text page 16, lines 332-339.

10. "community-dwelling population" -- means non-incarcerated persons?
Community-dwelling refers to non-incarcerated persons and persons not living in nursing homes or other institutionalized settings. We clarified this definition when we discuss the limitation of using non-incarcerated person in the limitations section (page 18, lines 392-393).

11. You have no way of knowing that people were aware of or felt threatened by this policy. Again, it would be good to nuance a conclusion of ineffectiveness of these policies as something suggested but not definitively demonstrated by this work.
Text revised to clarify that regardless of individual reactions or knowledge of sentences, implementation of sentences were “insufficient to change use at the population level,” as no change was detected (see page 17, like 356).

12. You believe that drug awareness campaigns could have affected use of all drugs but criminal law changes couldn't (see comment on p 8)?
We changed the text to read: “Increasing awareness of the harms associated with drug use – whether through formal awareness campaigns, news reporting or local community efforts – occurred alongside these criminal law changes.” (See page 17, lines 369-371).

13. Narcotics as a substitute for stimulants?
We changed the text to read: “Future research should assess opioid use (both prescription and heroin) as a way of managing highs when other drugs are not available or are less popular.” (See page 18, line 383).

14. Nonetheless, there are many, many more people incarcerated for drug offenses under state laws in the US than under federal law.
We agree that state incarceration rates are higher than federal incarceration rates. However, due to the Supremacy Clause that states that federal law takes precedence over state law and the popularity of the ADAA and FSA, state laws enacted immediately before and after these laws had to be as restrictive or generally similar to federal law. We include this explanation in the text on page 19, line 409.

15. To note - citations have been revised to comply with BMC standards. Tracked changes are not apparent due to the in-text citation manager system. Only revisions made to citations after updating general references appear in the tracked changes.

Citations


