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## LETTER TO THE EDITOR

# Commentary on: Dror IE, Melinek J, Arden JL, Kukucka J, Hawkins S, Carter J, et al. Cognitive bias in forensic pathology decisions. *J Forensic Sci.* <https://doi.org/10.1111/1556-4029.14697>. Epub 2021 Feb 20.

See Original Dror et al Article [here](#)

See JFS Editor-in-Chief Preface [here](#)

See Authors' Response to Oliver Commentary on [here](#)

Editor,

I am puzzled by the conclusions of "Cognitive bias in forensic pathology decisions" by Dror et al [1]. A careful reading of the paper suggests that the data they present directly contradict their conclusions.

The authors present two scenarios, one in which the caretaker is a biologically unrelated male and one in which the caretaker is a grandmother, and then sprinkle a racial difference on top. Because the pathologists, who may or may not be board-certified forensic pathologists, classified more of the first as homicide, the authors claim "contextual bias."

That is not what is demonstrated. First, it must be remembered that manner determination is a nonscientific determination for statistical purposes. As with any such aggregate statistic, there will be noise, where any individual determination is questionable. To show bias, it is necessary to show an aggregate consistent error in one direction. For instance, if the literature suggests that biologically unrelated caretakers kill their wards at a rate forty times greater than grandmothers, then a "biased" result would be that forensic pathologists tend to classify these cases as "Homicide" much more than forty times, or much less than forty times. One cannot show bias without that estimate of ground truth.

Unfortunately, the authors do not provide any such estimate of ground truth. It is clear from their discussion that their personal bias is that biologically unrelated caretakers do not kill their wards at a greater rate than do grandmothers or that it does not matter. The medical literature, were the authors to refer to it, does not support their apparent belief in this regard. There is significant medical literature that indicates that unrelated male caretakers are a predictor of abuse and that grandmothers as caretakers are associated with less aggregate risk of abuse. A full review of the literature is beyond the scope of a letter, but the risks are real and, because of the nature of the purpose and methods of manner determination, relevant. It should be pointed out that this literature largely does not rely on death certificates and is thus not subject to the "bias cascade" claim.

For the purpose of this letter, I will assume a conservative lower bound of ten times the risk.

If one uses ten times the risk as the lower bound, then forensic pathologists who evaluate these cases should classify cases in which the caretaker is a biologically unrelated male as "Homicide" at least ten times as often as those in which the grandmother is the caretaker. If they do not, then they are showing bias in favor of the biologically unrelated caretaker. In this study, the participants classified the case of the biologically unrelated caretaker as "Homicide" five times more often than of the grandmother. Thus, using the author's data, the participants significantly underestimated the number of homicides.

A very likely reason for this is that the participants are relatively hesitant to commit to a classification of "Homicide" in the absence of more supportive data (e.g., history of domestic abuse) and, as such, are more likely to classify the manner as "Accident" or "Undetermined," both of which are considered by many to be more conservative classifications. We do not know, since the authors did not attempt to find out in the survey or ask the participants in a follow-up survey. However, this is certainly as good an explanation as any.

Additionally, surveys such as this do not reflect actual death certificate behavior, since they are really questions of first impression rather than integration of complete case data. If the authors really wanted to make a statement about actual manner classifications rather than first impressions, they would have to do case studies.

Were this paper simply about integrating caretaker relationship, then it does not demonstrate that the participants introduced bias by over considering contextual data. It suggests that they failed to classify cases as "Homicide" by failing to consider it as much as they should—a different kind of cognitive bias. In medicine, the tendency to ignore relevant contextual data is much more damaging than the tendency to include irrelevant data.

For some reason that is unclear, the authors decided to inject the conflating variable of a racial difference. In the paper, the child in the case of the biologically unrelated caretaker was black, while the child in the grandmother case was white. The authors, again



for some unknown reason, decided to load the difference in classification onto race and, in fact, labeled the cases “Black Condition” and “White Condition” rather than “Boyfriend Condition” and “Grandmother Condition”—a clear example of introducing their bias into their discussion. While the participants classified the “Black Condition” homicide more often than the “White Condition,” they did so at a rate less than what would be expected from caretaker relationship alone. Thus to any degree that the results here have anything to do with race at all (and there is, in fact, no reason to believe that it does), then the result is that the participants had a bias against the classification of “Homicide” in the “Black Condition,” not, as the authors suggest, in favor of it.

By ignoring the medically relevant literature on caretaker relationship, the authors come to a conclusion exactly the opposite of what their data suggest. Their decision to ignore this medical literature is itself an example of a severe cognitive bias.

Imposing their personal bias that the medical literature has no bearing on medical decision-making is a bit odd in an article that pretends to oppose bias. The authors do not demonstrate why their personal biases should be taken as normative or imposed upon those

who place more value than they do on the importance of medical literature.

William Oliver MD

*Knox County Regional Forensic Center, Knoxville, Tennessee, USA*

*Email: billo@billoblog.com*

## REFERENCE

1. Dror IE, Melinek J, Arden JL, Kukucka J, Hawkins S, Carter J, et al. Cognitive bias in forensic pathology decisions. *J Forensic Sci.* 2021. [Epub ahead of print] <https://doi.org/10.1111/1556-4029.14697>.

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