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Response and rebuttal to “Comment on: Risk factors for workplace encounters with weapons by hospital employees” in public health in practice; 3 (2022) 100256 by Chidinma Okani and Carmen black

ARTICLE INFO

Keywords

Workplace violence
Weapons
Safety
Security
Confiscation

We would like to thank Drs. Okani and Black for their interest in our paper and their commentary published in PHIP but believe that we must clarify and respond to several of the points made in their commentary. Drs. Okani and Black state that the premise of our article is that armed conflict is the leading cause of assaults in healthcare. This was not the purpose of our study. As stated in the abstract and elsewhere in the paper, “*The specific aim of this study was to determine which risk factors were associated with frequent weapons confiscation in a healthcare facility. This study investigated the hypothesis that hospital-related factors impact the frequency of weapons confiscation.*” [1] We did not argue that armed conflict is the leading cause of assaults. Our study design and interpretations are aimed at examining this issue through a public health injury prevention perspective in which violence is examined as a public health problem. Drs. Okani and Black also state that the risk of being a victim of a hospital shooting is less than being struck by lightning, implying that hospital shootings are not a safety priority because they are rare events. The fallacy of this argument is that they are not using the correct denominator in their estimation. The only people at risk of a hospital shooting are people who are in a hospital, for work, visits, or as a patient. Using an inappropriate denominator such as the entire US population to estimate the probability or risk for a specific select scenario is not appropriate or in-line with conventional risk assessment techniques. In addition, the article by Kelen et al. [2] has limited applicability to our study because Kelen et al. [2] only investigated hospital shootings with no assessment of other weapons and, as Smalley et al. [3] points out, the majority of assaults with weapons occur with edged weapons such as box cutters and knives. Metal detectors have the ability to identify these edged weapons, which are much more frequently encountered. Drs. Okani and Black summarized the results of the study by Rankins et al. [4] by stating that the presence of metal detectors had no influence on assaults at the hospital they analyzed; in fact, upon careful review of that paper, you will find that they found a reduction in assaults with weapons but not a reduction in the frequency of assaults without weapons, suggesting that metal detectors had an important contribution to workplace safety. We interpret that result to imply that without weapons the consequences of an assault have the

potential to be less severe. Drs. Okani and Black also state that we mischaracterized the paper by Roche et al. [5] stating that this paper did not imply that fear of violence increased medical mistakes; however, Roche et al. [5] did show that “medication errors” were more prevalent when there were concerns about violence. Drs. Okani and Black also argue that security measures do not impact violence rates and that money should be “diverted” from security programs to clinical operations, unfortunately this is not supported by research for the last 20 years on workplace violence [6]. There is a wealth of literature showing that the largest causes of workplace violence in the health care setting are not the result of poor clinical operations such as wait times, but rather the result of the mental healthcare crisis, poor social services, and drug dependency [e.g. Refs. [7,8]. Furthermore, they argue that the use of the word “violence” is racist language and somehow coded to disparage a particular community. The workplace violence research community has repeatedly shown that assault rates in hospitals are not related to race, ethnicity, financial well-being of a hospital or even strongly associated with index and violence crime rates in a community but rather, much more closely associated with the quality and comprehensiveness of the hospital’s security program [9]. Moreover, our prior work has also clearly shown in a quantifiable way that the biggest predictor of the fear of violence among nurses working in a hospital is not related to race or ethnicity but rather, to the frequency of verbal abuse that nurses experience on the job [10]. Lastly, Drs. Okani and Black also noted the use of citations in our paper that are over 20 years old for metal detector usage. Unfortunately, to our knowledge, there are no recent studies on this question beyond the work discussed here, and we would point out that just because a study is old does not mean that it is not useful or applicable. We whole-heartedly would support funding for new additional studies on metal detector usage.

Source of funding

This project was not funded.

<https://doi.org/10.1016/j.puhip.2022.100304>

Received 9 June 2022; Received in revised form 23 June 2022; Accepted 28 July 2022

Available online 3 August 2022

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Human studies and subjects

This study was reviewed and approved by the Old Dominion University Institutional Review Board (protocol #1040377-3) and complies with US Federal Policy for the Protection of Human Subjects.

Declaration of competing interest

The authors have no perceived or actual conflicts of interest related to this project, paper, or submission.

Acknowledgements

The authors wish to thank the International Association for Healthcare Security and Safety (IAHSS; <http://www.iahss.org/>) for their support of our study.

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