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Trajectory analysis of the campus serial rapist assumption

To the Editor

We have major concerns about the scientific validity of "A Trajectory Analysis of the Campus Serial Rapist Assumption," by Kevin Swartout and colleagues (1).

Contacted one week after publication, Swartout provided the dataset he used and his analysis code. It is a <u>bare-minimum</u> dataset, consisting of five simple dichotomous (yes/no) rape variables, derived from two datasets – one publicly available (co-author Jackie White is principal investigator), and another that has not been made available despite requests (co-author Martie Thompson is P.I.).

Swartout and colleagues' methodology systematically suppresses the number of serial offenders. They excluded attempted rapes and defined "serial rape" as committing rape during more than one assessment period, such that men who raped more than twice – even more than five times – during one assessment period were <u>not</u> defined as serial rapists. Simple frequency analyses of the publicly available dataset show that, for every period assessed, at least 50% of rapists were serial rapists (i.e., men who had committed more than one rape) and the vast majority of rapes were committed by serial rapists.

Swartout acknowledged (after we alerted him) that his analysis dataset had large amounts of incorrectly missing data. Inspection of White's full public dataset revealed major data integrity issues for the sexual assault variables used to derive dichotomous variables for their analyses. For example, all sexual assault variables had been created by a command that recoded values of "missing" and "no response" into "never" (see page 513 of the publicly available PDF *Codebook for Male Data*). In short, errors piled upon errors plague the data used in the paper's analyses.

Using the original analysis code, we reviewed the analyses and their results. Again, major problems were uncovered. The analyses included data that the authors explicitly stated in their article had <u>not</u> been

included (i.e., senior year of the derivation dataset). The models themselves are based on untenable assumptions (e.g., the validity of imposing smooth trajectory curves to describe the probability of rape over time), and they fail to meet standard criteria of model fit (e.g., models were under-identified, requiring critical parameters to be fixed rather than estimated).

These major problems – and more – are clear to anyone who inspects the available data and, among those qualified, to analysts who perform the latent class analyses.

In support of the critique outlined above, we direct you and readers to our extensive critique and technical report posted on PubPeer.com.

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1. Swartout KM, Koss MP, White JW, Thompson MP, Abbey A, Bellis AL. Trajectory analysis of the campus serial rapist assumption. JAMA Pediatrics, 2015 Jul 13. doi: 10.1001/jamapediatrics.2015.0707. [Epub ahead of print]