

CORRECTION: SENSITIVITY ANALYSIS FOR AN UNOBSERVED MODERATOR IN RCT-TO-TARGET-POPULATION GENERALIZATION OF TREATMENT EFFECTS

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We regret an error in the article [Nguyen et al. \(2017\)](#), hereafter referred to as *the (published) article*. In correcting this error, we no longer recommend the methods in Section 4 of the article. The rest of the article and, most importantly, the sensitivity analyses proposed in Section 3 for moderators observed in the RCT but not in the target population, are unaffected.

1. The article and the content affected. The published article asks how to handle unobserved treatment effect *moderators* when using data from a randomized controlled trial (RCT) to estimate the *average treatment effect* for a *target population* (TATE). To set a foundation for considering this question, the article first presents two methods for estimating TATE when the moderators are observed both in the RCT and in a target population dataset: *outcome-model-based TATE estimation* relies on an outcome model with treatment-moderator interaction, and *weighting-based TATE estimation* relies on weighting the RCT sample to mimic the target population's distribution of the moderators. Building on this foundation, the article tackles two cases with unobserved moderators. In the first case, some treatment effect moderators (denoted V) are observed in the RCT but not in the target population. In the second case, we are concerned about possible effect moderation (represented generically as moderation by an unobserved U) that is completely unobserved, not even in the RCT. We call these the V case and the U case, respectively.

In the V case, the article proposes (in Section 3) an *outcome-model-based*, an *weighting-based*, and a *weighted-outcome-model-based* sensitivity analysis. These sensitivity analysis methods for moderators V observed in the RCT but not in the target population are sound, and are NOT affected by the error we report in this note.

In the U case, the article proposes (in Section 4) a *bias-formula-based* and a *weighting-plus-bias-formula-based* sensitivity analysis. These two sensitivity analysis methods for effect moderation by factors not observed in the RCT are affected by the flawed argument we explain below.

The data example in this article, which represents a V case, is NOT affected by the error which only concerns the U case.

2. The flawed argument concerning the U case. Section 4 proposes sensitivity analyses for the U case (where concern is about effect moderation by factors not observed in the RCT), based on defining U as the *remaining composite moderator after accounting for observed moderators* (Z). That is, U is a composite variable that captures all effect moderation forces other than Z , and it is independent of observed covariates, including moderators Z and confounders X . (Intuitively, U is a combination of all the remaining moderators, after