Assessing the Impact of Respondent Fatigue in the National Crime Victimization Survey

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Background
• Victimization counts obtained over a three-year period through up to seven interviews
• Beyond the first interview, victimizations may be suppressed by the respondent as a result of survey exposure
• This suppression is known as respondent fatigue and is one of many potential sources of bias

Purpose
• BJS currently uses later wave data to adjust for recall bias (telescoping) in the first wave
• Victimization estimates are comprised of responses from across interview waves, but the impact of respondent fatigue is currently unknown (both how it impacts the telescoping adjustment and victimization counts in general)

Approach
• Estimate a model over interview 2-7 records to predict number of victimizations
  \[ \log(E(Y)) = \beta_0 + \beta_1 \text{IntNum} + \beta_2 \text{IntNum}^2 + \beta_3 \text{IntNum}^3 + \ldots + \beta_{3k} \text{IntNum}^k \]
  Where \( \beta_x = 1, \ldots, k \) is an indicator for characteristic \( X \) (e.g., \( X = \text{males}, 12-17 \text{ year olds} \))
• Estimate an individual-level adjustment \( r \) as the ratio of predictions for interview 1 and the actual interview number
  \[ \log(r) = \beta_1 (1 - \text{IntNum}) + \beta_2 (1 - \text{IntNum}^2) + \beta_4 \text{IntNum}(1 - \text{IntNum}) + \ldots + \beta_{3k} \text{IntNum}^k (1 - \text{IntNum}) \]
• Multiply interview 2-7 victimization counts by a factor of \( r \) to obtain fatigue-adjusted estimates
• Evaluate the difference in rates with and without the fatigue adjustment

Results
• Conditioning the telescoping adjustment on the fatigue adjustment vs. not results in a large difference in interview 1 rates
• Combining the fatigue adjustment with a conditional telescoping adjustment leads to rates that more closely conform with our theory on how victimization should remain constant across interview waves
• Incorporating a fatigue adjustment increases victimization estimates considerably relative to current methods

Conclusion
• The current telescoping adjustment exacerbates the problem of fatigue by over-deflating first interview cases
• The difference in estimates when adjusting for fatigue vs. not points to potentially large levels of deflationary bias inherent to the current method