

Randomized Response Techniques: An Application to the Sexual Orientation Identity in Taiwan

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In a survey research dealing with sensitive questions related to drug abuse history, homosexual activities, abortion experience etc., the randomized response technique (RRT) proposed by Warner (1965) enables researchers to enhance respondents' cooperation and collect the data indirectly in order to reduce the bias due to nonresponse and social desirability. Unfortunately, many studies on sexual orientation identity do focus on using self-report direct questioning. So far, there are very few works about sexual orientation identity where RRT is used. This study considers both randomized response models proposed by Hsieh et al. (2018) and Groenitz (2014) that was used in a face-to-face interview on sexual identity in Taiwan. In Specific, this study discusses both methods that have been implemented to collect data, and derives the maximum likelihood estimators for the proportions of individuals self-identifying as bisexual and homosexual aged 20 years or older. Empirical results show that individual determinants of truthful response may differ across data collection modes.