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# A stratified randomized response model for sensitive characteristics using negative binomial distribution.

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Date: Sept. 2015

From: [Investigación Operacional](#)(Vol. 36, Issue 3)

Publisher: Editorial Universitaria de la Republica de Cuba

Document Type: Ensayo

Length: 4,373 words

Abstract:

Tomando la senalización hecha en el trabajo pionero de Hussain et al. (2014) sugerimos un nuevo modelo de respuestas aleatorizadas estratificado. Las propiedades del modelo de respuestas aleatorizadas sugerido han sido estudiadas bajo la afijación proporcional y la de "Neyman". El estudio ha sido realizado usando una modificación de la afijación de Neyman en la presencia de un estimador a prior crudo. Ilustraciones numericas tambien son dadas para soportar el presente estudio.

Taking the clue from the pioneer work of Hussain et al.'s (2014) we have suggested a new stratified randomized response model. The properties of the suggested stratified randomized response model have been studied under proportional and "Neyman" allocations. The study has been also carried out using modified Neyman allocation in the presence of crude prior estimates. Numerical illustrations are also given in support of the present study.

KEYWORDS: Randomized response sampling, Estimation of proportion, Respondents protection, Negative Binomial Distribution.

MSC: 62D05.

Full Text:

## 1. INTRODUCTION

One of the leading paraphernalia for obtaining data pertaining to human populations is the social survey. To measure opinions, attitudes, and behaviors that cover a wide band of