

ON ZERO TRUNCATION MODELLING OF POISSON AILAMUJIA DISTRIBUTION AND ITS APPLICATIONS

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Abstract: In present paper we have developed zero truncated Poisson Ailamujia distribution. The suggested model's parameter is calculated using the maximum likelihood technique. The proposed model fitted to observed set of data related to the events based on mortality and drawn some conclusions.

Keywords and Phrases: Poisson Ailamujia distribution, Zero truncated distribution, Method of maximum likelihood, Mortality, Goodness of fit.

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1. Introduction

In probability theory zero truncated distribution play an important role to draw the valuable inferences in respect of real life problems. When the data come from an environment that doesn't provide data with zero counts, zero truncated distributions are appropriate. Following (Shanker et al., 2015), Shanker R. (2017), Agarwal and Pandey (2022), let $p_0(x; \theta)$ is the original discrete distribution with support non negative positive integers, then the zero truncated form of $p_0(x; \theta)$ with support set of positive integers is given by-

$$p(x, \theta) = \frac{p_0(x; \theta)}{1 - p_0(0; \theta)}; \quad x = 1, 2, 3, \dots \quad (1.1)$$