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Inverse Analogue of Ailamujia Distribution with Statistical Properties and Applications

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Authors' contributions

This work carried out in collaboration among all authors. Author A. Aijaz designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors A. Ahmad and RT managed the analysis of the study. Author A. Aijaz managed the literature searches. All authors read and approved the final manuscript.

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Abstract

The present paper deals with the inverse analogue of Ailamujia distribution (IAD). Several statistical properties of the newly developed distribution has been discussed such as moments, moment generating function, survival measures, order statistics, shanon entropy, mode and median .The behavior of probability density function (p.d.f) and cumulative distribution function (c.d.f) are illustrated through graphs. The parameter of the newly developed distribution has been estimated by the well known method of maximum likelihood estimation. The importance of the established distribution has been shown through two real life data.

Keywords: Ailamujia distribution; inverse approach; moments; survival analysis; maximum likelihood estimation.

Mathematics subject classification: 60E05; 62E15.

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