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**On the distribution of functionals of discrete ordinal variables.** (English) Zbl 1264.60013  
Stat. Probab. Lett. 82, No. 11, 2044-2049 (2012).

The topic of the distribution of functionals of discrete ordinal variables is treated. Here, the joint probability distribution functions of order statistics such as the minimum and the maximum, the median and the first and third quantiles are presented. The appropriate combination of location measures can be very useful in describing the characteristics of a given discrete distribution when the ultimate goal is to offer a concise and intuitive statistical summary measure. Moreover, the analytical distribution of two well-known  $L$ -estimators is given: the trimmed mean and the Winsored mean, considered as robust versions of the arithmetic mean. The paper concludes with a practical application of the proposed methodology by an academic evaluation in the context of customer satisfaction data.

Reviewer: Ludwig Paditz (Dresden)

**MSC:**

[60E05](#) Probability distributions: general theory  
[62G30](#) Order statistics; empirical distribution functions  
[62E15](#) Exact distribution theory in statistics  
[62E10](#) Characterization and structure theory of statistical distributions

Cited in **3** Documents

**Keywords:**

discrete ordinal variables; ordinal data; order statistics; discrete parents; quantile based measures;  $L$ -estimators; trimmed mean; Winsored mean; intuitive statistical summary measure

**Full Text:** [DOI](#)

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