

Item “Importance” and Gamma in MHCA Customer Satisfaction Surveys

Executive Summary

Reports from the MHCA customer satisfaction survey have included a measure of each survey questions importance to the customer. This has been done by computing a correlation between the satisfaction scores on each item and the overall satisfaction score. In the reports, this correlation, known as Gamma, is compared to satisfaction levels. Items with large gaps between satisfaction and “importance” are identified as targets for improvement.

However, this correlation technique does not actually measure or impute the importance of an item to a client, but rather the association of the item to the overall satisfaction. This correlation analysis is appropriately used for survey development, but the importance of a survey item to a client must be directly measured and cannot be calculated from satisfaction scores.

The MHCA National Data Center is proposing to remove all of the “importance” analysis from the standard reports on customer satisfaction.

The Use of Importance Measures in MHCA Customer Satisfaction Survey Results

The MHCA National Data Center has used a measure known as “Gamma” or “Importance” in the reporting of client satisfaction survey results. This measure is used in standard non-comparative reports to identify survey items with the highest need for improvement. The highest need for improvement is defined as the largest gap between client satisfaction and importance of a survey item to that client. While this would be a useful measure, the measure of an item’s importance is based on an erroneous interpretation application of “derived importance”.

What is Gamma and how it is used in MHCA reports

Goodman and Kruskal's Gamma is a correlation coefficient which is used when both variables are ordinal (e.g. 0,1,2,3,4,5). The analysis employed by MHCA calculates this correlation between responses to each item and the overall satisfaction score (which is no longer ordinal). The correlation of the satisfaction items with the overall satisfaction is defined in the reports as the importance of the item to the customers completing the survey.

The Gamma correlation has been defined in MHCA reports as “A correlation method used to establish importance of each item to the clients”. MHCA reports further explain, “We show the first of two graphs connecting satisfaction to client-perceived importance of an item. This graph shows if you are doing well on items that are important to your clients’ satisfaction. “

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How “Importance” correlations are used

The practice of correlating satisfaction responses with overall satisfaction is a practice in survey development. In this application correlation with overall satisfaction is used to reduce the number of questions on a survey instrument, in a process called item analysis. For example, items with low correlations with the overall satisfaction are eliminated because of their minimum contribution to the score.

So the practice of correlating each item with the overall score shows the **importance of the item in the survey instrument** at predicting overall satisfaction, **but does not measure the importance of the item to the customer**. It is not possible to determine the importance of satisfaction items without direct measurement of importance.

Some Examples from the Literature

The following guidelines from the literature illustrate the use of “imputed importance” or “derived importance”:

“Derived importance is not a measure of attribute importance, but of the strength of association between the way each attribute and overall satisfaction are scored... Overt ratings (stated importance) are a better guide to attribute importance since they do not reflect current performance” (Institute of Consumer Service (2010)).

These authors emphasize that the use of correlations (derived importance) does not measure the importance of the item. They go on to say that importance must be explicitly and independently measured and should be evaluated independently of current levels of satisfaction.

MHCA based its use of the Gamma correlation as an importance measure from the article excerpted below:

“The idea is to measure the “imputed importance” of a particular question by correlating it with some “bottom line” question. If the underlying correlation coefficient is low, we know the question is not important to overall satisfaction, and we may want to omit it from subsequent surveys.” (Glancey and Dunn (1996))

This article does use Gamma correlation in the development of a customer satisfaction instrument for the purposes of eliminating questions which are not useful in predicting the overall satisfaction measure. There is no suggestion in this article that this correlation measures or imputes the importance of an item to the customer.

Chatman (2001) provides a detailed description of the process of using correlations for developing survey instruments in reducing questionnaire length.

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Conclusion

Importance of an item to a client cannot be computed based on satisfaction measurement scores. The use of the “Gamma” correlation in MHCA reports as a measure of item importance to the client is based on an erroneous interpretation of the literature. Importance must be directly measured and should be considered independent of measured levels of satisfaction. The MHCA National Data Center recommends no longer including the “importance” analysis in future reports.

References

Chatman (2001) *Using Correlation with Global Satisfaction Within Academic Divisions to Reduce Questionnaire Length and to Raise the Value of Results*. Steve Chatman. Student Affairs Research and Information, University of California - Davis. Report 202, 2001.

Glancey and Dunn (1996) *Patient Satisfaction Can Mean A Lot of Different Things*. Diane Glancey and Liz Dunn. Health Policy Newsletter, Thomas Jefferson Hospital Philadelphia PA (May 1996).

Institute of Consumer Service (2010) *Stated importance, correlation, regression and key drive analysis*. White Paper. Institute of Consumer Service, Colchester, England (2010)