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Evaluating the Cause-Effect Relationship for Likert Scale Items

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Likert scale items are used for surveys exploring attitudes by collecting responses to particular questions or groups of related statements. The common practice is asking respondents to express their level of agreement by applying the seven or five-point scale from 'strongly disagree' to 'strongly agree'. Although the Likert scale methodology serves as a powerful tool for asking attitudinal questions and getting measurable answers from the respondents, the surveys fail to identify the level of importance of the individual questions used for characterising the explored phenomena. Moreover, the Likert scale methodology does not enable to distinguish which of the questions are the causes, and which of them are the effects of the explored problem. The objective of the research is to propose an original method for evaluating the cause-effect relationship and strength of interdependences among Likert scale items. The modified influential relation map built for Likert scale items revealed improvement scopes by defining causal relationships and significance of the questions of the survey and added value for long-term strategic decision making. The viability of the proposed model is illustrated by a case study of service quality survey data collected at the rehabilitation hospital in Poland.