METHODOLOGY FOR SELECTING EXPERT GROUPS FOR THE PURPOSE OF DECISION-MAKING TASKS

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OBJECTIVES
This work aims to develop a methodology for determining the qualitative composition of an expert group for the purpose of participation in decision-making in health care technology. Its goal is also to evaluate the methodology based on an example of the selection of large medical equipment.

METHODS

The calculation model that was selected was able to eliminate errors in estimating the proportionality of extreme values and reduces the impact of uncertainty in the experts’ overall self-evaluations concerning their total competence.

SYMBOLS

\( W_e \) – overall expert’s weight
\( n \) – quantity of criteria
\( w_i \) – expert’s weight its criteria
\( w_1 \) – current job position
\( w_2 \) – level of education
\( w_3 \) – total work experience
\( w_4 \) – work experience in the problem area
\( w_5 \) – level of participation in the problem
\( w_6 \) – sources of arguments
\( w_{ST} \) – overall expert’s self-evaluation

DISCUSSION

The most important expert properties that might be considered for determination of their general weight included the following: 1) professional competence (reliability and validity of the decisions rendered), 2) impartiality, 3) objectivity, 4) concern in participating in the examination, 5) ability to operate on a scale of relations and a scale of probability, and 6) ability to take into account. The calculation model that was selected was able to eliminate errors in estimating the proportionality of extreme values and reduces the impact of uncertainty in the experts’ overall self-evaluations concerning their total competence.

RESULTS

The method for determining the qualitative composition of an expert group was developed, tested and analyzed.

A statistically significant correlation was found between the complex weighting factor and the following characteristics: the expert’s experience in dealing with similar tasks \( r = 0.512, p < 0.001 \), the expert’s theoretical background (awareness) and the relevance of the expert’s knowledge \( r = 0.440, p < 0.001 \), the expert’s current position \( r = 0.319, p = 0.002 \) and the level of his or her education and scientific record \( r = 0.280, p = 0.007 \).

CONCLUSIONS

This method may be a partial contribution in some fields of scientific and technological forecasting, medical or managerial decision making, during HTA process and operational research both in public and private sector.

REFERENCES


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