

Feasibility of Delphi Methodology to Validate Dental Information Items List

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Objectives

Investigate the feasibility of adopting Delphi methodology to validate a list of information items for general dental records and identify potential problems for successful validation.

Methods

We conducted a single round Delphi process with 10 general dentists with a D.M.D/D.D.S serving on the Delphi panel (6 private practitioners, 2 educators and 2 researchers). The participants were identified through convenient sampling. The participants were presented with a list of 326 items representing the Health History section of the candidate list developed previously. The items list was e-mailed to the participants as excel files. The participants were requested to express their level of agreement/disagreement in retaining the item on a 5-point Likert scale (5=strong agreement and 1=strong disagreement). The participants were allotted a period of 3 weeks to complete the rating process. An e-mail reminder was sent to all the participants after two weeks.

After all items were rated, we calculated the mean score and 95% confidence interval (CI), for each item. Based on previously published literature, the lower and upper limits of the 95% CIs were examined, and each item was classified into one of three categories: Retained (lower-limit 95% CI \geq 4.0, indicating

consensus agreement), Rejected (upper-limit 95% CI \leq 3.0, indicating consensus disagreement), or Equivocal (lower-limit 95% CI between 3.0-3.9, indicating the need for reevaluation).

Results

Although missing data completely at random was encountered for 7 out of 326 items, 9 out of 10 participants rated them. We handled this problem by considering average score of these 9 participants. 73 items were retained, 3 items were rejected and 250 items needed further reevaluation, suggesting a second Delphi round.

Conclusion

For validating dental information items list, the Delphi method is more appropriate than a survey, since it allows for iterative refinement of results to reach a consensus between participants.

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