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**LETTERS TO THE EDITOR**

**Intrinsic motivation of GPs was not related to recruitment success, whereas interest in the study topic was**



Dear editor,

Recruitment in primary care trials is often problematic and most notable in studies requiring the recruitment of incident cases [1]. Given that intrinsic motivation is known to be a moderate-to-strong predictor of performance in many domains [2], we hypothesized that the intrinsic motivation of a general practitioner (GP) is essential for recruitment success; however, to date, there has been no research on this topic. We therefore aimed to explore this association and surveyed GPs who had recently participated in completed randomized trials in Dutch general practice that prospectively recruited incident cases [3–6].

The questionnaire used in this survey comprised the Utrecht Work Engagement Scale (UWES-9) [7] plus questions about motivation, the relevance of the study topic, interest in the study topic (all measured with 5-point Likert scales ranging from fully disagree (1 point) to fully agree

(5 points)), and demographic characteristics. We obtained the recruitment data for GPs who participated in the selected trials from the researchers of the original studies. Recruitment success for a GP was defined as recruiting three or more patients, which was based on the median result for all four studies. We used logistic regression models to assess the relation between motivation and successful recruitment, corrected for GP and practice characteristics.

Among the four trials, 256 GPs engaged and could be surveyed, of which 90 (35%) were successful in recruiting. Concerning questionnaire response, 113 GPs filled out the questionnaire completely. Of note, response to the questionnaire was associated with successful recruitment. Interest in the research topic was the only predictor of successful recruitment (OR: 1.99, 95% CI: 1.15–3.43, Table 1), and including confounders in the model did not affect the primary result.

Although intrinsic motivation is considered a moderate-to-strong predictor of performance in many domains [2], we did not find a relationship with recruitment success. It is therefore possible that intrinsic motivation is not

**Table 1**  
Predictors of recruitment success

Measures of motivation, interest, and relevance	Univariable analyses	Adjusted analyses	Nagelkerke R <sup>2</sup>	Hosmer–Lemeshow test	AUC
Measures of motivation, interest, and relevance					
UWES GP	0.96 (0.59–1.56)	0.93 (0.55–1.55)	0.07	0.64	0.59
UWES recruiter	1.32 (0.95–1.83)	1.26 (0.86–1.84)	0.09	0.39	0.62
Motivated to participate	1.49 (0.83–2.66)	1.50 (0.79–2.86)	0.09	0.41	0.89
Participate actively when invited	1.19 (0.72–1.97)	1.15 (0.67–1.98)	0.08	0.67	0.61
Interest in the topic	<b>1.99 (1.15–3.43)</b>	<b>2.11 (1.18–3.78)</b>	0.15	0.49	0.67
Relevance of the topic	1.69 (0.98–2.92)	1.60 (0.89–2.85)	0.10	0.92	0.64
Potential confounders					
GP active researcher (ref = no)	0.98 (0.28–3.40)				
Obtained a PhD (ref = no)	<b>4.05 (1.03–15.84)</b>				

Abbreviations: AUC, area under curve; UWES, Utrecht Work Engagement Scale. The univariate and adjusted analyses show the OR (95% CI).

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important to recruitment success, or that it is less important compared with other factors at GP, patient, or organizational levels [8]. Nevertheless, we must consider that this was only an exploratory study, and that it has been the first study to assess this relation between intrinsic GP motivation and recruitment success. General interest in the topic of the trial was found to be associated with recruitment success, which is in line with previous research [8–10]. Limitations of this study are that we retrospectively surveyed physicians, using a convenience sample when selecting trials, not performing a multilevel analysis because of the limited sample size, the presence of responder bias as participation in this study predicted successful recruitment, and that the UWES-9 and the other questions were not specifically designed to measure intrinsic motivation for recruitment.

Our results suggest that a future prospective study is appropriate in a larger sample, which could be achieved by including a short questionnaire in upcoming trials. The goal should be to build and validate a prediction model for recruitment success that could help optimize recruitment to clinical trials in primary care.

#### CRediT authorship contribution statement

**Henk van der Worp:** Formal analysis, Writing - original draft, Writing - review & editing. **Guyonne A. Schuch:** Data curation, Investigation, Project administration, Writing - review & editing. **Anne M.M. Loohuis:** Data curation, Writing - review & editing. **Rick T. van Uum:** Data curation, Writing - review & editing. **Robert T.A. Willemsen:** Data curation, Writing - review & editing. **Jochen W.L. Cals:** Conceptualization, Methodology, Supervision, Writing - review & editing. **Marco H. Blanker:** Conceptualization, Methodology, Supervision, Writing - review & editing.

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## Response changes in Delphi processes: why is it important to provide high-quality feedback to Delphi participants?



Changing original responses to questions based on group feedback is an expected and desirable outcome of consensus-building in Delphi studies. In this letter, we respond to recent calls for exploring the nature of consensus-building in Delphi studies [1,2] by describing whether and how participants change responses after group feedback that includes seeing how their responses compare to those of other participants, reviewing summaries of the reasons given for each response, and discussing the group responses using asynchronous, anonymous, and moderated online discussion boards.

We use data from 13 patients and 42 caregivers who participated in a three-round online modified-Delphi panel that used the RAND/PPMD Patient-Centeredness method to determine importance and acceptability of 19 guideline recommendations for Duchenne muscular dystrophy [3,4] (Fig. 1). Our unit of analysis is a response change between two assessment/rating rounds. Because participants may not have answered all questions twice, our sample consists of 1,846 cases.

Fifty-four participants (98%) changed at least one of their responses. On average, participants changed 49% of their answers (range: 0% to 100%). A change was made to roughly half (47%) of the 1,846 answers provided. Twenty-eight percent of responses were changed toward consensus and 19% away from consensus, as measured by the distance between the revised answer and the original median of the group responses. Medians and shifts in responses toward means/medians are common consensus measures [5,6].

A typical change in responses was not large:  $\pm 1$  on a 9-point scale. Forty-five percent of changes moved a participant's response from one tertile to another. Most of these revised responses (58%) were higher than the

original answers. Although the proportion of responses in the upper tertile of the 9-point scale increased from 65% to 67%, 36 of 38 medians remained in the same tertile. Two medians moved from the upper to the middle tertile.

After participants completed all Delphi rounds, we interviewed them. Our interviews showed that although many gained insights into other participants' responses by seeing and discussing group responses, some felt that their own perspectives were simply reinforced by others' perspectives and no changes to their own original numeric responses were needed [7].

Taken together, these findings (1) show that participants in Delphi studies tend to change at least some of their responses after group feedback and discussion; (2) illustrate that iterative data collection helps build consensus [8]; (3) support previous findings about the modest magnitude of response changes between Delphi rounds [9]; and (4) suggest that even modest changes may affect the final study findings.

Our results reinforce the importance of providing high-quality feedback on group responses as a way of ensuring validity of consensus-based Delphi processes [2]. Besides seeing statistical and comment summaries, Delphi participants should be given an opportunity to discuss group responses before providing their final answers. Prespecifying the number of Delphi rounds and not requiring participants to reach consensus are also crucial for ensuring that no false consensus is established where differences in perspectives exist even after feedback on, and discussion of, group responses.

## CRedit authorship contribution statement

**Dmitry Khodyakov:** Conceptualization, Funding acquisition, Investigation, Methodology, Supervision, Writing - original draft. **Christine Chen:** Data curation, Formal analysis, Writing - review & editing.

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**Conflict of interest:** D.K. is a leader of the ExpertLens team. ExpertLens is a tool used to collect Delphi data for this study. C.C. reports no conflicts of interest.

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