The peer teachers' perception of intrinsic motivation and rewards

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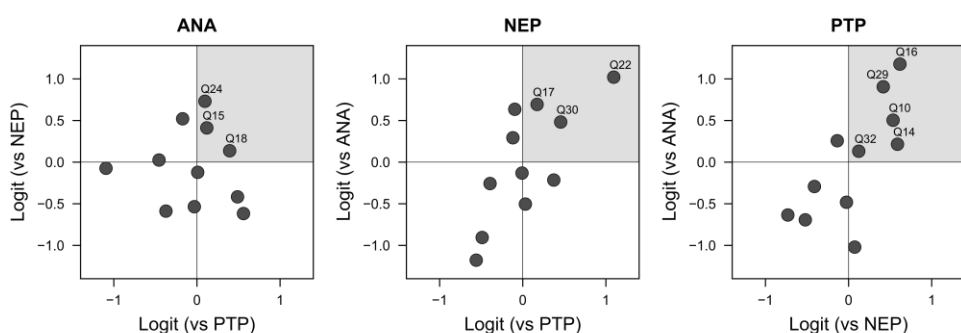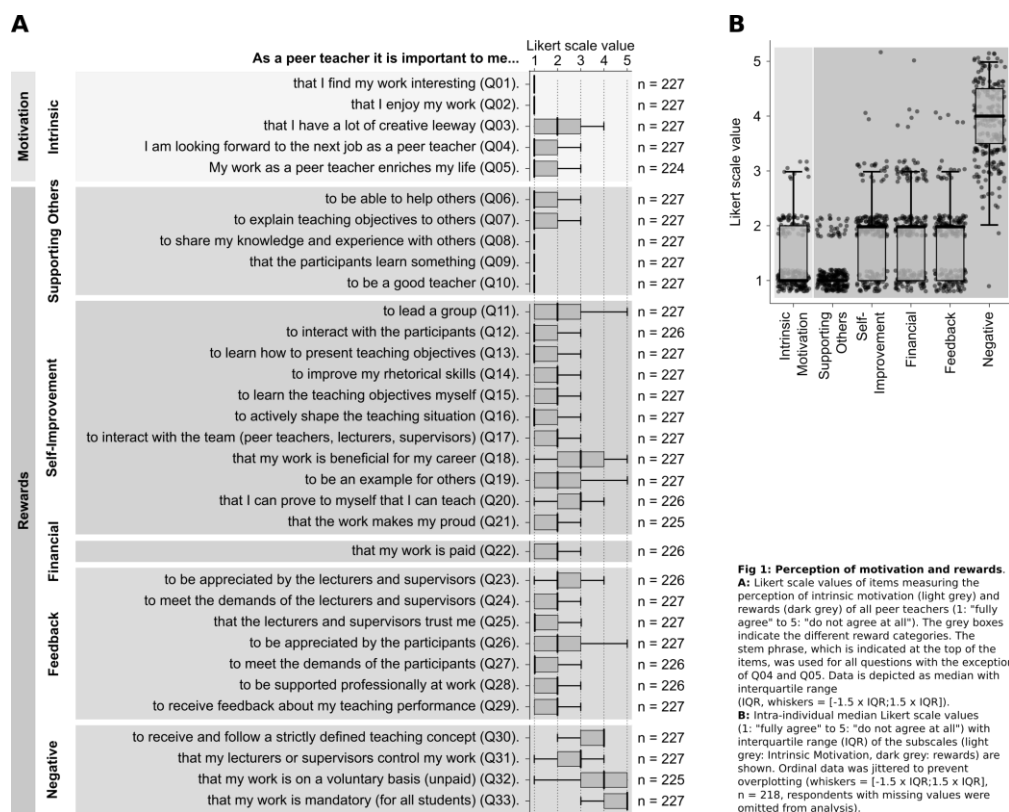* Corresponding author (daniel.engels@med.uni-muenchen.de)

INTRODUCTION

- **Background**: Peer-assisted learning (PAL) is an educational method which is frequently applied in academic teaching. The interplay between peer teachers and learners who are at a similar academic level is a main feature of PAL. It is assumed that peer teachers benefit from participating in PAL, however, the knowledge about their perception of motivation and rewards is sparse. Therefore, we designed an instrument to measure the perception of intrinsic motivation and rewards of peer teachers from 3 different PAL programs.
- **Aim**: Investigate the **peer teachers' perception** of **intrinsic motivation** and **rewards** within the context of peerassisted learning.

METHODS

- **Study cohort**: 227 peer teachers from **3 different peer-assisted learning (PAL) programs** (**ANA**: Anatomy, **NEP**: Neurophysiology and **PTP**: Peer Teaching Program), which have different didactic and content-related features.
- **Instrument**: Multiscale instrument with items that measure the **perception of intrinsic motivation** and **5 reward categories** (Supporting Others, Self-Improvement, Feedback, Financial and Negative Rewards) on a five-point Likert scale (1: "fully agree", 5: "do not agree at all").

RESULTS

- Peer teachers **highly valued** the importance of **intrinsic motivation** as well as **rewards from different reward categories** (Supporting Others, Self-Improvment, Financial and Feedback, Fig 1, A). Negative rewards were less appreciated.
- Items that address **intrinsic motivation** (median = 1, IQR = [1;2]) were **more strongly appreciated** than items which address **rewards** (grouped median = 2, IQR = [1;2], exlcuding negative rewards, Fig 1, B).
- Overall, the reward category **Supporting Others** was **valued most**.
- **ANA peer teachers** appreciated aspects of **skill development** more compared to NEP and PTP peer teachers. **NEP peer teachers** valued **financial rewards** as well as **personal interaction** more when compared to the two other groups. **PTP peer teachers** rated items regarding their **teaching performance** as important as opposed to NEP and PTP peer teachers (Fig 2). These **items reflect** the didactic and content-related features of the 3 PAL programs (Fig 3).

Fig 1: Perception of motivation and rewards.
A: Likert scale values of items measuring the perception of intrinsic motivation (light grey) and rewards (dark grey) of all peer teachers (1: "fully agree" to 5: "do not agree at all"). The grey boxes indicate the different reward categories. The stem phrase, which is indicated at the top of the items, was used for all questions with the exception of Q04 and Q05. Data is depicted as median with interquartile range
(IQR, whiskers = [-1.5 x IQR;1.5 x IQR]).
B: Intra-individual median Likert scale values (1: "fully agree" to 5: "do not agree at all") with interquartile range (IQR) of the subscales (light grey: Intrinsic Motivation, dark grey: rewards) are shown. Ordinal data was jittered to prevent overplotting (whiskers = [-1.5 x IQR;1.5 x IQR], n = 218, respondents with missing values were omitted from analysis).

Fig 2: Multinomial logistic regression model. Reward items which differ significantly among ANA, NEP and PTP (p ≤ 0.05 by Kruskal-Wallis rank sum test) are shown. 3 regression models were calculated, one for each PAL program as a reference for the two others. The items were plotted with their respective logits indicating the logarithmic chance ratios to be associated with the respective PAL program (compared to the two others). Items in the upper right quadrant of each plot are considered as being more appreciated by peer teachers from the respective PAL program compared to peer teachers from the 2 other PAL programs (ANA: Anatomy, NEP: Neurophysiology, PTP: Peer Teaching Program).

Fig 3: PAL program features and the peer teachers' perceived rewards. Summary of the content-related and didactic focus of the 3 PAL programs (program focus). Rewards which are significantly higher valued by peer teachers of the respective PAL program (as compared to peer teachers of the 2 other PAL programs) are depicted (peer teachers' rewards, ANA: Anatomy, NEP: Neurophysiology, PTP: Peer Teaching Program).

CONCLUSION

- Overall, peer teachers were **highly intrinsically motivated**.
- The reward category **Supporting Others** was **appreciated the most** when compared to the reward categories Self-Improvement, Financial and Feedback.
- The **perception of rewards** reflected the **didactic and content-related features** of the 3 PAL programs.

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