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### Feedback during clerkships: the role of culture

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## **Chapter 8**

### **Summary**

All over the world there is a need for high quality medical doctors. High quality education is conditional to satisfy this need. In medical education many practices are developed and empirical evidence is continuously explored and found. As a result, most of these practices are, based on their evidence, recommended as international standards. The advances of communication and information technology have facilitated stakeholders of medical education to easily access these standards and promote them globally. However, the existence of cultural differences between countries has raised questions about the universal value and general applicability of such standards. Educational principles and practices developed in different cultures may not be directly translated into another culture. Feedback is an example of an educational principle that might need different operationalisations in different cultural contexts. In this thesis, the existence and the influence of cultural differences on the feedback processes during clerkships are explored. The findings of our studies can be added to the body of feedback literature in medical education, especially the literature that tries to explain how to provide effective feedback in clinical setting.

In **Chapter 1**, three themes regarding feedback in clerkships are highlighted: (1) the characteristics of feedback that are recommended as effective for student learning in the clinical setting, (2) the role of feedback and assessment in facilitating student learning, inclusive the use of mini-CEX as a method to improve feedback in clinical setting, and (3) the role of culture in feedback during clerkships. Feedback is an example of an educational principle that is essential to facilitate learning during clerkships and, following international standards, should be implemented in medical curricula all over the world. However, how teachers and students interact during the feedback process is rooted in the culture of a society. The fact that cultures between countries are different implies that characteristics of feedback that proved to be effective in one country might not be directly applicable in other countries. This has been recognized by the Dutch psychologist Geert Hofstede and chapter 1 is based on Hofstede's Model of cultural dimensions, explaining that Indonesia is a country that is classified high on the cultural dimension of power distance and low on the dimension individualism. Based on these two dimensions, we ended this chapter by explaining the Indonesian teaching and learning cultures and the possible influence of these characteristics to the feedback process during clerkship. Cultural differences are the rationale behind the purpose of the studies in this thesis.

In **Chapter 2** we explored cultural differences in feedback processes and their influence to the perceived instructiveness of feedback. We Analyzed whether differences in feedback processes influenced the perceived instructiveness of the feedback by replicating a Dutch study in Indonesia. Over a two-week period, Indonesian students (n=215) recorded feedback moments during clerkships, noting who provided the feedback, whether the feedback was based on observations, who initiated the feedback, and its perceived instructiveness. Data were compared to the earlier Dutch study and Analyzed with chi-square tests, t-tests and multilevel techniques. Cultural differences were explored using Hofstede's Model. We found that perceived instructiveness of feedback did not differ significantly between both countries. However, significant differences were found in feedback provider, observation and initiative. The Indonesian study revealed that feedback from specialists was perceived as more instructive than feedback from residents, while in the Dutch study no significant difference in perceived instructiveness of feedback from specialists or residents was found. In Indonesia, we found no significant difference in perceived instructiveness of feedback based on observed and non-observed behaviour, whereas in the Netherlands, feedback based on direct observation was perceived as more instructive. In Indonesia, feedback was perceived as more instructive when the feedback moment was jointly initiated by the student and the supervisor than when it was solely initiated by the student. The Dutch study, however, showed no significant difference in perceptions about the instructiveness of feedback resulting from student or joint initiative. These differences correspond to cultural characteristics of the respective countries and can be explained from the cultural dimensions Power Distance and Individualism. The conclusion was that, at a time that homogenous, global models of medical education are being promoted, one model of feedback does not necessarily apply to another culture.

In **Chapter 3**, the perceived learning value and characteristics of individual and group feedback in a collectivistic culture were studied. During two clerkship weeks, students (n=215) at Universitas Gadjah Mada medical school, Yogyakarta, Indonesia, recorded the following characteristics for individual and group feedback moments: the provider, the focus and perceived learning value of feedback. Data were Analyzed with logistic regression and multilevel techniques. We found that group feedback more often focused on history taking, clinical judgment, patient management, communication/patient

counselling and professional behaviour, but less often on physical examination. Group feedback less often aimed at correcting performance deficiencies and more often at comparing performance to standards and planning action to improve performance. Group feedback was perceived as more valuable than individual feedback. Based on this study, the concept of feedback as described in literature, formulated from a rather individualistic perspective, is not enough comprehensive for the needs of collectivistic cultures. The degree to which group feedback satisfies the requirements for effective feedback and the high perceived learning value of group feedback underlines the importance of group feedback in a collectivistic culture.

Medical schools all over the world try to adapt their programs to meet international standards, including feedback to optimize students learning. However, local culture might hamper the implementation of new concepts like the mini-CEX. In **Chapter 4**, we focus on the challenges in Indonesia to implement the mini-CEX as method to improve feedback in clerkship, and to stimulate students' clinical competence. The main challenge was how to change the patterns of specialist-student interaction. Following the results of the replication study that showed that student perceived feedback from specialists as the most instructive, we decided that the examiner has to be a specialist. However, as an effect of high power distance, students did not receive most feedback from specialists, but from residents, as they are closer to students than specialists are. Second, as the consequence of low individualism, specialists usually give feedback to groups instead of to individual students. During the implementation of the mini-CEX, we had to shift from feedback from residents to feedback from specialists, and from group feedback to individual feedback. The study describes how we dealt with both cultural problems. We compared the final clinical competence of students who completed their clerkships before and after the implementation of the mini-CEX. All students were examined with help of a modified Objective Structured Long Examination Record (OSLER). After implementing the mini-CEX, the OSLER results were significant higher in Internal Medicine. However, no significant differences were found in Neurology (where scores were very high already anyway). We concluded that by carefully taking into account culture, local context and demands and using systematic steps, the mini-CEX could be implemented as intended. We advised other medical schools, who wish to meet international standards, to report their experiences with implementing

educational and assessment concepts that did not directly match their cultural features. Additional knowledge about all the challenges that have to be faced might shed more light on the value and applicability of international standards.

The mini-CEX was developed in countries with a culture that differs from the Indonesian culture. The acceptability of the mini-CEX may therefore be reduced in Indonesia. In **Chapter 5**, we examined the appreciation of students and specialists towards the mini-CEX. They completed a 19-item questionnaire, divided into two categories: practicability of the mini-CEX (5) and its impact on learning, which – in turn – was divided into general impacts on learning (11) and professional development (3). In total, 124 students (46 from neurology and 78 from internal medicine) and 38 specialists (13 from Neurology and 25 from Internal Medicine) participated in this study. Students and specialists were positive about the practicability of the mini-CEX and the impact of this assessment format on learning and on professional development. There were no significant differences between students' and specialists' opinions on the mini-CEX, except for 2 items. The first item was about observation: teachers were significantly more positive about direct observation than students. This difference could be explained by culture. In collectivist cultures, specialists need frequent observation to identify students' deviations from the group standards to maintain harmony and integration in the group. On the other hand, being observed may be a straining experience for students, because they are afraid of failing and losing face. The second item dealt with past mini-CEX experiences: students were significantly more positive than teachers were about the expectation that students' past mini-CEX experiences affected their recent mini-CEX outcomes. A possible explanation for this outcome was that the specialists did not know the results of students on former tests. Therefore, the specialist might give a general unbiased opinion. Students, on the other side, might interpret this question from an individual viewpoint and feel stimulated to perform different (better) at the next mini-CEX. The conclusion of this chapter was that students and specialists were positive about the mini-CEX in Indonesian clerkships, even though it was developed and validated in another culture.

In this thesis, we identified seven characteristics for effective feedback that could be facilitated by the mini-CEX. Two characteristics, the feedback provider should be an expert and feedback should be based on direct observation, have

already been studied in the replication study. Therefore, we analyzed how the other five feedback characteristics contributed to students' perceived learning value of feedback in cultures classified low on individualism and high on power distance. In **Chapter 6**, we present the data of this study. Students were asked to assess the learning value of the feedback they received on a 5-point Likert scale. They also were asked to record whether the feedback provider (1) informed the student what went well, (2) mentioned which aspects of performance needed improvement, (3) compared the student's performance to a standard, (4) further explained or demonstrated the correct performance and (5) prepared an action plan with the student to improve performance. Data were analyzed using multilevel regression. Of 250 participants, 225 respondents (44% males, 56% females) completed the form and reported 889 feedback moments. Students perceived feedback as more valuable when the feedback provider mentioned their weaknesses, compared their performance to a standard, explained or demonstrated the correct performance and prepared an action plan with the student. Appraisal of good performance did not influence the perceived learning value of feedback. No gender differences were found. In conclusion, in Indonesia, four out of the five characteristics for effective feedback can be validated. We argued that our findings relate to culture, in particular to the cultural dimensions of individualism and power distance.

The results of this study support the recommendation that culture should be considered when implementing international standards for feedback in order to optimize student learning and development. We also suggest to further validate our findings in different cultural settings in order to improve our understanding of what constitutes effective feedback in different cultures and why.

In **Chapter 7** our most important findings, educational implications and suggestions for further research are discussed as well as the study's strengths and weaknesses. We argue that cultural differences do exist in medical education, including in feedback process during clerkships. Our studies show that there are significant differences between countries in feedback processes and in the use of underlying factors that influence the perceived instructiveness of feedback. The differences of feedback processes can be explained by differences in classification on the cultural dimensions individualism and power

distance. Furthermore, we discussed that the importance of group feedback in clerkship learning in collectivistic countries supports the idea that culture has to be taken into account in education. The fact that the effectiveness of some feedback characteristics could, but of others could not be validated in different countries, strengthened this premise. The studies in this thesis showed that by taking into account culture, local context and demands and using systematic steps, the mini-CEX could be successfully implemented in another culture than the one in which it was developed. The positive appreciation from specialists and students of the mini-CEX underlines the success of the implementation strategies chosen. The empirical evidence for cultural differences in feedback processes during clerkships and providing a strategy how to take culture into account when implementing 'foreign' educational principles, are strengths of this thesis. However, possible limitations are: generalizability, and using students' perception to evaluate the learning value of feedback. Last but not least, we advised studying cultural differences in educational principles that also have been recommended by international standards and in literature to get more empirical evidence on the universal value and general applicability of global standards and to achieve better medical education in whole the world.



