Research Papers: Program Evaluation

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#7D1 (127503)

Does Myanmar-International Medical University Community Collaborative Project (MICCP) enhance student authentic learning?

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Introduction: The International Medical University (IMU) is initiating various local, charitable community service activities. While local projects are easy to plan and execute, community service projects delivered internationally with different cultural, socioeconomic and geographical differences is challenging. The objectives of the MICCP project were to provide students a hands-on experience of working with a rural health team in a foreign jurisdiction; to experience working together with students from other health programmes and; to broaden their horizon by experiencing life in another ASEAN country and sharing their culture. The aim of this qualitative study was to explore whether students’ community-based learning experiences met their expectations.

Methods: A total of twenty nine IMU undergraduate preclinical year students from Medicine, Pharmacy, Dietetics with Nutrition, Chiropractic and Psychology participated. The students conducted health screening and talk, nutritional assessment, taught First Aid, English and did planting teak and some entertainment at the village primary school. The students listed down their expected learning outcomes before MICCP project. At the completion of the program, we conducted a semi-structured, open-ended written interview of the student participants that explored their perceptions. The analysis of questionnaires performed. From their daily diary reflection, significant descriptions were extracted, coded by content, and then grouped into subcategories. These subcategories were then separated into main categories based on their emergent themes.

Results: The response rate was 90 per cent. Half of the students had previous community service experiences at their local area before joining MICCP. Learning via the community project was more meaningful than in a classroom setting (88%) and learning tool for inter professional collaboration work (81%). The project enhanced aware of cultural differences between the two countries (77%). The experience helped them to a better understanding of team-working in the provision of healthcare (73%) and learning tool for social accountability to others (69%). The main categories identified were “team work”, “leadership skill”, “communication skill,” “learning culture and skill to work in a multicultural environment” and “inter professional learning” and “community health learning”. One student reflected as “We were exposed to the overarching reality of disparity between rural-to-urban population ratios and healthcare access. Furthermore, we experienced first-hand the limitations of community health interventions, and were given the opportunity to acquire and refine organisation, planning and leadership skills to attempt to overcome those limitations and maximise intervention efficacy under circumscribing circumstances. Learning to work with others was among the few important qualities emphasised throughout. While ‘extending love beyond nations’ and making our small impact in the lives of those who are underprivileged, we in fact received much more in return – an insightful exploration and development of ourselves, our capabilities and potential as future healthcare professionals through humanity.”

Discussion: MICCP project achieved its targeted educational goals including students gained valuable knowledge and skills required for effective teamwork and the skills necessary to work in a multicultural environment. They developed an appreciation of the life of those less privilege peoples and an understanding of how to improve health through education.


#7D2 (127943)

How to implement a Programme for Overseas Doctors: Findings from a realist evaluation

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Introduction: Overseas Medical Graduates (OMGs) are relied upon to ensure effective healthcare delivery. However, concern has grown around the regulation and professional practice of those qualified overseas. Research suggests that overseas doctors are likely to
face difficulties with communication, culture, practical issues, team working and hierarchical structures. A multitude of recommendations have been made concerning support for OMGs; however currently there is no robust evidence to indicate how to effectively develop interventions to aid OMG transition to their host-country. This research seeks to understand i) how programmes set up to support OMGs enable them to make a successful transition to the host country, ii) what mechanisms trigger successful outcomes and in which contexts, iii) what barriers may hinder transition, and iii) how interventions can be developed and improved for future implementation.

**Methods:** Following the findings from a realist synthesis, a pilot Programme for Overseas Doctors (POD) was developed within one North East Trust. The programme provided both experiential training opportunities and a support system. The programme was primarily aimed at doctors new to the Trust who had gained their medical degree overseas. A realist evaluation was conducted across two years using a multiple case study design. A total of 100 interviews took place. Participants included programme attendees (OMGs), supervisors, ‘buddles’ and OMGs who had experienced either no intervention or were from other North East Trusts and had experienced minimal induction (interviews were conducted 3 months and one year after programme implementation). Pre and post questionnaires were distributed and performance data collected. Data was analysed using framework analysis and interpreted to refine programme theories developed in the initial realist synthesis.

**Results:** Three contextual levels were found to impact on adjustment: individual factors (e.g. capacity to change/role identity), training factors (e.g. supervisor/peer support) and organisational factors (e.g. cultural awareness/contextual factors). Psychological mechanisms triggered included self-efficacy, social capital, motivation, insight and acculturation. Educational mechanisms included preparedness, professional growth and transformative learning. Evaluation of the first cohort led to some facilitation and contextual factors, including the implementation of enhanced supervision, initial needs assessment, earlier and longer induction, use of previous POD attendees and a better recruitment process. Performance data and findings from interviews with non-intervention OMGs illustrate the critical need for such a programme.

**Discussion:** Establishing a strong support network and ensuring OMGs feel welcomed is critical to adjustment. The necessary individual, training and organisational contexts must be working together in order to improve adjustment in the transition process. Input from all levels within the organisation is needed and all team members must be culturally aware of OMG needs. Difficulties resulting from transition to a new country, which may impact upon patient safety and delivery of healthcare, are addressed and recommendations made as to how other Trusts can implement such programmes.

**Conclusion:** The implementation of an enhanced induction programme and on-going support is needed. The findings support and develop the framework proposed by an initial realist synthesis; giving a better understanding as to how programmes should be developed to support overseas doctors.

**#D1 (126846)**
**Cross-validation of a Learning Climate Instrument in a non-Western Postgraduate Clinical Environment**

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**Introduction:** In postgraduate medical training, there is a need to continuously assess the learning and working conditions to optimize learning. Students or trainees respond to the learning climate as they perceive it, not necessarily as intended by the training program. The Dutch Residency Educational Climate Test (D-RECT) is a learning climate measurement tool with well-substantiated validity. However, it was originally designed for Dutch postgraduate trainees and it remains to be shown whether extrapolation to non-Western settings is viable. The dual objective of this study was to revalidate D-RECT outside of a Western setting and to evaluate the factor structure of a recently revised version of the D-RECT containing 35 items.

**Methods:** We invited Filipino internal medicine residents from 96 hospitals to complete the revised 35-item D-RECT. Subsequently, we performed a confirmatory factor analysis to check the fit of the 9 scale model of the revised 35-item D-RECT. We used the following criteria and associated pre-determined cut-off values to gauge goodness of fit: relative Chi-square (CMIN/DF<2), goodness-of-fit index (GFI>0.9), Tucker-Lewis index (TLI>0.9), comparative fit index (CFI>0.9) and the root mean square error of approximation (RMSEA< 0.08). Inter-rater reliability was assessed using generalizability theory.

**Results:** Confirmatory factor analysis revealed that the factor structure of the revised 35-item D-RECT provided a reasonable fit to the Filipino data, after removal of 7 items. Five to seven evaluations were needed per scale to obtain a reliable result.

**Discussion:** With this cross-validation study we have demonstrated that the D-RECT, although originally designed for postgraduate medical trainees in the Netherlands, is useful in a non-Western setting. We were able also to validate the internal consistency and internal 9-factor structure of the revised D-RECT. Cultural differences that influence how trainees learn possibly explain why some items had to be removed from the 35-item revised D-RECT before the 9-factor structure provided a good fit to the Filipino data.

**Conclusion:** When used for the evaluation of the clinical learning environment in a non-Western setting;...
Factors Affecting Successful Use of Mentorship for Newly Appointed Neurosurgical Consultants; Multi-Institute Experience

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Introduction: Background: The principle of mentoring as a learning relationship has led to its use in undergraduate and postgraduate medical education. In medicine, mentorship is often Defined as: The process whereby an experienced, highly regarded, empathic person (the mentor), guide another individual (the mentee) in the development and re-examination of their own ideas, learning, and personal and professional development. Mentoring can enhance technical and non-technical skills. Aim: To explore factors affecting successful use of mentorship for newly appointed neurosurgical consultants in 4 neurosurgical centers.

Methods: Summary of work: This prospective, qualitative, descriptive, multi-center study includes 20 neurosurgical lecturers. For all of those lecturers, semi-structured, multiple mini individual interviews were undertaken between April and November 2014.

Results: Summary of results: Our results revealed that there were widely recognized benefits of mentorship for the new neurosurgical consultants. There are several factors affecting successful use of mentoring including previous experience of the mentor to act as a mentor, good understanding and suitable expectation of mentorship relationship between mentor and mentee, suitable matching between mentor and mentee, and good clinical and research experience of the mentor.

Discussion: Conclusions Mentorship is of a high value for the new neurosurgical consultants, however, multifactorial obstacles may enable such relationship to be widely used.

Conclusion: Conclusions Mentorship is of a high value for the new neurosurgical consultants, however, multifactorial obstacles may enable such relationship to be widely used.

Disclosure: The authors declare no conflict of interest.

#7D5 (128059)
Re-design of the System for Evaluation of Teaching Qualities in Anesthesiology Residency Training (SETQ Smart)

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Introduction: Modern anesthesiology residency training requires high performing teaching faculty. This study reports on new tools for the evaluation of core teaching qualities of anesthesiology faculty, developed by an international team of anesthesiologists and researchers using the well-researched System for Evaluation of Teaching Qualities (SETQ). The SETQ originated in the Netherlands; approximately 3500 residents and teaching faculty now use the system every year. International interest in the SETQ started the development of a new cross-national system, named SETQ Smart. This study investigates (i) the structure, (ii) the psychometric qualities of the new tools, and (iii) the number of residents’ evaluations needed per anesthesiology faculty to reliably use the new SETQ Smart tools.

Methods: Two SETQ Smart tools – one for faculty self-evaluation and one for resident-evaluation of faculty - were developed iteratively by literature review, multiple discussions in the research group and faculty and residents’ consultation rounds in the various teaching sites. The ‘Teaching as a Competency’ framework2 was leading in reflecting upon the content validity of the original SETQ. A multicenter cross-sectional survey was than conducted among 399 anesthesiology faculty and 430 residents in six European countries. Participation was anonymous. Items could be rated on a 7-point Likert scale. Residents also provided narrative feedback. Statistical analyses included exploratory factor analysis, reliability analysis using Cronbach’s alpha coefficients, item-total scale correlations, inter-scale correlations, comparison of composite scales to global ratings and generalizability analysis to assess residents’ evaluations needed per faculty.

Results: In total, 240 residents filled out 1622 evaluations for 247 faculty. Participation varied per country. The SETQ Smart tools revealed 6 teaching qualities consisting of 25 items for both the resident and the faculty self-evaluation tool. Cronbach’s was very high (> 0.95) for the total SETQ Smart tools, and high (> 0.80) for the separate teaching qualities. Inter-scale correlations were all within the acceptable range of moderate correlation. Overall tools and their scales correlated moderately to highly with the global ratings. For reliable feedback to individual faculty 3 to 5 resident evaluations are needed.
**Discussion:** This study provides empirical evidence for the first ever cross-national measurement tool for individual faculty teaching performance. The 6 teaching scales identified in the SETQ Smart included 4 scales from the original SETQ tool, and two new scales ('learner centeredness' and 'professional practice management'). Newly added professionalism items did not fit in any particular teaching scale. The reported reliability and validity results support the use of the SETQ Smart in quantifying and stimulating excellence in faculty teaching performance internationally. Teaching faculty may now use performance feedback for guiding their performance improvement plans. Strengths of the study included European wide participation and the underlying (SETQ) evidence-base. Additional single country studies may be performed in the future.

**Conclusion:** The first cross-national tools for evaluating individual anesthesiology faculty teaching performance were found to be valid, reliable and feasible for formative use in various European anesthesiology residency training programs. The SETQ Smart may also be useful to investigate and minimize variation in anesthesiology training within and across countries.

**References:**