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Traits of effective clinical educators: Perspectives of physiotherapy students and educators

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Abstract

Introduction: Clinical practice education is an important curriculum in developing physiotherapy students to professionals. This curriculum is largely dependent on clinical educators. Although traits of effective clinical educators had been studied in Western population, it was unclear if the Asian population would yield similar traits. Hence, we studied perspectives of students and academic educators to identify top five core traits of an effective clinical educator. The findings will then help guide policy development for clinical educator training and development.

Methods: A survey was circulated to physiotherapy students and academic educators through convenience sampling. We studied 16 traits – enthusiasm, availability, clarity, clinical competence / knowledge, feedback skills, organisational skills, professionalism, well prepared, scholarly activity, non-judgemental, respect students' autonomy / independence, sincerity, listening skills, evidence-based practice, role model, and awareness of students' learning needs.

Results: The top five traits identified by students and academic educators were similar in four traits – clinical competency / knowledge, clarity, feedback skills, and enthusiasm, and differed in the choice of “non-judgemental” by students and “awareness of students' learning needs” by academic educators. Interestingly, when the top six traits were considered instead of five, students and academic educators identified the same traits but in different ranked orders.

Conclusion: The study found six common core traits of an effective clinical educator from the perspectives of students and academic educators. Continuing education development for clinical educators should focus on these six traits prior to other 10 sub-traits.

Keywords: Training, Development, Education, Allied Health, Entrustable Professional Activities, Mentoring

I. INTRODUCTION

Clinical Practice Education (CPE) is a core component in undergraduate allied health studies, partnering clinicians with additional role as a Clinical Educator (CE) (Gibson et al., 2019). A study evaluating effective residency teaching for doctors identified 15 traits that a CE should possess, which are enthusiasm, competence-knowledge, clarity, availability, non-judgemental, independence, feedback skills, role model, professionalism, sincere, organised, well-prepared, evidence-based practice, scholarly activity and listening

skills (Buchel & Edwards, 2005). A recent study found that being aware of the learning needs of students could be the 16th trait a CE should possess (Francis et al., 2016). Considering recent shift towards the use of the Entrustable Professional Activity framework for work place competency review at student and professional levels (Kwok et al., 2023), it is important to consider which top five traits are considered core competence of a CE as defined by the pinnacle of entrustment at Level 5.

Perspectives of critical traits of an effective CE might differ between students, CEs and academic educators (AEs). Students in early years of undergraduate study and CEs identified similar top five traits of an ideal CE (Cross, 1995). In the study by Cross (1995), CEs should be approachable, possess good communication skills, be knowledgeable and demonstrate enthusiasm in teaching, including clinical competency (Cross, 1995). Competency of CEs was similarly desired among academic educators, alongside “being approachable” and “good communicator”, whereas two differences were noted as compared to CEs and students, which were “interested in learning process of the students” and “concerned about patient care” (Cross, 1995). It is possible that among the Asian population, competency of the CEs would be similarly desired. Recent studies might have considered different trait terms as compared to the classic study, for instance, “learning process” was likely subsumed under “learning needs” (Francis et al., 2016). It is unclear whether the Asian population will present with different trait ranking as compared to Western population.

Therefore, this study was undertaken to identify the top five essential traits of an effective CE. In view of notable differences between perspectives of students and AEs in past literature, this study explored similarities and differences of perspectives between students and AEs. In addition, we explored what gaps might exist in developing CEs. In this study, the AEs, all of whom used to be CEs, could provide useful and important inputs on the traits required of a CE. The findings would then provide directions for future policy development pertaining to clinical education and professional supervision.

II. METHODS

A. Study Design

A survey was conducted through convenience sampling. The study was conducted between March to December 2022. The study was approved by the Institutional Review Board of the Singapore Institute of Technology (SIT-IRB-2022031).

B. Participants

Students in the third year of undergraduate physiotherapy programme and AEs of the physiotherapy faculty (as of April 2022) were involved in the survey. Large variations in response rate exists in convenience sampling, so we projected at least 50% response rate for the students and also the AEs. Students who had withdrawn from the programme were excluded. Associate faculty educators were excluded because they were only involved in *ad hoc* teaching sessions.

Informed consent was sought at the beginning of the survey and digitally recorded.

C. Procedures

The survey described the 16 traits that contribute to an effective CE, which provided participants with knowledge about each trait, which was externally validated by five physiotherapists from the public and private sectors with experience ranging from eight to 25 years. The demographic data included student identification numbers to ensure that each response was unique. Thereafter, the data was de-identified to ensure anonymity during data analysis. As the sample size for the AEs was small, no personal data was collected to ensure anonymity. A survey invitation including a standardised survey link was distributed via email to all eligible participants. Participants were then asked to rank the 16 traits from 1 to 16, with 1 being the most important trait and 16 being the least important. Survey items were not randomised. The online survey was hosted on the secured Qualtrics Survey System (Qualtrics XM, 333 W. River Park Drive, Provo, UT 84604 USA). Student participants were first notified via email, followed by four reminder notifications, two months apart, via the cohort group chat on WhatsApp. AEs were first notified via email, followed by two reminder notifications via WhatsApp three months apart.

D. Statistical Analysis

Data analyses were performed using IBM SPSS Statistics for Windows, version 26 (IBM Corp., Armonk, N.Y., USA). Continuous variables are presented with means (standard deviations) and categorical variables with counts (percentages). Friedman test was used to analyse the mean rank of each trait. Then Kendall’s coefficient of concordance (Kendall’s W) was used to test the level of agreement among students for the mean ranks of the traits, as well as among AEs. The level of agreement was interpreted based on common recommendation and should yield statistical significance at $p < 0.05$.

III. RESULTS

A total of 81 students completed the survey (response rate of 46.6%) and a total of five AEs completed the survey (response rate of 41.7%). The average age, mean (standard deviation), of the students is 24.5 (4.1) years, and 52 of them are female (64.2%). The traits were ranked and presented in Table 1. Among the top five traits, there were four similar traits found between students and AEs, which were clinical competency / knowledge, clarity, feedback skills, and enthusiasm. The students ranked “non-judgemental” within the top five traits, whereas the AEs identified “awareness of

students' learning needs". If the top six traits were considered, both students and AEs yielded similar traits. In the traits ranking, the students showed fair level of agreement, approximating closely to moderate

agreement, Kendall's $W = 0.38, p < 0.001$, while AEs showed moderate level of agreement, Kendall's $W = 0.51, p = 0.001$.

Rank	Students (n = 81)		Academic Educators (n = 5)	
	Traits	Mean rank	Traits	Mean rank
1	Clinical competency / knowledge	4.51	Awareness of students' learning needs	3.20
2	Non-judgemental	4.78	Feedback skills	4.00
3	Clarity	4.94	Clinical competency / knowledge	4.20
4	Feedback skills	5.01	Enthusiasm	5.60
5	Enthusiasm	7.06	Clarity	6.80
6	Awareness of students' learning needs	7.27	Non-judgemental	7.00
7	Availability	7.93	Role model	7.60
8	Sincerity	8.56	Professionalism	8.00
9	Respect students' autonomy / independence	8.68	Listening skills	8.60
10	Listening skills	9.35	Respect students' autonomy / independence	9.80
11	Professionalism	9.51	Well prepared	10.20
12	Organisational skills	9.56	Organisational skills	10.40
13	Role model	10.23	Availability	10.80
14	Well prepared	11.69	Sincerity	11.20
15	Evidence-based practice	11.75	Evidence-based practice	13.00
16	Scholarly activity	15.19	Scholarly activity	15.60

Table 1. Ranking of clinical educator traits by students and academic educators

IV. DISCUSSION

The study was initiated to identify the top five traits an effective CE should possess through the perspectives of students and AEs. The students and AEs differed only in the selection of one trait. Interestingly, when the top six traits were considered, students and AEs were aligned in traits selection and only differed in the ranking of traits. These six traits were 1) clinical competence / knowledge, 2) non-judgemental, 3) clarity, 4) feedback skills, 5) enthusiasm in teaching, and 6) awareness of students' learning needs. The level of agreement found among students was fair and among the AEs was moderate for the rankings of traits in this study.

A few differences were observed in the top five traits as compared to western culture. Four traits were similar to

those identified in the past – clinical competence / knowledge, clarity, feedback skills and enthusiasm in teaching (Cross, 1995). Whilst “clinical competence / knowledge” was ranked first by the students, we caution that these traits must be complemented by appropriate “feedback skills” and “clear communication”. A key difference between students and AEs was the identification of “non-judgemental” and “awareness of students' learning needs” in the top five traits. The differences between students and AEs were essentially non-existent if we recognise top six traits as core competencies of an effective CE as compared to five traits. In view that the AEs were also past CEs, the rankings by the AEs provide valuable insights and could be used to align the students' expectations.

The study found two common traits that were ranked lower among students and AEs – evidence-based practice and scholarly activity. It is possible that the students and AEs have assumed that “evidence-based practice” was a part of “clinical competency”, given the fact that “evidence-based practice” is essential in clinical practice. Moving forward, it would be of interest to study the perspectives of the students and AEs with regards to “evidence-based practice” in clinical education. Future research could explore the traits as “must have”, “should have” and good-to-have” categories, which could help identify the critical traits (“must have”).

The study has a few limitations. Although self-reported survey could lead to response bias, we did not detect similar responses in consecutive order during data inspection. Next, we set out to collect 50% response rate, unfortunately, we were slightly away from the target as some respondents did not complete or withdrew their participation. As such, the sample size of the AEs was small and so perspectives from the AEs might require careful considerations. The study also did not allow for qualitative inputs from the respondents to explore other traits that were not listed. Lastly, we were unable to engage participation from CEs as the survey was not compulsory as part of their role.

V. CONCLUSION

This study identified six core traits an effective CE should possess. These traits are clinical competence / knowledge, non-judgemental, clarity, feedback skills, enthusiasm in teaching, and awareness of students’ learning needs. We identified that evidence-based practice and scholarly activity traits were potential gaps in career development of CEs as they were ranked lower among students and AEs.

Notes on Contributors

NHO was involved in study conceptualisation, data collection, data analysis, data interpretation and drafting manuscript.

BCK was involved in study conceptualisation, data analysis, data interpretation, drafting manuscript and final revision of manuscript.

SMA was involved in study conceptualisation, data collection and revising the manuscript.

SMDM was involved in study conceptualisation, data collection and revising the manuscript.

WPW initiated the study conceptualisation, project administration, data interpretation and review of the drafted manuscript.

Ethical Approval

The study was approved by the Institutional Review Board of the Singapore Institute of Technology (SIT-IRB-2022031).

Data Availability

Based on the ethics approval, data will not be shared on a repository. The anonymised dataset can be obtained from the corresponding author with reasonable request.

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Declaration of Interest

None of the authors has any conflict or financial interest to declare.

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