

Received: 4 October 2019, Accepted: 3 December 2019, Published 30 December 2019

HOW SENIOR CLINICIANS PERCEIVE THEIR ROLES AS CLINICIAN EDUCATOR

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Abstract

Phenomenon : Clinical reasoning is a central component of clinician competence and a crucial skill for students and trainees to learn. Experience and years of practice contribute significantly to competence in clinical reasoning. The roles of clinicians in educating and nurturing learners and novices to be competent diagnosticians of the future are of paramount importance. This study explored how senior clinicians perceive their roles in teaching clinical reasoning in the context of an established local Malaysian medical school.

Approach: The study used a qualitative approach drawing from interpretivism and constructivism methodology. In-depth interviews were conducted with six senior clinicians, all were conferred Emeritus professorship by the institution for their experience in clinical teaching. Area explored during the interview was the roles of the clinical teacher in teaching clinical reasoning. Interviews were recorded and transcribed verbatim. Data were analysed using thematic approach to identify different roles participant adopted while teaching clinical reasoning.

Findings: Five main categories of teaching roles were identified : superior teacher; facilitative coach; enthusiastic co-learner; patient advocate and fairy godparent. Senior clinicians spoke

about clinical reasoning -not as a specific skill or area to be learnt in isolation, but as an intrinsic part of practising medicine. They described their role in teaching clinical reasoning as to be an intrinsic component of their identity as medical doctors. Teaching clinical reasoning was connected to role as a teacher and role as a clinician, and then integrated into their identity as a clinician educator.

Insights: Senior clinicians developed their 'educator' roles gradually, determined by their beliefs about effective teaching, and the culture and nature of the medical disciplines they belonged to. Their description of their teaching goals and strategies demonstrated flexibility, enthusiasm, devotion, humility and life-long learning commitment. The data also highlights the potential value of junior clinician educators undertaking formalised training to facilitate the development and integration of their identities as both teacher and clinician.

Keywords: Clinical reasoning, senior clinicians, clinical teaching, teaching roles

1. INTRODUCTION

Clinical reasoning is a core component of medical doctors' diagnostic competency (Barrows, Norman, Neufeld, & Feightner 1982; Ryan, & Higgs 2008; Mckimm et al. 2014). Clinical reasoning has been defined by Hawkins et. al (2010) as "*thinking through different aspects of patient care to reach to a reasonable decision related to prevention, diagnosis and treatment of a clinical problem in a specific patient*" (Hawkins, Elder & Paul 2010).

Experience and years of practice contribute significantly to competence in clinical reasoning (Norman 2006; Croskerry 2009). The roles of clinicians in educating and nurturing learners and novices to be competent diagnosticians of the future are of paramount importance. While their primary role is to use their clinical reasoning skills to provide the best treatment and care to their patients, clinicians must also develop capabilities to teach sound clinical reasoning skills to learners. They are required to provide clinical diagnosis for patients whom they looked after, while at the same, diagnosing the learners' level of clinical reasoning and judgment (Eva 2005; Durning, Artino Jr, Pangaro, Van der Vleuten & Schuwirth 2011).

There is a large body of literature about the development of clinical reasoning (Durning, Artino Jr, Pangaro, Van der Vleuten & Schuwirth 2011; Dhaliwal & Ilgen 2016) in clinical practice, and methods for teaching it (Ajjawi & Higgs 2008; Delany & Golding 2014; Trowbridge, Rencic &

Durning 2015). Teaching clinical reasoning. American College of Physicians. Philadelphia, PA. However there has been comparatively less attention given to the influence of context (specifically the cultural environment in which teaching occurs), and within specific cultural contexts, the influence of expertise on clinicians' approaches to teaching clinical reasoning.

The cultural context in this study is Malaysia. The general approach to teaching clinical reasoning has traditionally been done in a didactic way, within a predominantly hierarchal culture and learning tradition drawing from Eastern values where the power gradient is more evident, when compared to the Western learning environment (Findyartini, Hawthorne, McColl & Chiavaroli 2016). Clinical teaching sessions are conducted by clinicians who are content experts in their respective medical fields, with minimal pedagogical or educational training except for voluntary participation in on-the job faculty development programs. Common clinical teaching includes typical teacher-centred learning activities like bedside teaching rounds, ambulatory clinic sessions, lectures, tutorials and seminars.

The goal of this research is therefore to examine how senior clinicians with more than 30 years' experience of working and teaching within this clinical context perceive their role in teaching clinical reasoning and the methods they use to teach clinical reasoning.

Gaining insight into how senior clinicians think about their role in teaching others clinical reasoning will enable the influence of cultural context to be identified and can lead to the development of culturally appropriate professional development for clinicians to develop their skills and awareness of their own styles of clinical reasoning education.

2. APPROACH

2.1. Study Context

The research was conducted in a large public medical school in Kuala Lumpur, Malaysia. Each year, the faculty produces about 200 medical graduates and 150 clinical specialists of major medical disciplines.

2.2. Study Approach

The study used a qualitative approach drawing from interpretivist and constructivism methodology. These paradigms reflect a belief that knowledge about a phenomenon is developed

via individual interpretations and through experience, knowledge and understanding is constructed by individuals (Bowen 2006). The ontological assumption of these research paradigms applied to this research is that individual clinicians will have a particular interpretation of what clinical reasoning and clinical reasoning education means to them (Creswell & Poth 2016).

2.3. Participant Recruitment

A purposive sampling method was used with two inclusion criteria for the study participation: 1. Clinical teaching experience of 30 years or more; 2. Conferred the Emeritus Professorship award from the university involved. The Emeritus professorship was only awarded to senior clinicians who fulfilled certain criteria as determined by the institution which indicated their excellence in clinical teaching, served as a method of standardization for the selection of participants into this study.

The research and ethics committee of the institution approved the study. Official invitation letters were sent via email to six Emeritus Professors who fulfilled the inclusion criteria, followed with telephone messaging service. All six professors responded promptly and agreed to participate in the study. Written informed consent were obtained from all participants.

2.4. Data Collection

Data collection involved semi-structured in-depth interviews. Six interview sessions were conducted and recorded by the key researcher, each lasted for 50 to 60 minutes.

Open ended questions were asked, with some added probing questions to clarify some points which were unclear during the interviews. In the beginning of the interview, questions on participant's general view about their roles as a clinical teacher were asked; *'Can you tell me about your view of your roles as a clinical teacher'* and *'What makes a good clinical teacher in your opinion?'*. Following that, questions were more specific towards clinical reasoning such as; *'In your own words, what does clinical reasoning mean to you?'*, *'During your early teaching career, what were your main intentions or aims in teaching clinical reasoning, and what are your teaching aims now?'*, *'How do you teach clinical reasoning?'*, *'What do you see your roles are in teaching clinical reasoning?'*

The interviews were audio-recorded and transcribed manually by HS. Basic demographic profiles of the participants were collected.

2.4. Data Analysis

Using content analysis method, transcripts of interview were analysed manually by the key researcher(HS), assisted by two other co-researchers who analysed the first two transcripts (JL and CD). In the beginning, the transcripts were read through line-by-line, analysed using open-coding method to establish the primary code system. Concepts were gradually identified. Larger clusters of concepts started to form, requiring repeated reading and review of the transcripts. Thematic constructs on the concepts which contain certain aspects matching the research questions were then established, leading to identification of agreed themes and subthemes.

3. FINDINGS

3.1. Participants and Demographics

Six experienced clinicians aged between 67 to 74 years agreed to participate in the project. All of them had been teaching for 30 to 40 years. Three of them were from medically-based disciplines (Internal Medicine and Psychiatry) while the other three were from surgically-based disciplines (O&G and Endocrine Surgery). All except for one obtained their first medical degrees from overseas.

3.2. Identified Themes

3.2.1 Perceived roles in teaching clinical reasoning

Through conceptual thematic analysis of their descriptions ideas and patterns within the data were identified, resulting in the emergence of five themes of perceived teaching roles: 1. Superior teacher; 2. Facilitative coach; 3. Enthusiastic co-learner; 4. Patient advocate; 5. Fairy godparents. The roles are described and expressed by the participants as follows, as illustrated by selected quotations in the interviews.

Role #1: Superior teacher

This role emerged from participants' descriptions of when a teacher upholds the philosophy that she/he owns the knowledge, and therefore has the duty to 'give away' or impart knowledge to novice learners. This type of teacher role almost exclusively uses didactic method of teaching, where the focus is on transferring knowledge from the teacher to the learner and hence fitting into the classical description of 'a sage on stage' (Harden & Crosby 2000).

The participants described this role as highlighted below:

- *I just want to teach to make sure you understand what it is we want out of you. So that you can do good to this particular patient.*

(SC#1, 74 y-o female O&G)

- *And I try my best to teach them the way that I feel suitable with my character, you see. Some of them interpreted that I was fierce with them, but as I said, I really, really want them to understand. So sometimes I made them memorize and repeat the actions of how to do certain things in the clinical examinations, until they get it.*

(SC#6, 67 y-o male O&G)

Role #2: Facilitative coach

In this role, the participants described their role as an educator adopting coaching-like strategies to facilitate learners to self-discover knowledge and clinical skills, and train them to think critically for independent practice in the future. They provide space for learners to explore and function more like 'a guide on the side'.

Under this theme, participants described their role as follows:

- *It is to help students think in a way that they can function independently themselves.*

(SC#2, 67 y-o male psychiatrist)

- *We have to guide them to do it correctly. if they are not experienced, their exposure is not in that field, still you have to guide them. It's not to scold them, but to guide them.*

(SC#1, 74 y-o female O&G)

Role #3: Enthusiastic co-learner

This role was described as a teacher who allows herself to learn alongside the learners, aiming to improve and upgrade knowledge and skills, to remain updated and relevant in the rapidly changing and dynamic digital era of today. The quotes below provide examples of these role descriptions:

- *Because we are all learning and we are all wanting to improve ourselves. Even at my age, I still need to improve. There are so many things that I do which maybe wrong, and which maybe irrelevant now. In which new technology has come in, you see.*

(SC#1, 74 y-o female O&G)

- *Because to me, during the teaching, I also learn from the students. I realize that sometimes, some of the things that I've been doing were not quite correct. So during teachings, I realize that this should be the proper way.*

(SC#6, 67 y-o male O&G)

- *Sometimes the students may ask very hard questions, so my normal reply as I became more experienced was: Yes, good question! Go and look it up, you tell me. Because it does both of us good.*

(SC#5, 68 y-o female physician)

Role #4: Patient advocate

This role refers to the clinician educator who focused on teaching students via a humanistic lens where the emphasis was on patient's basic rights to be treated by health professionals as their equal, with respect, integrity and dignity. He also promotes patient-centeredness in delivery of care.

This role was illustrated by the participants as follows:

- *.... that you respect your patient as one of the members of your family. And that you are there to be of assistance and you are grateful that the patient has trust in you, to come to you and allow you to take a history and let you examine.*

(SC#1, 74 y-o female O&G)

- *Hey, here! This is another human being of equal rights as you. And I am glad, because if you recall I've always, I've always supported – what shall I say; those who are at a worse state than we are. The underdogs – be it social, medical or whatever.*

(SC#5, 68 y-o female physician)

Role #5: Fairy godparent

In this role, the teacher acts as a parental figure who voluntarily supports and assists learners to overcome hardship and difficulties, especially when medical students failed their professional examination. Just like a fairy godmother to Cinderella who suddenly appeared during difficult situations and hardships, this teacher serves as a personal mentor to coach the students and prepare them intensively for the repeat exam. She also defends and protects the learners from mistreatment and harsh conducts of other teachers as well.

The illustration of such a role is as described below:

- *I volunteered myself. I purposely called these students to follow me and I showed them how to do the teaching. And as I said just now, make them repeat and repeat the performance of clinical examination until they got it.*

(SC#6, 67 y-o male O&G)

- *...another thing of course, is you should not belittle the children. The children, I mean the students. There are some lecturers tend to do that. Right? If they are become too*

frightened, they wouldn't know how to answer. I want them to participate, talk so they have a good communication.

(SC#3, 74 y-o female endocrine surgeon)

4. INSIGHT

This research aimed to understand how experienced clinicians described their role and methods of teaching clinical reasoning. The research was situated in a particular clinical context, Kuala Lumpur in Malaysia. For the purposes of this research, clinical reasoning teaching was perceived as a discrete type of teaching, standing alone, isolated and separated from other types of clinical teaching. However, analysis of the data, revealed that senior clinicians involved in this study spoke about clinical reasoning -not as a specific skill or area to be learnt in isolation, but as an intrinsic and interconnected part of practicing medicine. Participants described their teaching of clinical reasoning as an intrinsic component of their identity as a medical doctor. Hence, ways of 'teaching clinical reasoning' became ways of 'being a medical doctor'. Teaching clinical reasoning was connected to their role as a teacher and role as a clinician, all embedded in one single unique identity of a clinician educator. This connection to identity means that teaching clinical reasoning cannot be separated from their cultural identity as a teacher.

The participants of this study hence matched the definition of a 'clinician educator' as described by Sherbino (2104): *A clinician educator is being defined as a clinician active in health professional practice, who applies theory to educational practice, engages in education scholarship and serves as a consultant to other health professionals on educational issues (Sherbino, Frank, & Snell 2014).*

The five roles identified in this study were superior teacher, facilitative coach, enthusiastic co-learner, patient advocate and fairy godparent.

The first two roles – as superior teacher and facilitative coach – are the typical roles of clinician educator that have been well-described in the literature for many decades (Sherbino, Frank, & Snell 2014; Harden & Crosby 2000; Sutkin, Wagner, Harris & Schiffer 2008). In this study, it was apparent that most of the participants were more familiar with the teacher-centric approach of a superior teacher. This might be related to their early educational training as school children and medical students almost 40 years ago and within a Malaysian context. The highly influential cultural and hierarchal context of teacher-learner relationship within the Asian

communities, where teachers are highly revered as the sage on stage should also be regarded as an important factor to favor this role (Findyartini, Hawthorne, McColl & Chiavaroli 2016). A mixed method study comparing how Western and Asian cultural perspectives influence clinical reasoning teaching highlighted the existence of a power distance and gradient between teachers and learners in the Asian learning environment (Findyartini, Hawthorne, McColl & Chiavaroli 2016). The Indonesian students in the study regarded their clinician teachers as '*the definitive source of information*' - definitely as the sage on the center of the stage.

The roles as a facilitator and a coach are combined in this study as the senior clinicians described the roles interchangeably. The supporting role of a facilitative coach indicates a personalized form of teaching, addressing the learner's needs and include personal and professional development as well. Role modelling has been previously recognized as an important task of a facilitative coach, especially in inspiring students to reach their highest potentials and build confidence for independent practice (Pippard & Anyiam 2016).

The third role in teaching clinical reasoning as perceived by the senior clinicians in this study, as an enthusiastic co-learner. This role might be explained in part by the rapid advancement of the 21st century digital mobile technology which has significantly transformed the way we learn and teach these days (Nagel 2008). The fact that knowledge nowadays no longer belongs or is available solely to the privileged teachers and is readily accessible for all to consume, has 'forced' teachers to allow themselves to learn alongside with their learners (Daws 2009). In this study, the senior clinicians were aware of the importance of keeping abreast and updated with the latest development of medicine, and recognized that if they were not open to different avenues for learning new knowledge and skills, they would be irrelevant and obsolete. This reflection was apparent in their perceptions and attitudes, especially to relinquish the ownership of knowledge and the authority of a sage on the stage, and to allow themselves to assume the role of learners and to be taught by others. The concept of having clinicians to learn alongside with their learners is well grounded in educational theories including learner centred and adult learning (Wenrich 2011). However, it represents a shift in approaches to learning and teaching from traditional didactic approaches documented in Malaysian contexts.

The remaining two roles, as patient advocate and fairy godparent, are additional roles that emerged in this study. These roles are not well-described in the literature. Schwartz (2002) highlighted that patient advocacy is an essential part of professional duties for medical doctors

and other healthcare providers (Schwartz 2002). However, with the increasing reported incidences of abuse of power and paternalism in clinical circumstances where patient's safety and welfare is at stake, the role of patient advocacy might have to be delegated to others non-medically related professionals. As senior clinicians who have almost completed the whole circle of professional life as medical practitioners – from a novice pre-med to undergraduate medical student to postgraduate specialist trainee to junior clinical specialist to consultant clinician to superior educator and distinguished member of the profession, it is expected that the vast experience and wisdom would stimulate the senior clinicians to continue serving and contributing. Being patients themselves now, the senior clinicians have the opportunity to 'taste their own medicine' while as senior clinician educators, who remained to be actively involved in training the future young medical doctors and specialists, they could still play an effective role of a patient advocate to ensure patient safety and holistic care of high quality (Garelick 2012).

The role of clinical teacher as a godparent was briefly described in the Career Mentoring Handbook of University of California, Davis School of Medicine (207 – 2008) ((Garelick 2012), as a supportive mentor who is readily available to lend a hand, offering assistance during difficult times. In this study, the senior clinicians assumed the role of a 'fairy godparent'. The significance of this description is that the teacher is somewhat invisible and magical and appears only when needed by the learners, especially following challenging circumstances; for example, failing a major examination. It aligns with ideas about parental protective instincts. One explanation for why senior clinicians assume the role of a supportive fairy godparent is a link to the idea of teaching as a higher calling with obligations to make a difference to someone in need.

Importantly, in this study, it was clear that the clinician educators had adopted some or all of the five roles proposed in this study, either consciously or unconsciously, directly or indirectly. An important outcome of this study is to identify these different descriptors so that others can identify them in their own experience and more purposively choose their teaching role related to their learner's needs.

4.1. Limitations and Implications

This study only serves as a preliminary step to future research on the teaching of clinical reasoning in local settings and context. A very small sample of senior clinicians from one school only were included. Despite this small sample size, the findings provide important insights into different teaching roles adopted by clinicians when they teach clinical reasoning. The junior

clinicians who are at the beginning of their academic journey would be another important group of educators to be studied, especially in exploring the role of an enthusiastic co-learner. The current phenomenon of collaborative learning in the 21st century should be the focus of subsequent research to maximize its potential in medical education, and to prepare for setbacks and disadvantages if any. Learner's perspective and feedback on these roles is also highly valuable and should be regarded as a form of triangulation.

This research contributes to the existing body of knowledge on how clinical reasoning is being taught. Identification of five different roles in teaching clinical reasoning can be used to stimulate debate and discussion about the advantages and disadvantages of each of these roles so that educators can be more aware of their particular style and think about whether it is best for student learning in particular context and time. The results of this study can inform further discussions and professional development activities in the institution. The research findings can also be compared with the broader literature defining and discussing clinical reasoning – this literature has tended to focus on revealing the cognitive steps of clinical reasoning rather than how it reflects a clinical teacher's identity.

The data based on these expert teachers' experiences and teaching journeys also highlights the potential values of junior clinician educators undertaking formalised training on how to teach and assess clinical reasoning early in their career.

5. CONCLUSION

The research reveals that teaching practice cannot be separated from notions of self-identity within a cultural context. Senior clinicians developed their roles gradually, which might be determined by their main teaching intentions and reflections, as well as the culture and nature of the medical disciplines they belonged to. Their description of their teaching goals and strategies demonstrated flexibility, enthusiasm, devotion, humility and life-long learning commitment. The findings of this study nevertheless provide additional information on clinical reasoning especially in the context of medical training in Malaysia.

Acknowledgements

We would like to acknowledge the university for the permission and assistance in the study project. We would also like to thank all of the senior clinicians who participated in this study.

Conflicts of Interest

The authors declare that they have no conflict of interest.

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