Mini Review

CLINICAL INVESTIGATION

Medical teaching

Abstract

Adult medical teaching is a vital process in the medical system. Herein are some theories and techniques about that field.

Keyword: Adult learning • Clinical teaching • Surgical outpatient

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Borayek Saad*

Harvard Alumni Egyptian Fellowship Trainer, Egypt

*Author for correspondence: abojo920@gmail.com

Introduction

In this essay, I will explain the plan that I used in teaching the general surgery residents in the surgical outpatient clinic during the last two months. I will show the teaching techniques that were used according to "Kolb's Experiential Learning Model" and "the adult learning theory" [1, 2]. A last, I will explain the challenges I faced, and how I have overcome them.

In the last two months (June and July 2022), I have applied the "five-step micro-skills model of clinical teaching" one minute preceptor strategy in teaching ten residents how to diagnose inguinal hernia in males in the surgical outpatient clinic in my hospital, the Itayel Barud hospital, the Egyptian ministry of health [3]. I chose this teaching technique because it is an active teaching method that increases the role of the resident in the training process, and increases the learner self-confidence and engagement in his job. First, I allow the resident to take a concise history and examine the patient to reach a provisional diagnosis, then, I ask the resident to present the case and give a probe for "supporting evidence" about his diagnosis [4]. After the resident completes his case presentation in evidence-based protocol, I start teaching the resident the general rules for examining and diagnosing a case of male inguinal hernia. I then reinforce what right things the resident has done to give him confidence and support. Last, I correct the mistakes the resident has done in the learning process to improve his attitude and clinical skills in the next times. This strategy proved to be a cost-effective method, and my residents accepted it as a teaching technique and became able to diagnose inguinal hernia in males clinicallyI depended in my teaching on "Kolb's Experiential Learning Model" which actually involves four stages "concrete learning, reflective observation, abstract conceptualization and active experimentation" [5]. In this teaching model, "the learner can enter the cycle at any stage of the cycle with logical sequence" [6]. So the learner can start by doing things actively, experimenting, and gaining experience. And then he will reflect, observe, and use some abstract conceptualization, meaning that he will read and search the literature to see whether there are some other solutions for his experimentation, and so on. But people may actually have different preferences where to enter this cycle, and based on this, Kolb actually created different learning styles. The learner may actually go between these different elements in different directions. The learner may oscillate between experience and experimentation. So the learners will be trying things, gaining experience, and trying to fix it by doing some more experiments and so on. I will help them reflect on things or read on things, conceptualize things, and so on, to gain more benefit and achieve more effective learning. I also depended on "Adult Education Theory" in my job; this theory states that adults can determine their needs and abilities, thus sharing a responsibility in their learning sessions and activities. As regard "One Minute Preceptor (OMP)" the "evidence indicates that the OMP prompts the teaching of higher level concepts, facilitates the assessment of students' knowledge, and prompts the provision of feedback" [7]. Also, "Students indicate satisfaction with this method of clinical case-based discussion teaching". Besides, the OMP model is a brief and easy-to-administer intervention that provides modest improvements in residents' teaching skills [8]. Moreover, "The simple-to-administer nature of the OMP module makes it useful in busy teaching settings" [9].

I faced some challenges in "one minute preceptor" teaching method:

- The residents were ten, while the "one minute preceptor "teaching strategy depends on an active teaching of one resident each time. I needed more time and effort, but I was able to achieve this job.
- The "unmotivated and disengaged" residents who faced a novel teaching method, they didn't know before, so I used to explain to the residents the importance of active teaching methods that makes learning easier and more effective [10]. After being used to the "one minute preceptor" method, residents loved it and took it as a fundamental method of teaching.
- Uncooperative patients who refused to be a part of the teaching process. I encouraged these patients

to share in the teaching strategy by putting them in the nearest operative list, and did their operation for free.

- Lack of knowledge for the residents in the topic of male inguinal hernia. So, I used to do a weekly lecture to all the ten residents about this topic in the form of the flipped classroom technique in the teaching hall in my hospital.
- Financial needs, so I communicated with some organizations in the civil community to support and sponsor this teaching process, intending to continue this method in every coming teaching process.
- Time needed for teaching, so I persuaded the manager to allow using recent teaching methods, and he made me free of some other duties to save more time in teaching residents.

In the end, I am so grateful for all my teachers in HMS for their efforts in this course. Thank you.

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