Apprentissage des principes de la médecine basée sur les faits aux médecins de famille : une étude descriptive

Teaching of evidence-based medicine principles in Family medicine curriculum: a descriptive study

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RÉSUMÉ

Introduction: la médecine de famille a été considérée officiellement dans notre journal officiel en 2019. Afin de permettre la mise à niveau des praticiens avec le profil de poste officiel, la faculté de médecine de Tunis a lancé un master durant l'année universitaire 2018/2019. L'apprentissage des principes de la médecine basée sur les faits a été inclus dans le curriculum et a été planifié durant une journée avec une session d'apprentissage matinale basée sur les méthodes traditionnelles d'apprentissage et une séance d'apprentissage l'après midi basée sur l'apprentissage en équipe.

Objectif : Evaluer l'acceptabilité de l'association de ces méthodes par les apprenants ainsi que leurs conséquences sur leurs compétences en matière de lecture critique.

Méthodes: il s'agit d'une étude transversale, descriptive et prospective. Un site web a été crée et contenait un pré test à remplir par les participants avant la séance d'apprentissage. Après la séance d'apprentissage en équipe, les apprenants devaient remplir un post test et un questionnaire de satisfaction.

Résultats: 20 participants ont assisté à la séance d'apprentissage. 17 participants ont accepté de remplir le pré test post test et le questionnaire de satisfaction. La moyenne et médiane des pré tests étaient respectivement de 11.19 et 14/20. La moyenne et médiane des post tests étaient respectivement de 12.69 et 14/20. Aucune différence statistique n'a été observée entre les pré et post tests (p=0.2). La majorité des participants étaient satisfaits de la séance d'apprentissage. 13/17 participants ont évalué leurs besoins en matière de pratique de la médecine basée sur les faits à 4/5.

Conclusion: Nos résultats mettent l'accent sur l'acceptabilité de l'enseignement des principes de la médecine basée sur les faits pour les médecins de famille. L'absence de différence significative entre les pré tests et post tests peut être expliquée par le fait que les participants ont tous soutenu leurs thèses et ont déjà été sensibilisés à la lecture critique d'articles médicaux.

Mots-clés

Médecine basée sur les faits, pratique basée sur les faits, médecine de famille

SUMMARY

Background: Family medicine was considered officially and legally in early 2019 in Tunisia. In order to help general practitioners to fit with the new profile of family doctors, the faculty of medicine of Tunis launched an MBA curriculum in 2018. Teaching evidence-based-medicine (EBM) principals was planned in a one-day training and was divided into a morning lecture-based session and an afternoon work team session.

Aim: To assess the acceptability of this training by the participants and to highlight the consequences of this tutoring on the research skills of the trainees.

Methods: This is a cross sectional, prospective and descriptive study including the trainees registered in the MBA curriculum. A web site was created and contained a pre-test. After the work team session, the participants were asked to fulfill a post test and a feed back form.

Results: 20 trainees participated to the training day. 17 participants agreed to fulfil the pre-test, the post test and the feed back form. The mean and the median scores of the pre-test were estimated respectively to 11.19 and 14/20. The mean score and the median of the post-tests scores were estimated respectively to 12.69, and 14/20. No significant statistical difference was observed between the pre and post test scores (p=0.2). The majority of the trainees were totally satisfied with the training program. 13/17 participants estimated their needs' scale in EBM practice to 4/5.

Conclusion: Our results highlighted the acceptability of EBM teaching in family medicine curriculum. The absence of significant difference pre test and post test scores can be explained by the fact that all participants obtained their doctorate and were able to perform a critical appraisal of medical articles.

Key-words

Evidence-based medicine, evidence-based practice, family medicine

INTRODUCTION

Becoming an evidence-based medicine practitioner is mandatory when dealing with family medicine. The Canadian Family Medicine board has introduced this practice in order to improve the professional skills of family doctors and the management of the patients (Ladden, Peters, Kotch, & Fletcher, 2004). In our country, the shift to family medicine practice has been operated progressively since a few years with many challenges and limitations and family medicine has been considered legally as a specialty in the early 2019. In accordance to the national policies and the international standards, the faculty of Medicine of Tunis had the mission to improve the skills of the general physicians in practice in order to ensure their compliance with the new professional profile. For that purposes, an MBA curriculum was launched in 2018. Teaching evidence-based-medicine has been included in this curriculum and a pilot study was performed in order to assess the acceptability of such learning by family doctors.

METHODS

Population

The authors describe a cross sectional, descriptive and prospective study including Family doctors registered in a post-graduate MBA training about family medicine held in the Faculty of Medicine of Tunis. The trainees were volunteers that were invited to the course by e-mail. The presence to courses wasn't compulsory according to the faculty's policies.

Pedagogical scenario

Pedagogical methods used associated lecture-based methods and participative methods. In order to allow an active participation of the trainees, a web site was created one week before the training session and was made available through this link: https://sites.google.com/fmt.utm.tn/cecmedecinedefamille/accueil.

The site contained a pre-test and many resources concerning documentation on PubMed and the different article types that were available in YouTube.

The site contained also the different articles that were used during the participative session. The different articles were centred on the theme of viral hepatitis B. They consisted in a systematic review, a clinical trial and recommendations (2, 3, 4). The program of the training day is presented in figure 1.

The morning session was based on lectures dealing with

Figure 1 : The organization of the room and the subdivision into 3 groups (tables) with the break sweets.

the different steps of the evidence-based medicine which are: facing the problem, asking the question, the critical appraisal practice, assessing the validity of the evidence, looking for the applicability of the evidence to the patient. The afternoon session dealt with teamwork about the different types of articles.

The scenario of the day was about a Tunisian film dealing with the use of Dubutex drugs. In the morning session, we focused on some scenes captured form the movie dealing with a 50-year-old man with a past medical history of drug intake who presented to the family physician with a fatigue. The trainees were asked about the different exams to perform and when they hypothesized about the necessity of screening for viral hepatitis C, the tutor asked them about its utility. The trainees were asked to follow the different steps of the evidence-based medicine practice in order to solve the scenario.

During the afternoon session, the participants were divided into 3 groups and every group was asked to make a critical appraisal of an article (Figure 2). This critical appraisal was guided by some questions related to each type of articles. After that, every group was asked to present to the other groups, the objectives, the methods and the results of the article then answered to the different questions. The questions related to the clinical trial, the systematic review and the recommendations articles are represented in Table 1. The tutor who presented the particularities of every type of article after the group work guided this session.

Post-test and Feedback: At the end of the afternoon session, every participant was told to fulfil the posttest and the feed back form that were made available through this link: https://forms.gle/6pVHjEpMoYkqXjuQA. The feed back form consisted in 5 liekert-scale questions and 3 open questions. They were asked about their perception of the program of the day, the pedagogical methods used, their appreciation of the tutorship and their needs in evidence-based-medicine practice

Statistics: a descriptive study was performed and the means, median, 95%CI were calculated using SPSS software version 21.0. Non-parametric tests were used to compare the means of the pre-test and post-test. Statistical significance was assessed for p<00.5.

Ethics: The present study has been conducted according to the principles of the Declaration of Helsinki. Ethical approval for the study was not required. Participants were made aware of the purpose of the study, the anonymous nature of the purpose, the anonymous nature of the dataset generated and the option to not respond if they so wished. This information served as the basis for an informed consent from each respondent.

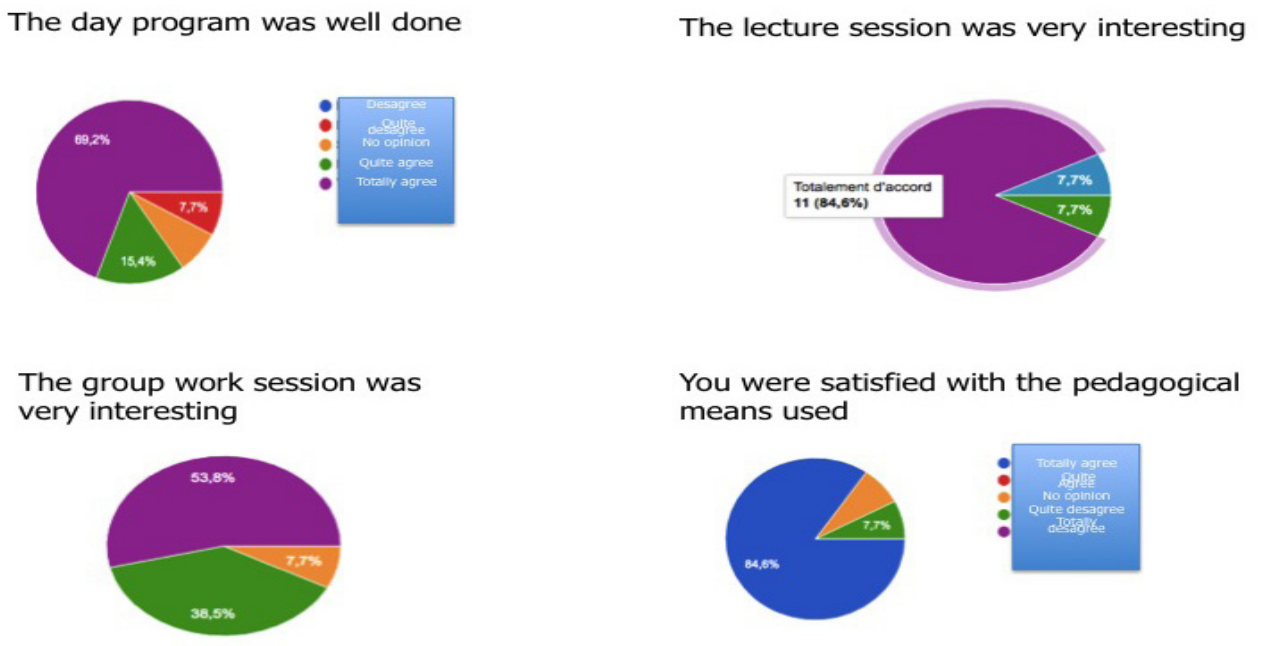


Figure 2: The program of the training day.

Table 1: the different questions associated to the different articles' types.

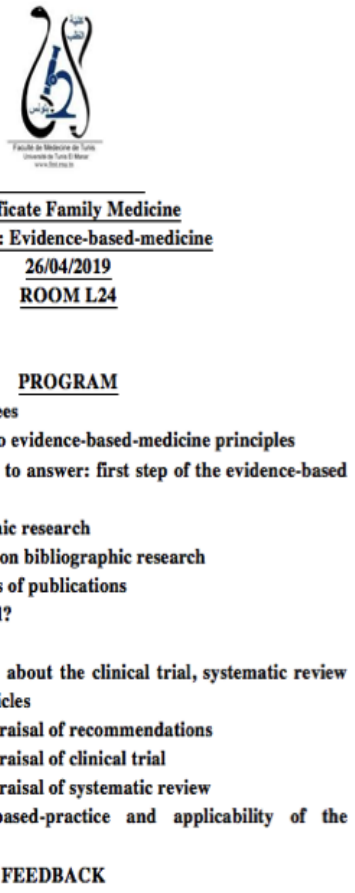
Clinical trial article (Monnet et al., 2019)
- In this clinical trial, the authors tried to demonstrate the efficiency of an intervention: a/ what is this intervention, b/ what are the judgement factors used, c/ why did the authors use 2 levels of analysis
- Why did the authors stratify the randomization based on the mode of working of the physicians
- The authors considered the results non conluant. What are their considerations
- Did the results presented applicable to all the physicians of the country
- Did the results presented applicable to all the population?
- Can we compare the patients of both groups of physicians?
- Is the title of the article appropriate? If not, could you propose a title?
Recommendations article (Grad et al., 2017)
- Are there any conflicts of interests in this article?
- Did the panel of experts contain a methodologist?
- Did the experts explain any subjective judgement?
- Did the recommendations comply with the level of evidence used?
- Are the recommendations clear and flexible?
- Are the recommendations compatible with the clinical practice?
Systematic review article (Cadieux et al., 2016)
- What was the main objective of the authors?
- What were the different steps in the method section?
- What were the different criteria used to include or exclude articles?
- How did the authors evaluate the quality of the articles included?
- What were the conclusions of the authors?

RESULTS

Population: Twenty trainees participated to the training day. 17 participants agreed to fulfil the pre-test, the posttest and the feed back form. The pre-test consisted in 7 Open Questions and 5 Multiple-Choice Questions. 16 women and 1 man were involved. The mean age of the participants was 35 years. All the participants were postgraduate students that were practicing general medicine in private or public sectors and had a prior research experience when preparing their medical thesis.

- Pre-test and post-test results: The mean and the median scores of the pre-test were estimated respectively to 11.19, 95%CI [3-14] and 14/20. The mean score and the median of the post-tests scores were estimated respectively to 12.69, 95%CI [7-14] and 14/20. No significant statistical difference was observed between the pre-test and post test scores (p=0.2). 10/17 participants improved their scores. 5/17 participants had the same scores and 2/17 participants decreased their scores. The correlation between the sex and the test scores wasn't assessed because there was only 1 man in the group.

- Feedback form: 12/17 trainees were totally satisfied with the training program. 14/17 participants were totally satisfied by the quality of the lectures. 16/17 participants were satisfied with the teamwork session. 16/17 trainees were very satisfied with the pedagogical methods used. 16/17 participants were very satisfied with the tutorship. 13/17 participants estimated their needs' scale in evidence-based medicine practice to 4/5. 7/17 participants suggested the necessity of repeating the experience and prolonging the formation from one day to 2 days. Figure 3 illustrates the feed back of the participants concerning each question.



Certificate Family Medicine
Teaching: Evidence-based-medicine
26/04/2019
ROOM L24

PROGRAM

9h30: Welcoming of trainees
9h30-9h45: Introduction to evidence-based-medicine principles
9h45-10h05: The question to answer: first step of the evidence-based medicine process
10h05- 10h35: Bibliographic research
10h35-11h00: Team work on bibliographic research
11h-11h15: Different types of publications
11h15-11h30: Why to read?
11h30-12h30: BREAK
12h30-13h45: Team work about the clinical trial, systematic review and recommendations articles
13h45-14h00: Critical appraisal of recommendations
14h00-14h15: Critical appraisal of clinical trial
14h15-14h30: Critical appraisal of systematic review
14h30-15h00: Evidence-based-practice and applicability of the evidence to the patient
15h00: POST-TEST AND FEEDBACK

Figure 3: Pie charts representing the main results of the questionnaire form.

DISCUSSION

This pilot experience highlights the necessity of introducing the principles of evidence-based medicine in the curriculum of family doctors in our country. The majority of the participants felt comfortable with the program of the training day, the pedagogical methods used and the quality of the tutorship. 10/17 participants improved their scores after the training session and 13/17 trainees estimated their needs in evidence-based-medicine practice to 3/5 according to the scale used. No significant statistical difference was observed between the pre-test and pot-test means (p=0.2). This result can be explained by the fact that even if all the trainees didn't know the principles of evidence-based medicine, they had a prior research experience. Hadley J, et al. reported in a questionnaire study including 317 trainees from various specialities that trainees with prior research experience were more comfortable when finding the evidence and reported the superiority of evidence in comparison to clinical judgement. They also reported that non-surgical specialities tended to believe that EBM has little impact on practice (Hadley, Wall, & Khan, 2007). On the other hand, the implementation of EBM principles was performed by non-surgical specialities. Evidence-based medicine implementation seems mandatory especially in low-income countries, where family doctors have to deal with the rapid growth of science literature and the lack of the resources that they are facing. Even if practicing standards and guidelines is becoming harder because of the precarity of these countries, physicians have to be always aware of them and able to adapt them to their patients or even able to struggle with authorities for changing policies in their country. This fact makes the faculty socially responsible towards the common health problems that are particular to the community in which evidence-based medicine principles are implemented. The history of evidence-based-medicine is a long parcours with many actors that participated to the birth of this concept including Fletcher R, Haynes R, Cochrane A (6) (7) (8) (9) (10) (1). The term of evidence-based medicine was initially used by Guyatt G who published many works in order to highlight the necessity of practicing this medicine (Guyatt, 2008). Godwin M, et al. reported a questionnaire-based study about critical appraisal skills of family physicians in Canada. The study included 1000 physician doctors that reported that they felt more knowledgeable than older doctors thanks to this practice. Besides, 95% of respondents felt the important of practicing the principles of EBM in their routine (Godwin & Seguin, 2003). In a review article dealing with the effects of critical appraisal practice, Parkes J et al. reported 25% improvement in critical appraisal knowledge thanks to critical appraisal teaching in the intervention group in comparison to 6% improvement in the control group (Parkes, Hyde, Deeks, Milne, & Santesso, 2001).

Our study is a pilot experience about introducing the EBM principles in the Faculty of Medicine of Tunis. The main limitation of our study consists in the small number of participants who represent 2/3 of the trainees registered in the MBA.

CONCLUSION

Our pilot study highlights the necessity of implementing the EBM principles in medical curriculum especially for family doctors. More research has to be performed in order to include more doctors and to assess the impact of such a teaching on clinical practice.

Conflict of interest statement: the authors declare that they have no conflict of interest.

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