



Full Length Research Paper

Self perceived competences of internship after family practice training in Monastir (Tunisia)

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Abstract

In Tunisia, the training for family physicians must reflect the new health needs of our population (increasing volume of medical knowledge, needs of an aging population). The objective of this study was to evaluate self-perceived competence before and after four months family medicine internship in Monastir. We performed a before-after study design with prospective consecutive data collection. All Family Medicine internships were included during a period of 32 months (from the 01/03/2008 to the 31/10/2010). The evaluation tool consists of five dimensions on primary care activities; global care approach; activities of care coordination; continuity of care and achieving public health goals with a total of 51 items. Internship self evaluation was conducted at the beginning and the end of the training period. A total of 300 medical interns were included in this study. Significant increases were found in self-perceived competence for the majority of the skills examined. The items with no significant improvement were those in which experience and confidence remained poor at the end of training. The university faculties of medicine and the ministry of health should incorporate family medicine training in medical courses and increase the supply of educational resources to meet training requirements.

Keywords: Family Practice, Internship and Residency, Education, Tunisia.

INTRODUCTION

Family medicine (FM) is defined as a medical specialty concerned with the planning and provision of the comprehensive primary health care of all members of a family on a continuing basis. This discipline must be included in the medical courses to improve training of future physicians and appropriately address health needs of populations (Roberts et al., 2012). In addition, evidence shows that longer involvement with FM in medical training improves student's abilities and increases their probability to choose it as a career later (Moore et al., 2007).

In Tunisia, efforts for the integration of family medicine in the medical curriculum began in recent years. In fact, The Faculty of Medicine of Monastir incorporated into the medical curriculum a four-month mandatory internship in the department of Community Medicine (CM). Recently, since 2005 we established partnership among our universities of medicine and the University of Montreal

(Canada) (Family Medicine cooperation among Tunisian Medical Faculties and the University of Montreal (2006)). Within this partnership Tunisian primary health care physicians perform internships at the department of FM at the University of Montreal to enhance their skills. After that they ensure intern training in the department of CM of Monastir.

The objective of this study was to evaluate self-perceived competence before and after four months family medicine internship in Monastir.

METHODS

Context of the study

This study was carried out in the region of Monastir in Tunisia. Sanitary structure of the region included a University of Medicine with University Hospital, three regional hospitals and 88 primary health care centers in the public sector. The private sector consists of 102 general practitioners (GPs) and 62 specialists (Center of national basic health care Tunisia, (2008).

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In the University of Medicine, medical interns performed four-month internship during two years with a total of six internships (three internships in the first year and three in the second year).

In the department of CM, we continuously received around 40 internships in their second year to perform four-month training. They were allocated to the primary health care centers in which they participated to curative, preventive and educative activities followed by rotation schemes in the three regional hospitals. During their training, internships were periodically invited to the department of CM to assist to training sessions about learning in clinical reasoning, quiz and patient-centered approach.

Evaluation tool

The evaluation tool was designed, by the family medicine committee, as a grid which included 5 dimensions on primary care activities (15 items); global care approach (4 items); activities of care coordination (11 items); continuity of care (11 items) and achieving public health goals (10 items). Thus the grid consists of 51 items in the likert scale responses format (Appendix 1 and 2).

Members of the family medicine committee were three professors of family medicine and experienced GPs from the fifteen primary health care centers of Monastir. They have extensive teaching experience in medical students training.

Study design

We performed a before-after study design with prospective consecutive data collection. We have included eight promotions of medical interns in a 32-months period from the 01/03/2008 to the 31/10/2010. Prior to beginning or advancing their training, medical interns were invited to put, in the constructed grid, their own evaluation on the five following dimensions. The same grid was used in the final evaluation after four-months training.

Ethical considerations

Participants were assured that completion of the constructed grid was a matter of personal choice, that anonymity and confidentiality would be maintained throughout the study, and that results would only be published in aggregated form so that no individuals could be identified. Anonymity was important in order to encourage participants to self-assess honestly.

Data analysis

Data were analysed using the Statistical Package for Social Sciences (SPSS) version 15.0. Descriptive statistics were generated to describe the characteristics of the sample (categorical variables are expressed as proportions, and continuous variables as mean with standard deviation). The before-after comparisons were done using paired sample-t-test. All tests used a significant level of 0.05.

RESULTS

A total of 300 medical interns were included in this study. Response rates varied from 87 to 96% depending on the items. Among the participants 222 (74%) were female and 78 (26%) males. Participant's means age was 26.8 (SD 1.1).

On a five point Likert-type scale, the mean score of the first dimension (primary care activities) at the beginning of the internship was 2.82 and 3.5 at the end ($p < 0.01$). The analysis of each item showed that interns reported feeling more competent for most items excepting item 6 (refer the patient to the second or third level of care) and item 13 (ensure patient compliance and the achievement of additional tests) (figure 1).

In the second dimension (global care approach) items differences between before and after training scores were also significant ($p = 0.03$) (figure 2).

Analysis of the third dimension (continuity of care) showed a lower global mean score at the first measurement with a significant improvement for the overall items in the second measurement ($p < 0.01$) (figure 3). The global mean score rose significantly also for the fourth dimension (activities of care coordination) of the grid from 2.50 to 3.60 ($p < 0.01$) (figure 4).

The knowledge level was the highest towards the end for almost items of the fifth dimension (achieving public health goals). In fact, the fifth global mean score rose significantly from 2.37 at the first self-evaluation to 3.20 at the final self-evaluation (figure 5). The lowest improvement was observed for the tenth items "coordinate curative and preventive activities".

DISCUSSION

In this study, skills acquisition during a four-month internship with training program for general practice is evaluated for the first time in our Tunisian context. This assessment of clinical competence in medical interns training for family practice is not only useful to evaluate

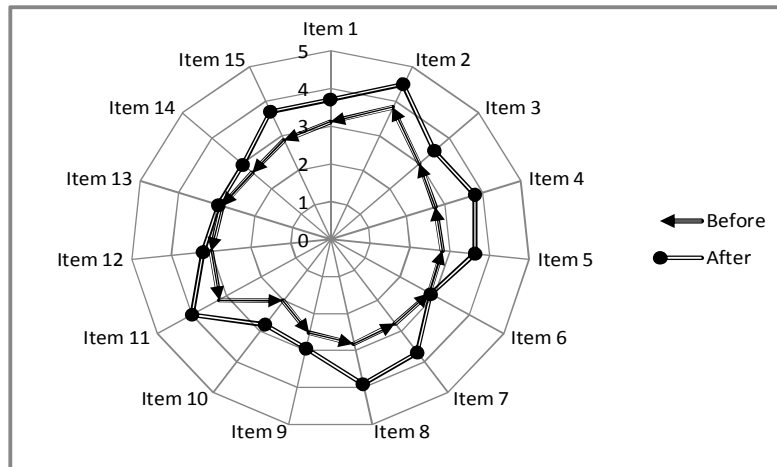


Figure 1. Self perceived competences in primary care activities

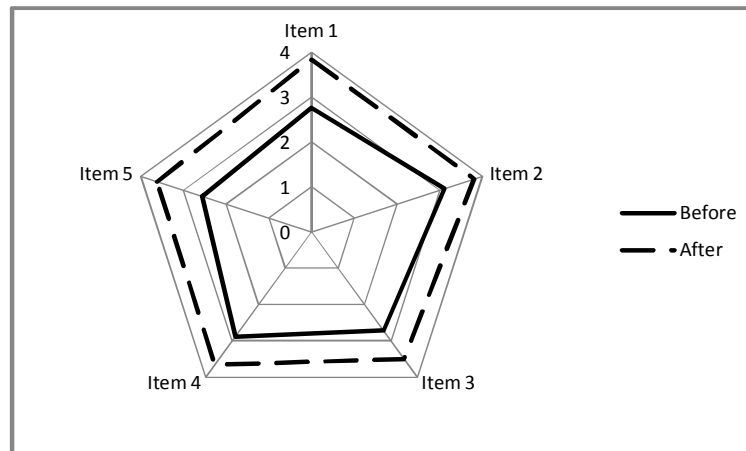


Figure 2. Self perceived competences in activities of global care approach

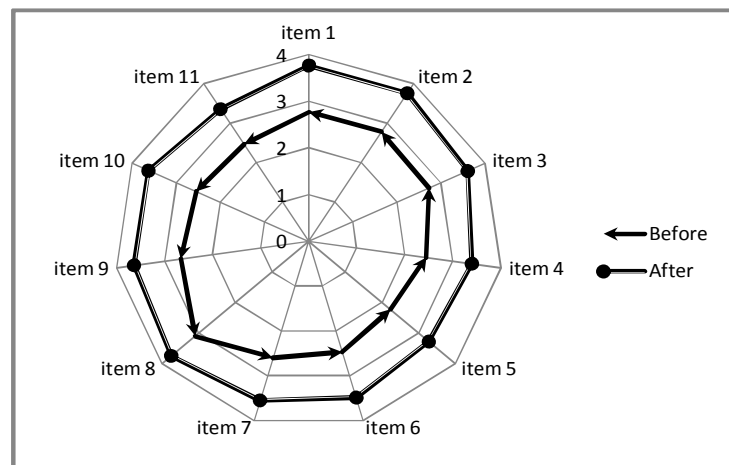


Figure 3. Self perceived competences in activities of care coordination

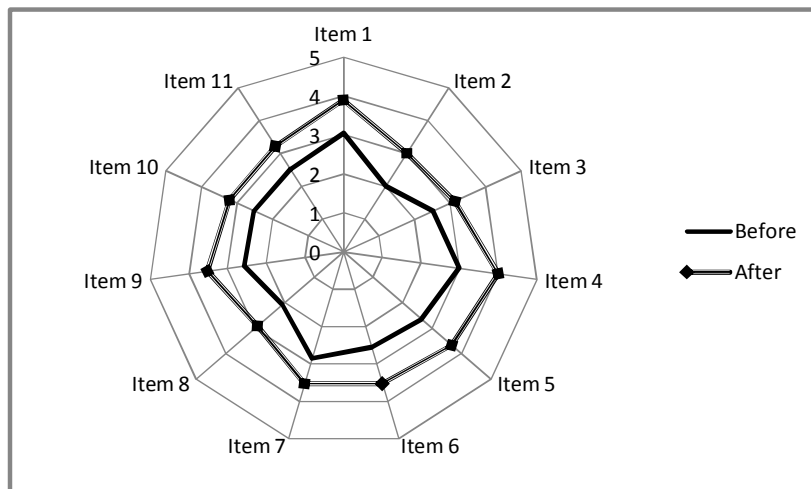


Figure 4. Self perceived competences in activities of continuity of care

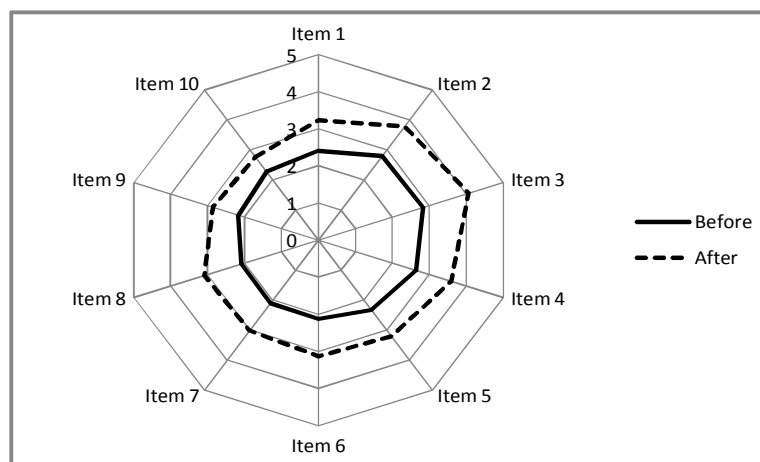


Figure 5. Self perceived competences in activities of achieving public health goals

trainees but may also serve to examine the quality of the training programs (Berkenbosch et al., 2011; Kramer et al., 2003). In our case, evaluation is interesting especially after our experience of partnership with Canadian universities. Objective assessment tools are often regarded as the gold standards in measuring competence. However, evaluating self-perceived competence has its merits, as it may provide an indicator on the subject's motivation in maintaining and improving the skills concerned especially in a virgin context (Lai and Teng, 2011).

Regarding this study, we believe that these give us only a scheme from general practitioners and internship in the region of Monastir. This study should be done with cooperation of others medical universities in larger scales to have an in-depth and objective evaluation of the Tunisian general medicine training. Such evaluation

allows us to move through a process of health system reform that promises to improve general practice training and to deliver effective primary medical care (Kidd et al., 2011).

Results show that in most items of the grid, interns rated themselves as poorly or moderately competent in the beginning of the internship with a significant increase at the final self-evaluation. The greatest self-perceived acquisitions were observed in items related to global care approach, coordination and continuity of care. This is encouraging, as comparatively, activities of communication, care globality and continuity probably demand greater urgency for competence for a newly-qualified doctor (Lai et al., 2007).

Communication with patients is a vital part of physician mission's. Research highlights the value of better communication in improving clinical outcomes

(Moral et al., 2003). A study performed in the Department of Internal Medicine of Minnesota (USA) showed that new internal medicine rate high the importance of the medical interview. They also rate their competence and adequacy of previous training in medical interviewing relatively low, and many indicate that they would benefit from additional communication training (Mueller et al., 2006). In our study, internship rate their competences in items related to communication as lower with a significant improvement a four months training. We realize that medical training in general practice enhances self-perceived clinical competence (Kramer et al., 2007).

Continuity of care led to provides opportunities to observe the course of disease and treatment and to develop strong doctor-patient relationships (Vogt et al., 2000). Literature confirmed that experiencing continuity of care reveals the responsibilities inherent in primary care, helping students make informed decisions about specialty choice (Goodle et al., 2009). Absence of continuity of patient care in training program has been cited as an important problem that affects significantly doctors competences (Lai et al., 2007).

Many studies concluded that care coordination must also be considered in models of general practice training. In our country we experienced an epidemiological and demographic transition with prolonged life expectancy at birth and the emergence of chronic diseases. Thus we are invited to provide care for patients with more complex needs and to work as part of a multidisciplinary primary health care team (Emery et al., 2011). Good coordination for curative as well as preventive activities can deal with the new complexities and provide high-quality and safer care.

Despite the significant improvement in most items related to primary care activities, globality and continuity of care some items have not changed positively like "patient reference to the second or third level of care". Previous studies showed that lack of time, experience, and training were identified as barriers to ensure patient reference in good conditions (Toosi et al., 2009). In this study also, lack of intern's improvement in this item is probably due to shortness of the internship or to the lack of general practitioners training. Thereafter, an increase but not significant was observed, for others items like "coordinate curative and preventive activities". Our findings are consistent with those identified barriers to providing preventive care and coordinate it with curative activities in primary care practice (Hutchison et al., 1996). These barriers and disparities between theory and practice led probably to the lack of effective acquisition of this capacity by interns (Hulscher et al., 2007).

CONCLUSION

In Tunisia the training for family physicians must reflect the increasing volume of medical knowledge, the greater

technologic complexity and the needs of an aging population. This adaptation will enhance family practice and remains it as an attractive career choice. Coordinated efforts should also be made to share experiential knowledge gained from the establishment of PM programs in other countries.

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REFERENCES

- Berkenbosch L, Brouns JW, Heyligers I, Busari JO (2011) How Dutch medical residents perceive their competency as manager in the revised postgraduate medical curriculum. *Postgrad Med J. Article in press.*
- Center of national basic health care (Tunisia). Annual report of the region of Monastir (2008).
- Emery JD, Skinner LP, Morgan S, Guest BJ, Vickery AW (2011). Future models of general practice training in Australia. *Med J Aust; 194(11):S97-100.*
- Family medicine cooperation among Tunisian Medical Faculties and the University of Montreal (2006). <http://www.fmt.rnu.tn/act/comm.pdf> (consulted the 15/07/2011).
- Goodle II, Smith S, Maestas RR, James J (2009). First-year medical students' perspective on continuity of care. *Fam Med; 41(3):175-81.*
- Hulscher ME, Wensing M, van der Weijden T, Grol R (2007). WITHDRAWN: Interventions to implement prevention in primary care. *Cochrane Database Syst Rev; 18(1):CD000362.*
- Hutchison BG, Abelson J, Woodward CA, Norman G (1996). Preventive care and barriers to effective prevention. How do family physicians see it? *Can Fam Physician; 42:1693-700.*
- Kidd MR, Beilby JJ, Farmer EA, Jackson CL, Trumble SC (2011). General practice education and training: past experiences, current issues and future challenges. *Med J Aust Jun 6; 194(11):S53-4.*
- Kramer AW, Jansen KJ, Dusman H, Tan LH, van der Vleuten CP, Grol RP (2003). Acquisition of clinical skills in postgraduate training for general practice. *Br J Gen Pract; 53(494):677-82.*
- Kramer AW, Zuithoff P, Jansen PP, Tan LH, Grol RP, Van Der Vleuten CP (2007). Growth of self-perceived clinical competence in postgraduate training for general practice and its relation to potentially influencing factors. *Adv Health Sci Educ Theory Pract; 12(2):135-45.*
- Lai NM, Sivalingam N, Ramesh JC (2007). Medical students in their final six months of training: progress in self-perceived clinical competence, and relationship between experience and confidence in practical skills. *Singapore Med J; 48(11):1018-27.*

- Lai NM, Teng CL (2011). Self-perceived competence correlates poorly with objectively measured competence in Evidence Based Medicine among medical students. *BMC Med Educ* 28;11:25
- Moore DG, Wilson DR, Cave AG, Woodhead Lyons SC, Donoff MG (2007). Improving the Quality and Capacity of Canada's Health Services: Primary Care Physician Perspectives. *Healthc Policy*; 3(2):e145-61.
- Moral RR, Rodriguez Salvador JJ, De Torres LP, Prados Castillejo JA (2003). Effectiveness of a Clinical Interviewing Training Program for Family Practice Residents: A Randomized Controlled Trial. *Fam Med*; 35(7):489-95.
- Mueller PS, Barrier PA, Call TG, Duncan AK, Hurley DL, Multari A, Rabatin JT, Li JT (2006). Views of new internal medicine faculty of their preparedness and competence in physician-patient communication. *BMC Med Educ*;6 :30.
- Roberts RG, Hunt VR, Kulie TI, Schmidt W, Schirmer JM, Villanueva T, Wilson CR (2011). Family medicine training--the international experience. *Med J Aust*;194(11):S84-7.
- Toosi TD, Azizian A, Roushan N, Khasaeipur Z, Soleimanzadeh M (2009). The views of general practitioners in Iran about prevention and health promotion and related obstacles in clinical practice. *Acta Med Indones*; 41(3):115-20.
- Vogt HB, Lindemann JC, Hearn VL (2000). Teaching Medical Students about Continuity of Patient Care. *Acad Med*; 75(1):58.

Appendix 1

Dimension n°1: primary care activities

1. How to conduct a medical interview
2. Perform useful clinical and paraclinical exams in the diagnosis process
3. Analysis and synthesis of gathered information's
4. How to inform patient
5. Propose and negotiate a health care plan to obtain a membership in decision
6. Patient reference to the second or third level of care
7. Appropriate Decision Making
8. Developing a comprehensive intervention project
9. Make a prescription taken into account indications, risks and drug interactions
10. Complete the administrative document related to performed medical procedures
11. Initiate a procedure for accessing to social assistance
12. Draft a summary of the session in the patient's medical record
13. Evaluating the impact of previous prescribed treatment
14. Ensure patient compliance
15. Make the synthesis of expert advice and incorporate it into the patient's medical history

Dimension n°2: global care approach

1. Do, at each medical consultation, a comprehensive diagnosis of the patient's situation by gathering and managing information
2. Prioritizing problems and objectives of care in complex or multiple diseases
3. Dealing with situations of seriousness
4. Summarizing information to make appropriate decisions

Dimension n°3: activities of care coordination

1. Identify patient needs for intervention specialist
2. How to transmit all relevant information to obtain a specific response of correspondents
3. Define with patient and his family modalities / limits of care
4. Verify the good achievement of care and evaluate its results on patient health
5. Gather and synthesize new information resulting from the performed care
6. Updating patient record
7. Identifying patient's needs of medico social care
8. Choose with patient / family the adapted site to address patient's needs
9. Complete the administrative document related to the chosen care
10. Harmonizing and coordinating multiples care provided to the same patient
11. organizing communication between all health care actors

Dimension n°4: continuity of care

1. Collecting longitudinal and transversal medical information and ensure their synthesis
2. Establishing a personalized prevention plan considering patient's personal and family risk factors
3. Supporting patient in the management of his health
4. Monitoring of specific disease by incorporating it into the story and living conditions of patient
5. Educating patients to manage their health concerns
6. Developing a therapeutic plan and ensuring its clinical and biological monitoring
7. transmitting information to correspondents in the second and third level of care specifying reasons and expected results
8. Check compatibility of another prescription with an ongoing treatment
9. Evaluate patient adherence to therapeutic plan and identify causes of non compliance
10. Identifying self-medication and its favouring factors
11. Sorting medical information while respecting law and code of ethics in order to transmit them if the patient changed physician

Dimension n°5: achieving public health goals

1. informing patient on his medical condition and his raise awareness of risk factors
2. Achieve an organized individual screening based on history and known risk factors for the patient and the valid data from epidemiological studies
3. Defining educational goals and negotiating their implementation with patient
4. Participating in collective action to improve public health
5. Relaying locally national information, prevention and health education companies
6. Participating in mass screening campaigns
7. Perform tests and examinations provided in the screening campaigns
8. Informing patients individually about their screening results
9. Participating in epidemiological research
10. Look for a better efficiency of care delivery