Research on the field of education: Students' understanding of EURACT educational agenda

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Background-1

- the academic development of family medicine started in the 1970's and has resulted in the development of undergraduate teaching of family medicine throughout Europe.
- Teaching of specific competencies of family medicine varies widely between countries
- EURACT has developed an educational agenda, which has become a key document on teaching family medicine in Europe
- It lists in broad terms the educational objectives of family medicine at different levels of training
- a basis for family medicine curricula throughout Europe
- It may be also the basis for the assessment of medical students' attitudes to the discipline

Background-2

- Family medicine has been taught at the Ljubljana medical school since 1994/95
- Regular evaluation of our teaching using a questionnaire we have developed
- The level of achievement of learning objectives increased with the experiences of the teachers
- We changed the attitude of medical students toward general practice and general practitioners to more positive.

Objectives

➢ to develop a properly validated instrument, based on modern theory of family medicine teaching (EURACT educational agenda) for assessment of medical students' attitudes towards family medicine

➢ To find out how the students understand our discipline

➢ To find out the impact of 7-weeks curricula in family medicine on students attitudes regarding the key competencies of family medicine

➢ To find out which attitudes are of outmost important in prediction of professional career in family medicine

Methods -1

1. **The development of the questionnaire**
- **Stage one:** gathering the statements about core competencies
- **Stage two:** two researchers independently assessed statements. The formulation of the draft questionnaire was a result of a consensus meeting between the two researchers, who discussed the comments and made corrections of the first list of statements separately.
- **Stage three:** the questionnaire (164 questions) was then distributed to all final-year medical students at the University of Ljubljana at the beginning of their family medicine
- **Stage four:** reduced the number of items in the second version of the questionnaire:
- A)Made a reduction in number of questions for each competence separately
- B)Made a reduction in number of questions for a questionnaire a whole
- **Stage five:** the final version of questionnaire was distributed to all of the students at the beginning of their family medicine rotation
- **Stage six:** Temporal stability was tested by test/retest reliability

Methods -2

2. Use of the final tool to evaluate the effect of clerkship on students attitudes

- Use the final tool to evaluate the impact of the curricula on students attitudes

3. Use the students attitudes in prediction of professional career in family medicine

. Using the artificial neural networks (ANN) find the attitudes which predict career choice in family medicine

Statistical analysis

Methods:
- Qualitative methods (Delphi technique)
- Descriptive statistics (mean, SD)
- Bivariate statistics: t- test, paired t-test (attitudes pre-post clerkship)
- Reliability analysis
- ANN (artificial neural network)
- Genetic algorithm
- Factor analysis

- The level of significance was $p < 0.05$.

Results – total questionnaire

- Cronbach alpha of the total questionnaire containing 164 questions was 0.853

Competence	No. statements	Cronbach alpha
Primary care management	40	0.672
Person-centered care	28	0.558
Specific problem solving skills	25	0.479
Comprehensive approach	23	0.363
Community orientation	36	0.427
Holistic approach	12	0.530

60-items Questionnaire A

Competence title	No. statements	Cronbach alpha
primary care management	26	0.714
Person-centered care	1	0.537
Specific problem solving skills	11	0.708
comprehensive approach	7	0.572
community orientation	11	0.712
holistic approach	4	0.507

Cronbach alpha for the total 60-items questionnaire was 0.878.

PRIMARY CARE MANAGEMENT

Broad knowledge is necessary for a doctor working in family medicine

Serious conditions are frequently treated at patient's home

It is better for patients if a doctor is a clinical specialist

Primary care can be of high quality

Appointment system in practice improves quality of care

In case of serious disease, an immediate referral is the best option

Good organisation of care can save lives

The main reason for referral is the interest of one's patient

Other health care workers can perform some medical tasks better than physicians

It is sometimes a role of the physician to be an advocate for his patient

Physicians don't have enough time for dealing with all the health problems the patients have

Physicians offer more to more demanding patients

Physicians must be available for their patients all the time

It is not the responsibility of the physician to explain the health care system to their patients

Physicians need appropriate equipment in order to work well

Lack of time could be a reason for lesser quality of work

High quality is not possible without good organisation

Medical record is a good indicator of quality of work

Patients usually want more time than it is necessary for the management of their problems

Frequent diseases should be managed in primary care

Long appointment time is unacceptable

Rare diseases should be managed by specialists

Physicians should not transfer their professional responsibilities to others

There is no high quality of care without a computer support

It is the nurse's responsibility to manage the waiting room

High quality of primary care can save a lot of money

PERSON CENTERED CARE

Patients often have unreliable requests

SPECIFIC PROBLEM SOLVING SKILLS

Detailed clarification of patients health care problems is important

It is not necessary to perform all diagnostic procedures at once

Physicians use referrals to achieve fair access to the secondary level of care

Priorities of physicians could be different from priorities of patients

Physicians should all the time balance between evidence and experience

Every health care problem should be defined as soon as possible

Community influences the physician's work

Non-specific health problems can be signs of serious diseases

It is not possible to objectively explain all the health problems a patient may have

Health care priorities may change over time in a patient

Patient's personality should be taken into account in treatment

COMPREHENSIVE APPROACH

Unfortunately, physicians must deal with problems which are not physical

Management of many health problems at once leads to missing the most important problems

Psychic dimension of the disease is usually as important as physical part of the disease

Prevention is more important than treatment

The best option for patient is to die at home

Prevention is a key to good health

When treatment options are considered, the cost for the patient should be taken into account

It is important that the doctor knows the legal limitations of his work

All the patients should have the same level of care independently of their social status

Physicians should cooperate with the local community

Physicians should coordinate their activities with the other services in community

Informatisation helps achieving high quality of work

COMMUNITY ORIENTATION

Sick leave is often exploited

Sick leave is a reflexion of the society and not a reflection of physician's work

Patients should know the legal framework of the health care system

If necessary the family should be included in treatment

HOLISTIC APPROACH

It is the duty of the physician to adapt recommendations to the patients' wishes and possibilities

Knowing patients' personality helps in choosing the appropriate diagnostic and therapeutic approach

Physicians should treat against the recommendations in guidelines if it is better for patient

Physician should be aware of patient's ethnicity and religion in order to successfully manage the disease.

Reliability at second administration, temporal stability

- The reliability of the 60-items questionnaire fulfilled by the second group of students assessed by Cronbach alpha was 0.816.

- Calculating temporal stability using ICC coefficient when the second administration of the questionnaire was one week after the first one, we found that our questionnaire has acceptable level of temporal stability - ICC= 0.448.

30-items Questionnaire B

- Chronbach alpha was 0.919
- Items were from five out of six competences in according to EURACT educational agenda (except holistic approach)
- The mean value of the items were from 5.31 to 6.55
- The mean sum of all items (range from 30 to 210) were from 41 to 203, mean 173.7 (SD 19.2)
- There were no differences between male and female students (p=0.061)

30-items questionnaire

Physicians should not transfer their professional responsibilities to others
High quality of primary care can save a lot of money
Without patients cooperation, there is no success in treatment
Without good communication, one cannot work well in practice
Long term doctor-patient relationship improve the efficacy of work
There is no appropriate treatment with ought trust
Doctor should be objective
A good doctor listens his patients
A good doctor identifies with the patient in distress
Detailed clarification of patients health care problems is important
Priorities of physicians could be different from priorities of patients
Treatment plan should be adapted to the patient
Priorities of patients care could be changed
Patient's personality should be taken into account in treatment
Psychic dimension of the disease is usually as important as physical part of the disease
Advice for healthy lifestyle in an important physicians' duty
Physician educates by his own example
Palliative care is as important as active treatment
Prevention is a key to good health
To each patient, one should include a preventive advice
At each visit, one should include a preventive advice
It is important that the doctor knows the legal limitations of his work
All the patients should have the same level of care independently of their social status
Physicians should adapt his work style to the needs and possibilities in the community in which he is working.
Physician should enable the same level of care to all the patients, taking into account the possibilities.
Physicians should cooperate with the local community
Informatisation helps achieving high quality of work
Physician should know the legal framework of the health care system
Patients should their rights and also their duties.
If necessary the family should be included in treatment

7 factors were recognized

Scree Plot
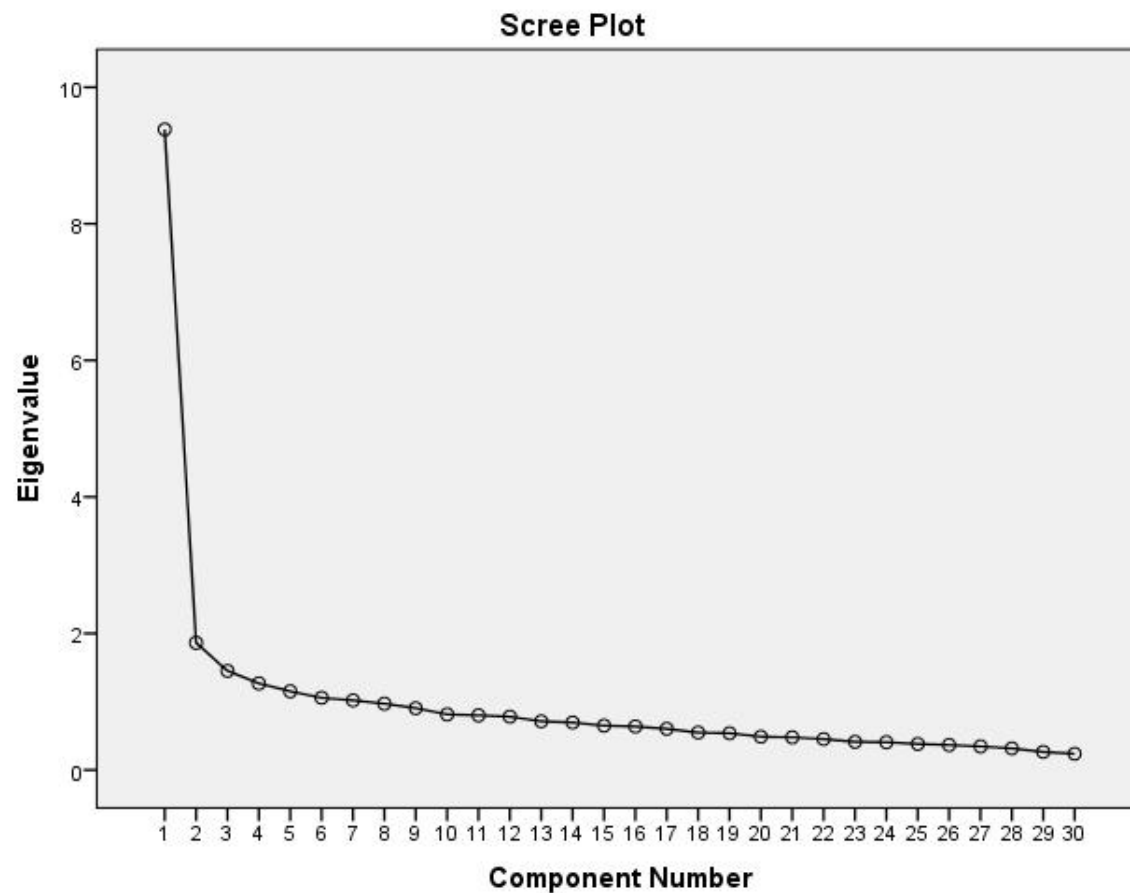
7 factors

1. Prevention
2. Social justice/ethical aspects
3. Community/health care system
4. Person – centeredness
5. Doctor-patient relationship and communication
6. Empathy
7. Financial efficacy

Factors vs. EURACT educational agenda

1. Prevention **(Comprehensive approach)**
2. Social justice/ethical aspects **(Primary care management)**
3. Community/health care system **(Community orientation)**
4. Person – centeredness **(Person-centered care)**
5. Doctor-patient relationship and communication **(person-centered care)**
6. Empathy **(Person-centered care)**
7. Financial efficacy **(Primary care managment)**

The influence of clerkship on students' attitudes

Competence title	t-test	p-value
Primary care management	1.849	0.067 (NS)
Person-centered care	-3.336	0.001
Specific problem solving skills	5.872	<0.001
Comprehensive approach	4.408	0.001
Community orientation	2.531	0.012
Holistic approach	2.286	0.005

NS-non-significant

Carrere choice of final year medical students (1- not at all, 5 very likely)

Students' wish to become a family medicine specialist (N=316)	Frequency	Percentage
1	24	7.6 %
2	80	25.3 %
3	115	36.4 %
4	83	26.3 %
5	14	4.4 %

Prediction of career choice-1

- 201 students (likely and unlikely to become family doctors)
- 31 out of 164 attitudes
- classification accuracy of at least 85%
- The most important singular statement (classification accuracy of 70.1%) is a **positive attitude toward long-term doctor-patient relationship**

Prediction of career choice-2

The other important predictors:
- trust in public health care system
- positive attitude to a family medicine physician as a role model
- communication skills
- tolerant approach to legal limitations

Conclusions

- Students doesn't understand family medicine as it was defined in EURACT educational agenda
- Understanding of holism and specific problem-solving skills is a problem
- Family medicine teaching could improve students' attitudes toward family medicine
- We identified predictors of career choice in family medicine and on some of them we could influence with our teaching

References

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