Developing self-assessment in an osteopathic curriculum

A comparison between self-assessed and externally assessed undergraduate clinical evaluations

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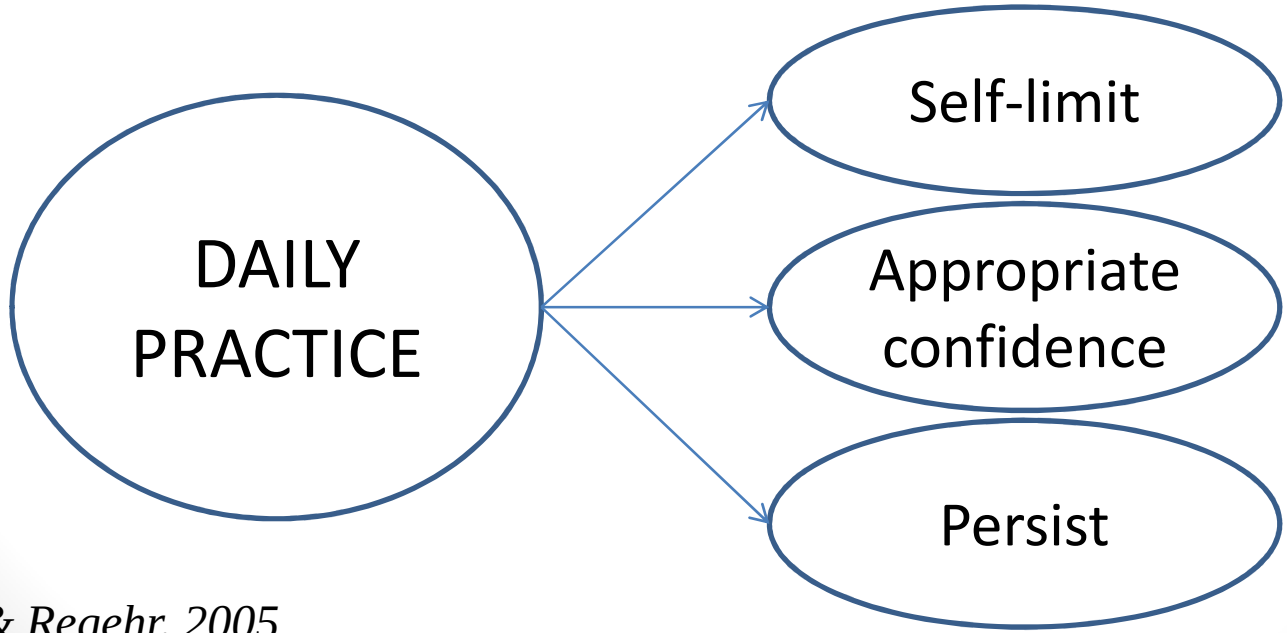
What is self-assessment ?

« Self-assessment functions both as a mechanism for identifying one's weaknesses and as a mechanism for identifying one's strength »

Why is it important for healthcare professionals?



Eva & Regehr, 2005

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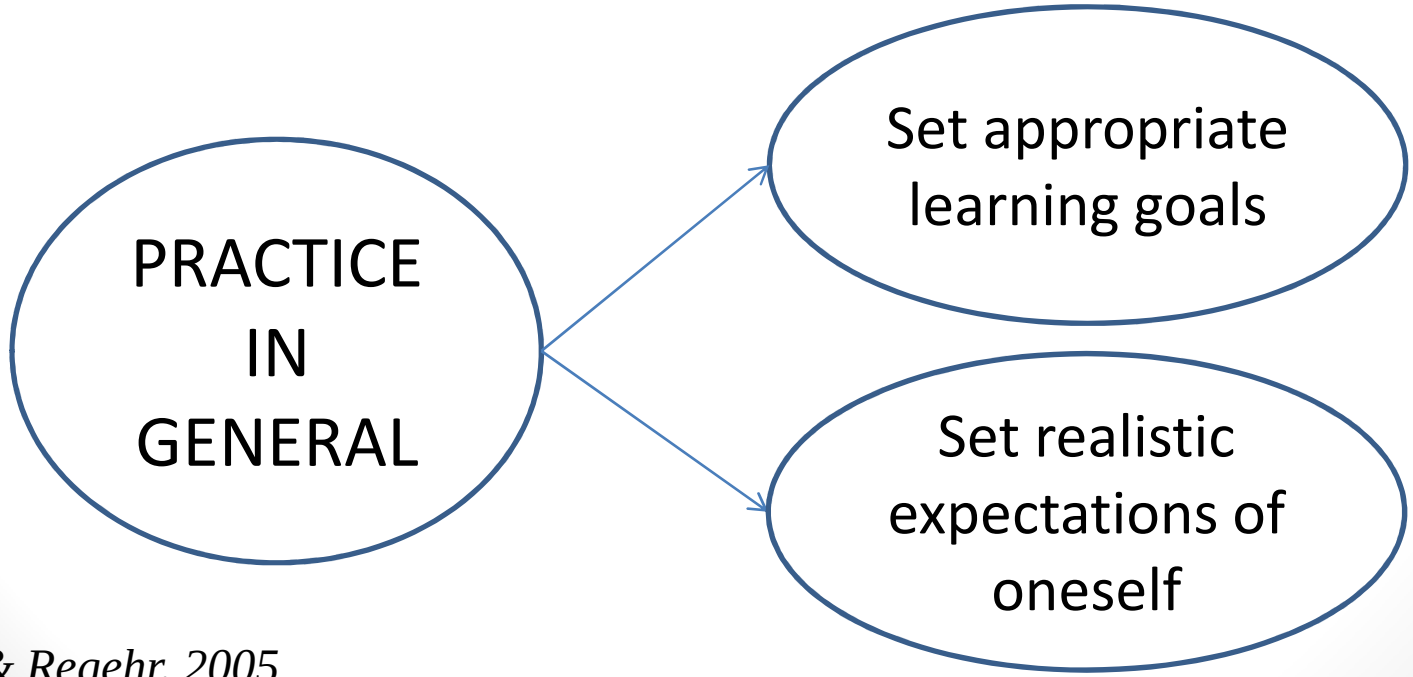


Eva & Regehr, 2005

Implementing the concept in an osteopathic curriculum

- Each student is assessed 4 times during the clinical hours of his last year

- At the end of these clinical assessments, the student fills in a self-assessment form

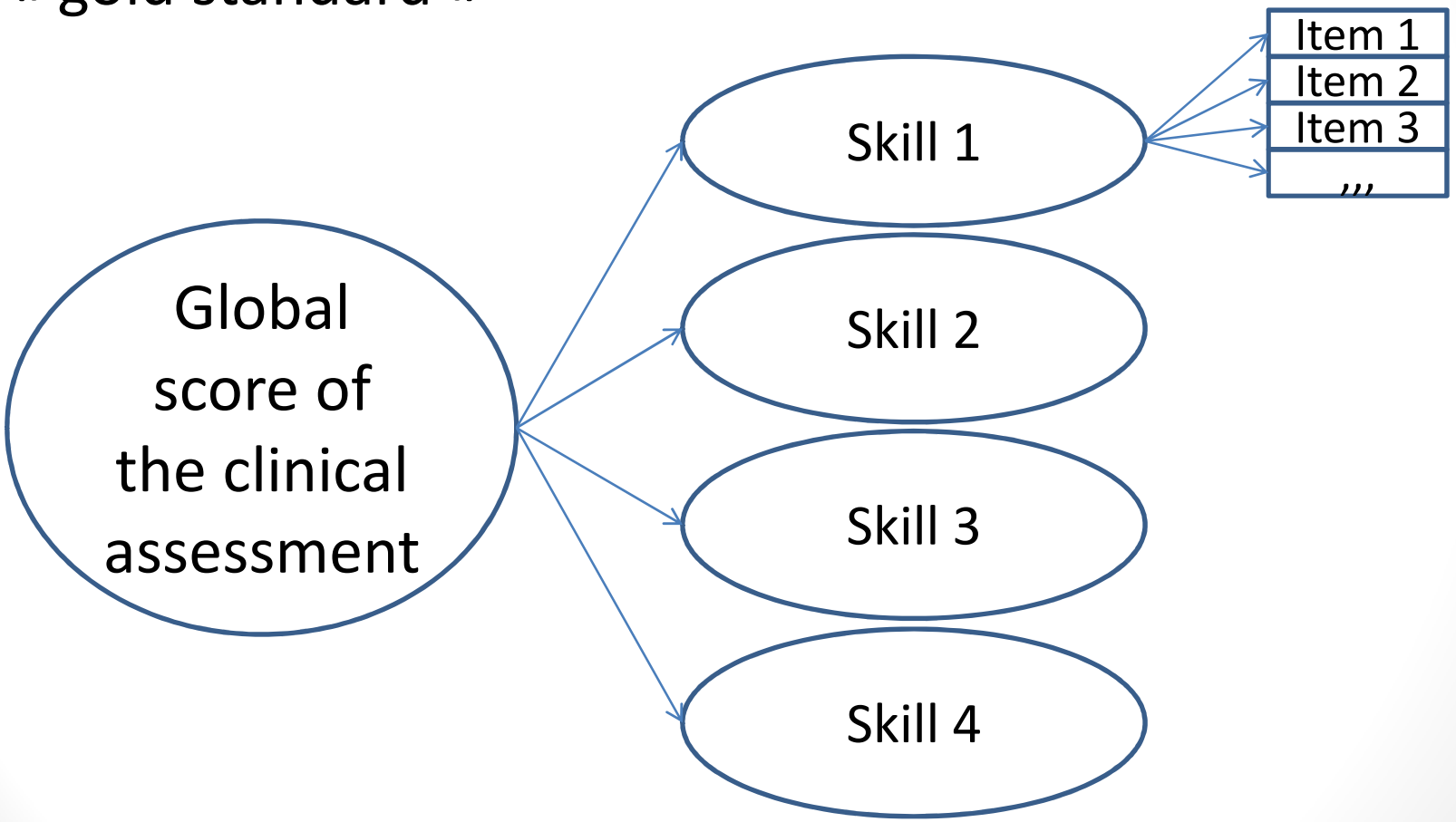
- The assessor fills in a similar form

- Students and assessors debrief on the consultation and comment the student's self-assessment

How close is the student's self-assessment to the « expert » assessment, in general ?

Main objective

Assess the validity of 5th year students's self-assessment capacities when compared to a « gold standard »



3 levels of analysis : global score, skills and items

Population

5th year students who never repeated a clinical year and gave their informed consent

Assessors

- Trained osteopath
- Graduated at least 5 years ago
- At least 5 years of clinical tutoring experience.

-> We gathered the results of the first two clinical assessments

The assessment form

Based on the 6 osteopathic skills defined by the SNESO organisation with the help of Professor Jacques Tardif (2012)

1) PROFESSIONALISM
2) INTERPERSONAL SKILLS
3) DIAGNOSTIC PROCESS
4) TREATMENT

Assessed during the clinical evaluations

5) EVIDENCE-BASED PRACTICE
6) PRACTICE MANAGEMENT

The assessment form

Skills	Number of items
Professionalism	4
Interpersonal skills	8
Diagnostic process	11
Treatment	7

28 items rated on a 3-point Likert scale

Not-acquired	Acquired	Mastered
1	2	3

The assessment form

Skills	Number of items	Skill score
Professionalism	4	/12
Interpersonal skills	6	/18
Diagnostic process	11	/33
Treatment	7	/21

- Summation of each item to reach a global score. Maximum : **84**
- Imputation of missing data by the mean of the other items of the skill, when at least 2/3 was available

Statistical analysis

Comparison of self-assessments and external assessments

- Spearman correlation coefficients for the global scores and each skill score
- Weighted kappa coefficients for each item

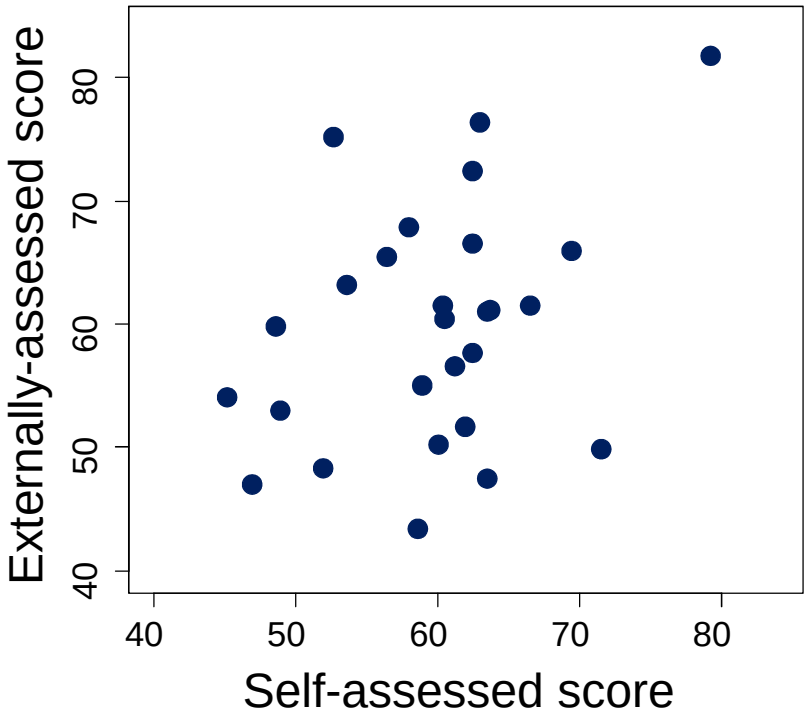
Results : Population

1st assessment → 27 students, 10 male/17 female, mean age 24,3 years old (+/- 1,8)

2nd assessment → 21 students, 6 male/15 female, mean age 24,6 years old (+/- 1,7)

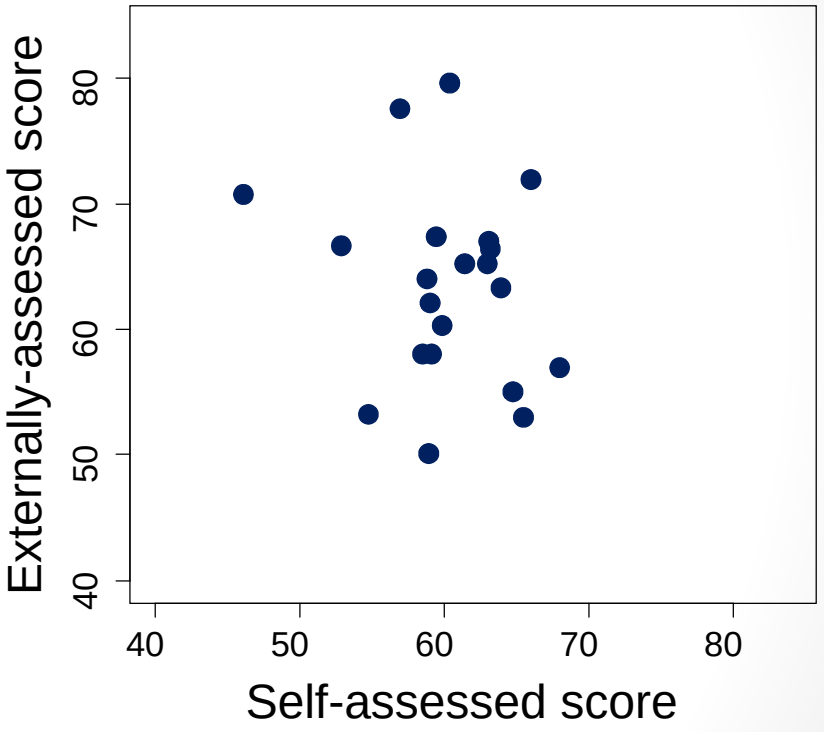
Results : Global scores

1st assessment



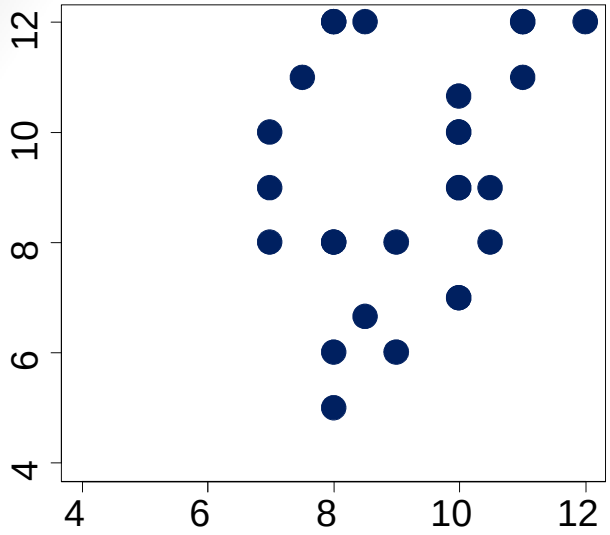
ρ = 0,29 (p=0,1403)

2nd assessment



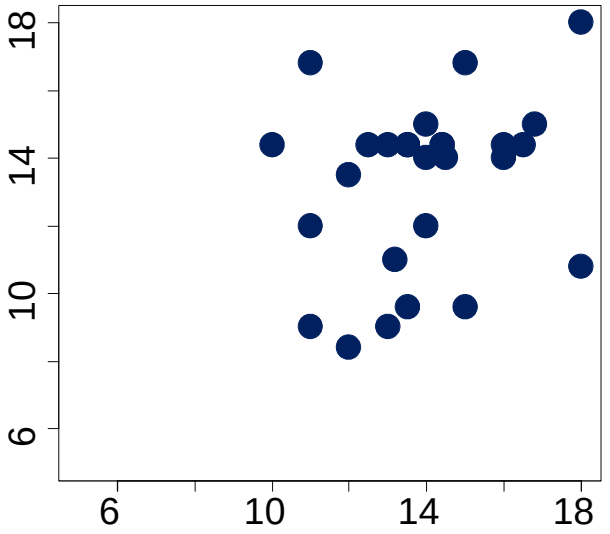
ρ = - 0.12 (p=0,6127)

Results : Skill scores, 1st assessment



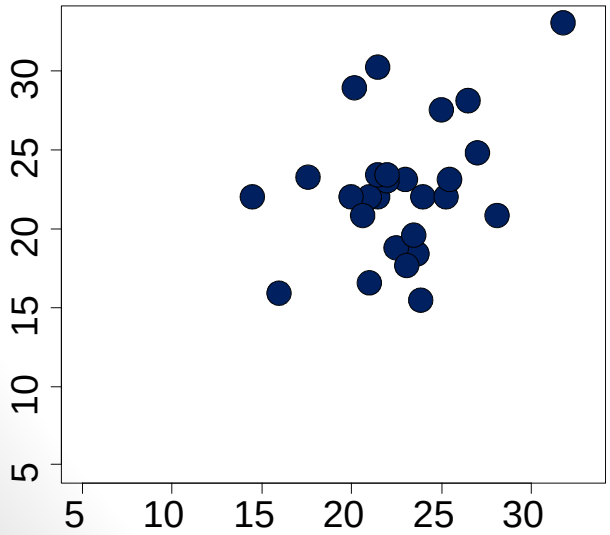
ρ = 0,27

Professionalism



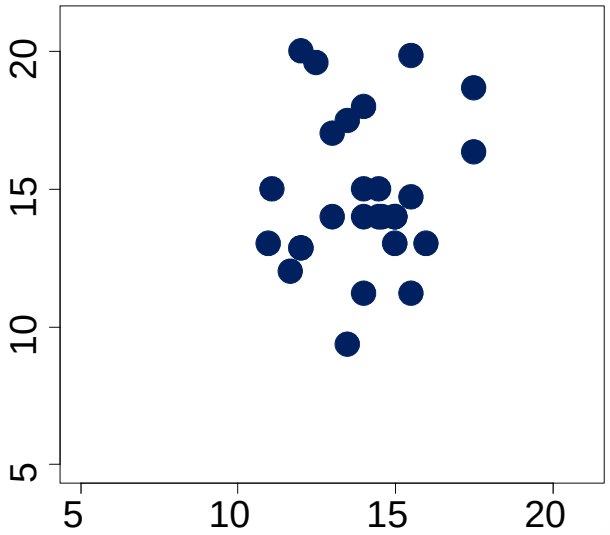
ρ = 0,28

Interpersonal skills



ρ = 0,18

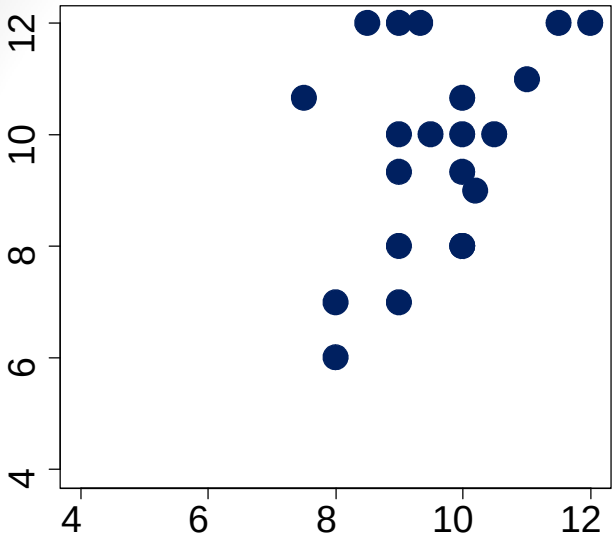
Diagnostic process



ρ = 0,12

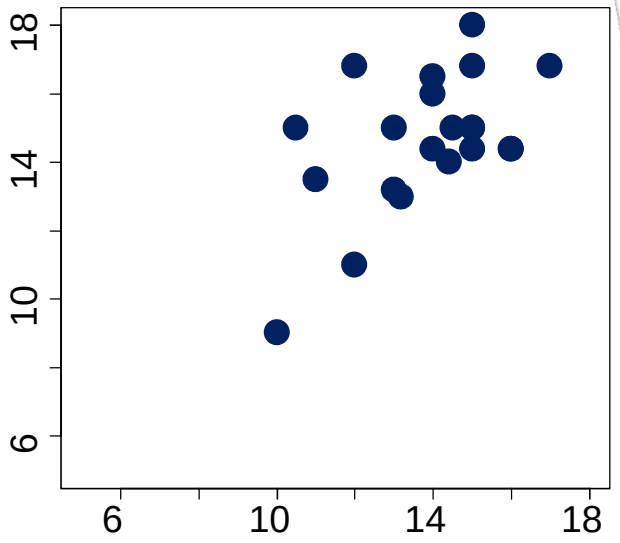
Treatment

Results : Skill scores, 2nd assessment



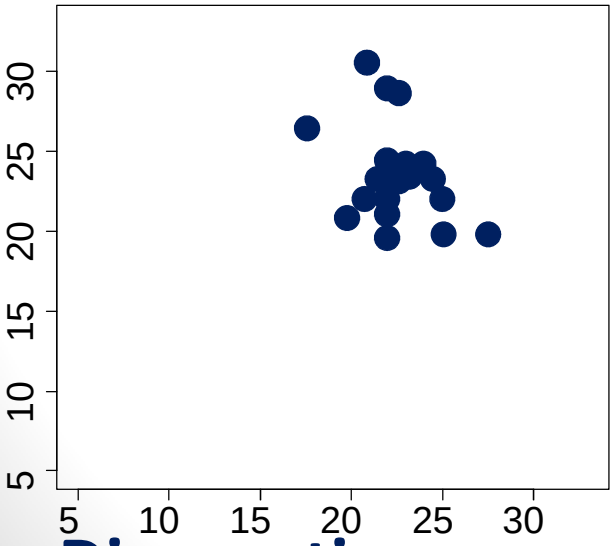
ρ = 0,31

Professionalism



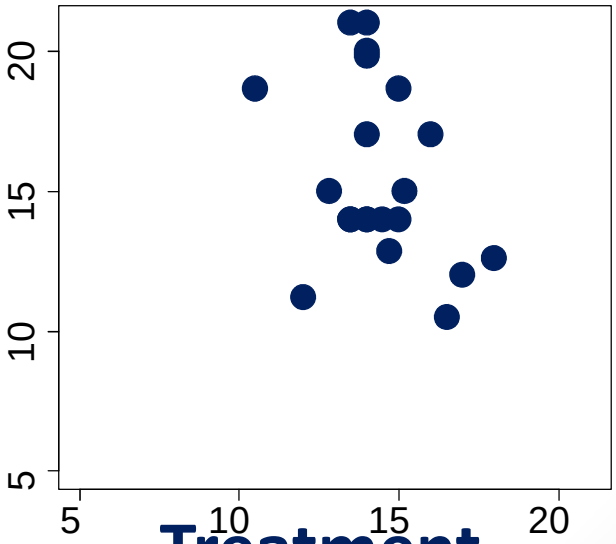
ρ = 0,41

Interpersonal skills



ρ = -0,19

Diagnostic process



ρ = -0,33

Treatment

Results : Item analysis

Most kappa values are lower than 0.4 , confirming the global results : There is poor concordance between self-assessment and external assessment.

→ Mean kappa values are higher for Professionalism and Interpersonnal skills

→ Kappa values are globally lower for Diagnostic and Treatment skills

Results : Item analysis

Best kappa values :

- Informing on the treatment (κ = 0,41 & 0,30)
- Listening and empathy skills (κ = 0,48 & 0,21)
- Confront history taking with palpation (κ = **0,5** & **0,49**)
- Hypothesis making (κ = 0,29 & 0,29)

Worst kappa values :

- Palpation skills (κ = 0,18 & **-0,44**)
- Static and dynamic observation (κ = -0,18 & 0,04)
- Adapting the treatment to the type of patient (child, pregnant women…) (κ = -0,29 & -0,18)

Discussion

1. Although the results of the first assessment are positive, the global feeling is that there is poor concordance.

- Self-assessment is a new concept for students
- Design of the scale : 3 point not enough ?
- Complexity of evaluating an osteopathic consultation

Discussion

2. Interestingly, self-assessments seem harder for diagnostic and treatment skills.

- Does it really comme from the students ?
- Particularly for assessments that rely on subjectivity ?
- Do we need to clarify our expectations to the students ?

Discussion

→ **Some Limits**

- Pilot study : need to increase assessments

- Students may not measure the importance of self-assessment and don’t fill the forms seriously.

- A heterogeneity of assessors

Conclusion

This type of analysis can reveal the strenght and weaknesses of :

- The appreciation by the students of the skills they’re supposed to master

- An item-based assessment process.

Perspectives

- Sensibilizing the students to the importance of self-assessment

- Self-assessment as part of a portfolio approach of learning

- Modify the assessment form in light of what we've learned

- Analyse the psychometric properties of a global scale? (reliability, construct validity…)

Thank you for your attention…

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