

Medical Education Journal Club

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Medical Education Journal Club

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Activity Directors / Planners / Reviewers / Faculty

Name	Role	Disclosure / Resolution
Carla S. Lupi, MD	Activity Director/Planner/ Speaker	Dr. Lupi reports no relevant financial relationships.
Vivian Obeso, MD	Planner/Speaker	Dr. Obeso reports no relevant financial relationships.
Christian Castro, PhD	Planner	Mr. Castro reports no relevant financial relationships.
Melissa Ward-Peterson, MPH	Planner	Ms. Ward-Peterson reports no relevant financial relationships.



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Disclosure Information

Faculty / Speaker

- Education in Medicine
 - Owner
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 - Paid consultant



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Learning Objectives

- Be able to list the search results for one medical education database consulted in the design of a course or teaching session.
- Conduct a critical appraisal of an article in the medical education research.
- Identify the applicability of research results to one's own course or teaching session.



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- Establish a forum for faculty to share and discuss recent literature in medical education
- Use best evidence in medical education literature to evaluate and advance current practices in our educational program
- Establish a culture that promotes curricular innovation and change in an evidence-based manner
- Stimulate educational scholarship



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Objectives for Today's Session

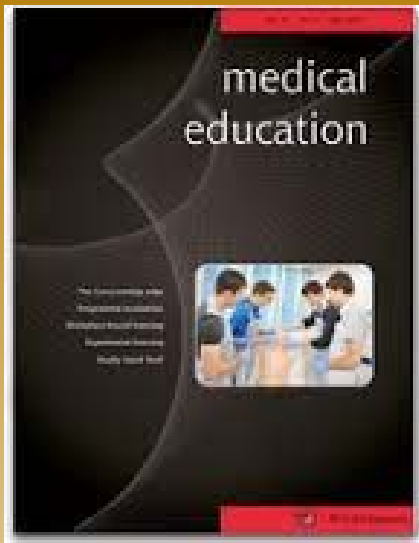
- Learn about factors that distinguish quality feedback
- Know the difference between feedback and general compliments
- Be comfortable evaluating an educational randomized controlled trial



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feedback



An investigation of medical student reactions to feedback: a randomised controlled trial

MARGARET L BOEHLER, DAVID A ROGERS, CATHY J SCHWIND, RUTH MAYFORTH, JACQUELYN QUIN, REED G WILLIAMS & GARY DUNNINGTON

BACKGROUND Medical educators have indicated that feedback is one of the main catalysts required for performance improvement. However, medical students appear to be persistently dissatisfied with the feedback that they receive. The purpose of this study was to evaluate learning outcomes and perceptions in students who received feedback compared to those who received general compliments.

METHODS All subjects received identical instruction on two-handed surgical knot-tying. Group 1 received specific, constructive feedback on how to improve their knot-tying skill. Group 2 received only general compliments. Performance was videotaped before and after instruction and after feedback. Subjects completed the study by indicating their global level of satisfaction. Three faculty evaluators observed and scored blinded videotapes of each performance.

the group that received compliments was significantly higher than the group that received feedback (6.00 versus 5.00, $P = 0.005$).

DISCUSSION Student satisfaction is not an accurate measure of the quality of feedback. It appears that satisfaction ratings respond to praise more than feedback, while learning is more a function of feedback.

KEYWORDS randomised controlled trial; humans; students, medical/*psychology; *feedback, psychological; *education, medical, undergraduate; personal satisfaction

Medical Education 2006; 40: 746–749
doi:10.1111/j.1365-2929.2006.02503.x



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Background / Introduction



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Background

Definition of Feedback

Feedback is the control of a system by reinserting into the system the results of its performance.



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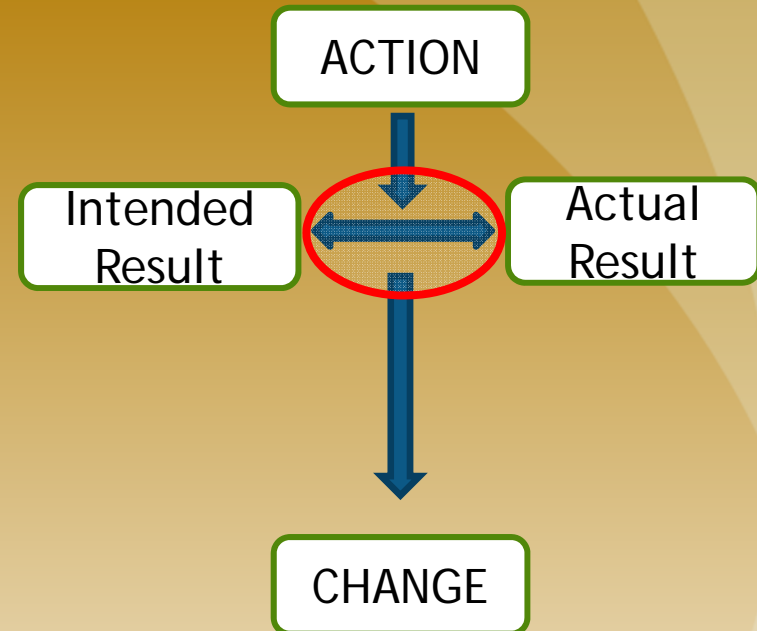
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Background

Feedback is important in clinical skill acquisition

- Helps students to learn about deficiencies and strengths
- Dissonance between intended result and actual result
- Offers insight into what he or she actually did
- The consequences of actions.
- A impetus for learner change



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Background

Can be difficult to give

Is not done often enough (with med students)

Is generally not done well enough (by faculty)



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Sumit K. De, et al. Attending, house officer, and medical student perceptions about teaching in the third-year medical school general surgery clerkship. J AM Coll Surg. 2004; 199(6): 932–942.

Background

At the University of Michigan, medical students were asked about feedback on the Surgery clerkship:

When asked (did you always get feedback?), students were more likely to Disagree or Strongly Disagree ($p < 0.001$)

Medical students thought that feedback was poor compared with the opinions of faculty and residents ($p < 0.002$).

50% of medical students believed they were an inconvenience to the service; 30% of house officers and 27% of faculty ($p < 0.001$) believed this also.



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Ringdahl EN, Delzell JE, Kruse RL.
Evaluation of interns by senior residents
and faculty: is there any difference? Med
Educ 2004; 38(6): 646-51.

At the University of Missouri-Columbia, PGY-1 residents were evaluated by faculty and senior residents. End of block written feedback comments were analyzed.

82% of all comments were positive

38% of all comments fell into two categories (generic comments & personal attributes)

Level or gender of the evaluator did not affect the comments ($p = 0.17$)



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Weak feedback

Competencies that are not observable

Uninformed or non-expert observer

Global information

Implicit standard

Second hand information

No aim of performance improvement

No intention to re-observe

Strong feedback

Well observable tasks and competencies

Expert observer and feedback provider

Highly specific information

Explicit standard

Personal observation

Explicit aim of performance improvement

Plan to re-observe

**Van De Ridder J, Stokking K, McGaghie W, Ten Cate O.
What is feedback in clinical education? Med Ed 2008;
42 (2): 189–197**



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Background

Characteristics of High Quality Feedback

- Timely
- Behavior (or action) specific
- Addresses specific deficiencies that can be corrected
- Includes information in multiple domains



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Hypothesis

“medical students receiving compliments would be more satisfied than those receiving feedback”

“”medical students receiving feedback would demonstrate improved performance, whereas those receiving compliments would not”



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Research Question?

- What is it?
- Not explicitly stated
- Research question is tied to your hypothesis



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Methods



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Population

Medical Students

2nd and 3rd year

Southern Illinois University School of Medicine



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Setting

Motor Learning Session

Motor learning is a change, resulting from practice or a novel experience.

It involves improving the smoothness and accuracy of movements and is necessary for complicated movements such as playing the piano and **tying surgical knots**

Salmoni A, Schmidt R, Walter C. Knowledge of results and motor learning: A review and critical reappraisal. *Psych Bulletin* 1984; 95(3): 355-386.



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Intervention-Set Up

Pre-Test performance of all students

Tested the ability to tie a two-handed surgical square knot

Videotaped



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Intervention-Set Up

Instruction for all students

Identical instruction on two-handed surgical square knot-tying

Given by an expert academic surgeon, well-respected, supportive, credible, and trustworthy



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Intervention-Set Up

Pre-Intervention performance by all students

Tested their ability to tie a two-handed surgical square knot (again)

Videotaped



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Intervention-Randomization

Randomized to two groups

Group 1 – Compliment Group

observed by expert instructor

given pre-arranged / scripted compliments

Group 2 – Feedback Group

observed by expert instructor

given immediate, specific feedback based on deficiencies



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Intervention-Post

Post-intervention performance of all students

Tested their ability to tie a two-handed surgical square knot (again)

Videotaped



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Data gathered

Student demographic data

Performance outcome

Three videotaped student performances

Pre-test, Pre-intervention, Post-intervention

Satisfaction outcome

Asked to rate their satisfaction with the instruction

7-point Likert scale (1= “very poor” and 7 = “truly exceptional”)



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Data gathered

Performance Outcome

three blinded, faculty reviewed each video performance
used validated performance assessment instrument

Scored videos (total score 0 – 32)

8 distinct actions required for optimal knot-tying
performance

5-point Likert scale (0 – 4)



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Data analysis

Inter-observer agreement on video performance ratings

2-way random effects interclass correlation (ICC)

Pre and post intervention performance ratings compared with Paired Sample *t*-test

Average performance ratings of Groups 1 and 2 were compared with Independent-sample *t*-test

Average satisfaction scores of Groups 1 and 2 were compared with Independent-sample *t*-test



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Results



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Demographics

- Average age 25.6
- Gender Male (51.5%) Female (48.5%)
- Level of training- 2nd and 3rd year

After randomization:

Groups were same



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Inter-observer reliability

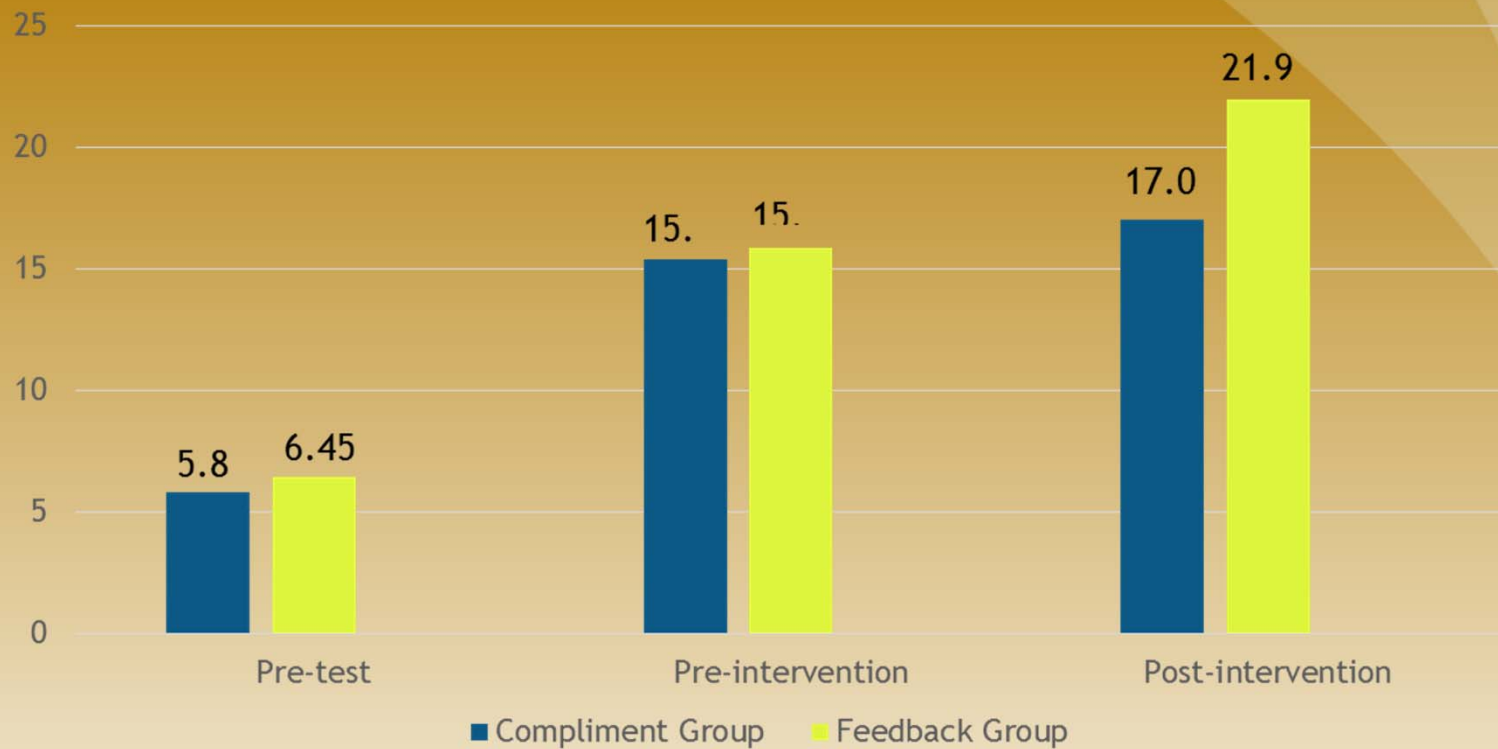
Pre-test	0.80
Pre-intervention	0.82
Post-intervention	0.83



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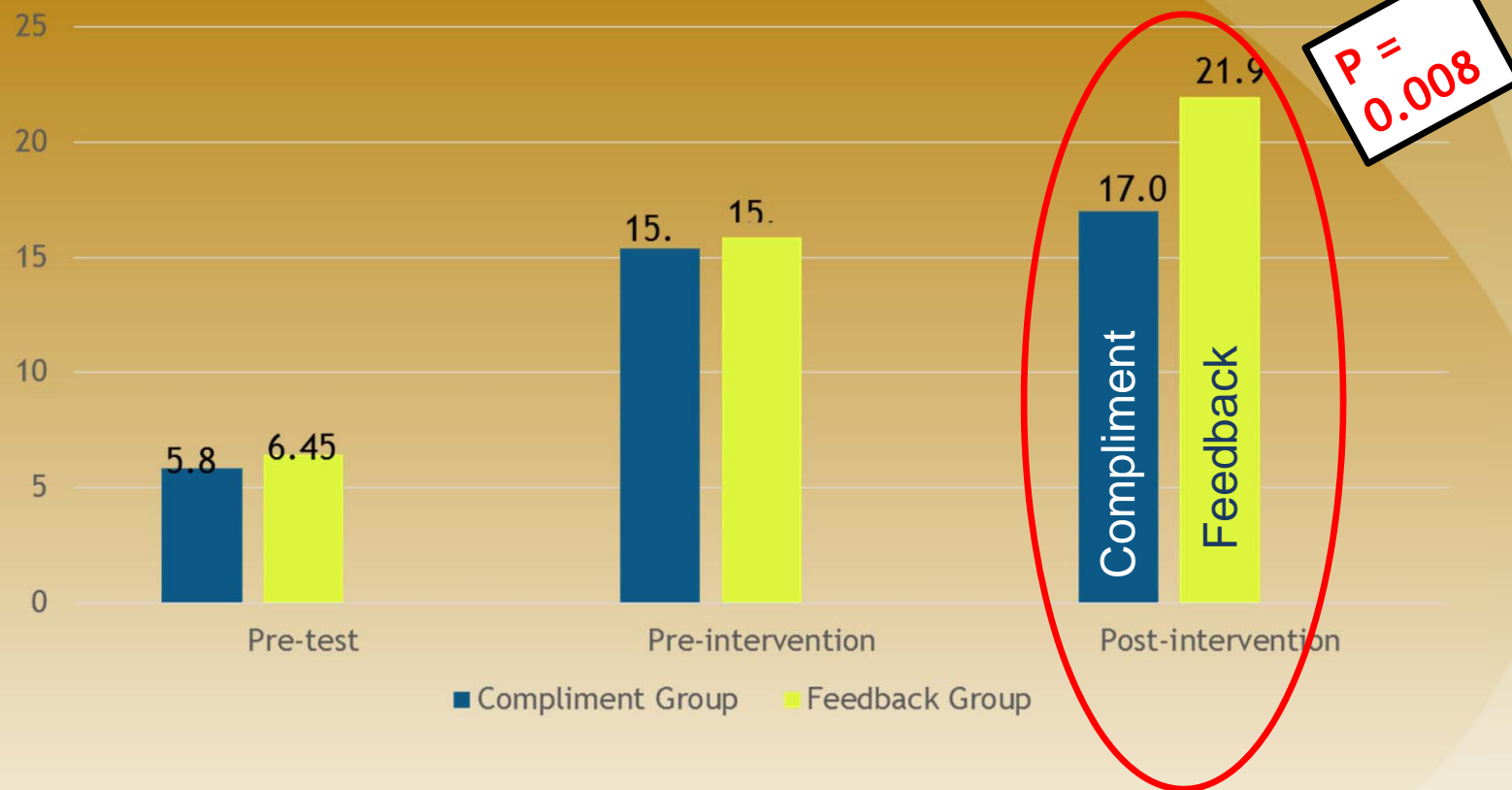
Average Performance ratings



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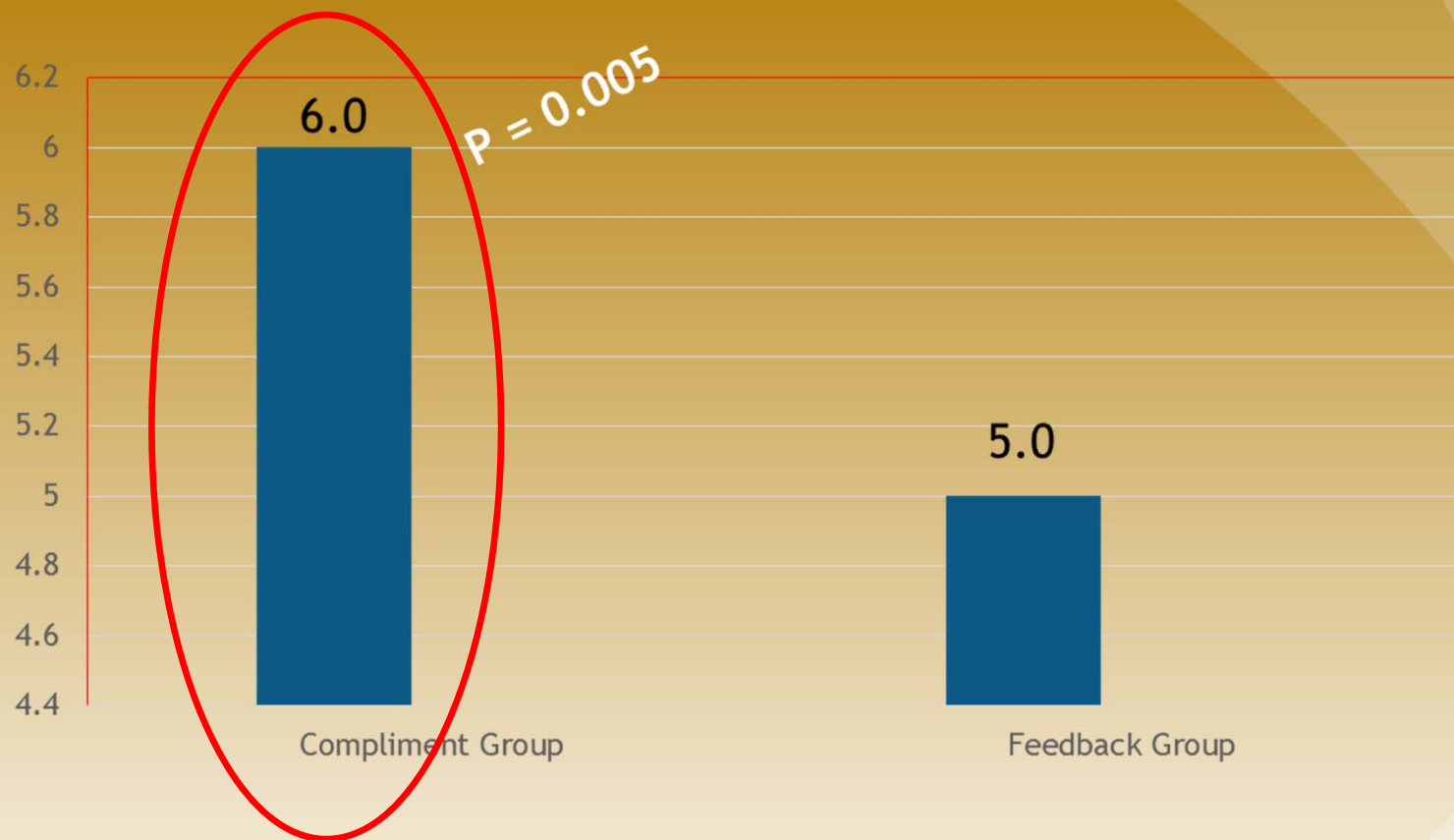
Average Performance ratings



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Global Satisfaction ratings



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Critique / Criticisms Questions / Flaws



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Population

- Is this population the same as ours?
- Is it generalizable to our students & faculty?



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Population

Southern Illinois University School of Medicine

State university. Multi-campus (4). Started in 1968.

Accreditation: Full 8 years no citations in 2012

298 current students; 49% women

Residents - 332 current residents and fellows in training

Graduates in practice - 1,964 graduates in practice; 827 (42%) in 72 Illinois counties; 893 (45%) in primary care

Degree programs - medical, M.D./J.D., M.D./M.P.H., doctoral, master's, physician assistant as well as residency programs



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Intervention

Randomization

Were the students blinded to which group they were assigned to?

Not explicitly stated

How many students were randomized to each of the group?

Does not say (total was 33)



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Intervention

Is the intervention reasonable and is there an appropriate comparison?

Which was the intervention?

Giving compliments- (per the authors)

Could look at it the other way:

Usual care (compliments / bad feedback)



Good specific feedback



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Outcome

Did they assess appropriate outcomes?

Videotapes of surgical knot tying

validated measure, but....

not much in the literature about the measure

the Action steps that are assessed are not in the literature

Asked two experienced surgeon (FS, RL) neither had heard of it



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Change your practice?

- Is this going to change your practice?
- Did anyone think that just giving compliments would be better than specific feedback?
- Points out that our usual practice may not be as effective but still lead to improvements (the students just got better with more practice)
 - **Time-on-task effect**
 - Important to take into consideration with clinical skill acquisition studies



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Change your practice

- Giving good, specific feedback leads to better performance
- The students in the feedback group were statistically better after getting behavior-specific feedback



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Questions?



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**Please complete the CME survey to
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