

Emotion regulation: a useful predictor of empathy in medical students



Rampoldi G.^{2,4}, Ardenghi S.^{1,4}, Strepparava M. G.^{1,3,4}
¹Milano-Bicocca University, School of Medicine and Surgery
²Milano-Bicocca University, Department of Human Sciences for Education
³San Gerardo Hospital, Clinical Psychology Unit
⁴Italian Society of Medical Education (SIPeM)



Introduction

Emotion regulation (ER) is a predictive factor of academic performance [1,2] and well-being [3] in medical students.

Several studies explored the relationship between Emotional Intelligence and empathy in medical students [4-6], but little is known about the association between ER and empathy in the medical education.

Methods

389 second-year medical students (female = 207; mean age = 19.93, SD = 1.39) completed the Italian version of the Jefferson Scale of Physician Empathy – Student Version (JSE-S), and the Difficulties in Emotion Regulation Scale (DERS) at the beginning of the academic year.

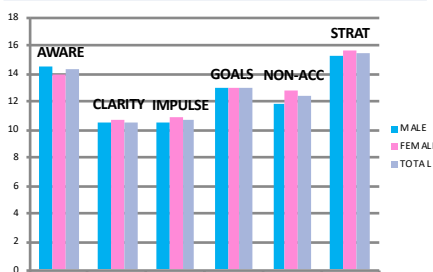
T-test and multiple hierarchical linear regression models were performed in order to evaluate the gender differences in students' ER scores and the relationship between the difficulties in emotion regulation with empathy levels.

Results

No gender differences were found in DERS subscales.

DERS scores explained 9% of variance in medical students' empathy.

Controlling for the effect of gender and age, Awareness ($\beta = -0.215$; $p < 0.001$), Clarity ($\beta = -0.130$; $p < 0.05$) and Non-acceptance ($\beta = -0.142$; $p < 0.05$) subscales showed a significant negative relationship with medical empathy scores.



T-test revealed no gender differences in DERS scores

Aim

This study was designed to **determine whether difficulties in ER were associated with empathy** in a sample of second-year medical students. A negative correlation between difficulties in ER and empathy was expected.

Materials

The *Difficulties in Emotion Regulation Scale* (DERS) was designed to assess trait-level **emotion regulation ability** as defined by Gratz and Roemer [7,8]. This 36-item self-report measure is scored such that higher scores reflect greater impairment or dysregulation. The six subscales are:

- lack of emotional awareness (**AWARENESS**);
- lack of emotional clarity (**CLARITY**);
- difficulty regulating behavior when distressed (**IMPULSE**);
- difficulty engaging in goal-directed cognition and behavior when distressed (**GOALS**);
- unwillingness to accept certain emotional responses (**NON-ACCEPTANCE**);
- lack of access to strategies for feeling better when distressed (**STRATEGIES**).

The *Jefferson Scale of Empathy – Student version* (JSE-S) [9,10] is a self-administered unidimensional inventory to assess **clinical empathy in medical undergraduate students**. The measure contains 20 questions, half of which are negatively phrased. The students mark 1 of the 7 options provided on a Likert scale in response to each item (1=strongly disagree, 7=strongly agree).

	MODEL			AWARENESS		CLARITY		IMPULSE		GOALS		NON-ACCEPT		STRATEGIES	
	R ²	F	p	β	p	β	p	β	p	β	p	β	p	β	p
JSE-S	.09	6.991	< .001	-.215	< .001	-.130	.043					-.142	.025		

Associations between difficulties in emotion regulation and empathy levels



Discussion

This study explored the individual differences in ER and the relationship between difficulties in ER and the medical empathic attitude in undergraduate medical students.

Consistent with study hypotheses, medical students that reported higher levels of emotion dysregulation showed lower levels of empathy.

The results suggest that **emotion regulation deficits might lead to difficulties in medical empathy.**

Therefore, future research should also incorporate a measure of alexithymia (inability to identify and describe emotions experienced by one's self or others) in order to gain a deeper understanding of the relationship between empathy and emotion regulation.

Take-home message

For improving or maintaining students' empathy levels, **medical educators should provide a set of ER strategies to their students during medical school.** This would help them to be aware of their own and others' emotions during the emotionally demanding encounters with patients.

Contact

Maria Grazia Strepparava
 Milano-Bicocca University, School of
 Medicine and Surgery
 Via Cadore 48, 20900 Monza (MB) – Italy
 E-mail: mariagrazia.strepparava@unimib.it

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