



Short communication

Appropriate training based on Balint groups can improve the empathic abilities of medical students: A preliminary study



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ABSTRACT

Objective: Although empathy is critical in a doctor–patient relationship, empathic abilities seem to decline throughout medical school. This study aimed at examining changes in empathic abilities of fourth-year medical students who participated in an optional certificate based on Balint groups.

Methods: Thirty-four students were included in the “Balint group” certificate and compared with 129 participating in other certificates. Before the training sessions and 4 months later, they filled up the interpersonal reactivity index (IRI) and were asked to rate their emotional reactions in response to two case-reports: the first described a woman with diabetes, borderline- personality traits and a history of childhood trauma; the second, a woman with histrionic traits suffering from multiple sclerosis and hospitalized for functional symptoms. A principal component analysis extracted four factors from the 8 questions asked: empathic-approach (e.g. finding the patient touching), rejecting-attitude, intellectual-interest and fear of emotion contagion.

Results: At baseline, there were no socio-demographic or psychological differences between groups. At follow-up, an increase of IRI fantasy-scale ($p = 0.02$) and a decrease of IRI empathic-concern ($p = 0.006$) were observed, regardless of the group. Empathic-approach only increased in the “Balint group” and for the first case-report ($p = 0.023$), with a difference between the groups at follow-up ($p = 0.003$).

Conclusion: Results suggest that Balint groups may enable medical students to better handle difficult clinical situations such as those presented by borderline personalities. Our findings encourage assessing training initiatives designed at helping young medical students to take into account the emotional component of a doctor–patient relationship.

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Introduction

Physician's empathic abilities are essential to build a strong doctor–patient relationship, which is known to improve treatment adherence and clinical outcomes [1]. Empathy refers to the ability to share emotions with others, without confusion between self and others. It integrates emotional resonance, emotion regulation and perspective-taking [2]. Most standardized evaluation scales of empathy, including those that have been used among physicians such as the Interpersonal Reactivity Index (IRI) [3,4], distinguish between affective and cognitive

empathic abilities. A decline in empathy throughout medical school has been observed [5] mainly at the end of first and third year [6], although other findings tend to moderate these conclusions. First, very weak or even no decreases were also found [7]. Second, since empathy is critically modulated by contextual factors [2], this decline may be more about the perceived importance of empathy within the context of the doctor–patient relationship than about empathic abilities per se [8]. In IRI-based studies, the most affected dimension is the “Empathic-Concern” [9]. Several factors could explain this phenomenon: teaching methods [10] (e.g. prioritizing a purely biomedical approach); selection procedures which may not be in favor of the most empathic students [5]; influence of models [6]; and coping strategies based on emotional distancing [11]. However, the IRI may fail to capture the actual implementation of empathic skills within the context of the doctor–patient relationship [12]. As a consequence, interventions aiming at promoting empathic skills among medical students should not only use general

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measures of empathy such as the IRI, but also more ecological, clinically-relevant measures.

Several interventions aimed at preserving medical students' empathic abilities have been developed such as narrative medicine, which encourages students to put themselves in the place of the patients by narrating their story in the first person [13], theater groups [14], experience sharing in small groups [15], or videotaped case analyses [16]. Balint groups are specifically designed to help health-professionals and medical students in developing their empathy skills in order to reduce interpersonal difficulties. Ability to listen, according to Balint, refers to the inclination of a caregiver to take into account emotional issues of the doctor–patient relationship through using his or her empathic skills as assessed by the IRI [17–19]. Participants are asked to react to a particularly touching, upsetting or interesting live clinical situation that involves interpersonal problems. Theoretical and practical training of facilitators is systematized. These interventions differ from problem-based learning in that they aim to develop empathic abilities rather than medical knowledge [20].

In Paris Descartes University of Medicine, all the fourth-year medical students participate in a Narrative Medicine seminar and have to choose one optional certificate among thirteen. All of them consist of lectures in different specialties (e.g. cardiology, microbiology, and surgery) that the student wishes to study further, excepting the optional certificate entitled “doctor–patient relationship training”. In this last certificate, students are divided into small groups, structured as Balint groups, and instead of lectures, participants interact with each other according to specific procedures. This study aimed at examining changes in empathic abilities observed in students who participated in this last certificate as compared with those who did not.

Material and methods

Population

By the short title of “Balint group” we will refer to all fourth-year medical students of Paris Descartes University in 2009/2010 who participated in the optional certificate “doctor–patient relationship training.” The latter started on 10/28/2009 and ended on 02/03/2010, and consisted of 10 two-hour weekly sessions, except during school holidays. Students were separated into small groups of 8 to 10 people supervised by a trained facilitator experienced in Balint groups. Case-reports based on real patients met in hospital settings were voluntarily presented by students and discussed within each group.

The “control group” consisted of all other fourth-year students. No further change towards another optional certificate was authorized during the year.

The study was approved by the dean of Faculty of Medicine for evaluating the effects of this new certificate. After having given their informed consent, all participants were invited to fill in questionnaires via an internet platform, first from 10/09/2009 to 11/19/2009, then from 02/04/2010 to 03/05/2010. The study was presented as a research on doctor–patient relationship without any mention to the comparison between groups. No reward was offered to the participants.

Questionnaires

The following questionnaires were filled in by all the participants before and after the end of their optional certificate:

- The French version of the IRI with its four dimensions: Fantasy-Scale (tendency to get caught up in fictional stories), Empathic-Concern (sympathy and concern for others), Perspective-Taking (tendency to take the psychological point of view of others) and Personal-Distress (self-oriented anxiety when witnessing others in distress) [21].
- An ad hoc 8-item questionnaire aimed to assess their reactions in response to two written case-reports, the first describing a woman

with diabetes, borderline personality traits and a history of childhood trauma, and the second a woman with histrionic traits suffering from multiple sclerosis, hospitalized for functional symptoms (see supplementary material for details). Participants read each case report and answered the following questions on a 4-point Likert scale (Not at all, A little, Somewhat, A lot): Q1) Does the story of Mrs X affect you?; Q2) Does the attitude of Mrs X annoy you?; Q3) Do you find Mrs X touching?; Q4) Do you find the case of Mrs X interesting?; Q5) When listening to Mrs X, could you naturally put yourself in her place?; Q6) Does Mrs X make you feel like you're wasting your time?; Q7) Can being absorbed by the experiences of Mrs X interfere with the rigor of your diagnostic and therapeutic approach?; and Q8) Can taking care of Mrs X teach you something about your job?

Statistical analysis

A Principal Component analysis with varimax rotation extracted four factors from the second questionnaire that accounted for 76% and 78% of the total variance for the first and second case reports, respectively. Four variables were consequently computed, by summing single scores: Empathic-Approach (Q1 + Q3 + Q5), Rejecting-Attitude (Q2 + Q6), Intellectual-Interest (Q4 + Q8) and Fear of Emotion Contagion (Q7). Chi-square- and Student *t*-tests for independent groups were used for baseline comparisons between Balint and control groups, respectively for categorical and continuous variables. The reliability of the factorial scores extracted from our 8-item ad-hoc questionnaire was tested by computing Pearson correlation coefficients between scores derived from each of the two case-reports. Student *t*-tests for paired groups were used for comparisons between baseline and follow-up measures (pre–post tests). The combined effect of time and participation to Balint based training on doctor–patient relationship was tested via ANOVAs for repeated measures with a between-group factor and a within-group time factor. Potential confounding factors were added in the ANOVAs as covariates. For all statistical analyses, selected tests were two-tailed and the significance level was set at 5%. The analyses were performed using SPSS-16.0 for Windows.

Results

In 2009–2010, 439 students (aged 22 ± 1.7 years) were in the fourth year of medical school. Sixty participated in the certificate on patient–doctor relationship, with an average attendance of 8.6/10 sessions: 34 of them (57%) accepted to participate in our study and filled out the questionnaires; and 379 participated in other optional certificates: 129 of them (34%) filled in the questionnaires. At baseline, there was no difference between Balint and control groups regarding gender, parental socioeconomic status (SES), IRI scores and reactions to case-reports (Table 1). There were fewer students who were currently undergoing a personal psychotherapy in the Balint group (2/34) than in the control group (27/129; $p = 0.042$). Women had higher IRI subscores than men, and Empathic-Approach was higher in students with lower SES (all $p < 0.05$).

At follow-up, an increase of IRI Fantasy-Scale (effect size $\eta^2 = 0.033$; $p = 0.020$) and a decrease of IRI Empathic-Concern ($\eta^2 = 0.046$; $p = 0.006$) were observed, regardless of the group. Subjects from lower parental SES compared with those from upper SES had a higher increase of their Fantasy-Scale (SES*time interaction: $\eta^2 = 0.027$; $p = 0.036$) and a greater decrease of their Empathic-Concern (SES*time interaction: $\eta^2 = 0.027$; $p = 0.039$).

Regarding the first case-report, the Empathic-Approach factor increased in the Balint group only (group*time interaction: $\eta^2 = 0.032$; $p = 0.023$ for the), with a significant difference between groups at follow-up ($p = 0.003$) (Fig. 1). The group*time interaction remained significant ($p = 0.019$) after adjusting for the parental SES. In addition, Intellectual-Interest increased ($\eta^2 = 0.027$; $p = 0.032$) and Rejecting-Attitude decreased ($\eta^2 = 0.048$; $p = 0.005$) in the whole population, without any group*time interaction. Separate analyses per group confirmed an increase of Empathic Approach ($p = 0.03$) and Intellectual Interest ($p = 0.046$) in the Balint group and a decrease of Rejecting Attitude in both groups (Table 2). No significant change was observed regarding the second case-report. Pearson correlation coefficients between the two case-reports were respectively of 0.66, 0.50, 0.30 and 0.63 for Empathic Approach, Intellectual Interest, Rejecting Attitude and Fear of Emotion Contagion (all $p < 0.001$).

Table 1
Comparisons at baseline between Balint and control groups for socio-demographic and psychological variables

Socio-demographic characteristics	Balint group (N = 34)	Control group (N = 129)	p
Age (years) ^a	21.68 (1.20)	21.71 (1.78)	0.92
Gender ^b			
Male	9 (26.5)	53 (41)	0.12
Female	25 (73.5)	76 (59)	
Socio-economic status ^b			
Low or average	11 (32.4)	28 (21.7)	0.20
High	23 (67.6)	101 (78.3)	
Personal psychotherapy ^b			
Yes	2 (5.9)	27 (20.9)	0.041*
No	32 (94.1)	102 (79.1)	
Doctor in family ^b			
Yes	11 (32.4)	39 (30.2)	0.81
No	23 (67.6)	90 (69.8)	
Psychological scores at baseline			
Interpersonal Reactivity Index ^a			
Fantasy Scale	18.05 (5.51)	17.76 (6.11)	0.80
Empathic Concern	17.12 (3.90)	18.03 (3.38)	0.21
Perspective Taking	17.25 (4.40)	17.09 (4.53)	0.85
Personal Distress	12.20 (5.28)	13.21 (4.93)	0.85
<i>Factor scores from the ad hoc 8 item questionnaire^a</i>			
Reactions to the diabetic-borderline woman case-report ^a			
Empathic-Approach	3.64 (2.24)	4.06 (2.16)	0.33
Rejecting-Attitude	1.12 (1.29)	1.29 (1.38)	0.21
Intellectual-Interest	4.33 (1.37)	4.21 (1.55)	0.48
Fear of Emotion Contagion	1.10 (0.93)	1.24 (0.99)	0.46
Reactions to the multiple sclerosis-histrionic woman case report ^a			
Empathic-Approach	3.61 (2.24)	4.15 (2.02)	0.55
Rejecting-Attitude	1.21 (1.36)	1.06 (1.10)	0.66
Intellectual-Interest	4.33 (1.35)	4.35 (1.43)	0.94
Fear of Emotion Contagion	1.01 (0.94)	1.00 (0.82)	0.97

^a Results for continuous variables are presented as mean (standard deviation) and comparisons between groups were performed with Student *t*-tests for independent groups.

^b Results for categorical variables are presented as N (%) and comparisons between groups were performed with Chi² test.

* $p \leq 0.05$.

Discussion

The decrease of Empathic-Concern observed in all participants during the fourth year of medical school is consistent with several previous data published on this topic [9]. Rather than an erosion of empathy, these results could be interpreted as an adjustment to the confrontation with lived clinical situations due to the shift from abstract

to more concrete bedside teaching, characterizing the fourth year of medical school in France. Students are thus pushed to get the proper distance from the patients. The slight increase of Fantasy-Scale observed in the same population could seem contradictory. However, it may result from the dramatic increase of opportunities that these students had to transpose themselves into the feelings and actions of others during the fourth year of their curriculum. For many students, this period involves for the first time a repeated exposure to narratives from individuals coming from very different backgrounds.

The evolution during the fourth year of medical school of students' reactions to the first case-report is consistent with IRI's results, showing for the whole population an improvement of Intellectual-Interest and a reduction of Rejecting-Attitude. However, only students in the Balint group exhibited an enhanced Empathic-Approach. Overall, these results do not show evidence that Balint-based training increased students' empathic skills per se. Nevertheless, Balint-based training might have increased the actual implementation of these skills in the context of the doctor-patient relationship, at least in one case-report [18]. Thus, participants demonstrated a better ability to take into account this affective dimension of the doctor-patient relationship when they were faced with a clinical situation including relationship difficulties, like the case of patients with borderline personality traits. Our scale is supposed to assess more specifically the implementation of empathic skills within an actual doctor-patient relationship whereas the IRI does not assess this ability but the general and non-contextualized tendency to empathy. The lack of difference between the two assessments regarding the second case-report suggests that borderline personality case-reports may be more sensitive than histrionic personality case-reports for challenging students' empathic abilities.

A limitation of our observational study is the lack of randomization which prevents causal conclusions to be drawn. Even if we cannot

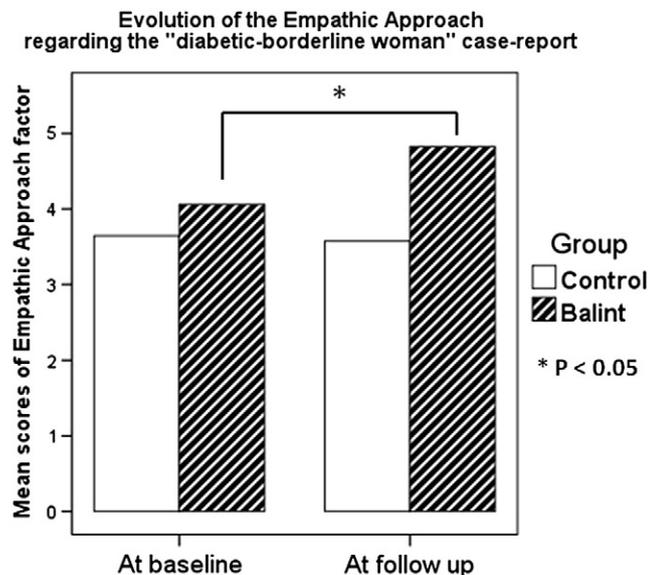


Fig. 1. Evolution of the Empathic Approach regarding the "diabetic-borderline woman" case-report.

Table 2
Evolution of IRI scores and factor scores derived from the 8 item ad hoc scale for Balint and control groups

	Balint group (N = 34) ^a			Control group (N = 129) ^a			Two way ANOVA ^b		
	Baseline	After 4 months	p ^a	Baseline	After 4 months	p ^a	Time	Group	Interaction
<i>Interpersonal Reactivity Index</i>									
Fantasy Scale	17.76	18.85	0.11	18.05	18.47	0.13	0.02*	0.96	0.30
Empathic Concern	18.03	17.09	0.06	17.12	16.58	0.03*	0.01*	0.28	0.45
Perspective Taking	17.09	17.76	0.28	17.25	17.01	0.40	0.50	0.70	0.15
Personal Distress	13.21	13.12	0.87	12.20	12.05	0.64	0.72	0.27	0.93
<i>Reactions to the diabetic-borderline woman case-report</i>									
Empathic-Approach	4.06	4.82	0.03*	3.64	3.57	0.67	0.06	0.03*	0.02*
Rejecting-Attitude	1.29	0.85	0.04*	1.12	0.84	0.02*	0.005*	0.62	0.50
Intellectual-Interest	4.21	4.62	0.04*	4.33	4.45	0.29	0.03*	0.92	0.25
Fear of Emotion Contagion	1.24	1.09	0.43	1.10	1.14	0.70	0.62	0.78	0.40
<i>Reactions to the multiple sclerosis-histrionic woman case report</i>									
Empathic-Approach	4.15	3.65	0.09	3.61	3.53	0.62	0.11	0.40	0.25
Rejecting-Attitude	1.06	1.21	0.53	1.21	0.98	0.06	0.75	0.85	0.16
Intellectual-Interest	4.35	4.35	1.00	4.33	4.36	0.84	0.92	0.97	0.92
Fear of Emotion Contagion	1.00	0.85	0.36	1.01	1.03	0.79	0.51	0.53	0.37

^a Mean comparisons with Student *t* test.

^b ANOVAs for repeated measures with p-results for within-group time factor, between-group factor, and time*group interaction.

* p ≤ 0.05.

exclude a selection bias in the choice of optional certificates by fourth year medical students or in the consent to participate in our study by filling out the questionnaires, respondents of both groups were comparable for all variables of interest at baseline except for a previous or concurrent engagement in a personal psychotherapy which was less frequent for students participating in the Balint group, but no difference in the responses to the questionnaires was found between students engaged or not in a personal psychotherapy. Another limitation consists in the use for this study of our ad hoc scale, still needing validation, although we observed a strong correlation between results at the two case-reports, suggesting an intra-subject reliability of a tool designed to assess the implementation of empathic skills in the context of the doctor–patient relationship. Finally, the lack of differences between Balint and control groups regarding the reactions to the second case-report questions the sensitivity of clinical situations related to histrionic patients to assess the effects of a Balint-type training, but it is also possible that more emphasis was given to borderline personality than to histrionic personality cases within Balint sessions. In conclusion, our findings support a more optimistic view on the issue of empathy in medical curriculum and encourage assessing training initiatives designed at helping young medical students to take into account the emotional component of doctor–patient relationship, despite their still lacking clinical experience.

Conflict of interest

The undersigned authors: Guillaume Airagnes, Silla M. Consoli, Olivier De Morlhon, Anne-Marie Galliot, Cédric Lemogne and Philippe Jaury have no conflict of interest to declare regarding this study.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jpsychores.2014.03.005>.

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