

## Effect of Balint seminars training on emotional intelligence and burnout among internal medicine residents

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### Abstract

**Background:** Balint seminars are widely used educational activities in family medicine residency programs. However, their impact on measurable outcomes is uneven and controversial. The discussions in Balint seminars deal with perceiving and understanding the emotions of the participants.

**Objective:** This study measures the effect of Balint seminars on the emotional intelligence (EI) and burnout of internal medicine residents at the American University of Beirut.

**Design:** Quasi-experimental observational pretest–posttest study.

**Setting:** In all, 27 internal medicine residents at the American University of Beirut.

**Methods:** Bi-weekly Balint seminars were delivered to internal medicine residents throughout the academic year. EI using Mayer Salovey and Caruso Emotional Intelligence Test (MSCEIT) and burnout level using Maslach Burnout Inventory (MBI) were measured at the beginning and end of the academic year.

**Results:** A total of 20 Balint seminars were delivered. On average, residents attended six sessions with standard deviation (SD) of 2. Using paired *t*-tests to compare post- and pre-total EI scores, there was no significant difference between the two scores (mean difference post-pre =  $-0.6 \pm 9.7$ ,  $p = .738$ ). Gender was the most important predictor of the difference between pre- and post-total EI scores (women are the reference,  $\beta = -8.403$ ,  $p = .007$ ) as compared to understanding emotions baseline score ( $\beta = -0.263$ ,  $p = .003$ ). A significant proportion of residents (22.2%–29.6%) showed severe burnout levels on at least one of the three domains of burnout at baseline; however, Balint seminars did not have any effect on any of the burnout domains.

**Conclusions:** Balint seminars may have the beneficial effect of improving emotional intelligence among women. Balint seminars did not improve the burnout levels of internal medicine residents. Optimizing attendance of the Balint sessions may affect the outcomes attributable to Balint seminars.

### Keywords

Balint, burnout, emotional intelligence, internal medicine, residency program

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## Introduction

Michael Balint, a Hungary-born British psychoanalyst, was the first to introduce Balint groups among practicing physicians in the 1950s to explore the doctor–patient relationship (Balint, 1969; Samuel, 1989; Van Roy et al., 2015). Later, the approach was modified and implemented as educational activities in residency programs to help physicians become aware of their blind spots during their interactions with patients and to use their feelings and responses to patients as tools to better understand the physician–patient relationship (Lustig, 2016). Balint seminars provide a form of longitudinal experiential learning that typically occurs over a 1- to 2-year period. The seminars consist of a group of residents who meet on a regular basis (biweekly to monthly) in the presence of two Balint leaders. One resident presents a troubling case, and the group discusses the case from the perspectives of the patient, doctor and physician–patient relationship disregarding the medical aspects of the cases (Diaz et al., 2015; Horder, 2001; Johnson et al., 2001). The Balint leaders direct the discussion to elaborate, reflect and clarify thoughts and feelings related to the case from both the patient and physician’s perspective.

The implementation of Balint seminars is time consuming, however, and requires significant resources. As such, it is important to establish evidence about the efficacy of such a training. In the USA, analysis of Balint discussions has been mapped to a subset of the Accreditation Council for Graduate Medical Education (ACGME) milestones, mainly those pertaining to communication skills and professionalism (Lichtenstein et al., 2018). Balint training has been shown to improve residents’ skills in dealing with psychological aspects of patient care, increasing awareness of their own feelings and values, and their ability to develop appropriate treatment plans based on the psychological needs of the patient (Horder, 2001; Kjeldmand and Holmström, 2008). Furthermore, a systematic review has positively reported the effects of Balint groups on psychological self-efficacy, burnout and job satisfaction, breaking bad news, empathy, and professionalism (Van Roy et al., 2015). Nevertheless, a literature review conducted in 2015 concluded that the effect of Balint seminars on measurable outcomes is still controversial and sporadic (Van Roy et al., 2015).

As Balint training is so closely related to understanding and using emotions, we hypothesized that Balint training might improve the emotional intelligence (EI) of residents. EI has been defined as ‘the ability to monitor one’s own and others’ feelings and emotions, to discriminate between them and to use the information to guide one’s thinking and actions’ (Salovey and Mayer, 1990: 189). EI has been found to be an important ability needed to partner with patients and enhance the physician–patient relationship (Coelho, 2012; Cummings, 2011) by cultivating patients’ trust in their physician and their satisfaction (Antoun et al., 2014; Weng et al., 2008). A systematic review about EI in medicine showed that EI is positively correlated with improved physician–patient relationship, increased empathy, enhanced communication skills and stress management (Arora et al., 2010; Fahrenkopf et al., 2008; Hall et al., 2016).

Furthermore, Balint training has been proposed as an intervention to reduce burnout (Romani and Ashkar, 2014). Symptoms of burnout include emotional exhaustion (EE) and depersonalisation, which links burnout to EI. In a study among 110 internists and 2,872 outpatients, internists with higher EI were less likely to experience burnout and accordingly had higher patient satisfaction (Weng et al., 2011). As EI is negatively associated with burnout (Kwon and Kim, 2016), we hypothesized that improving the EI of residents would consequently decrease their level of burnout and improve their wellbeing.

In response to two studies conducted at the American University of Beirut (AUB) that showed high burnout levels among residents (Ashkar et al., 2010; Talih et al., 2016), the Internal Medicine Department decided to start Balint seminars. Talih et al. (2016) showed that at least 27% of the

AUBMC medical residents met the criteria for burnout. The aim of this study is to assess the effect of Balint seminars on EI and burnout levels among internal medicine residents using validated instruments.

## Materials and methods

A quasi-experimental observational study with a one group pretest–posttest design aimed to measure the effect of Balint seminars on EI and burnout among internal medicine residents at the AUB who attended these seminars during the academic year 2017–2018. Balint seminars have been established at the Department of Family Medicine at AUB since 2013 (Antoun et al., 2014). In 2017, the Internal Medicine Department decided to introduce the Balint activity as an initiative to help reduce burnout. As part of quality assurance and the evaluation of a new educational initiative, all residents were asked to fill in the validated tools at the beginning and end of the academic year. Residents were asked for their consent to release their scores for research purposes.

Two leaders (J.A. and M.R.), who have acquired their credentials from the American Balint Society, facilitated the seminars together every other Wednesday at 11:00 am. The residents were expected to attend at least 10 sessions throughout the academic year to account for their rotations outside the main hospital. The same group of residents was invited every other week to attend the activity. It was also posted on their monthly activity schedule. However, few residents were not able to attend if they were responsible for closed critical units, passing through a rotation outside the hospital or were on vacation/abroad elective. IRB approval was granted by the AUB Institutional Research Board.

Two major outcomes were measured using validated instruments: EI using the Mayer Salovey and Caruso Emotional Intelligence Test (MSCEIT) and burnout using the Maslach Burnout Inventory (MBI). The MSCEIT is the most comprehensive measure of EI as an ability (Cartwright, 2008). It is based on the Four-Branch Model of EI: perception of emotions, use of emotions for thinking and problem solving, understanding emotions, and finally managing emotions. It consists of 141 items divided into 8 tasks (Brackett and Salovey, 2004). The MSCEIT provides 15 main scores: total EI score, two area scores, four branch scores, and eight task scores. The four branches are as follows: perceiving emotion, using emotions, understanding emotions and managing emotions. Perceiving emotions is the ability to recognise how you and the others are feeling. Using emotions is the ability to use the feeling to enhance your thinking and decision making. Understanding emotions is the ability to reason the emotions and understand what lead to them. It can be scored using both the consensus and expert scoring methods. There are guidelines on how to interpret the score. The average MSCEIT score is 100 with a standard deviation of 115. There are 7 score ranges based on empirical percentiles: develop (69 or less), improve (70–89), low average score (90–99), high average score (100–109), competent (110–119), strength (120–129) and significant strength (130 and above). The MB is the gold standard for measuring burnout (Maslach et al., 1996, 2008; Maslach and Jackson, 1981). It is a validated 22-item self-reported measure. Each item is scored on a 7-point Likert-type scale. Different items of the survey assess different aspects of burnout: EE, depersonalisation (DP), and a reduced sense of personal accomplishment (PA). The score for each domain of burnout is reported as mild, moderate or severe.

## Statistical analysis

Descriptive statistics were used for baseline demographic characteristics using percentages for categorical variables (gender, level of training) and means for continuous variables (age, attendance). Normalisation of the data was measured using Shapiro Wilk test. EI was measured using the total

**Table 1.** Baseline demographic characteristics of the internal medicine residents ( $N=27$ ).

	$M \pm SD$
Age (years)	$27.0 \pm 1.3$
Attendance (sessions per resident)	$6.0 \pm 2.4$
	$N$ (%)
Gender	
Female	16 (59.2%)
Male	11 (40.8%)
Level of training	
PGY 2	12 (44.4%)
PGY 3	15 (55.6%)
	$M \pm SD$
Baseline total emotional intelligence	
Total EI	$81.3 \pm 11.8$
	$N$ (%)
Categories of total emotional intelligence	
Consider development (69 or less)	4 (14.8)
Consider improvement (70–89)	18 (66.7)
Low average score (90–99)	2 (7.4)
High average score (100–109)	3 (11.1)
Baseline burnout level	
Moderate/severe emotional exhaustion	20 (74.1)
Moderate/severe depersonalisation	19 (70.4)
Low/moderate personal accomplishment	21 (77.8)

PGY: postgraduate year; EI: emotional intelligence.

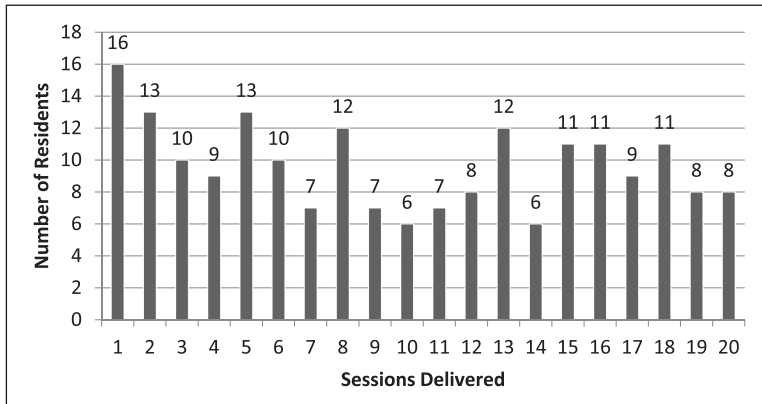
MSCEIT EI score and was considered as a continuous variable. Burnout was measured as mild, moderate or severe on each of the three domains and thus it was considered a categorical variable.

The Shapiro Wilk test  $p$  value was .453, so EI total scores were analysed as normally distributed. To measure the effect of Balint seminars on EI, the pre and post EI total score were compared using a paired  $t$ -test. The difference between post and pre-total EI score was associated with the various demographics using an independent  $t$  test for dichotomous variables (gender, training level) and the Spearman coefficient for continuous variables (attendance rate).

Multiple logistic linear regression was performed to predict the change in the EI scores post Balint intervention. To measure the effect of Balint seminars on burnout, chi-square was used to compare the proportion of each burnout domain before and after the intervention. Data were analysed using SPSS 21. The level of statistical significance was set at  $p < .05$ .

## Results

A total of 34 residents were eligible to participate in the study, 2 left the programme, 1 withdrew the consent to release the test scores, 1 went on maternity leave and did not fill the end test while 3 residents did not fill the test completely. The baseline demographics of the remaining 27 residents are summarised in Table 1.



**Figure 1.** Residents' attendance in each Balint session.

**Table 2.** MSCEIT scores of the Internal Medicine residents before and after the Balint seminars ( $N=27$ ).

	$M$ (post-pre) $\pm$ $SD$	$p$ value
Total Score	$-0.6 \pm 9.7$	.738
Experiential	$-1.5 \pm 10.8$	.470
Strategic	$-1.7 \pm 14.4$	.535
Perceiving emotions	$-1.1 \pm 10.3$	.582
Using emotions	$-0.6 \pm 11.4$	.802
Understanding emotions	$-0.9 \pm 15.0$	.750
Managing emotions	$-2.5 \pm 15.5$	.412
Faces	$0.6 \pm 25.0$	.902
Pictures	$-3.8 \pm 9.0$	.037
Sensation	$-2.8 \pm 11.0$	.187
Facilitation	$4.6 \pm 14.3$	.107
Changes	$-0.9 \pm 12.0$	.691
Blends	$-0.9 \pm 12.8$	.709
Emotional management	$-0.7 \pm 10.6$	.747
Emotional relationship	$-1.9 \pm 11.7$	.400

MSCEIT: Mayer Salovey and Caruso Emotional Intelligence Test.

A total of 20 Balint seminars were delivered. There was a fluctuation in attendance at each Balint session with a median of 9 residents attending per session – a minimum of 6 and a maximum of 16 (Figure 1). On average, residents attended 6 sessions with a  $SD$  of 2 out of the 10 expected sessions.

Using paired  $t$ -test to compare post- and pre-total EI scores, there was no significant difference between the two scores (mean difference post-pre =  $-0.6 \pm 9.7$ ,  $p$  value = .738) (Table 2). However, 4 residents increased their score by more than 10 points (range: 11–18 points); 7 residents increased their total EI score by less than 10 points (range: 1–8 points). The total EI score remained the same or worsened among the rest of the 16 residents. This selective improvement in some individuals (11 out of 27 residents, 40.1%) was seen in postgraduate year 3 (PGY3) more than in postgraduate year 2 (PGY2): 7 out of 15 PGY3 improved versus 4 out of 12 PGY2.

Table 3 shows the association between the difference between post- and pre-total EI scores and various demographics. The residents in this study attended on average 6 sessions only; 48.1% (13

**Table 3.** Association between the difference between MSCEIT total EI score before and after the Balint seminars and the various demographics ( $N=27$ ).

	Mean (difference of post-pre) $\pm$ SD	<i>p</i> value
Attendance	$r = .103$	.610 (Pearson correlation)
Graduate level		
PGY2	$-1.7 \pm 7.2$	.243 (independent <i>t</i> test)
PGY3	$0.2 \pm 11.5$	
Gender		
Female	$3.6 \pm 8.2$	.004 (independent <i>t</i> test)
Male	$-6.8 \pm 8.2$	

MSCEIT: Mayer Salovey and Caruso Emotional Intelligence Test; EI: emotional intelligence; PGY: postgraduate year.

**Table 4.** Burnout levels of the internal medicine residents before and after the Balint seminars based on the three domains of Maslach Burnout Inventory (MBI) ( $N=27$ ).

	Pre-Balint no. (%)	Post-Balint no. (%)	<i>p</i> value
Emotional exhaustion			
Mild	7 (25.9%)	8 (29.6%)	.634
Moderate	12 (44.4%)	14 (51.9%)	
Severe	8 (29.6%)	5 (18.5%)	
Depersonalisation			
Mild	8 (29.6%)	8 (29.6%)	.810
Moderate	11 (40.7%)	9 (33.3%)	
Severe	8 (29.6%)	10 (37%)	
Personal accomplishment			
Mild	7 (25.9%)	7 (25.9%)	.945
Moderate	14 (51.9%)	13 (48.1%)	
Severe	6 (22.2%)	7 (25.9%)	

residents) attended 6 or more sessions. Only one resident attended more than 10 sessions as anticipated. There was no association between the difference between post and pre-total EI score and attendance ( $r = .103$ ,  $p$ -value = .610) or training level ( $p$ -value = .243). Only the understanding emotions subskill demonstrated a significant moderate correlation between post-pre-understanding emotion EI scores and attendance ( $r = .472$ ,  $p$ -value = .013). The total post-Balint EI score improved among women ( $3.6 \pm 8.2$ ) as compared to men ( $-6.8 \pm 8.2$ ),  $p$  value of .004. Multiple linear regression was used to test if gender, training level, total EI score, baseline understanding emotions scores, baseline burnout level and gender significantly predicted an increase in the participants' total EI score. The results of the regression indicated that two predictors (gender and baseline understanding emotion score) explained 44.1% of the variance ( $R^2 = .441$ ,  $F = 11.239$ ,  $p = .000$ ). Gender is the most important predictor (women are the reference,  $\beta = -8.403$ ,  $p = .007$ ) when compared to the understanding emotions baseline score ( $\beta = -0.263$ ,  $p = .003$ ).

A significant proportion of residents (22.2%–29.6%) showed severe burnout levels on one of the three domains of burnout at baseline (Table 4). Severe EE dropped from 29.6% to 18.5% post Balint seminars (chi-square,  $p$  value = .634). There was no association between the various burnout domains and gender, attendance or training level.

## Discussion

The efficacy of Balint training on measured outcomes remains controversial (Van Roy et al., 2015). Burnout (Bar-Sela et al., 2012; Benson and Magraith, 2005; Ghetti et al., 2009; Kjeldmand and Holmström, 2008) and empathy (Cataldo et al., 2005; Ghetti et al., 2009) are commonly studied outcomes. Moreover, although Balint seminars have been shown to improve doctors' ability to listen to their patients (Salinsky and Sackin, 2000) and aid in the understanding of physician and patient's emotions, none of the existing studies have tackled EI as an outcome. This study assessed the effect of Balint seminars on EI using MSCEIT and their effect on burnout using BMI among internal medicine residents. Throughout the duration of 12 months, Balint seminar training, evaluated using a quasi-experimental one group pretest-post-test design, did not significantly affect the EI or burnout level of internal medicine residents. Furthermore, women were more likely to improve their total EI scores than men.

Several factors may have affected the Balint intervention such as the gender of the residents, their individual learning styles and level of training, and the time of EI measurement. First, this study demonstrates that the Balint intervention was more effective in improving EI among female residents as compared to their male counterparts. Although there are no predetermined gender differences in EI abilities among medical residents of various specialties (McKinley et al., 2014), educational interventions have been found to be more effective among women than men (Cherry et al., 2012). The openness of women to educational activities could explain why the female residents of this study improved their EI. Second, it is noteworthy that EI did improve in a small number of students, and this could be due to the residents' various learning styles, personality and their level of training. The Balint seminar, according to some residents, lacked a focus on problem solving and adhered to a strict structure that might not meet all the diverse residents' developmental needs (Smith and Anandarajah, 2007). Moreover, different levels of training among the residents might explain why a single intervention was not uniformly effective (Lewis et al., 2005). Indeed, more improvement was shown among PGY3 residents than PGY2. Finally, measuring the EI of the residents directly after the intervention may also have contributed to the lack of improvement in EI across the whole group. In two studies, the influence of EI educational intervention was only measurable as a delayed positive effect in an emergency medical residents' intervention (Gorgas et al., 2015), and 10 months after participation among primary care nurses (Rabinowitz et al., 1996). Therefore, interventions to improve EI and decrease burnout levels may have longer terms effects that were not evaluated in the short duration of the study.

Balint seminars have been widely used and studied by family medicine residency programs (Johnson et al., 2001), and a few papers have been published from obstetrics and gynaecology, psychiatry and oncology programs (Van Roy et al., 2015). This study is the first to report findings on the use of Balint seminars among internal medicine residents. Internal medicine residents spend more time in inpatient care as compared to continuity clinics. The physician-patient relationship may be more demanding and exhausting in long-term relations such as those found in continuity clinics. In Balint seminars, residents are always reminded to present cases from their continuity clinic. The Balint leaders have noticed that all the cases presented by the internal medicine residents were from the inpatient wards, mainly palliative, oncology and critical care units. In fact, in a study among oncology residents, Balint seminars did not improve the burnout levels of junior residents (Bar-Sela et al., 2012). Further research is needed to understand the value of Balint seminars in discussing non-continuity cases where residents may not follow up on the same patient or have an ongoing patient-physician relationship.

Although Balint seminars aim to decrease the burden of troublesome physician-patient interactions, burnout levels of internal medicine residents post-Balint seminars did not improve. In fact, Balint seminars' reported effects on burnout are conflicting (Van Roy et al., 2015). Moreover,

the complexity of burnout syndrome is affected by many variables beyond physician–patient interactions. Residency structure, number of night calls per month and personal stresses were common factors associated with high levels of burnout among AUB residents (Ashkar et al., 2010; Block et al., 2013; Talih et al., 2016) as well as US Residents (Kassam et al., 2015). Residents’ resilience is also essential to decrease burnout rate (Bird and Pincavage, 2016) and the Balint group is associated with building physicians’ resilience (Roberts, 2012). Therefore, other outcomes that measure satisfaction with a physician–patient relationship should be included in future research.

### ***Strengths and limitations***

Our study is the first to measure EI improvement as a potential outcome of Balint training and the first published study on the use of Balint seminars among internal medicine residents. The small sample size, low attendance and single-centred nature of the study may pose challenges to generalisability. The low sample size is common among studies on Balint seminars as it is bound by the convenience samples at the respective residency programs. Moreover, it is difficult to combine different residency programs as there will be lots of other confounding variables that cannot be accounted for.

This study did not have a control group because this was neither feasible nor ethical in educational settings where burnout levels are high. It was not possible to deny a group of residents of an educational activity. This may affect the internal validity of the study as changes in the outcome may have occurred as a result of normal development.

### **Practical implications**

Although the results of this study did not show a positive impact of Balint seminars on EI across the sample, a small group of residents had some improvement in their scores. It is difficult for any educational intervention to be useful to all learners. It is also important to view the results within the context of a population that had severe burnout which could have impacted their empathy and EI skills. The importance of the Balint seminars was introduced by the programme director in the first session where he emphasised the importance of this activity. Balint seminars were offered at 11:00 AM. Although this time was selected by the residency programme as the most convenient, the residents may be preoccupied with medical cases on the hospital inpatient ward and some had to excuse themselves because they needed to attend to a patient. However, the facilitators always introduced the session by few moments of deep breathing and asking the residents to try to relax and disconnect from their duties. In the year following the research study reported here, the residency programme moved the Balint session until 1 PM and started to offer lunch at the session, which improved the attendance rate. Despite all this, the study represents the reality of implementing of Balint session in Internal Medicine residencies with all its complexities.

### **Conclusion**

Balint seminars may play an important role in improving EI among internal medicine residents, especially female residents. More studies are needed, however, to explore this link. The study suggests that the implementation of Balint seminars should ensure proper attendance for better outcomes. Further research should be conducted to examine the Balint process and how it can be modified to align with different learning styles of residents. Furthermore, burnout is a complex syndrome that may require multidimensional interventions that can include Balint seminars.

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