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## Erosion of Empathy in Primary Care Trainees

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## INTRODUCTION

- Empathy outside of the clinical context is oftentimes described as “feelings” or emotionally putting oneself in another’s situation (Halpern, 2014).
- Empathy in patient care is “a predominantly cognitive (as opposed to affective or emotional) attribute that involves an understanding (as opposed to feeling) of patients’ experiences, concerns, and perspectives combined with a capacity to communicate this understanding”(Hojat, 2009).
- Evidence supports that empathic care is associated with better health outcomes, enhanced shared-decision making, and higher rates of medication adherence, and lower rates of medical malpractice (Hojat, 2011; Hickson, 2002; Riess, 2012, Del Canale, 2012).
- Despite the positive effects of empathy, physicians struggle with exactly how to display empathy in the patient-provider relationship (Gleichgerrcht and Decety, 2012).
- To this end, educating physicians on how to demonstrate empathy in the early stages of their education may be an effective strategy to increasing empathic engagement.
- The evidence shows that, worrisomely, empathy among medical students tends to decrease with increased exposure to the healthcare system (Hojat, 2009).
- Compared to studies evaluating empathy in medical students, fewer studies have evaluated empathy in physician residents (Avasarala, 2015; Greenberg, 2015; Olson, 2015).
- Current evidence is conflicting as to whether empathy decreases or is unaffected during residency training (Greenberg, 2015; West, 2007).

## OBJECTIVE

To evaluate if empathy among physician residents (trainees) differs dependent on training year and to assess trainees’ characteristics associated with higher empathy scores.

## METHODS

This study was reviewed by the Thomas Jefferson University IRB and determined not to constitute human subjects research.

### Setting

- In order to become a primary care physician (PCP) and practice for the Italian National Health Service, a physician must complete a three-year postgraduate training in primary care structured and managed by the 21 Italian regions.
- The training entails 4,800 hours of professional training of which one third are devoted to didactics and two thirds are dedicated to practical experience, including clinical activities in hospital and outpatient settings, with a focus on PCP ambulatory practice.
- In Tuscany, every year approximately 78 physicians enter the three-year regional postgraduate primary care training; the training is organized by the four regional local health authorities.

### Instrument

The adapted Jefferson Scale of Physician Empathy (JSE) includes information on two domains:

- **Demographic information:** age, gender, years of training, and years of service for trainees.
- **Empathic measurement:** using the Italian translated, HP-version of JSE. A prior study confirmed the psychometrics of the Italian translation of the JSE (Di Lillo, 2009). The HP-version of JSE consists of twenty Likert questions on a seven point scale (1=strongly disagree, 7= strongly agree), with ten questions reverse coded. The total empathy score may range from a minimum of 20 to a maximum of 140.

### Data collection

- From June to July, 2015, all 119 PCP trainees attending the PCP training program managed by the Florence and of Prato LHAs, were invited to complete an online version of the adapted JSE.
- A total of 98 trainees returned the survey (response rate: 82.4%).

### Data analysis

- Descriptive statistics were generated for the demographic variables (Table 1).
- Mean empathy scores and standard deviation (SD) were calculated for trainees according to the demographic variables of interest (Table 2).
- Student’s t-test and analysis of variance (ANOVA) were conducted to evaluate statistical differences in mean empathy scores by subcategories, as appropriate. We used the Tukey’s Studentized Range Tests for statistically significant ANOVA results (Table 2).
- All statistical analyses were completed using SAS 9.3 Enterprise Software.

## RESULTS

**Table 1. Demographics for Sample Population (N=98)**

	n (%), 2015
<b>Age, yrs<sup>a</sup></b>	
Range	26-39
Mean (SD)	29 (2.7)
Median	29
<b>Sex, n (%)<sup>a</sup></b>	
Female	66 (69%)
Male	30 (31%)
<b>Trainee year, n (%)<sup>b</sup></b>	
First	35 (36%)
Second	28 (29%)
Third	35 (36%)
<b>Years of service, n (%)<sup>a</sup></b>	
≤2	43 (45%)
3-5	46 (48%)
≥6	7 (7%)

Abbreviations: SD, standard deviation  
 a Available for 96 respondents  
 b Sum is not 100 due to rounding

**Table 2. JSE Scores (N = 98)**

Characteristic	n	Mean score (SD)	Range of scores	P value
<b>All respondents</b>	98	112.7 (12.7)	77-140	
<b>Age group, yrs<sup>a</sup></b>				
26-28	36	116.8 (11.3)	87-133	<b>0.036</b>
29-31	40	109.4 (14.4)	77-140	
>32	20	111.5 (10.0)	97-133	
<b>Sex<sup>a</sup></b>				
Female	66	113.5 (11.9)	77-140	0.324
Male	30	110.7 (14.6)	85-133	
<b>Trainee year<sup>a</sup></b>				
First	35	116.0 (11.3)	87-132	<b>0.035</b>
Second	28	114.0 (13.1)	83-140	
Third	35	108.4 (12.8)	77-129	
<b>Years of service<sup>a</sup></b>				
≤2	43	115.2 (11.5)	87-133	0.182
3-5	46	110.3 (14.3)	77-140	
≥6	7	111.6 (6.0)	102-120	

Abbreviations: ANOVA, analysis of variance; SD, standard deviation  
 a ANOVA P value for 3-way comparisons and t test P value for 2-way comparisons  
 Bolded values are statistically significant at alpha level of 0.05.

## LIMITATIONS

- Our sample included physicians in a single primary care training program therefore, results may not be generalizable to primary care trainees across Italy or other geographic regions.
- Our results are from a cross-sectional study and therefore we did not capture the true variation of empathy as trainees progressed in the program.

## DISCUSSION

- To our knowledge, this study is the first to investigate characteristics linked to empathic care in Italian primary care trainees and adds to the scarce knowledge on this topic.
- Our study showed empathy scores were significantly lower in year 3 of residency training. These results are in agreement with previous evidence that demonstrated that empathy within medical residents significantly declined during matriculation in training programs (Bellini, 2001; Bellini, 2005; West, 2006; West, 2007; Rosen, 2006; Mangione, 2002).
- These results are important because they demonstrate that primary care residents may follow the same phenomenon as medical students and internal medicine residents of decreasing empathy with increased exposure to clinical practice.
- We observed higher empathy scores in women vs. men, although not statistically significant likely due to small sample size (Park, 2015; Hojat, 2002).
- Future studies in larger samples may confirm our results. In addition, future research should utilize a longitudinal analysis of changes in empathy among primary care trainees.
- We urge directors of primary care residency programs to support educational activities to teach trainees strategies for empathic engagement.

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