

# Does empathy change during medical education? A meta - analysis



*Vicky Spatoula DDS, MSc & Efharis Panagopoulou PhD  
Medicine School Aristotle University of Thessaloniki*

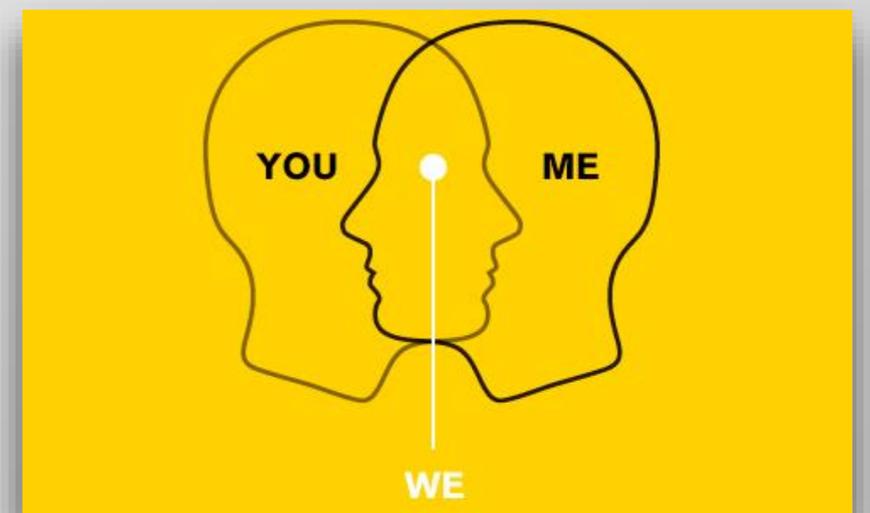
# Empathy



- “Empathy is seeing with the eyes of another, listening with the ears of another and feeling with the heart of another.”
- Empathy reflects an innate ability to perceive and be sensitive to the emotional states of others coupled with motivation to care for their wellbeing.

# Empathy in Medicine

- Empathy is regarded as being crucial to the development of the therapeutic relationship and has been linked to patient enablement. *(Mercer SW et al 2001, Dixon DM et al 1999)*
- High levels of empathy have been associated with enhanced diagnostic accuracy and favorable patient outcomes. *(Del Canale S et al 2012, Hojat M et al 2011)*
- Empathy is considered an essential prerequisite for effective medical care and holistic understanding go the patient's perspective *(Walker and Alligood 2001; Reynolds 2000)*



# Empathy in Medical Education



- “Medical schools need students who are better able to understand their patients and can, therefore, apply the most appropriate treatment” (*Cowley 2006*)



- Empathy should be an essential objective in undergraduate education (*Association of American Medical Colleges*)

# Empathy in Medical Education

Studies examining the empathy of medical students show **contradictory results**.

- Studies conducted in the US showed a significant reduction in empathy during medical education (*Chen et al 2012, Neumann et al 2011*)
- Other studies do not show same trend towards reduction of empathy during medical education (*Paro et al 2014, Costa et al 2013*)



# Does empathy change during medical education? A meta - analysis

- Consequently it is important to examine reliably **whether and how empathy changes through the years of medical education.**
- Therefore, the overarching aim of the review was to synthesize the existing evidence examining **how empathy changes during undergraduate medical education.**

Database	Papers Identified
PubMed	899
Web of Science	707
Psyinfo	225
Total	1831

Electronic databases searched and number of results.

(28 November 2018)

# Does empathy change during medical education?: A meta - analysis

- **Number of studies:** n=12
- **Sample size:** n=4906
- **Instrument:** Jefferson's Scale for Physician Empathy (JSPE) (n=7), The Balanced Emotional Empathy Scale (BEES), the Reading the Mind Eyes test (RME-R test), the Empathy Quotient (EQ) scale and the Interpersonal Reactivity Index (IRI)
- **Origin:** USA (n=3), Ethiopia, India, Iran, Malaysia, Pakistan, Portugal, Turkey and United Kingdom.
- **Design:** cross-sectional (n=9) and longitudinal (n=3).

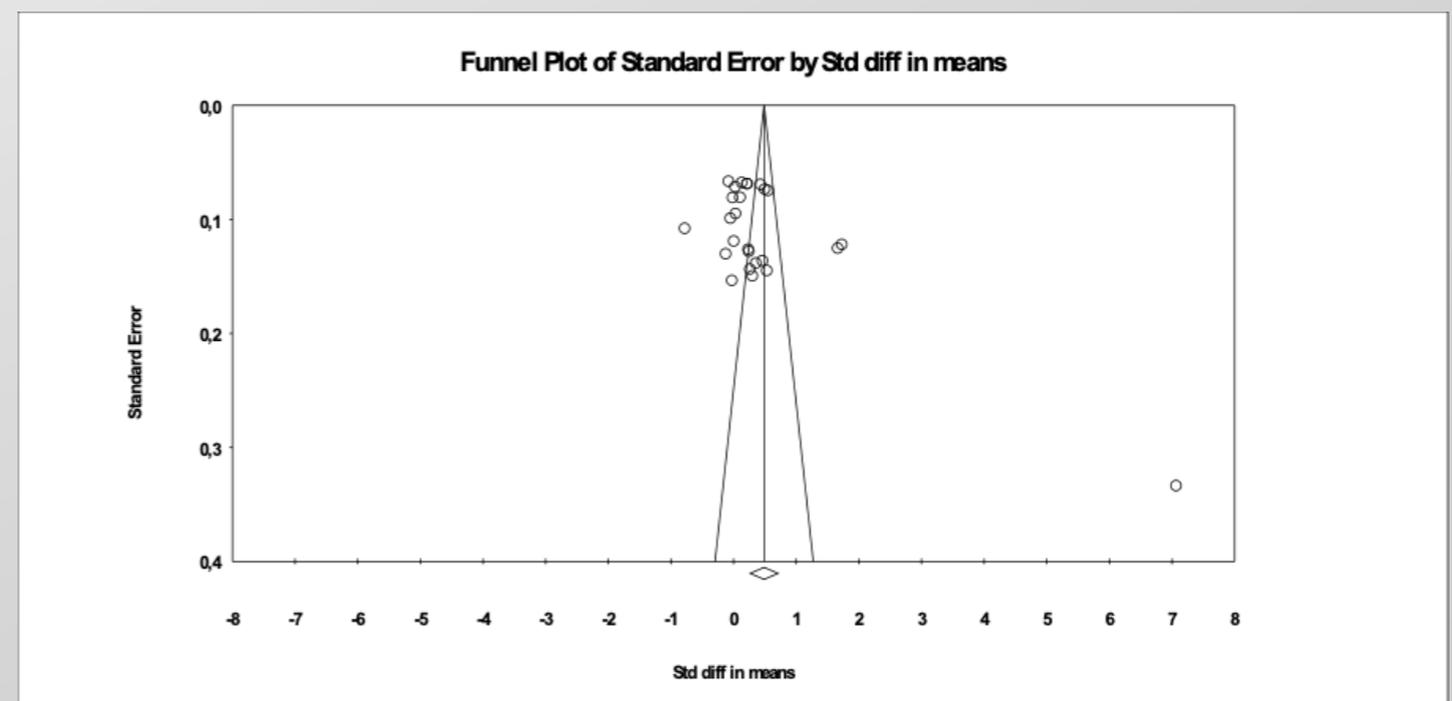
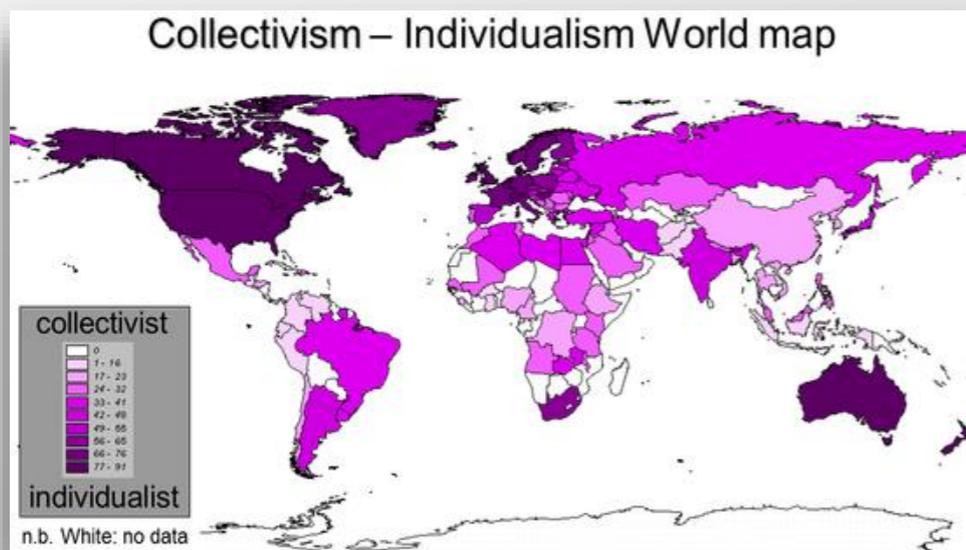
# Does empathy change during medical education?: A meta - analysis

## RESULTS:

- Overall results indicate a **small significant effect** ( $g = 0.487$ ,  $SE = 0.113$ ,  $95\% \text{ CI} = 0.265, 0.709$ ).
- In relation to **instruments** used to measure empathy, scales using the Jefferson's Scale for Physician Empathy reported higher effect sizes ( $g = 0.834$ ,  $SE = 0.219$ ,  $95\% \text{ CI} = 0.406, 1.263$ ), while the effect size of other used scales was smaller and not significant ( $g = 0.099$ ,  $SE = 0.052$ ,  $95\% \text{ CI} = -0.003, 0.201$ ).
- In terms of **origin**, there was a smaller effect size for studies conducted in the US ( $g = 0.209$ ,  $SE = 0.057$ ,  $95\% \text{ CI} = 0.097, 0.321$ ) in comparison with those conducted in non-US countries ( $g = -0.903$ ,  $SE = 0.326$ ,  $95\% \text{ CI} = 0.264, 1.542$ ).

# Does empathy change during medical education?: A meta - analysis

1. Jefferson Scale of Physician Empathy (JSPE)
2. Western cultures (mostly the United States) are more **individualistic**, than cultural products that come from **collectivistic** eastern cultures (including Korea, Japan, China, and Mexico).



# Does empathy change during medical education?: A meta - analysis

- One needs to be cautious in concluding that empathy decreases during medical education, given the over-reliance on one single measure.
- More **information is needed** before we devote scarce resources to training healthcare professionals to be more empathetic, in order to deliver high quality, holistic care. (*Spector 2006*)
- **Integrating cultural issues** at the undergraduate levels can help doctors-in-training to have a better understanding of cultural issues in clinical settings later on. (*Humayun and Herbert 2011*)



let's stop  
waiting for a  
**BETTER WORLD.**

let's start  
working on it.

**TOGETHER.**

Thank you!!