

Paramedic – Research Principles (MRT1/RST4)

Paramedic CAT (Critically Appraised Topic)

Title: Empathy Levels of Paramedics

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Second party appraiser: N/A

Clinical Scenario: A paramedic team arrives onsite at a traumatic two-car motor vehicle collision. There is one fatality and several critical injuries including two pediatric injuries. Using the triage system the paramedics work effectively and quickly to stabilize and treat the patients for transport to the hospital. The two paramedics were efficient in assessing this traumatic incident and in the treatment of the patients. Is it possible that if the paramedics arriving on scene had lower or higher levels of empathy that they may have made different or less effective decisions in triaging the patients?

PICO: In paramedics working in an out-patient EMS setting, do higher or lower levels of empathy effect the decision-making process and the effectiveness of patient-care.

Search Strategy: (Emotion OR Empathy) and (Paramedic OR EMS) and (patient care).

Search Limiters: Humans*, 10 years* (date of publication within last 10 year).

Search Outcome: PUBMED (134 titles), Science Direct (786 titles), Google Scholar (10600 titles).

Relevant Papers: 4 studies were chosen as relevant for this cat.

Author/Date	Population	Design	Outcomes	Results	+Strengths/ -Weaknesses
Mirhaghi, 2016	9721 paramedics from 27 separate studies. Paramedics from 27 separate countries.	Article/Study Review . All chosen studies used a standardized measurement tool or researcher-constructed questionnaire.	Compilation of studies assessing effective paramedic personality traits. Benefit of personality traits knowledge to paramedic student /employment identification or recruitment.	Paramedics have significantly low scores on empathy. Self-reported empathetic regard can vary based on medical condition. Females have greater mean empathy scores than males (108.69 vs 103.58, p=0.042). Prediction of appropriate decision making for males and females possible using various measurement tools.	+ In-depth analysis of paramedic personality traits. + Global overview. + Studies reviewed utilize many research tools. - Not specific to empathy/emotion. - Limited discussion of empathy or effective personality traits in clinical/field setting being absent.

Clompus, 2015	7 British paramedics	Qualitative psycho-social approach using Free Association Narrative Interviewing (FANI).	Emotional coping strategies (resilience), management support, health and social care systems.	Traumatic/Problematic calls incite stress. Participants draw on previous experiences, peer and organizational support and humor as coping strategies.	+ Discussion of various coping strategies. +Connection made between empathy and specific out-patient emergency calls. - Small sample size - No quantitative data. -empathy or emotion tool not used. (ex. JSPE)
Guise, 2017	753 EMS professionals from 44 of 50 US states. 80% of sample were paramedics or EMTs	Qualitative analysis using self-reporting questionnaire. Focused on participants perceptions of stress and patient safety/care.	Contribution of stress or anxiety to pediatric safety events. Stress/anxiety in emergency situations may affect patient care/safety.	Participants report heightened stress and emotional response to out-patient pediatric emergencies. Emotional response to traumatic pediatric emergency calls is perceived to have direct impact on participant's stress levels and perceived increase in errors and patient safety events.	+ Focus on emotion and patient care. +Large sample size. +Urban, rural and suburban data. - Emotion or empathy measurement tool not used - Only self-reported survey data used.
Williams, 2014	1111 Australian Health Professional students	Cross-sectional study. Jefferson Scale of Physician Empathy-Health Students (JSPE-HPS) used to measure empathy.	Empathy related to positive clinical outcomes. Paramedic students, empathy and genetic predisposition. Empathy varies across health disciplines.	Females showed higher levels of empathy than males (110.86 SD-11.76 vs 105.31 SD-13.47, $p<0.0001$). Paramedic students showed second lowest empathy levels across 8 disciplines. Empathy increased with age ([20-24 years]108.44) and ([45-49] 117.71).	+ Focus on empathy level health care. +Discussion on benefits of empathy to patient care. - Sample of students, no professionals. - Not specific to paramedics.

Comments: The studies above lack a specific focus on empathy levels in practicing paramedics and their clinical care of patients. They do provide evidence of distinct paramedic personality traits; including resiliency, perceived effect of paramedic stress on patient safety and overall low empathy levels in paramedics and paramedic students.

Consider: Perhaps having a lower level of empathy allows the practicing paramedic to emotionally detach from a traumatic emergency call and thus better assess the patient's medical needs. Discussing empathy in paramedic training as possibly both an innate and learned trait, may better equip paramedics with the emotional tools they need to efficiently address patient care.

Clinical Bottom Line: Empathy has been directly linked to positive clinical outcomes in the hospital and out-patient setting. Due to the lack of specific research on empathy levels of paramedics and the relationship to effective patient care, additional research with this focus is needed to ensure paramedic students and practicing paramedics receive the up-to-date education and training that they need.

References:

Clompus, S.R., Albarran, J.W., 2016. Exploring the nature of resilience in paramedic practice: A psycho-social study. *International Emergency Nursing*. 28, 1-7.

Guise, J., Hansen, M., O'Brien, K., Dickinson, C., Meckler, G., et al., 2017. Emergency medical services responders' perceptions of the effect of stress and anxiety on patient safety in the out-of-hospital emergency care of children: a qualitative study. *BMJ Open*. 7 (2), Published Online.

Mirhaghi, A., Mirhaghi, M., Oshio, A., Sarabian, S., 2016. Systematic review of the personality profile of paramedics: Bringing evidence into emergency medical personnel recruitment policy. *Eurasian Journal of Emergency Medicine*. 15, 144-149.

Williams, B., Brown, T., McKenna, L., Boyle, M.J., Palermo, C., et al., 2014. Empathy levels among health professional students: a cross-sectional study at two universities in Australia. *Advances in Medical Education and Practice*. 5, 107-113.