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**Essay Title:** Paramedic Empathy and Attitude Improves Patient Outcomes

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## **PICO (Population-Intervention-Comparison-Outcome) Question**

In the prehospital setting, does paramedic empathetic care and attitude improve patient outcome compared to no use of empathy?

## **Relevance and Rationale of the Question**

Empathy is the understanding of a person's thoughts, feelings and problems and relaying this understanding back to the individual. Paramedic empathetic attitude enables trusting relationships to be built with patients, which increases patient satisfaction and reduces malpractice litigations. In paramedic practice, there is a burden of emotionally draining and high stress cases which can cause clinicians to have a poor empathetic attitude towards patients. However, when empathy is neglected by paramedics, their patients are not receiving the most holistic care possible. Empathy is a skill which can be improved with training and practice. Empathy and attitude in practitioners will be studied in order to understand its purpose in the prehospital setting in regard to improving patient outcome.

## **Search Strategy**

**Search Terms:** (Paramedic OR prehospital OR “out of hospital” OR ambulance OR physician) AND (empathy OR empathetic OR attitude) AND (result OR outcome OR condition).

The included articles discussed paramedic empathy and physician empathy in relation to patient outcomes and clinical skill. The search included articles analysing physician empathy due to the lack of available prehospital studies. The search was limited to studies written in English, and with human participants. Articles were also excluded if they had a poor level of evidence, determined by the Oxford Centre for Evidence-Based Medicine Level of Evidence.

The search identified 702 articles using EMBASE and Medline. 68 fit the inclusion criteria and six were suitable for appraisal following full-text and data evaluation. Appendix 1 outlines the process for study selection.

### Search Results

Author and Year	Study Design (LOE)	Population: Sample and characteristics	Study Aim	Results	Strengths and Limitations
Mirhaghi et al., 2016	Systematic Review LOE 1a	9721 paramedics from 27 separate studies in 27 countries were analysed.	Does paramedic attitude and personality traits affect their patient care?	Paramedics generally have low empathy scores. Females had a greater empathy scores than male paramedics (108.69 vs 103.58, $p=0.042$ ). It was reported that the empathy of paramedics differs depending on the patient's medical condition. Paramedics are less empathetic to drug/alcohol and mental health related cases.	<p>Strengths</p> <ul style="list-style-type: none"> <li>- Global study</li> <li>- Analysis of traits shown by paramedics</li> <li>- The studies reviewed were comprehensive</li> </ul> <p>Limitations</p> <ul style="list-style-type: none"> <li>- Broad results, not specific on empathy</li> <li>- Limited results on the patient outcomes</li> </ul>

Williams et al., 2014	Crosssectional study LOE 2a	1111 Australian Health University Students across 2 different universities were questioned using the Jefferson Scale of Physician Empathy to evaluate self reported empathy levels.	Does empathy relate to positive clinical outcomes in patients? Furthermore, do empathy levels vary across health disciplines?	Paramedic students had the second lowest empathy scores out of the eight health disciplines. Females had the highest levels of empathy compared to males (110.86 vs 105.31, $p < 0.0001$ ). Empathy scores increased with age and level of study ([20-24 years]108.44) ([45-49] 117.71). Positive associations were found between empathy, openness and attitude. Furthermore, finding personalities are drawn to different professions, with empathetic people less drawn to paramedicine.	Strengths - Analysis on empathy in paramedic practise - Discussion on patient outcomes from empathy  Limitations - No professional paramedics studied - Non-specific to paramedic students - Not within the date range
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<p>Norby et al., 2013</p>	<p>Exploratory research study LOE 2c</p>	<p>20 paramedics were in-depthly interviewed in Norway</p>	<p>Understand the effects of paramedic attitude in the prehospital setting for patients with serious disease.</p>	<p>No paramedics found that they struggled with communicating medical issues. Instead, the challenges experienced were interpersonal relations with patients, ethical issues and communication strategy. Largely, paramedics found that they struggled to show empathy to the patients and did not know the right words to say. Consequently, paramedics found their patients were hesitant about treatment and weren't able to communicate their needs.</p>	<p>Strengths  - In-depth analysis on paramedics personal communication issues  - Discussion of the benefits of better communication and its importance for patients</p> <p>Limitations  - Not comprehensive as it did not interview patients  - Did not follow up on patients to see how communication affected future outcome  - Largely focused on communication rather than empathy  Not within the date range</p>
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<p>Mercer et al., 2016</p>	<p>Case-Series Study LOE 1c</p>	<p>659 patients attending 47 general practitioners in Scotland of high- and low-socioeconomic areas.</p>	<p>Understand if general practitioners empathy level influences patient outcomes in areas of high and low socioeconomic deprivation. And whether the physician's empathy is up to patient expectations.</p>	<p>Practitioner empathy was influential of better patient outcomes in both low and high socioeconomic areas. The positive patient outcomes from empathetic practitioners was also seen 1 month after the consultation. Patients in lower socioeconomic areas had more problems during their consultation and perceived their health practitioners as less empathetic (P = .02). These health practitioners additionally displayed verbal and nonverbal behaviors that made the patients feel as if the practitioner did not care about their condition.</p>	<p>Strengths</p> <ul style="list-style-type: none"> <li>- In-depth analysis on how physician empathy influences patient outcome short and long term</li> <li>- Explored the difference in empathy in different socioeconomic environments</li> <li>- Explored non-verbal and physical traits of empathy and their effects</li> </ul> <p>Limitations</p> <ul style="list-style-type: none"> <li>- Was not specific to prehospital/paramedics</li> <li>- Did not interview the general practitioners and their perceived empathy levels</li> </ul>
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<p>Ferguson et al., 2019</p>	<p>Historically Controlled Study LOE 2b</p>	<p>30 men who used an ambulance service in Australia for mental health and/or alcohol and other drugs were interviewed.</p>	<p>Explore men's experiences with paramedic communication and whether paramedic empathy affected their outcome. Specifically for mental health and/or alcohol and other drug related issues</p>	<p>Patients found positive experiences prehospitally when the paramedics communicated effectively and conveyed compassion. Patients felt that empathetic paramedics were more attentive which resulted in positive outcomes. Conversely, negative experiences often involved a lack of professionalism, and poor empathy and understanding of patient conditions. Patients with drug related concerns felt that the paramedics were undertrained and treated their patient with low priority. Therefore, patients found themselves hesitant if they had to call for an ambulance again.</p>	<p>Strengths</p> <ul style="list-style-type: none"> <li>- Focused on the prehospital setting with ambulances in Australia</li> <li>- In-depth analysis of patients feelings and how it affected them after the experience</li> <li>- Included quotes and in-depth explanation by patients</li> <li>- Explored empathy, communication and professionalism</li> </ul> <p>Limitations</p> <ul style="list-style-type: none"> <li>- Small sample size</li> <li>- Did not include the paramedics and their perceived empathy levels</li> </ul>
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<p>Guadagni et al., 2018</p>	<p>Case Control Study LOE 2a</p>	<p>41 participants were analysed using the Pittsburgh Sleep Quality Index and then an emotional empathy task. 12 paramedics with at least 3 years experience, 13 paramedic trainees, and 16 students.</p>	<p>Whether or not sleep quality affects empathetic levels in experienced paramedics.</p>	<p>Paramedics with lack of sleep continuity had lower empathetic levels. When compared to undergraduate paramedic results who achieve consistent sleep throughout the week [Mean (SD) = 0.173 (0.156)], the paramedic group had a reduction in their empathetic response [Mean (SD) = -0.472 (0.162) p = 0.018]. Long term, this can cause paramedics to have high rates of mental illness, burnout, and consequently negatively impact patient care.</p>	<p>Strengths</p> <ul style="list-style-type: none"> <li>- Showed the factors that influence paramedic empathy</li> <li>- Comparison to non-paramedics and undergraduates</li> <li>- Analysis on the long term effects of lack of empathy</li> </ul> <p>Limitations</p> <ul style="list-style-type: none"> <li>- Small study size</li> <li>- No analysis on how empathy impacts patient outcome</li> <li>- Does not include patient perceived empathy levels</li> </ul>
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**Comments:**

The studies provide distinct evidence suggesting that paramedics have generally low empathy levels compared to other health professions. Additionally, females consistently showed higher rates of empathy. Paramedics frequently reported struggles in communication with patients which they thought negatively impacted their patient care. Patients who did not receive empathetic care from health professionals with poor attitudes found themselves reluctant to seek further medical attention and had overall worse outcomes, especially in regard to mental health. Paramedics are shown to have less empathy for patients in lower socioeconomic areas and with drug and alcohol related issues. Empathetic attitude improved patient outcomes as communication barriers were broken, creating greater compliance and more accurate diagnosis.

**Consider:**

As paramedics are regularly first on scene to traumatic incidents, they are possibly desensitised to cases. Additionally, more empathetic health clinicians are found to be less drawn to paramedicine compared with other disciplines. Perhaps, the nature of the job requires paramedics to be emotionally detached so that they can more accurately assess and treat patients. Showing empathy can also lead to clinician burnout due to the emotional stress of the job. Therefore empathetic training for paramedics could better equip paramedics to manage patients effectively whilst showing empathy and having a good attitude.

**Clinical Bottom Line:**

Empathy and attitude is directly linked to positive patients outcomes in the prehospital setting. Clinicians need additional training focusing on empathetic care so that patients receive the most holistic care. Factors such as sleep and stress largely contribute to paramedic attitude. Empathy does result in lower complication rates, better communication and clinical outcomes. Whereas lack of empathetic care and poor attitude results in patient dissatisfaction and reluctance to seek further medical treatment. Empathetic paramedics make patients feel more comfortable to call when in an emergency and receive better treatment.

## References

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## Appendices

### Appendix 1 *PRISMA Flow Chart*

