

# Does Empathy Affect Patient Support System Understanding of Patient Outcomes?

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## Introduction

Self-reporting patient symptoms and outcomes is an inherently subjective method of determining results<sup>1,2</sup>. Therefore, input from the patient's support system, such as friends or family, may be a valuable source of information regarding the patient's condition and recovery. Various factors may influence how concordant the interpretation of a patient's condition are between a patient and a support-system representative. Determining whether patients' support system can accurately report patient outcomes and which factors can influence this reporting is therefore crucial. This study uses surveys of patient outcomes and empathy to elucidate relationships in reporting between the patient and a representative of their support system. We hypothesized that greater empathy for the patient would lead to increased concordance of perceived outcomes between patient and representative. Preliminary data supports this hypothesis.



## References

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- Mularski, R., et al. (2004). Agreement Among Family Members in Their Assessment of the Quality of Dying and Death. *Journal of Pain and Symptom Management*, 28(4), 306-315

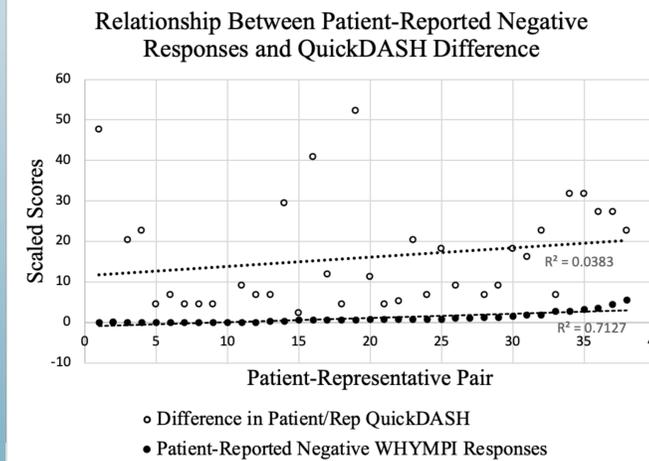
## Materials and Methodology

- Both traumatic and non-traumatic orthopedic patients were recruited to participate in this study at a tertiary care clinic at a Midwestern academic medical center.
- Patients and their selected representatives completed the following surveys (6)
  - QuickDASH Outcome Measure
  - Patient Reported Outcome Measurement Information System (PROMIS) Surveys:
    - Upper Extremity (UE)
    - Pain Interference (PI)
    - Depression (D)
  - West Haven-Yale Multidimensional Pain Inventory (WHYMPI) - Part II
  - West Haven-Yale Multidimensional Pain Inventory For Significant Others
- QuickDASH surveys were used as a measure of functionality with questions regarding the patient's ability to perform upper extremity tasks (i.e., opening a tight jar), where **lower** scores represent higher functionality.
- PROMIS questions were scored on a 5-point Likert scale (1=never, 5=always)
  - PROMIS-UE consists of questions regarding patient ability to perform basic upper extremity tasks (i.e., pouring a glass of liquid).
  - PROMIS-PI consists of questions regarding interference of pain with performance of everyday tasks by patients.
  - PROMIS-D consists of questions regarding patient feelings of depression.

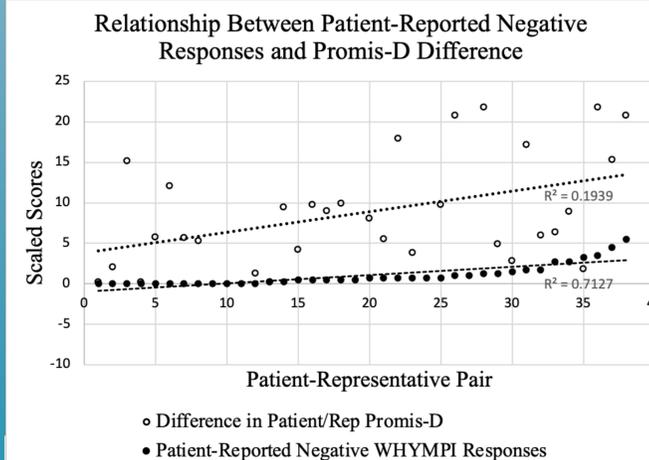
- WHYMPI surveys were used as a measure of empathy. They consisted of 14 questions and were scored on a 7-point Likert scale (0=never, 6=very often). The questions were subdivided into negative (4), solicitous (6), and distracting (4) responses. **Higher** solicitous and distracting scores and **lower** negative response scores indicated greater empathy.
- Data were analyzed via paired t-test, Wilcoxon Signed Rank Test, and Spearman correlation. All analyses were performed using SAS 9.4.

## Results

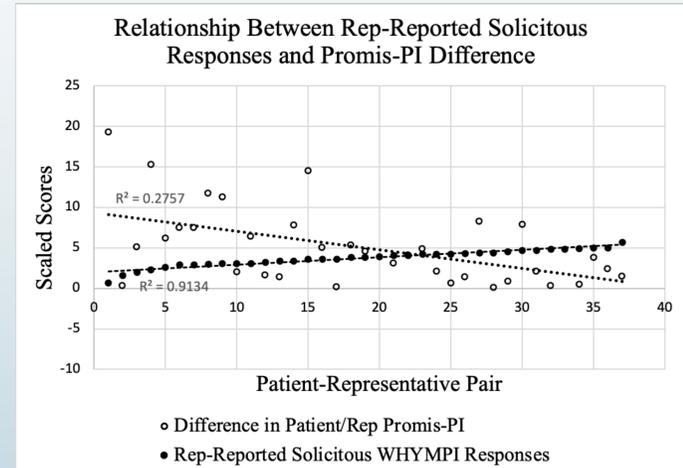
- As of November 30, 2021, there have been 38 patient-representative pairs enrolled in the study.
- Within these pairs, 24 patients (63.2%) selected spouses, 3 patients (7.9%) selected a child, 5 patients (13.2%) selected a non-first degree relative, and 1 patient (2.6%) selected a friend.
- Patient WHYMPI negative response scores were correlated with increasing difference in patient-representative QuickDASH scores ( $p=0.022$ , Figure 1) and PROMIS-D scores ( $p=0.017$ ).
- Representative solicitous and distracting response scores were negatively correlated with difference in patient-representative PROMIS-PI scores ( $p=0.062$ , Figure 3) and PROMIS-D ( $p=0.0018$ , Figure 4) respectively.



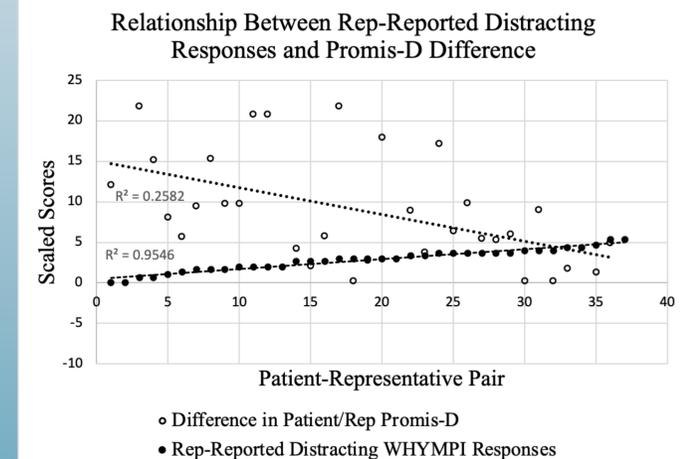
**Figure 1:** Increasing patient-reported negative (WHYMPI) responses were positively correlated with larger differences between patient- and representative-reported QuickDASH outcomes ( $p=0.022$ )



**Figure 2:** Increasing patient-reported negative (WHYMPI) responses were positively correlated with larger differences between patient- and representative-reported Promis-Depression outcomes ( $p=0.017$ )



**Figure 3:** Increasing representative-reported solicitous (WHYMPI) responses were negatively correlated with larger differences between patient- and representative-reported Promis-Pain Interference outcomes ( $p=0.0062$ )



**Figure 4:** Increasing representative-reported distracting (WHYMPI) responses were negatively correlated with larger differences between patient- and representative-reported Promis-Depression outcomes ( $p=0.0018$ )

## Conclusions

Current data suggests that patients who report greater empathy by their support system, (i.e., higher patient-representative WHYMPI concordance) have representatives that better understand their physical functionality and depression. When the representative of the patient reports being more empathetic to the patient, they have a similar understanding of the patient's pain and depression. These findings lend credence to the hypothesis that when patients have a more empathetic support system there will be a more concordant understanding of their overall condition. Data collection is ongoing.