



The Blues Cloud the View: Proxy Depression Is Associated with Lower Dyadic Agreement on EQ-5D-5L

PCR-40

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BACKGROUND

Proxy assessments are widely used in health-related quality of life (HRQoL) research when patients cannot self-report. The impact of proxy psychological distress on assessment accuracy remains poorly understood. (1)

EQ-5D-5L: 5-domain HRQoL measure (Mobility, Self-Care, Usual Activities, Pain/Discomfort, Anxiety/Depression). Utility score calculated using US value set. (2)

OBJECTIVES

1. Examine whether proxy depression affects EQ-5D-5L proxy-self agreement
2. Examine whether proxy pain affects proxy-self agreement
3. Compare effects across both directions: Caregiver (CG) → Patient (PT); Patient (PT) → Caregiver (CG)

METHODS

Study Design: Secondary analysis; cross-sectional online survey (Qualtrics, US, Aug 2022–Feb 2023). (3)

Sample: 504 caregiver-care recipient dyads; bidirectional proxy assessments

Depression: EQ-HWB: 'Sad or depressed?' – No Depression (level 1) vs Any Depression (levels 2–5)

Pain: EQ-HWB: 'Physical pain?' - None (level 1) vs Any (levels 2–5)

Outcome: EQ-5D-5L: 5 domains + utility index score (US value set)

Agreement: Exact agreement % per domain; and Mean Absolute Difference (MAD) for utility

Statistics: Chi-square tests (domain %); Mann-Whitney U tests (MAD) and Minimally Important Difference (MID)

Sample Size by Distress Status

Predictor	No Distress	Any Distress
Caregiver Depression	122	382
Caregiver Pain	101	403
Patient Depression	89	415
Patient Pain	36	468

RESULTS

Table 1: Exact Agreement (%): Caregiver → Patient [by CG Depression]

Domain	No Depression %	Any Level of Depression %	p
Mobility	73.8	60.7	0.012*
Self-Care	72.1	64.7	0.158
Usual Activities	51.6	48.2	0.573
Pain/ Discomfort	54.1	57.6	0.567
Anxiety/ Depression	56.6	41.6	0.005*

Table 2: Exact Agreement (%): Patient → Caregiver [by PT Depression]

Domain	No Depression %	Any Level of Depression %	p
Mobility	77.5	69.4	0.161
Self-Care	88.8	77.1	0.021*
Usual Activities	75.3	56.4	0.001*
Pain/ Discomfort	59.6	53.0	0.314
Anxiety/ Depression	73.0	43.1	<0.001*

Figure 1: Anxiety/ Depression Domain: Largest Impact by Proxy Depression

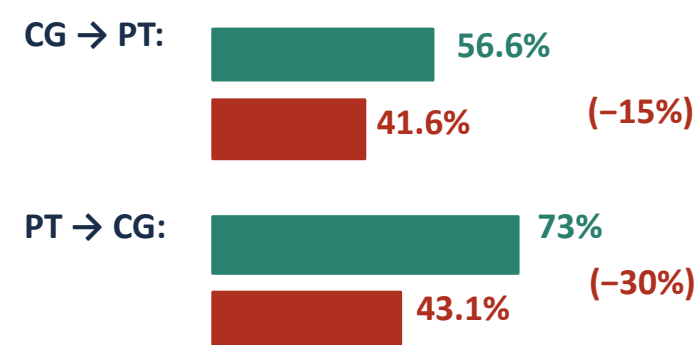


Figure 2: Utility Agreement (MAD) in EQ-5D-5L by Proxy Distress status – Depression vs Pain Effect

CG → Patient Depression	PT → Caregiver Depression
0.113 → 0.170 No distress → Any distress p < 0.001	0.097 → 0.170 No distress → Any distress p < 0.001
CG → Patient Pain	PT → Caregiver Pain
0.140 → 0.161 No distress → Any distress p = 0.251	0.091 → 0.162 No distress → Any distress p = 0.063

⚠ Depression ΔMAD = 0.057–0.073
Exceeds MID threshold of ~0.05 (both directions)

Pain: No significant effect on utility MAD in either direction.

Only isolated domain effects on Mobility & Self-Care.

Key Findings

Depression Impairs Proxy Agreement

- Utility MAD rises 0.057–0.073
- Anxiety/Depression Domain is most affected, in both directions (p<0.001). Depressed proxies report more problems on this domain.

Pattern Differs by Direction

- CG depression → Mobility + Anxiety/Depression
- PT depression → Self-Care, Usual Activities + A/D

Pain has No Significant Utility Effect in either direction

Clinical Implication: Depression can systematically bias proxy assessment.

DISCUSSION

Domain Congruence: Depressed proxies project their own emotional state, most strongly impairing the Anxiety/Depression domain.

Pain vs. Depression: Proxy pain caused no significant overall utility impairment, suggesting the mechanism is specific to cognitive-affective states.

To note that we are relying in this study on a single self-reported depression item.

key Limitations: Cross-sectional design (no causality), Depression/pain from single EQ-HWB items, not clinical diagnoses, Unequal pain group sizes (n=36 vs 468)

CONCLUSION

Proxy depression, but not pain, significantly impairs EQ-5D-5L proxy assessment agreement. The effect is bidirectionally replicated, and pronounced for the Anxiety/Depression domain.

While these findings are based on a single self-reported depression item, they suggest that depression can systematically bias proxy assessments of others' health, in particular mental health.

REFERENCES & ACKNOWLEDGEMENTS

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