CASE STUDY · LONGITUDINAL HEALTH RESEARCH

Does mood shape how people plan for end-of-life care?

Two-wave survey analysis for a US physician research team on affect, death anxiety and advance care planning.

SAMPLE	DESIGN	TIMELINE	TOOLS
610 at baseline, 493 matched across waves	2 survey waves, about 3 months apart	About 5 weeks, May to June 2026	R: OLS, residualized change, RCI

THE CHALLENGE

Advance care planning, documenting preferences for future medical care, is widely recommended but often postponed. The investigators wanted to know whether short-term mood and death anxiety help explain who engages in it. They ran two online survey waves about three months apart, using validated instruments: PANAS (positive and negative affect), DAI-R (death anxiety) and the ACP Engagement Survey.

The analytic challenge was twofold: separate genuine psychological effects from demographic confounding, and distinguish stable differences between people from real change over time.

MY APPROACH

01 **Four models per question.** Cross-sectional and residualized-change regressions, each unadjusted and adjusted for age and sex, applied to five research questions.

02 **Measurement quality.** Cronbach's α above .89 for all scales at both waves; strict scale scoring with a transparent sample size for every model.

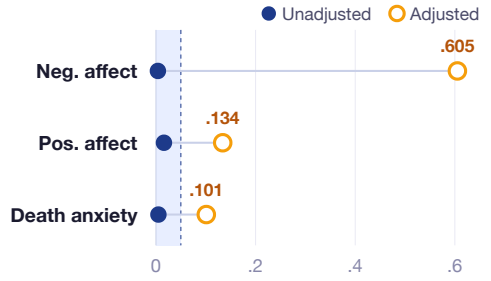
03 **Diagnostics.** Shapiro-Wilk, Breusch-Pagan, Durbin-Watson and VIF for every model, complemented by visual residual checks where formal tests are oversensitive at large N.

04 **Iterative follow-up.** Two supplementary analyses at the investigators' request: change-on-change regressions, and a stability-threshold approach that kept only participants with meaningful change, defined by 1 SD and by the Reliable Change Index. The client's proposed cutoff of ±8 points was validated as roughly 1 SD.

KEY FINDINGS

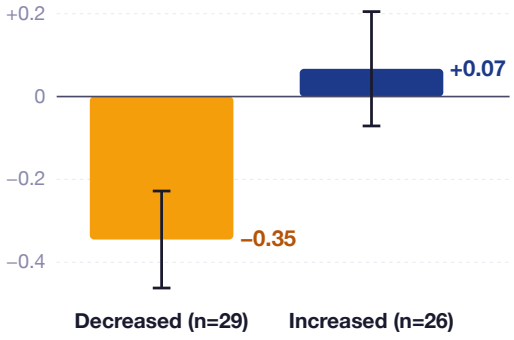
BEFORE VS. AFTER ADJUSTMENT

p-values, outcome: planning engagement · shaded = p < .05



CHANGE AMONG CHANGERS

Δ planning engagement, positive affect ±1 SD · mean ± SE



- **Simple associations did not survive adjustment.** Negative affect, positive affect and death anxiety were all related to planning engagement at baseline, but none of these links held after controlling for age and sex.
- **Age was the real driver,** the strongest predictor in every adjusted model (b ≈ 0.025 per year, p < .001).
- **One robust association:** negative affect predicted death anxiety (R^2 = .12, p < .001), also after adjustment.
- **Where change mattered:** participants with a meaningful drop in positive affect also became less engaged in planning (Δ = −0.35, p = .007). The difference from those whose affect rose was significant (d = −0.62, p = .027). Reported as an exploratory subgroup finding with a Reliable Change Index sensitivity check.

DELIVERABLES

- 16-page statistical report with a reading guide for the regression tables and a clear statement of limitations
- Two supplementary analyses: change-on-change and stability thresholds (1 SD, Reliable Change Index)
- Reproducible, fully commented R script

OUTCOME

The report kept the team from over-interpreting weak, confounded associations and pointed to where a real signal may lie, with concrete recommendations for future studies (age stratification, larger samples, longer follow-up).

Client details are withheld for confidentiality.