Beyond the Scale: Noom and Whole-Person Health

Does Noom help people "live better, longer?"

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Executive Summary

Objective: Noom's mission is to "help people live better, longer." To determine if Noom is achieving its mission, we sought to examine health-related quality of life, functioning, and flourishing among a sample of Noom GLP-1^{Rx} Program members to understand the potential benefits of Noom GLP-1^{Rx} Program beyond weight loss.

Methods: Noom GLP-1^{Rx} Program users were invited to participate in a survey via email at approximately Day 1, Day 60, or Day 145 of program participation, with 1,259 users completing one survey, and a subset (n = 126) completing two or three surveys. Users completed measures of functioning, health-related quality of life, and flourishing. Pairwise comparisons were conducted to characterize differences in health-related quality of life and flourishing, and linear mixed-effects models were conducted to estimate a longitudinal trajectory of change for each outcome. Exploratory health utility analysis was conducted to estimate quality-adjusted life years (QALYs).

Key findings: Significant differences in anxiety, fatigue, depression, pain, social functioning, and flourishing were observed at Day 145. Projected one-year health utility gains are in the range of, and may exceed, the benefit associated with meeting physical activity guidelines for a full year. An exploratory analysis projected a one-year incremental gain of approximately 0.07 QALYs (about 0.8 months of perfect-health-equivalent time) if the Day 145 improvement is maintained, and up to 0.10 QALYs (about 1.2 months) if improvement continues linearly, which is an optimistic upper bound. In addition, 53.6% of respondents with data at baseline and Day 145 reported a clinically important improvement in overall well-being.

Conclusions: Results provide initial insight into Noom's value beyond weight loss, to promoting living better, healthier, and happier. Longitudinal data, systematic data collection across Noom populations, and analytic approaches that control for missing data are being pursued to address key limitations in this initial analysis.

WEIGHT LOSS ALONE IS ONLY PART OF THE STORY

Obesity is associated with an increased risk of chronic health conditions as well as higher levels of anxiety and depression, poorer sleep, and reduced quality of life (Araghi et al., 2013; Bianchettin et al., 2025; Hildebrand & Pfeifer, 2025). As a result, the benefits individuals with obesity seek from a weight management program may extend beyond weight loss, to improvements in mood, sleep, mobility, and overall quality of life. The success of a weight management program is often evaluated through changes in body composition. Although such changes represent important clinical outcomes, they only capture part of the potential impact.

Engagement in weight management interventions may provide opportunities for broader behavioral change (e.g., development of new habits). Changes in diet, physical activity, lifestyle, thinking patterns, and more that may come from participating in a weight management program can provide opportunities to establish new, sustainable habits that support long-term health. For example, improvements in physical functioning and other aspects of health may make it easier for individuals to engage in physical activity and other health-promoting behaviors. GLP-1-supported weight loss may further help to reduce hunger, cravings, and food-related preoccupation ("food noise"), in effect, decreasing the cognitive burden associated with managing eating behavior and potentially freeing cognitive resources for planning, self-regulation, and the formation of new habits (Cook, 2026a; Cook, 2026b). Thus, GLP-1-supported behavioral weight loss interventions may promote weight loss, an important clinical outcome in itself, but also may serve as a catalyst for changes in behavior and activities that contribute to broader, sustained improvements in health and well-being.

NOOM GLP-1^{Rx} PROGRAM AS A WHOLE-PERSON INTERVENTION

Noom cares about helping people live better, longer, with programs designed to improve health and wellbeing in everyday life. In line with the perspective that health is more than the absence of disease or the achievement of a particular weight, Noom's GLP-1^{Rx} Program is designed to support physical, psychological, behavioral, and social aspects of health.

Specifically, Noom's GLP-1^{Rx} Program offers clinical care and cash-pay access to personalized compounded GLP-1 medications, if clinically appropriate, in conjunction with a comprehensive behavioral support program. The comprehensive behavioral support program is designed to help users develop skills and habits that support weight management and broader health goals via nutrition education and food logging, physical activity guidance and access to at-home workouts, a healthy habit curriculum, and access to clinicians. As users practice new behaviors, experiences of successful implementation may strengthen self-efficacy and facilitate the development of new routines. Noom provides a behavioral infrastructure through which users can develop and apply skills such as goal-setting, identifying behavioral patterns, overcoming barriers, and establishing sustainable routines across multiple domains of health.

GLP-1-supported weight loss may create a particularly favorable context for this process. Cook (2026a) has proposed a pharmacologically enabled "habit window", whereby reductions in hunger, cravings, and "food noise" during GLP-1 treatment may reduce the cognitive demands associated with food and provide users with greater capacity to engage in behavioral strategies, practice new habits, and establish routines that support their health beyond active weight loss. Although this "habit window" remains a hypothesis requiring prospective testing, pairing GLP-1

medications with structured behavioral support may provide an opportunity to address both the biological and behavioral drivers of obesity, in turn, promoting lasting weight loss and improving health broadly.

As healthcare increasingly shifts toward patient-centered and value-based care, understanding how weight management GLP-1 programs impact the whole person, including daily functioning and quality of life, will be an essential component to measuring success of these programs.

MEASURING WHOLE-PERSON HEALTH

Whole-person health recognizes health as an interconnected state of biological and psychological wellbeing. Traditional approaches to healthcare have dichotomized biological and psychological components of health as well as disease or lack thereof. A whole-person health approach conceptualizes the states of disease to optimal health as a spectrum consisting of interconnected biological and psychological components. Noom's 7 Ms of Wellbeing (Cook, 2025) is a framework that incorporates Metabolism, Muscle, Movement, Mindset, Maintenance, Membership, and Motivation as actionable whole-person health domains that can be targeted via intervention to optimize health. To assess changes in these domains, evidence-based measures are crucial. Two complementary validated self-report measures were selected from the literature to assess whole-person health in alignment with the 7 Ms framework and Noom's mission to empower everyone, everywhere to live better longer, every day.

Patient-reported outcome measures (PROMs) are an important tool for evaluating the effectiveness of interventions from the patient's perspective, as they capture how individuals function in their daily lives and provide insights into domains of function that matter most to patients (e.g., emotional health, pain, sleep, mobility). Health-related quality of life, which refers to an individual's perceived health and functioning, was assessed using the Patient-Reported Outcomes Measurement Information System-Preference Score (PROMIS-PROPr; Dewitt et al., 2018). In alignment with the 7 Ms of Wellbeing, the PROMIS-PROPr measures physical function (e.g., Muscle and Movement), cognitive function (e.g., Mindset), sleep disturbance, fatigue, and pain interference (e.g., Maintenance), as well as engagement in social roles and activities (e.g., Membership). This measure aligns with Noom's mission to help people live longer, as functioning is associated with longevity (Phyo et al., 2020).

Flourishing, which refers to a perceived state of thriving, was assessed using the PERMA framework (Butler & Kern, 2016). The PERMA measures Motivation indirectly under the Accomplishment domain, Mindset indirectly via the Positive Emotion and Meaning domains, and Membership via the Relationships domain. This measure aligns with Noom's mission to help people live better, as flourishing is associated with life satisfaction (Kern et al., 2015).

Together, these measures assess overall quality of life (PROMIS-PROPr) and flourishing (PERMA) from various angles, including emotional and cognitive functioning, sleep, fatigue and pain, ability to engage in meaningful activities, and feelings of accomplishment and engagement, capturing the 7 Ms of Wellbeing. Further, the PROMIS-PROPr enables estimation of health utility and quality-adjusted life years (QALYs), providing a standardized metric for evaluating the potential impact of the Noom GLP-1^{Rx} Program on quality of life.

Methods

Although previous work has demonstrated that Noom GLP-1^{Rx} Program users show substantial weight loss over the course of the program, we have not previously measured how functioning and flourishing change among Noom users as they engage in our GLP-1^{Rx} Program. The Noom Research Team started administering surveys to GLP-1^{Rx} Program participants to ultimately be able to answer the following key research questions:

- Do individuals who were prescribed GLP-1 medication while enrolled in Noom show greater levels of *health-related quality of life and functioning* relative to baseline?
- Do individuals who were prescribed GLP-1 medication while enrolled in Noom show higher levels of *flourishing* relative to baseline?

We started by collecting cross-sectional data to examine if functioning, health-related quality of life, and flourishing differed according to Noom GLP-1^{Rx} Program tenure, which we describe below. Based on promising results, we started collecting longitudinal data. Initial learnings from the small, exploratory longitudinal sample of Noom GLP-1^{Rx} Program users are also presented below.

Survey of Noom GLP-1^{Rx} Program Members

Procedures and participants

We conducted a survey of Noom GLP-1^{Rx} Program members, which is a program that provides up to 1.2mg/weekly of semaglutide following a personalized titration schedule. Noom GLP-1^{Rx} Program users were invited to participate in a survey via email at approximately Day 1, Day 60, or Day 145 of program participation. Individuals who opted out of research participation and residents of CO, WA, CT, and NV were excluded from the study. A total of 1,259 Noom GLP-1^{Rx} Program members completed surveys at one of the three assessment time points (Day 1: n= 381; Day 60: n=555; Day 145: n=456), and a subset of participants completed two or more timepoints (n=126).

Measures

Participants were asked to complete a battery of questionnaires including the PROMIS-PROPr (Dewitt et al., 2018), the PERMA Profiler (Butler & Kern, 2016), a question examining their level of satisfaction with the Noom GLP-1^{Rx} Program (i.e., “How satisfied are you with your Noom Med experience so far?”), and basic demographic questions.

The PROMIS-PROPr is a 16-item self-report measure that assesses several domains of functioning over the previous week (Dewitt et al., 2018). Participants responded to questions such as, “In the past 7 days…How much did pain interfere with your day to day activities?”, on a Likert scale ranging from “Not at all” to “Very much.” They also responded to questions asking them how often they felt “depressed” or “hopeless” using a Likert scale ranging from, "Never" to “Always”, among others. The PROMIS-PROPr was validated in two large US general-population samples, in which it demonstrated discriminative construct validity and strong convergent validity with the EQ-5D-5L and Health Utilities Index (Hanmer et al., 2018).

The PERMA Profiler (Butler & Kern, 2016) is a self-report measure designed to assess dimensions of flourishing. The measure assesses five pillars of well-being (i.e., positive emotion, engagement, relationships, meaning, and accomplishment) as well as negative emotion and health. Participants were asked to respond to questions regarding their health status (e.g., “In general, how would you say your health is?”) on a Likert scale ranging from 0 (“Terrible”) to 10 (“Excellent”) as well as questions related to purpose and meaning (e.g., “In general, to what extent do you lead a purposeful and meaningful life?”) on a Likert Scale ranging from 0 (“Not at all”) to 10 (“Completely”). Validation studies of the PERMA Profiler indicate acceptable internal consistency and convergent validity of the measure (Ryan et al. 2019; Wu et al., 2026).

To assess whether improvements in the PROMIS-PROPr and the PERMA Profiler were likely to be meaningful from a clinical perspective, minimal clinically important difference (MCID) thresholds were identified. Literature indicates a threshold of 3 points on the PROMIS domain T-scores is likely to correspond to functional improvement that would be noticeable to an individual (HealthMeasures, 2026; Terwee et al., 2021); therefore, an improvement of 3 T-score points was used as the MCID for the PROMIS domains in the present study. To determine overall MCID for Health Related Quality of Life (HRQoL), we used the threshold of 0.04 as suggested by the PROPr measure developers (“Frequently Asked Questions,” n.d.) and employed in previous literature (Hanmer, 2021). No studies were identified that defined an MCID for the PERMA Profiler; therefore, we employed 0.5 standard deviation, which has been used previously in the HRQOL literature (e.g., Mouelhi et al., 2020) as a threshold for MCID for the PERMA Profiler.

Analyses

Descriptive statistics were calculated for each PROMIS-PROPr and PERMA domain at Day 1, Day 60, and Day 145 of the Noom GLP-1^{Rx} Program. First, pairwise comparisons were conducted between Day 1 and Day 60, Day 1 and Day 145, and Day 60 and Day 145 to characterize differences in domains of health-related quality of life and psychological flourishing during program participation. Observed changes were also evaluated against established or literature-derived minimal clinically important difference (MCID) thresholds. Because these analyses compared independent cohorts at different stages of the program, we conducted secondary analyses among a subset of participants (n=126) who completed the survey at least twice to evaluate whether similar patterns of improvement were observed within the same individuals over time. Linear mixed-effects models nesting program day within person were employed to estimate a longitudinal trajectory of change for each outcome. In addition, we also performed an exploratory health utility analysis using the PROMIS-PROPr. Exploratory QALY estimates were derived from mean PROPr utility values at Day 1, Day 60, and Day 145 in the longitudinal subset (n=126) using the trapezoidal method recommended (Hunter et al., 2015). Incremental QALYs were calculated as the difference between this area under the curve and the area under a constant line at the baseline utility (0.43) over the same period. One-year estimates were calculated under two scenarios: (a) the Day 145 utility is sustained through Day 365, and (b) the observed rate of improvement from Day 1 to Day 145 continues linearly through Day 365. Because of the small sample, these estimates should not be taken to support longitudinal claims.

Results

Sample demographics

Participants (n=1259) in cross-sectional analyses were, on average, 48.96 years old (SD = 13.96) and had an average body mass index (BMI) on Day 1 of 31.95 (SD = 6.10). Most participants identified as female (83.4%).

Participants (n=126) analyzed in exploratory longitudinal analyses were, on average, 53.07 years old (SD = 12.69), and most identified as female (86.5%). Their average BMI on Day 1 was 32.43 (SD = 6.46) and 29.83 (SD = 6.75) on Day 145.

Participation in the Noom GLP-1^{Rx} Program was associated with greater functioning and Health-Related Quality of Life

Analyses of the PROMIS-PROPr revealed significant differences across all functional domains, including overall health related quality of life (all $p < .001$) by Day 145. Further, many domains showed differences that would be considered clinically significant, or meaningful to participants, based on the MCID of 3 T-score points (See Table 1).

Table 1. Comparisons Across PROMIS-PROPr Domains among Day 1 (n=381) and Day 145 (n=456) cohorts

Measure	Day 1	Day 145	Day 1 versus Day 145	Statistical significance
	Mean (SD)	Mean (SD)	Difference [95% CI]	P-value
Fatigue	52.99 (8.16)	49.37 (7.97)	-3.62 [-4.73, -2.52]	< .001*c
Sleep Problems	53.96 (6.26)	51.24 (6.35)	-2.72 [-3.62, -1.82]	< .001*
Anxiety/Fear	57.18 (7.66)	52.59 (7.44)	-4.59 [-5.63, -3.55]	< .001*c
Ability to Participate in Social Roles/Activities	51.83 (7.01)	55.15 (6.50)	3.32 [2.39, 4.25]	< .001*c
Depression/Sadness	52.43 (7.68)	48.41 (6.88)	-4.02 [-5.02, -3.02]	< .001*c
Cognitive Function	51.61 (8.00)	54.82 (7.25)	3.22 [2.20, 4.24]	< .001*c
Physical Function	48.86 (8.12)	51.32 (7.28)	2.46 [1.46, 3.46]	< .001*
Pain Interference	52.51 (8.23)	48.84 (7.35)	-3.67 [-4.69, -2.64]	< .001*c
Sleep-Related Impairment	50.66 (6.01)	48.09 (5.77)	-2.57 [-3.38, -1.76]	< .001*
PROPr (HRQoL)	0.42 (0.17)	0.53 (0.17)	0.12 [0.09, 0.14]	< .001*c

Note: SD = Standard Deviation; CI = Confidence Interval; Statistical significance is indicated by asterisk, and clinical significance is indicated by superscript "c"
Sample sizes may vary across timepoints due to missing data.

On average, depression ratings were lower among the Day 145 cohort compared to the Day 1 cohort, with a mean difference of -4.02, 95% CI [-5.02, -3.02]. The Day 145 cohort also reported lower levels of anxiety (M_{diff} = -4.59, 95% CI [-5.63, -3.55]), pain interference (M_{diff} = -3.67, 95% CI [-4.69, -2.64]), and fatigue (M_{diff} = -3.62, 95% CI [-4.73, -2.52]). These differences were all considered clinically meaningful. Ability to participate in social roles and activities (M_{diff} = 3.32, 95% CI [2.39, 4.25]), cognitive function (M_{diff} = 3.22 95% CI [2.20, 4.24]), and overall health related quality of life (M_{diff} = 0.12, 95% CI [0.09, 0.14]) (See Figure 1) were also higher among the Day 145 cohort, with differences meeting criteria for clinical significance. Although differences in sleep and sleep-related impairment were statistically significant, neither of these group differences reached the threshold for clinical significance. Overall, PROMIS-PROPr scores were higher among the Day 145 cohort compared to the Day 1 cohort, indicating greater health-related quality of life, (M_{diff} = 0.12, 95% CI [0.09, 0.14]) (See Figure 1).

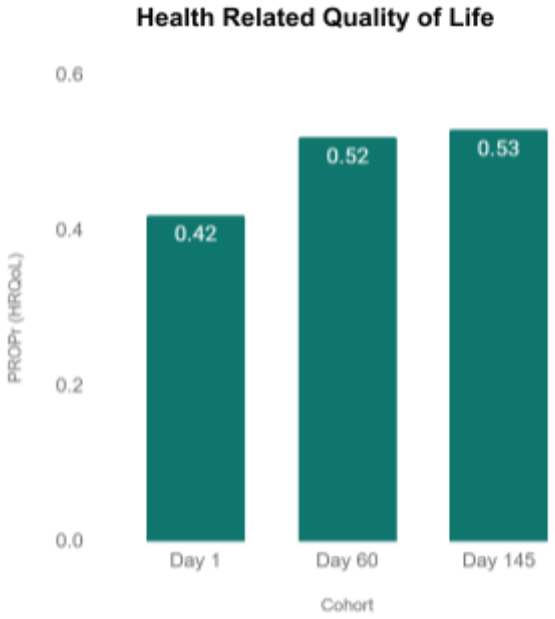


Figure 1. This figure shows the composite PROMIS-PROPr score for Day 1 Cohort (n=381), Day 60 Cohort (n=555), and Day 145 Cohort (n=456), Noom GLP-1Rx Program Participants.

Participants with greater GLP-1^{Rx} Program exposure reported greater psychological well-being and flourishing

Cross-sectional comparisons of the Day 1, Day 60, and Day 145 cohorts showed progressively higher levels of well-being across most of the PERMA domains (see Table 2). The greatest differences in indicators of well-being were observed between the Day 1 and Day 145 cohorts, with the Day 145 cohort reporting significantly higher levels of positive emotion (M_{diff} = 0.76, 95% CI [0.56, 0.96]) (See Figure 2) and engagement (M_{diff} = 0.45, 95% CI [0.27, 0.62]), as well as better relationships (M_{diff} = 0.65, 95% CI [0.43, 0.88]), greater accomplishment (M_{diff} = 0.98, 95% CI [0.82, 1.14]), and more meaningful lives (M_{diff} = 0.68, 95% CI [0.47, 0.90]). Noom users in the Day 145 cohort, on average, reported lower levels of negative emotion (M_{diff} = -0.61, 95% CI [-0.83, -0.39]) and loneliness (M_{diff} = -0.56, 95% CI [-0.91, -0.21]).

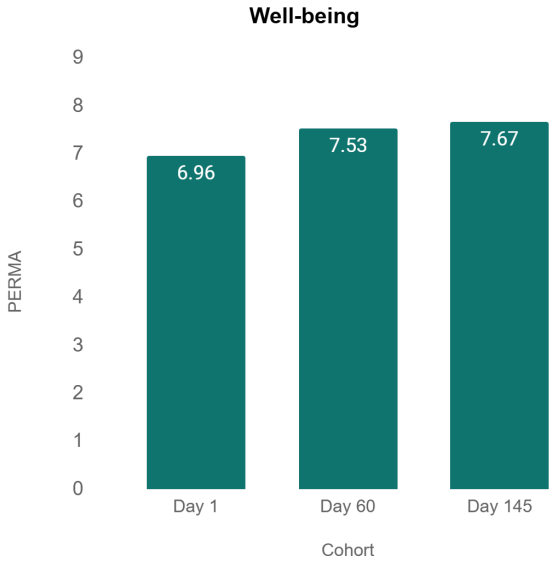


Figure 2. This figure shows the composite PERMA score for Day 1 Cohort (n=381), Day 60 Cohort (n=555), and Day 145 Cohort (n=456), Noom GLP-1Rx Program Participants.

However, the only domain to achieve clinical significance was feelings of accomplishment. Although statistically significant, the differences between Day 60 and Day 145 were relatively small and no comparisons achieved clinical significance at the standardly accepted 0.5 SD for PRO measures. When looking at differences in the total composite score for flourishing, Noom GLP-1^{Rx} Program users surveyed at Day 145 reported greater overall flourishing than those surveyed at Day 1 (M_{diff} = 0.71, 95% CI [0.55, 0.87]).

Table 2. PERMA Domains Comparisons among Day 1 (n=381), Day 60 (n=555) and Day 145 (n=456) cohorts

Measure	Day 1	Day 60	Day 145	Day 1 versus Day 60	Day 1 versus Day 60	Day 1 versus Day 145	Day 1 versus Day 145	Day 60 versus Day 145	Day 60 versus Day 145
	Mean (SD)			Difference [95% CI]	P-value	Difference [95% CI]	P-value	Difference [95% CI]	P-value
Positive Emotion	6.67 (1.76)	7.23 (1.57)	7.43 (1.50)	0.56 [0.37, 0.75]	< .001*	0.76 [0.56, 0.96]	< .001*	0.20 [0.02, 0.38]	.047*
Engagement	6.70 (1.49)	6.97 (1.42)	7.14 (1.38)	0.27 [0.10, 0.44]	.039*	0.45 [0.27, 0.62]	< .001*	0.18 [0.02, 0.34]	.032*
Relationships	7.30 (1.96)	7.84 (1.69)	7.95 (1.87)	0.55 [0.33, 0.76]	< .001*	0.65 [0.43, 0.88]	< .001*	0.11 [-0.10, 0.32]	.307
Meaning	7.30 (1.93)	7.92 (1.63)	7.99 (1.62)	0.62 [0.42, 0.82]	< .001*	0.68 [0.47, 0.90]	< .001*	0.06 [-0.13, 0.26]	.761
Accomplishment	6.84 (1.51)	7.67 (1.19)	7.83 (1.18)	0.82 [0.67, 0.97]	< .001*^{c}	0.98 [0.82, 1.14]	< .001*^{c}	0.16 [0.02, 0.31]	.046*
PERMA (Well-being)	6.96 (1.42)	7.53 (1.22)	7.67 (1.25)	0.58 [0.42, 0.73]	< .001*	0.71 [0.55, 0.87]	< .001*	0.14 [-0.01, 0.28]	.103
Negative Emotion	3.89 (1.82)	3.34 (1.80)	3.28 (1.72)	-0.56 [-0.77, -0.35]	< .001*	-0.61 [-0.83, -0.39]	< .001*	-0.05 [-0.25, 0.15]	.923
Health	5.64 (1.91)	6.75 (1.57)	7.12 (1.59)	1.11 [0.92, 1.31]	< .001*^{c}	1.48 [1.28, 1.69]	< .001*^{c}	0.37 [0.18, 0.56]	< .001*
Loneliness	3.58 (2.88)	3.09 (2.73)	3.02 (2.93)	-0.49 [-0.82, -0.15]	< .001*	-0.56 [-0.91, -0.21]	.001*	-0.08 [-0.40, 0.24]	.673

Note: SD = Standard Deviation; CI = Confidence Interval; Statistical significance is indicated by asterisk, and clinical significance is indicated by superscript "c"
Sample sizes may vary across timepoints due to missing data.

Longitudinal analyses showed similar patterns for health-related quality of life and flourishing

To explore whether the cross-sectional findings reflected changes within individuals, we conducted an exploratory analysis among a subset of Noom GLP-1^{Rx} Program users (n=126) who completed the survey at more than one timepoint. Overall, findings revealed similar patterns of improvement in both health-related quality of life as well as flourishing.

Across most PROMIS-PROPr domains, users reported statistically significant improvements from Baseline (Day 1) to Day 145. The greatest improvements were seen in depression (M_{diff} = -3.02, 95% CI [-4.75, -1.30]) and anxiety (M_{diff} = -2.82, 95% CI [-4.43, -1.21]), as well as pain interference (M_{diff} = -2.17, 95% CI [-4.25, -0.09]) and ability to participate in social roles and activities (M_{diff} = 2.35, 95% CI [0.51, 4.19]) (see Table 3 for all domains and timepoints). However, among all domains of measurement, the only area to achieve clinically significant improvement was depression. Overall health-related quality of life increased from 0.43 (SD =

0.15) at Day 1 to 0.50 (SD = 0.18) at Day 145 (M_{diff} = 0.09, 95% CI [0.04, 0.13]). Most improvement occurred between baseline and Day 60 (M_{diff} = 0.08, 95% CI [0.05, 0.12]), with little additional change between Day 60 and Day 145 (M_{diff} = 0.00, 95% CI [-0.03, 0.04]).

Table 3. Longitudinal Changes Across PROMIS-PROPr Domains among GLP-1^{Rx} Program users (n=126)

Measure	Day 1	Day 60	Day 145	Day 1 Versus Day 60	Day 1 Versus Day 60	Day 1 Versus Day 145	Day 1 Versus Day 145	Day 60 Versus Day 145	Day 60 Versus Day 145
	Mean (SD)			Estimated Difference [95% CI]	P-value	Estimated Difference [95% CI]	P-value	Estimated Difference [95% CI]	P-value
Fatigue	51.98 (8.04)	51.08 (8.50)	49.83 (8.12)	-1.18 [-2.79, 0.42]	.320	-2.52 [-4.61, -0.44]	.049*	-1.34 [-3.01, 0.33]	.261
Sleep Problems	53.39 (6.21)	52.77 (5.95)	51.97 (6.26)	-0.90 [-2.29, 0.49]	.413	-1.79 [-3.55, -0.02]	.040*	-0.89 [-2.33, 0.56]	.453
Anxiety/Fear	55.01 (7.55)	53.34 (7.29)	52.93 (7.77)	-1.84 [-3.06, -0.62]	.010*	-2.82 [-4.43, -1.21]	.002*	-0.98 [-2.25, 0.29]	.289
Ability to Participate in Social Roles/ Activities	52.70 (5.95)	54.44 (6.46)	54.74 (6.47)	1.92 [0.47, 3.37]	.028*	2.35 [0.51, 4.19]	.035*	0.43 [-1.08, 1.94]	.842
Depression/ Sadness	51.78 (6.96)	49.25 (7.11)	49.18 (6.92)	-2.60 [-3.92, -1.28]	< .001*	-3.02 [-4.75, -1.30]	.002*	-0.43 [-1.80, 0.95]	.816
Cognitive Function	52.58 (8.83)	54.81 (6.67)	54.03 (8.11)	2.27 [0.44, 4.09]	.043*	1.77 [-0.53, 4.07]	.290	-0.50 [-2.39, 1.40]	.866
Physical Function	49.73 (7.53)	50.90 (7.46)	50.64 (7.95)	1.57 [0.05, 3.10]	.038*	1.87 [-0.11, 3.85]	.155	0.30 [-1.28, 1.89]	.926
Pain Interference	51.87 (7.59)	49.29 (6.70)	49.83 (7.85)	-2.66 [-4.29, -1.03]	.005*	-2.17 [-4.25, -0.09]	.049*	0.48 [-1.21, 2.18]	.841
Sleep-Related Impairment	49.34 (5.23)	48.98 (5.53)	48.31 (5.93)	-0.40 [-1.61, 0.82]	.798	-0.92 [-2.47, 0.63]	.477	-0.52 [-1.78, 0.74]	.694
PROPr (HRQoL)	0.43 (0.15)	0.51 (0.17)	0.50 (0.18)	0.08 [0.05, 0.12]	< .001*	0.09 [0.04, 0.13]	< .001*	0.00 [-0.03, 0.04]	.970

***Note*. Differences are estimates as models account for missing data. Sample sizes may vary across timepoints due to missing data.**

Flourishing also increased over time, with all well-being domains of the PERMA showing statistically significant improvement from Day 1 to Day 145, with the exception of loneliness (see Table 4 for all domains and timepoints). At Day 145, participants reported significantly higher positive emotion (M_{diff} = 0.36, 95% CI [0.08, 0.64]), greater engagement (M_{diff} = 0.45, 95% CI [0.13, 0.77]), better relationships (M_{diff} = 0.50, 95% CI [0.16, 0.83]), more meaning in their lives (M_{diff} = 0.63, 95% CI [0.33, 0.93]), and greater sense of accomplishment (M_{diff} = 0.97, 95% CI [0.66, 1.29]). Participants also reported lower levels of negative emotion (M_{diff} = -0.51, 95% CI [-0.92, -0.09]) and better self-reported health (M_{diff} = 1.21, 95% CI [0.89, 1.53]). Although most PERMA domains showed statistically significant changes from Day 1 to Day 145, only the accomplishment domain achieved clinical significance based on the a priori threshold. Consistent with the findings from the PROMIS-PROPr, the greatest changes across domains occurred between Day 1 and Day 60, with no significant difference between Day 60 and Day 145.

Table 4. Longitudinal Changes Across PERMA Domains among GLP-1^{Rx} Program users (n=126)

Measure	Day 1	Day 60	Day 145	Day 1 Versus Day 60	Day 1 Versus Day 60	Day 1 Versus Day 145	Day 1 Versus Day 145	Day 60 Versus Day 145	Day 60 Versus Day 145
	Mean (SD)			Estimated Difference [95% CI]	P-value	Estimated Difference [95% CI]	P-value	Estimated Difference [95% CI]	P-value
Positive Emotion	7.04 (1.60)	7.28 (1.55)	7.38 (1.50)	0.26 [0.04, 0.47]	.050*	0.36 [0.08, 0.64]	.037*	0.10 [-0.12, 0.32]	.656
Engagement	6.82 (1.30)	7.20 (1.31)	7.17 (1.26)	0.39 [0.14, 0.64]	.006*	0.45 [0.13, 0.77]	.018*	0.06 [-0.20, 0.32]	.901
Relationships	7.42 (1.86)	7.95 (1.69)	7.75 (1.97)	0.58 [0.33, 0.82]	< .001*	0.50 [0.16, 0.83]	.011*	-0.08 [-0.34, 0.18]	.819
Meaning	7.52 (1.74)	7.95 (1.62)	7.98 (1.62)	0.56 [0.34, 0.78]	< .001*	0.63 [0.33, 0.93]	< .001*	0.07 [-0.16, 0.31]	.826
Accomplishment	7.00 (1.44)	7.82 (1.16)	7.92 (1.03)	0.87 [0.62, 1.11]	< .001*[c]	0.97 [0.66, 1.29]	< .001*[c]	0.10 [-0.15, 0.36]	.703
PERMA (Well-being)	7.15 (1.27)	7.64 (1.21)	7.64 (1.20)	0.54 [0.36, 0.71]	< .001*	0.58 [0.35, 0.81]	< .001*	0.04 [-0.13, 0.22]	.877
Negative Emotion	3.56 (1.62)	3.20 (1.84)	3.09 (1.62)	-0.36 [-0.68, -0.03]	.049*	-0.51 [-0.92, -0.09]	.048*	-0.15 [-0.49, 0.18]	.648
Health	6.12 (1.84)	6.85 (1.59)	7.13 (1.66)	0.86 [0.62, 1.11]	< .001*	1.21 [0.89, 1.53]	< .001*[c]	0.35 [0.09, 0.60]	.023*
Loneliness	3.46 (2.83)	3.09 (2.64)	3.51 (3.09)	-0.40 [-0.95, 0.14]	.320	-0.03 [-0.74, 0.68]	.995	0.37 [-0.20, 0.94]	.416

***Note*. Differences are estimates as models account for missing data. Sample sizes may vary across timepoints due to missing data.**

Proportion achieving MCID in for each measure

Table 5 and 6 report the proportion of individuals with available data at each time point who achieved MCID for the PROMIS-PROPr (n= up to 70) and PERMA (n= up to 72), respectively. Overall, 80.6% of respondents reported a clinically important increase in health related quality of life within the first 60 days, increasing to 84.3% by Day 145 (n=59). More than half reported a clinically important improvement in overall well-being by Day 145 (53.6%). Engagement (72.2%) and Accomplishment (62.0%) domains demonstrated the highest proportion of users reporting meaningful improvement.

Table 5. Percent achieving MCID by program day across PROMIS-PROPr domains among GLP-1Rx users.

PROMIS-PROPr Measure	Day 60 n (%)	Day 145 n (%)
Sample Size (Day 1 + assessment Day)	67	70
Fatigue	30 (44.8%)	34 (48.6%)
Sleep Problems	18 (26.9%)	21 (30.0%)
Anxiety/Fear	25 (37.3%)	27 (38.6%)
Ability to Participate in Social Roles/ Activities	17 (25.4%)	19 (27.1%)
Depression/ Sadness	29 (43.3%)	35 (50.0%)
Cognitive Function	12 (17.9%)	12 (17.1%)
Physical Function	5 (7.5%)	7 (10.0%)
Pain Interference	28 (41.8%)	29 (41.4%)
Sleep-Related Impairment	17 (25.8%)	19 (27.5%)
PROPr (HRQoL)	54 (80.6%)	59 (84.3%)

Table 6. Percent achieving MCID by program day across PERMA domains among GLP-1Rx users.

PERMA Measure	Day 60 n (%)	Day 145 n (%)
Sample Size (Day 1 + assessment Day)	68	72
Positive Emotion	22 (33.3%)	31 (44.3%)
Engagement	49 (72.1%)	52 (72.2%)
Relationships	30 (44.1%)	36 (50.0%)
Meaning	31 (45.6%)	37 (51.4%)
Accomplishment	35 (52.2%)	44 (62.0%)
PERMA (Well-being)	29 (44.6%)	37 (53.6%)
Negative Emotion	32 (47.1%)	40 (55.6%)
Health	36 (52.9%)	41 (56.9%)
Loneliness	23 (33.8%)	27 (37.5%)

Note: Percentages indicate percentage of individuals with available data at that time point or prior, the number of respondents differs across items.

Exploratory health utility analyses showed positive signal

Average PROMIS-PROPr utility scores increased in the longitudinal subset (n=126) from 0.43 (SD = 0.15) at baseline to 0.51 (SD = 0.17) at Day 60 and remained approximately the same at Day 145 (M=0.50, SD = 0.18). We conducted an exploratory area-under-the-curve (AUC) analysis using these values (trapezoidal rule), which showed an estimated 0.195 quality-adjusted life years (QALYs) accrued over the 145-day observation period. If participants remained at their baseline health utility for one year, the estimated annual QALY would be 0.43. Assuming linear continuation of the observed improvement through one year yielded an estimated 0.53 QALYs, corresponding to an incremental gain of 0.10 QALYs (approximately 1.2

quality-adjusted months) over one year. This scenario is an optimistic upper bound, as it is inconsistent with the plateau observed between Day 60 and Day 145, and approximately three-quarters of this gain arises from extrapolated rather than observed data.

Please note that these estimates are based on a relatively small sample size and are relying on assumptions regarding the persistence and linear continuation of observed improvements, and lack of a comparison group; therefore, these results should be interpreted as exploratory and will need to be replicated in a larger sample of GLP-1^{Rx} Program users through data collected prospectively over time.

Discussion

“Living better, longer” reflects Noom’s ambition to catalyze life-long change in habits through its comprehensive GLP-1^{Rx} Program. Preliminary findings suggest users further along in Noom’s programs report higher functioning, quality of life, and flourishing that extend beyond weight loss. Results revealed statistically significant differences in anxiety, fatigue, depression, sleep, pain, social functioning, and overall health-related quality of life at Day 145 of the GLP-1^{Rx} Program. In fact, the potential increase in health utility observed in this study is directionally consistent with improvements reported for randomized controlled trials of other interventions (e.g., Konopka et al., 2018; Wiesinger et al., 2023), and potentially exceeds the reported 1-year 0.058 QALY associated with meeting physical activity guidelines compared to inactivity (Sun et al., 2014), as well as the 9-month QALY gain of 0.015 observed in a physical activity telephone coaching intervention (Barrett et al., 2022) and the 0.0011 average QALY gain over 5 years among users of a commercial physical activity application (Rondina et al., 2021). This sample of GLP-1^{Rx} Program users moved from a mean health utility score below general population estimates to a score consistent with those observed in the general population samples (Klapproth et al., 2022). Additionally, results showed the potential to gain 0.07 to 0.10 QALYs, which may correspond to roughly 0.8 - 1.2 additional months of life in “perfect health” if validated in a larger, longitudinal sample. Altogether, these results provide initial support that Noom’s GLP-1^{Rx} Program is associated with better functioning and improvements in health utility.

Few studies to date have reported longitudinal changes in PROMIS-PROPr scores following an intervention, reflecting the measure’s relatively recent development and emerging evidence regarding its responsiveness to change. Among the limited studies that have used this measure, Noom’s program shows similar functional improvement. PROMIS-PROPr HRQoL scores observed among users of an online rehabilitation program for adults with long COVID, wherein PROPr (HRQoL) scores changed from an average of 0.20 at baseline to an average of 0.27 six months later (McGregor et al., 2024), were similar to changes observed in our sample of Noom’s GLP-1^{Rx} Program users. Preliminary results suggest that improvement in HRQoL in as little as 60 days is possible, with 80% of GLP-1^{Rx} Program respondents with data at both program timepoints reporting a clinically meaningful change.

Results of the PERMA revealed participants' flourishing scores were on the lower edge of "normal functioning" at Day 1, and at Day 145, were consistent with the upper range of "normal functioning", according to scale interpretations recommended by Kern (n.d.). Effects observed among Noom GLP-1^{Rx} Program users are potentially similar to those observed in combined exercise-psychological interventions (Wilkie et al., 2026) and may be greater than those observed in a meta-analysis of mindfulness, compassion, single positive psychology exercises, yoga, and exercise interventions (Wilkie et al., 2026), if substantiated in a longitudinal cohort. Average differences in PERMA scores among Noom GLP-1^{Rx} Program users were smaller than effects observed in overall PERMA change following an 8-week positive psychology course (Smith et al., 2023) and in a randomized clinical trial of a psychosocial training program (Ganz et al., 2022). Overall, more than half (53.6%) of participants with data available at baseline and Day 145 reported clinically significant improvement in well-being.

In the present study, the PERMA domain of accomplishment emerged as an important contributor to well-being gains, with positive emotions also contributing to well-being differences across users. Together, these findings are consistent with users experiencing meaningful, self-directed health progress. Research suggests experiencing self-efficacy in relation to a goal, such as successful weight loss, may foster positive emotions, which can in turn reinforce personal resources and contribute to greater flourishing (Fredrickson, 2001). This also aligns with the concept of "habit windows", or periods of change during which existing behavioral patterns are disrupted and individuals may be particularly receptive to establishing new routines (Cook, 2026a). The early success and reduced biological barriers to behavior change that can accompany GLP-1–supported weight loss may create opportunities to practice and reinforce behaviors related to eating, physical activity, sleep, and other aspects of health (Cook, 2026a). When paired with structured behavioral support, like Noom's GLP-1^{Rx} Program, these periods of successful change may help translate short-term weight-loss progress into sustainable habits that support longer-term health and well-being.

Strengths

The current study provides insight into health-related outcomes beyond weight loss associated with GLP-1s. In addition, the combination of evidence from a large cross-sectional cohort design (n=1,259) with a longitudinal subset analysis (n=126) supports exploration of both high-level associations as well as within-person changes in these domains.

The use of validated measures (i.e., PROMIS-PROPr and PERMA) allows for assessment of functioning, quality of life, and flourishing that are clinically interpretable and can be benchmarked to other interventions in the literature. We also went one step further and examined the MCID to highlight changes that are not only significant on the basis of statistical testing, but are noticeable and meaningful to users.

Finally, we incorporated a health utility assessment to explore gains in health utility and support the calculation of quality-adjusted life years (QALYs) to estimate the potential gain in quality-adjusted time associated with the program.

Limitations

These findings should be interpreted with several important limitations in mind.

Cross-sectional cohort data. The primary analyses were conducted using cohort data, not longitudinal; therefore, claims related to within-person changes cannot be made among the larger sample.

Sample size for exploratory longitudinal analyses. The sample size for the subset of participants with completed surveys for at least two time points was not sufficient to make strong longitudinal claims, and findings should be interpreted with caution.

Attrition and selection bias. The study samples were subsets of invited, former Noom GLP-1^{Rx} users. These non-random, self-selected samples may not be representative of all users, whereby respondents may be fundamentally different from non-respondents (e.g., more successful, more engaged, or more motivated), limiting the generalizability of the findings to the broader population of Noom GLP-1 users. Additionally, participants who responded to Day 145 surveys may have been more likely to experience benefits from the Noom GLP-1^{Rx} program compared to users who did not respond or may have terminated the program prior to Day 145.

No comparison group. All analyses are pre-post or cross-sectional, so changes cannot be attributed to the program. Regression to the mean, concurrent treatment effects, and natural recovery may contribute.

QALY estimates. QALYs were estimated from three time points in a small subset. One-year estimates assume that the Day 145 utility is sustained or that improvement continues linearly; the latter is inconsistent with the observed plateau. They are illustrative and not forecasts of long-term benefit.

Conclusions

Results of cross-sectional cohorts and exploratory longitudinal analyses of a small sample revealed Noom GLP-1^{Rx} users, on average, report higher functioning, health-related quality of life, and flourishing. Exploratory QALY estimates suggest potential benefits that are worth continued measurement at scale. This study provides initial evidence that engaging in a behavioral weight management program alongside GLP-1 medications is associated with holistic benefits that extend beyond weight loss. Measures were selected to capture whole-person health, reflecting a broader view of health in which success is not defined solely by weight loss or absence of disease, but rather by people living well day-to-day.

This whole-person perspective informs the development of Noom's programs, which are designed around the 7 Ms (Metabolism, Muscle, Movement, Mindset, Motivation, Maintenance, and Membership). By addressing these biological, behavioral, psychological, and social components together, Noom's programs can support improvements that translate to living better day-to-day for longer.

Future longitudinal studies with representative samples are needed to replicate and extend the present work. Continued collection of longitudinal data will allow us to evaluate whether improvements are sustained over time and could inform the development of a novel, composite measure of whole-person health that quantifies what it means to "live better longer".

[1] To enroll in the Noom GLP-1^{Rx} program, individuals must be 18-65 years old, speak English, have a BMI >=30 or BMI >= 27 and a weight-related comorbidity, located in a state where Noom Med is offered. Exclusion criteria include active cancer, liver failure, severe heart disease, personal or family history of Multiple Endocrine Neoplasia Type 2, personal or family history of Medullary Thyroid Cancer, benzoyl alcohol allergy, were pregnant or nursing.

References

1. Araghi, M. H., Jagielski, A., Neira, I., Brown, A., Higgs, S., Thomas, G. N., & Taheri, S. (2013). The complex associations among sleep quality, anxiety-depression, and quality of life in patients with extreme obesity. *Sleep, 36*(12), 1859-1865.
2. Barrett, S., Begg, S., O'Halloran, P., Doran, C. M., & Kingsley, M. (2022). Physical activity telephone coaching intervention for insufficiently physically active ambulatory hospital patients: Economic evaluation of the Healthy 4U-2 randomised controlled trial. PLOS ONE, 17(6), e0270211.
3. Bianchettin, R. G., Gawey, B. J., Acosta, A. J., Borlaug, B. A., Caples, S. M., Collazo-Clavell, M. L., ... & Lopez-Jimenez, F. (2025, June). Clinical assessment of people with obesity: focus on adiposity-related multimorbidity. In Mayo Clinic Proceedings (Vol. 100, No. 6, pp. 1005-1029). Elsevier.
4. Butler, J., & Kern, M. L. (2016). The PERMA-Profiler: A brief multidimensional measure of flourishing. *International journal of wellbeing, 6*(3).
5. Cook, G. (2025, December 16). Blueprint for everyday wellbeing: The 7 Ms. Noom. https://www.noom.com/blog/longevity/blueprint-for-everyday-wellbeing/
6. Cook, G. (2026a). Digital behavioral infrastructure for glucagon-like peptide-1 pharmacotherapy: Viewpoint on persistence, tolerability, and postcessation durability. Journal of Medical Internet Research, 28, e104227.
7. Cook, G. (2026b). Quieting “food noise”: How GLP-1s and mindfulness rewire the default mode network (DMN) and reward circuits. Cureus, 18(1), e100818.
8. Dewitt, B., Feeny, D., Fischhoff, B., Cella, D., Hays, R. D., Hess, R., ... & Hanmer, J. (2018). Estimation of a preference-based summary score for the Patient-Reported Outcomes Measurement Information System: The PROMIS®-Preference (PROPr) scoring system. *Medical Decision Making, 38*(6), 683-698.
9. Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American psychologist, 56*(3), 218.
10. Frequently asked questions about the PROMIS-Preference Score. Retrieved August 7, 2021. http://www.proprscore.com/faqs.
11. Ganz, A. B., Rolnik, B., Chakraborty, M., Wilson, J., Tau, C., Sharp, M., ... & Snyder, M. P. (2022). Effects of an immersive psychosocial training program on depression and well-being: A randomized clinical trial. Journal of psychiatric research, 150, 292-299.
12. Hanmer, J. Measuring population health: association of self-rated health and PROMIS measures with social determinants of health in a cross-sectional survey of the US population. Health Qual Life Outcomes 19, 221 (2021).
13. Hanmer, J., Dewitt, B., Yu, L., Tsevat, J., Roberts, M., Revicki, D., Pilkonis, P. A., Hess, R., Hays, R. D., Fischhoff, B., Feeny, D., Condon, D., & Cella, D. (2018). Cross-sectional validation of the PROMIS-Preference scoring system. *PLoS ONE, 13*(8), e0201093.

14. HealthMeasures. (2026, September 14). Meaningful change. https://healthmeasures.net/interpret-scores/meaningful-change/

15. Hildebrand, S., & Pfeifer, A. (2025). The obesity pandemic and its impact on non-communicable disease burden. Pflügers Archiv-European *Journal of Physiology, 477*(5), 657-668.

16. Hunter RM, Baio G, Butt T, Morris S, Round J, Freemantle N. An educational review of the statistical issues in analysing utility data for cost-utility analysis. PharmacoEconomics. 2015;33(4):355–366. doi:10.1007/s40273-014-0247-6

17. Kern, M. L. (n.d.). Questionnaires. https://www.peggykern.org/questionnaires.html

18. Klapproth, C. P., Sidey-Gibbons, C. J., Valderas, J. M., Rose, M., & Fischer, F. (2022). Comparison of the PROMIS Preference Score (PROPr) and EQ-5D-5L index value in general population samples in the United Kingdom, France, and Germany. Value in Health, 25(5), 824–829.

19. Konopka, J. F., Lee, Y. Y., Su, E. P., & McLawhorn, A. S. (2018). Quality-Adjusted Life Years After Hip and Knee Arthroplasty: Health-Related Quality of Life After 12,782 Joint Replacements. *JB & JS open access, 3*(3), e0007.

20. McGregor, G., Sandhu, H., Bruce, J., Sheehan, B., McWilliams, D., Yeung, J., Jones, C., Lara, B., Alleyne, S., Smith, J., Lall, R., Ji, C., Ratna, M., Ennis, S., Heine, P., Patel, S., Abraham, C., Mason, J., Nwankwo, H., Nichols, V., … Underwood, M. (2024). Clinical effectiveness of an online supervised group physical and mental health rehabilitation programme for adults with post-covid-19 condition (REGAIN study): multicentre randomised controlled trial. *BMJ (Clinical research ed.), 384,* e076506.

21. Mouelhi, Y., Jouve, E., Castelli, C., & Gentile, S. (2020). How is the minimal clinically important difference established in health-related quality of life instruments? Review of anchors and methods. Health and quality of life outcomes, 18(1), 136.

22. Phyo, A. Z. Z., Freak-Poli, R., Craig, H., Gasevic, D., Stocks, N. P., Gonzalez-Chica, D. A., & Ryan, J. (2020). Quality of life and mortality in the general population: A systematic review and meta-analysis. BMC Public Health, 20(1), 1596.

23. Rondina, R., Hong, M., Sarma, S., & Mitchell, M. (2021). Is it worth it? Cost-effectiveness analysis of a commercial physical activity app. BMC Public Health, 21, 1950.

24. Ryan, J., Curtis, R., Olds, T., & Maher, C. (2019). Psychometric properties of the PERMA Profiler for measuring wellbeing in Australian adults. *PLoS ONE, 14*(12), e0225932.

25. Smith, B. W., deCruz-Dixon, N., Erickson, K., Guzman, A., Phan, A., & Schodt, K. (2023). The Effects of an Online Positive Psychology Course on Happiness, Health, and Well-Being. Journal of happiness studies, 24(3), 1145–1167.

26. Sun, K., Song, J., Manheim, L. M., Chang, R. W., Kwoh, K. C., Semanik, P. A., Eaton, C. B., & Dunlop, D. D. (2014). Relationship of meeting physical activity guidelines with quality-adjusted life-years. *Seminars in arthritis and rheumatism, 44*(3), 264–270.

27. Terwee, C. B., Peipert, J. D., Chapman, R., Lai, J. S., Terluin, B., Cella, D., Griffiths, P., & Mokkink, L. B. (2021). Minimal important change (MIC): a conceptual clarification and systematic review of MIC estimates of PROMIS measures. Quality of life research : an international journal of quality of life aspects of treatment, care and rehabilitation, 30(10), 2729–2754.

28. Wiesinger, T., Kremer, S., Bschor, T., & Baethge, C. (2023). Antidepressants and quality of life in patients with major depressive disorder – Systematic review and meta-analysis of double-blind, placebo-controlled RCTs. *Acta Psychiatrica Scandinavica, 146*(6), 545-560.

29. Wilkie, L., Fisher, Z., Geidel, A., Goodall, I., Kamil, S., Davies, E., & Kemp, A. H. (2026). A systematic review and network meta-analysis of randomized controlled trials of well-being-focused interventions. Nature human behaviour, 10(4), 715–726.

30. Wu, J. R., Iwanaga, K., Ditchman, N., & Chan, F. (2026). Assessing multidimensional well-being in individuals with disabilities: Psychometric validation of the Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment (PERMA) Profiler. *Rehabilitation Psychology.*