



ValidationInstitute

2023 Validation Report

Review for: Kaia Health
Validation Achieved: Outcomes
Valid through: May 2024



Company Profile

Category:	Musculoskeletal Management
Website:	https://kaiahealth.com/
Public or Private:	Private
Year Established:	2016
President:	Nigel Ohrenstein
Company contact:	support@kaiahealth.com

Description:

Kaia Health makes effective musculoskeletal pain therapy accessible to people anywhere and anytime. Kaia is an at-home digital musculoskeletal pain management program that helps people self-manage symptoms and reduce costs for musculoskeletal conditions, like back and joint pain. **Kaia** also offers a pulmonary rehabilitation-based solution effective for pulmonary conditions such as chronic obstructive pulmonary disease.

Through a mobile app on the patient's own smartphone or tablet, the **Kaia** program provides biopsychosocial MSK care including curated physical exercises designed by physical therapists and based on international guidelines for physical therapy, mind-body content and techniques, and pain education modules without additional sensors or equipment. Using 24/7-available motion analysis technology, the program guides patients through customized, engaging workouts and patients receive real-time feedback, so they perform every exercise correctly and safely.





Company Profile

Patients also have access to 1:1 PT consultants with **Kaia**'s team of Doctors of Physical Therapy and coaching sessions with **Kaia**'s team of health coaches. PTs and coaches offer motivation and guidance throughout the program journey, as well as physical therapy support and care coordination. Since 2016, **Kaia** has partnered with employers and payers to deliver care to over 500,000 patients around the world.





Claim Assertion for Validation

Patients with low back pain who were randomly assigned to Kaia Health's digital treatment program have significantly more improvement in pain (greater reduction) and improvement in function than patients receiving usual care.

Since this study was a randomized controlled trial (RCT) in which enrollment was random rather than voluntary, the results are strong evidence that the program makes the difference.



Method / Calculation / Examples

General Practitioners were randomly assigned to offer low back pain patients the Kaia Health digital program. A total of 933 Patients were included in the intervention group. The staff was trained in the Kaia Health program and its support services. Similarly, 312 patients received usual care without restrictions - following the recommendations of the German National Care Guideline on treatment of non-specific back pain. These guidelines closely resemble United States national guidelines for non-specific back pain. The total patient sample was 1,245 participants.

The Kaia and the control groups were compared on demographic traits to ensure that they were similar to one another. They were compared on gender (% female), age, height/weight, education, employment, use of pain killers, risk of chronic pain, and how they were referred for care.

Pain scores for the Kaia Health and the control groups were measured and averaged at the start of care (baseline) and three months later. Patients were followed for 12 months, however, with additional data forthcoming. The Numerical Rating Scale (NRS) was used for pain measurement; it is a validated instrument for this purpose.

In addition to pain assessment, patients also responded to the questionnaires listed below. (Note: all survey tools are validated, which means they are reliable and credible data sources.)

- Quality of life regarding physical and mental health (Veterans Rand 12)
- Depression, anxiety, and stress (Depression, Anxiety, Stress Scale or DASS)
- Functional capacity (Hannover Functional Ability Questionnaire)



Method / Calculation / Examples

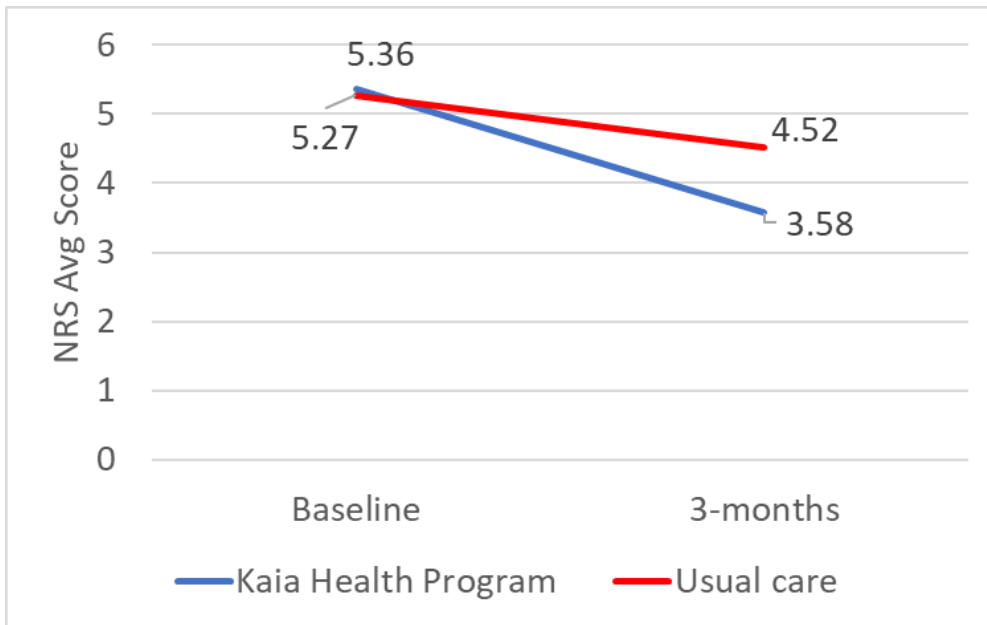
Scores on these questionnaires were taken at the start of care and three months later. Patients were followed for 12 months total with additional data forthcoming. Each patient's change in score was then averaged, and the average change in scores was compared between the group receiving the Kaia program and the group receiving usual care.





Findings & Validation

The Kaia group and the intervention group had nearly identical average pain scores at the start of treatment. The graph below shows the Kaia Health group and control group’s baseline and three-month average pain score, as measured by the NRS tool. The Kaia patients’ pain score declined 33.3% which can be considered a clinically meaningful improvement, and the control group’s pain score declined 14.3%. The Kaia patients had statistically significantly more pain reduction than the usual care patients. In fact, Kaia patients saw more than double the pain improvement of the control group.



Graph 1: Average Pain Scores

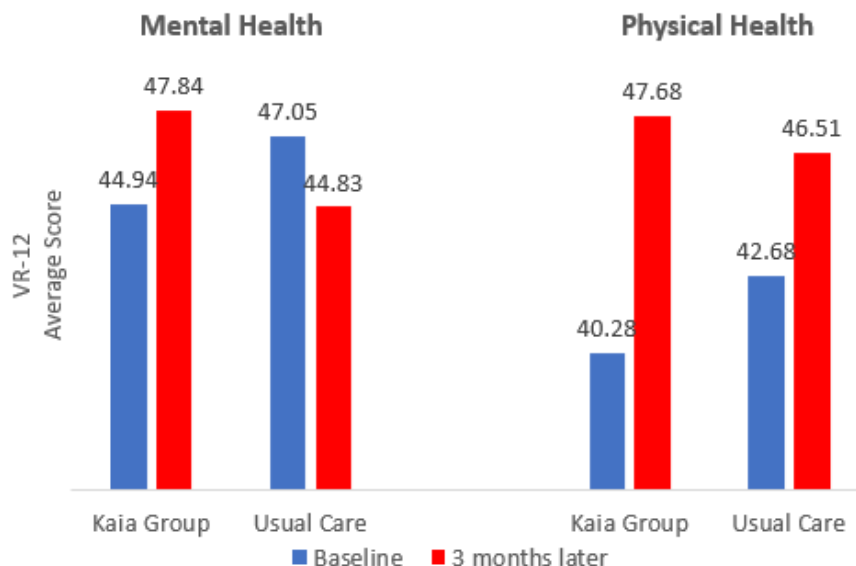
The subset of the Kaia user population who scored at a higher acuity level (as measured by the StaRT Back tool) showed a greater than average pain improvement of 43%. (Note: StarT Back scores were not analyzed here.)



Findings & Validation

Further, Kaia participants used the program on average approximately 1 out of every 3 days during the period of the study.

The graph below shows the quality-of-life (VR-12) scores for both groups. The Kaia group improved its scores in both mental and physical health; the control group worsened in mental health on average. In both mental and physical health, Kaia program users significantly outperformed the control group; this means their change in average scores was statistically different than the change for the control group. In physical health, Kaia program users' average change was large enough to mark a clinically-meaningful change in health status (minimum clinically important difference).

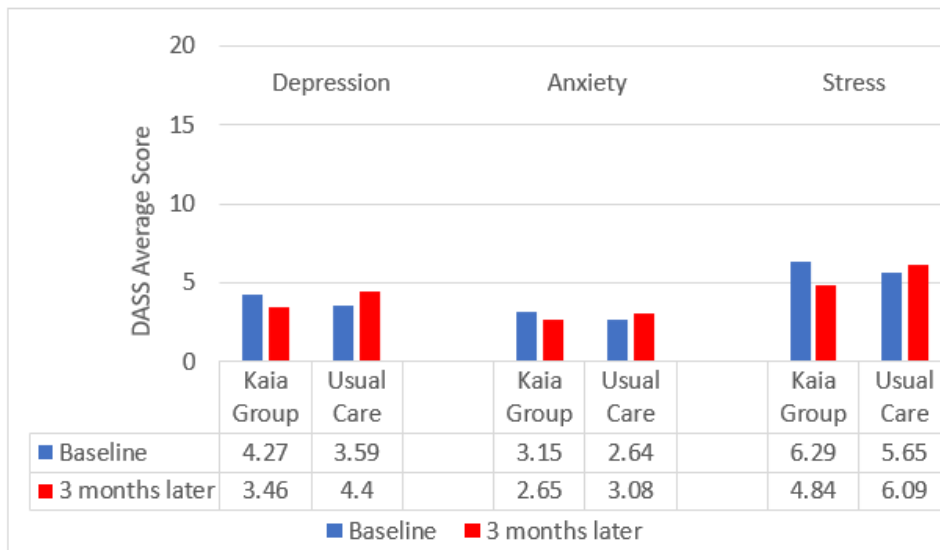


Graph 2: Quality of Life VR-12 Average Scores



Findings & Validation

The graph below shows the depression, anxiety, and stress scores (DASS) scores for both groups. The control group on average had an increase in their scores, denoting a worsening of depression, anxiety, and stress. The Kaia group improved significantly on all three. In addition, the Kaia group’s average change in scores for each section was statistically different from the control group’s average.



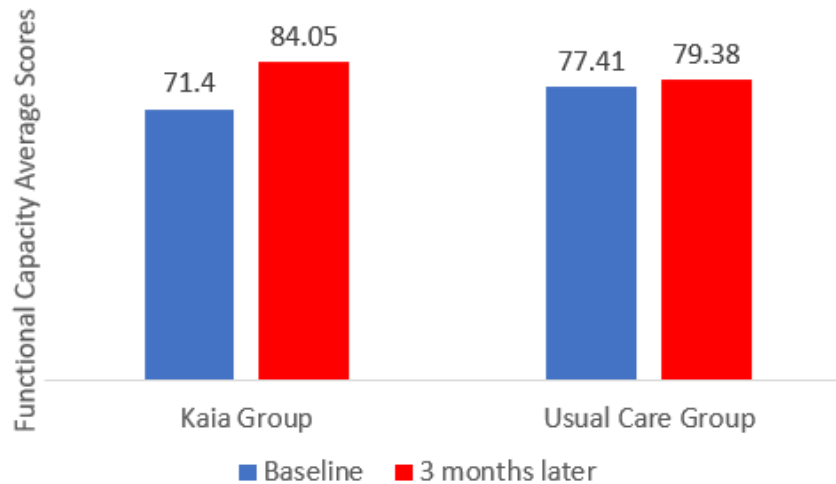
Graph 3: Depression, Anxiety, Stress Average Scores





Findings & Validation

The graph below shows the average scores in functional capacity, as measured by the Hannover Functional Ability Questionnaire. Both groups improved, but the Kaia group's improvement was statistically significantly higher than usual care patients'.



Graph 4: Functional Capacity Average Scores





Limitations

The population analyzed was German, working age adults. It is assumed that the results would be similar for working age adults in other Western countries, such as the United States.





Validation and Credibility Guarantee

Kaia Health's Digital Low Back Pain Treatment Program achieved validation for **Outcomes**. Validation Institute is willing to provide up to a \$25,000 guarantee as part of their Credibility Guarantee Program. To learn more, visit <https://validationinstitute.com/credibility-guarantee/>

Savings

Can reduce health care spending per case/participant or for the plan/purchaser overall.

Outcomes

Product/solution has measurably moved the needle on an outcome (risk, hba1c, events, employee retention, etc.) of importance.

Metrics

Credible sources and valid assumptions create a reasonable estimate of a program's impact.

Contractual Integrity

Vendor is willing to put a part of their fees "at risk" as a guarantee.





Validation Expiration: May 2024

CERTIFICATE OF VALIDATION

Applicant: **Kaia Health**
500 7th Avenue, WeWork - 8th Floor, New York,
NY 10018

Product: Kaia Health's Digital Low Back Pain Treatment
Program

Claim: Patients with low back pain who were randomly
assigned to Kaia Health's digital treatment
program have significantly more improvement in
pain (greater reduction) and improvement in
function than patients receiving usual care.

Validation Achieved: **Validated for Outcomes**

Validation Award Date: July 2022

Linda K. Riddell, MS
VP, Population Health Scientist
Validation Institute

Benny DiCecca
Chief Executive Officer
Validation Institute





About Validation Institute

Validation Institute is a professional community that advocates for organizations and approaches that deliver better health value - stronger health outcomes at lower cost. We connect, train, and certify health care purchasers, and we validate and connect providers delivering superior results. Founded in 2014, the mission of the organization has consistently been to help provide transparency to buyers of health care.

Validation Review Process

Validation Institute has a team of epidemiologists and statisticians who review each program. The team focuses on three components:

- Evidence from published literature that a similar intervention had similar results.
- The reliability and credibility of the data sources.
- The rigor of the approach to calculating results.

To achieve validation, the program has to satisfy each of these components. VI's team then summarizes the review into a report which is publicly available. Details of VI's review are available with the program's permission.

