



Clinical Outcomes Report

Wave Coaching Drives Clinical Outcomes Across the Severity Spectrum



Executive Summary

Behavioral health (BH) coaching has tremendous potential to transform behavioral healthcare. Typically, it is positioned as an alternative to therapy for individuals experiencing subclinical psychological distress; early data supports its efficacy in reducing symptoms and improving wellbeing among this limited group. However, BH coaching may be effective for a wider scope of individuals, with critical implications for improving outcomes and reducing gaps in care. In this white paper, we explore the impact of Wave's BH coaching program and present evidence of its effectiveness across diverse clinical presentations. Our key findings are as follows:

- About two-thirds of engaged coaching users had reliable symptom reductions within 1-2 months of Wave coaching.
- Among those who improved, 73% saw reductions in depression, 50% saw reductions in anxiety, and 68% saw reductions in stress.
- 52% of engaged coaching users with initially elevated depression symptoms saw reliable reductions over time, compared with only 23% of controls.
- 46% of engaged coaching users with initially elevated stress saw reliable reductions over time, compared with only 17% of controls.
- Whether initial symptoms were mild to moderate, or severe to extremely severe, users in the engaged coaching group fared better than their control group counterparts.
- Improvement rates were consistently highest among engaged coaching users who initially exhibited severe to extremely severe symptoms.

Certain factors may differentiate those who will benefit from BH coaching from those who require alternative or adjunctive interventions (e.g., therapy, medication); however, our data refute that severity is a critical indicator of outcome. In an era when half of individuals with mental health needs do not receive care, our findings suggest that BH coaching can extend the reach of our healthcare system and make a critical difference in the lives of millions of people each day.

What is Behavioral Health Coaching?

Behavioral health (BH) coaching has tremendous potential to transform behavioral healthcare and increase access to high-quality services. Consistent with other, more costly and scarce services, BH coaching helps people harness their strengths and cultivate new skills for living healthier, more fulfilling

lives (1). BH coaching can address a variety of behavioral health issues – including depression, anxiety, management of chronic illness, to name a few – but no matter the specific focus, coaching is commonly grounded in setting and achieving health and wellness goals. A coach is a supportive person who fosters clients' confidence and self-awareness. Coaches help clients initiate and maintain lifestyle changes; they provide relevant knowledge, promote skill-development, and are a source of supportive accountability as clients navigate the paths of change and growth (2).

Why Coaching, Why Now?

A confluence of factors have contributed to the growth of BH coaching. One critical factor is the growing gap in access to care, a result of rising demand for BH services paired with a dearth of licensed providers equipped to meet this growing need. In the United States, 53% of adults with mental illness do not receive services (3), and 47% live in a mental health workforce shortage area (4). Workforce projections suggest the supply-demand imbalance will only worsen over the next decade (5). BH coaches can help bridge the gap in access to care.

With brief but adequate training, BH coaches effectively deliver evidence-based treatments and improve clinical outcomes across a range of health conditions (6;7). Government agencies and industries are taking note: major insurance providers are expanding coverage for coaching; online mental health platforms are introducing coaching offerings; and congress has allocated funding for development of a lay workforce (8). Thus public need, coupled with scientific and systemic support, has propelled BH coaching's adoption; effective dissemination and outcome measurement will be critical to its continued momentum and broader impact.

Who Benefits From Coaching?

Coaching is often positioned as an alternative to therapy for individuals experiencing subclinical psychological distress. For instance, Attridge et al. (9) describe an EAP program in which coaching was offered to employees with mild to moderate mental health concerns. Likewise, Lungu et al. (10) detail a remotely-delivered, CBT-based coaching program for employees with mild to moderate depression or anxiety. Peiper et al. (11) describe an employer-offered digital coaching program offered to individuals who screened negative for depression. All these authors present data for the efficacy of coaching in low-acuity employee populations. As a result, there is evidence to suggest that individuals with low levels of depression and/or anxiety benefit from coaching.

Unfortunately, many programs immediately rule out coaching as an intervention for higher-acuity individuals. All of the aforementioned reports excluded employees with severe depression and/or anxiety. However, our data, and other peer-reviewed work (12), suggest that such protocols may be unfounded. In this white paper, we explore the impact of Wave's BH coaching program, with attention to initial severity of coaching users. We present data that speak to the clinical benefits of Wave coaching across a wide range of clinical presentations, and we discuss how this data may reshape thinking on the role of coaches in behavioral healthcare.

Coaching at Wave

At Wave, coaches partner with users to aid them in their pursuit of health and wellbeing-related goals. Coaching services are provided via remote video visits and asynchronous in-app messaging. Video sessions can be scheduled same-day or for the future. Scheduling is flexible, but typically, sessions occur weekly and last 30 minutes. The coach-user relationship is characterized by respect, non-judgment, and unconditional positive regard.

Coaches work with users to create customized care programs based on their unique needs; they assist users in defining and achieving wellness goals via psychoeducation and skills acquisition. All users have access to Wave's digital app, through which they can message their coaches between sessions. Coaches use the messaging feature to send post-session summaries, and they can customize users' in-app experiences by providing personalized content recommendations. See Box 1 for additional information regarding Wave's app.

Box 1. Wave App Experience.

The Wave app offers a variety of tools and content designed to support users in managing their physical and emotional wellbeing. Features include "Reflect" (digital journaling with prompts); quizzes (e.g., "What's your attachment style?"); daily wellbeing check-ins; and "bytes" (short-form written, audio, and video content).

Bytes provide psychoeducation and introduce evidence-based concepts and skills (e.g., mindfulness, cognitive reframing, distress tolerance) based on empirically-supported therapeutic approaches (e.g., ACT, DBT, CBT). All content is reviewed for accuracy and approved by a licensed clinical psychologist. Users can navigate to desired content by independently exploring Wave's vast library, or by completing in-app quizzes and receiving customized content recommendations. Users who completed the DASS in-app receive customized content through Wave's "My Program" feature.

All Wave coaches have received certification from the National Board for Health and Wellness Coaching (NBHWC). This certification is achieved by completing an approved training program, acquiring 50 post-training practice sessions, and passing an exam co-sponsored by the National Board of Medical Examiners. In addition, coaches complete additional training provided by Wave. This training covers foundational components (e.g., building rapport, providing supportive accountability, practicing cultural humility) as well as use of Wave's technology and app offerings. In addition, training covers: mental health first aid; motivational interviewing; case conceptualization; transtheoretical model of change; behavioral health & chronic conditions; risk assessment and management; interpretation of quantitative data (consistent with measurement-based care approaches); and transdiagnostic approaches to behavioral healthcare.

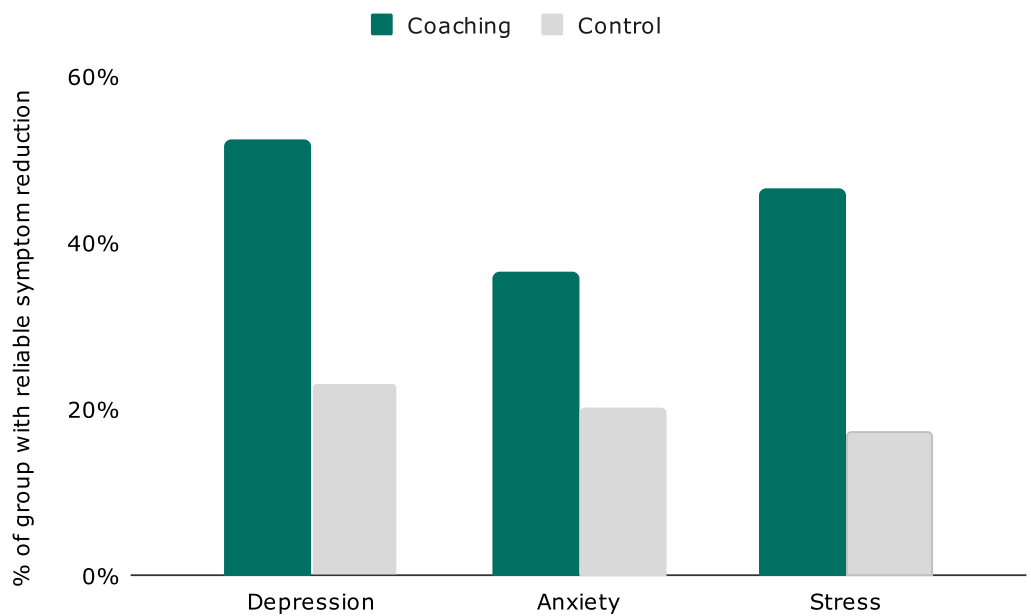
Clinical Benefits of Wave Coaching

We examined clinical outcomes among a subset of Wave users who completed the DASS-21, a measure of depression, anxiety, and stress symptoms. Users were separated into two groups based on engagement data: engaged coaching users were defined as users who attended 2 or more coaching sessions; and controls were defined as users who never attended coaching, or only met with a coach for an initial introductory session. Symptom

trajectories were compared to assess the impact of coaching on symptom reductions over time. Symptom reductions were deemed to be clinically meaningful if they exceeded accepted thresholds established by previous literature (Ronk et al., 2013). Additional detail regarding the study methodology and all statistical analyses can be found in the Appendix.

Among engaged coaching users who had clinically-elevated symptoms of depression, anxiety, and/or stress, about two-thirds (61%) experienced reliable symptom reductions within 1-2 months of Wave coaching. Among these improved users, 73% saw reductions in depression, 50% saw reductions in anxiety, and 68% saw reductions in stress.

Engaged coaching users had greater reductions in depression, anxiety, and stress, as compared to controls (see figure below). In the case of depression and stress, these differences reached statistical significance. 52% of engaged coaching users with initially elevated depression symptoms saw reliable reductions over time, compared with only 23% of controls. 46% of engaged coaching users with initially elevated stress saw reliable reductions over time, compared with only 17% of controls.



Symptom reduction was particularly high for engaged coaching users who had severe, or extremely severe, initial symptoms. Across depression, anxiety, and stress, rate of reliable symptom reduction was higher among engaged coaching users in the more severe subset than those in any other group (i.e., engaged coaching users with mild to moderate initial symptom severity, and controls with any level of initial symptom severity). Improvement rates among users with mild to moderate severity were also always higher for engaged users than their control group counterparts. When stratifying groups by initial severity and analyzing for statistical significance, two significant results emerged. First, improvement in anxiety was significantly higher among coaching users with mild to moderate initial severity relative to their control group counterparts (29% versus 0%). Second, improvement in stress was significantly higher among coaching users with severe to extremely severe initial severity relative to their control group counterparts (60% versus 8%).

Implications for Behavioral Healthcare

This pilot study demonstrates the value of BH coaching among individuals with mental health concerns. We found that 61% of engaged coaching users saw clinically-reliable improvements in depression, anxiety, and/or stress. These results were achieved quickly, roughly 1-2 months after beginning coaching. Whereas other studies have demonstrated appreciable improvement in mental health and wellbeing over the course of coaching ([9](#); [10](#); [11](#)), those studies lacked control groups. Without a control group, it is difficult to determine whether treatment itself is driving observed changes, or if other phenomena are responsible for improvement. In this study, we found that engagement with Wave coaching was associated with greater rates of symptom reduction than those observed in a control group with similar initial symptom severity, and for whom outcomes were contemporaneously assessed. Thus, this study provides strong evidence of the effectiveness of Wave coaching and takes an important step toward ruling out other possible explanations for change, such as regression to the mean.

This study also challenges the notion that BH coaching is only a relevant option for individuals with mild to moderate mental health concerns or subclinical stress. Rather, the data show that the benefits of coaching can be realized across the severity spectrum. Whether initial symptoms were mild to moderate, or severe to extremely severe, users in the engaged coaching group fared better than their control group counterparts. Moreover, improvement rates were consistently highest among engaged coaching users who initially exhibited severe to extremely severe symptoms. Certain factors may differentiate those who will benefit from BH coaching from those who require alternative or adjunctive interventions (e.g., therapy, medication); however, our data refute that severity is a critical indicator of outcome.

As the BH coaching industry grows, so will demand for evidence of its effectiveness. When evaluating studies on coaching outcomes, the use of validated assessments, clinically-relevant benchmarks, and controlled study designs are important indicators of quality. The presence of these elements can increase confidence in the veracity of studies' claims. Using a rigorous, empirically-grounded approach, we found support for the impact of Wave's coaching program across users with diverse clinical presentations. In an era when half of individuals with mental health needs do not receive care, emerging evidence suggests BH coaching can extend the reach of our healthcare system and make a critical difference in the lives of millions of people each day.



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Appendix

Methodology

Analyses were conducted for a subset of Wave users who, between April 2023 and May 2024, completed the DASS-21. The DASS-21 is an empirically-validated clinical assessment of depression, stress, and anxiety; using established thresholds, it classifies symptoms as normal, mild, moderate, severe, or extremely severe. Wave users filled out the DASS-21 upon account creation and twice more at monthly intervals. To assess longitudinal change in symptom severity, change scores between first and second, and first and third, DASS-21 administration, were calculated. Change scores were interpreted based on the reliable change indices reported for outpatients by Ronk et al., 2013. Users' data were included in depression, anxiety, and stress analyses if they initially had elevated symptoms in the relevant category. Chi-square tests compared changes in DASS-21 for engaged coaching users (those who attended 2 or more coaching sessions) to controls (those who never attended coaching, or only met with a coach for an initial introductory session).

Chi-square analyses

Symptom reductions associated with Wave coaching

Symptom category	% of group with reliable symptom reduction		χ^2	p-value
	Coaching	Control		
Depression	51.6%	23.1%	4.859	0.028*
Anxiety	35.5. %	20.0%	1.626	0.202
Stress	46.4%	16.7%	5.202	0.023*

* indicates statistical significance, <.05

Depression symptom reduction associated with Wave coaching, by initial symptom severity

Initial severity	% of group with reliable symptom reduction		χ^2	p-value
	Coaching	Control		
Mild-moderate	30.8%	8.3%	1.963	0.161
Severe-extremely severe	66.7%	35.7%	3.030	0.082

Anxiety symptom reduction associated with Wave coaching, by initial symptom severity

Initial severity	% of group with reliable symptom reduction		χ^2	p-value
	Coaching	Control		
Mild-moderate	29.4%	0.0%	3.939	0.047*
Severe-extremely severe	42.9%	35.7%	0.150	0.699

* indicates statistical significance, <.05

Stress symptom reduction associated with Wave coaching, by initial symptom severity

Initial severity	% of group with reliable symptom reduction		χ^2	p-value
	Coaching	Control		
Mild-moderate	38.9%	25.0%	0.625	0.429
Severe-extremely severe	60.0%	8.3%	6.407	0.010*

* indicates statistical significance, <.05