Mental Health Coaching from Employee Assistance Program Improves Depression and Employee Work Outcomes: Longitudinal Results from CuraLinc Healthcare 2020-2022

Dr. Mark Attridge*, David Pawlowski** and Sean Fogarty**

* Attridge Consulting, Inc., United States
** CuraLinc, LLC (d.b.a. CuraLinc Healthcare), United States

Abstract: This was an applied naturalistic study examining changes in work and clinical outcomes after using individual mental health coaching services from an employee assistance program in the United States. The data was from 872 employee users at CuraLinc Healthcare during the years 2020 to 2022. The coaching intervention included individual sessions that focused on helping the employee with personal goal setting, problem-solving and skill-building. Over two-thirds of clients engaged in coaching for support with mental health issues (anxiety 47%, depression 12% or other 9%) while others had issues of stress (19%), personal relationships (marital 8%, family 4%) or work (2%). The coaching was delivered online and usually lasted about five weeks. The study features a Pre to Post single-group research design with self-report data collected at the start of use and again at follow-up after the last session. Repeated measures ANOVA tests found significant improvement with each result being a large size statistical effect for the outcomes: work absenteeism hours were reduced by 88% (d=0.42); work productivity level was increased by 32% (d=0.79); severity of depression symptoms was reduced by 66% (d=0.67). Exploratory analyses indicated that improvement on outcomes was experienced consistently across different sub-groups of clients based on age, gender, employer and service use factors. Having an absence problem was reduced from 42% of all clients at Pre to 7% at Post. Specific hours of missed work in the past month (measured by the Workplace Outcome Suite) changed from 6.7 hours at Pre to less than 1 hour at Post. Employees with a problem with their work productivity (i.e., low performance and lack of focus, measured by Stanford Presenteeism Scale) was reduced from 27% of clients at Pre to 1% at Post. Among the subsample of clients initially with a work productivity problem, 94% achieved “reliable recovery” with a larger than chance level increase in their productivity score. The average total hours of absence and lost work productivity combined in the past month was reduced from 52.8 hours at Pre to 14.5 hours at Post. The percentage of all employees at-risk for clinical depression (measured by the PHQ-9) was reduced from 20% of coaching clients at Pre to zero at Post. Within this at-risk subgroup, 85% achieved “reliable recovery” such that the differences in their scores was greater than at chance level. Coaching services thus appear to be a viable alternative to counseling for employees interested in more goal-oriented, solution-focused type of support.

Index Terms: absenteeism, anxiety, coaching, depression, employee assistance program, mental health, PHQ-9, presenteeism, productivity, Stanford Presenteeism Scale, Workplace Outcome Suite

INTRODUCTION

Untreated behavioral health problems can impact the work performance of employees which in turn results in lost productivity and other healthcare and economic costs for employers and society [1,2]. Absenteeism (repeatedly being absent from work due to health problems) and presenteeism (a pattern of working despite not feeling well) are both negative indicators of productivity affected by a worker’s mental health [3]. The World Health Organization (WHO) estimates that anxiety and depression cost the global economy $1 trillion each year in lost productivity [4]. Experts estimate that for every $1 spent on scaling up mental health treatment options, there is a $4 return in improved health and productivity [5]. The prevalence rates (and their adverse impacts) of behavioral health problems have been exacerbated during the recent ongoing COVID-19 global pandemic [6,7]. Recent national data from the U.S. revealed that during the pandemic around 40% of adults meet clinical criteria for having a mental health or substance use disorder [8].

Employers are increasingly interested in improving the mental health of their workforce to subsequently reduce absenteeism and presenteeism behavior. Since the pandemic started, expanding the employee assistance program (EAP) benefit was the No. 1 action...
step to support employee wellbeing and mental health – according to a survey by the Gallup organization of 200 Chief Human Resource Officers [9].

1.1 Overview of Employee Assistance Programs

According to the Employee Assistance Professionals Association (EAPA) [10], an EAP is a “set of professional services specifically designed to improve and/or maintain the productivity and healthy functioning of the workplace (p. 1).” Staffed mostly by masters-level licensed counselors and social workers, EAPs offer assessment and short-term counseling (usually 3 to 6 treatment sessions per case) for individual employees who present with a wide range of behavioral health, personal life and work-related issues.

The most recent national representative survey of employers was conducted in March of 2022 by the U.S. Bureau of Labor Statistics (BLS) [11]. It shows that EAPs are the most popular of six different quality of life benefit options offered by employers in the U.S. The same research reveals that although a majority of employers have an EAP benefit (56% overall), it varies substantially by company size, with EAPs being more common as the size of the employer increases (private and government sectors combined): 32% or employers with under 100 workers have EAP; 68% of employer with 100-499 workers have EAP; and 86% of employers with 500 or more workers have EAP. An actuarial analysis combining census data for the number of employers by size and market and similar BLS rates of having an EAP benefit, estimated that in year 2021, over 2.3 million private sector employers and over 182,000 public sector organizations sponsored an EAP benefit for their employees and when combined over 74 million employees in the U.S. had access to EAPs [12]. The conclusion from multiple scholarly reviews of evaluations conducted over the past four decades is that counseling from EAPs is generally effective for most employee users in areas of reducing personal and clinical distress, improving work-related outcomes (such as absenteeism, presenteeism and productivity), and that most users are satisfied with their experience using an EAP [13-19].

1.2 Overview of Coaching Services for Employees

The field of coaching as a support to employees has a long and diverse history [20,21]. According to several industry surveys [22,23], coaching has evolved into several different sub-types, including workplace coaching [24], executive coaching [25,26], health and wellness coaching [27-29], and life coaching [30,31]. Coaching has multiple sources of professional certifications [32]. For example, founded in 1995, the International Coaching Federation in year 2022 has over 50,000 members located in 140 countries and offers several levels of certification and training [33].

At least a dozen published empirical critical reviews or meta-analyses have examined the findings from the global literature of evaluation studies of workplace and executive coaching [24-31,34-46]. The general consensus from this body of work is that individual workplace coaching typically has positive effects on employee work performance and overall well-being. Although there is variation in the specific estimates of the effects of coaching on certain outcomes, generally coaching interventions appear to have positive, small-to-moderate size statistical effects on both work outcomes (productivity, work performance/skills, competency-based skills, work-related attitudes, job satisfaction) and personal outcomes (well-being, coping, self-regulation, goal attainment, behavioral change, personal attitude change).

1.4 Coaching from Employee Assistance Programs

In contrast, there is scant literature concerning workplace coaching services provided by EAPs. Despite the apparently large numbers of EAPs active in providing workplace coaching services [47], only a handful of published studies exist that provide data on the use and outcomes data for external workplace coaching services from EAPs or other workplace mental health specialty providers that support employers. Each of these three providers are based in the U.S. and rely on virtual online delivery models of coaching. Two of the EAPs feature short-term interventions of external workplace coaching that is typically delivered over a one to two month period per client [48,49]. Another provider is devoted solely to life coaching [50-52] and has a much longer duration of use experience that typically spans between 6 to 12-months per client.

1.5. Mental Health Coaching as Specialty Service from CuraLine Healthcare

In response to an increased demand for services to address sub-clinical focus areas among employee populations, such as meditation, mindfulness and sleep fitness, CuraLine Healthcare began offering coaching as an additional support option for EAP participants in 2019. Based on feedback from participants who used the service, coaching was gradually expanded to include sub-clinical focus areas for participants with mild to moderate mental health concerns and a personal preference for coaching over counseling. For participants who choose coaching, the intervention includes individual sessions that are solution-focused and address personal goals. This aspect of the EAP service is called mental health coaching (or what we also refer to as emotional fitness coaching). It is different from executive coaching, workplace coaching, life coaching or basic wellness health.
coaching. These participants had a personal preference for coaching over counseling, and our assessment determined that, based on the relatively low severity of the issue (and the absence of any risk or safety concerns), coaching could be appropriate. As with all aspects of the employee assistance program, the participant’s personal choice is always a priority. Participants can choose counseling over coaching for any reason, even if their clinical symptoms are mild. There are a variety of reasons some participants prefer mental health coaching over counseling:

1. Less stigma surrounding coaching than counseling or therapy
2. Current challenges are on the mild end of the clinical severity spectrum
3. Personal preference for a short-term, goal-oriented, solution focused approach
4. Desire to learn practical skills and strategies to address challenges quickly
5. Lack of interest in exploring effect of past experiences on current challenges
6. Highly motivated to learn new skills and a capacity and willingness to practice between sessions

All CuraLinc Healthcare coaches are independently licensed masters level clinicians who draw upon evidence-based treatment approaches to deliver coaching support. These coaches also have additional training, accreditation or certification in their area(s) of coaching specialty. Employees are only offered coaching when clinically appropriate. For example, participants with severe or acute mental health concerns, more severe symptoms or any clinical risk issues are always referred for counseling or another clinically appropriate treatment option.

CuraLinc Healthcare also published a study in 2022 of the clinical and work outcomes achieved from employee users of the EAP counseling service during the years 2017 to 2022 [53]. These counseling-specific findings will serve as a comparison for the coaching service results obtained in the present study.

1.6. Research Questions

We proposed the following research questions on the primary outcome measures available to study:

- \( RQ1: \) Use of coaching will improve outcomes for work absenteeism.
- \( RQ2: \) Use of coaching will improve outcomes for work presenteeism/productivity.
- \( RQ3: \) Use of coaching will improve outcomes for hours of lost productive work time.
- \( RQ4: \) Use of coaching will improve outcomes for depression symptoms and clinical risk status.

We also wanted to leverage the client demographic and operational data available in our study to explore the potential for moderators of improvement in key outcomes after use of coaching. Thus,

- \( RQ5: \) Is improvement in clinical and work outcomes from Pre to Post use of the coaching service consistent across different subgroups of clients defined by employee demographic, service use or employer context factors?

We also wanted to better understand how the effectiveness of EAP coaching compares to the effectiveness of EAP counseling. Thus,

- \( RQ6: \) How does the improvement in work and depression outcomes from Pre to Post use of the coaching service from EAP compare to that of the counseling from EAP?

II. METHODOLOGY

2.1. About the Service Provider

CuraLinc Healthcare is a global external vendor of EAP services, based in the United States. In business since 2008, it has over 3,400 employer customers that offer the EAP as a benefit to over 6 million employees. This company specializes in delivering transformative mental health care by marrying technology and personalized advocacy to engage, empower and support employees throughout their care journey. Users were made aware of the service as a benefit open to all covered employees through a variety of digital, interpersonal and workplace promotional practices. As part of its ongoing business practices, this EAP routinely collects several kinds of data relevant to assessing the outcomes of the services.

2.2. Archival Data

The study period spanned 33 months, from January of 2020 through early September of 2022, based on the start date of program use for the coaching clients (a 2.8 year period). The raw data was aggregated into one master dataset and analyzed for the present paper. We focused only on employee users in this study and therefore the experiences of spouses, dependents and retirees of covered employees
who used the coaching service were excluded. There was no direct cost to the employees in this study, as access to the coaching was sponsored by their employer. Employees participated voluntarily and were not paid for being in the research study.

2.3. Client Intake, Coaching Intervention and Follow-up

Employees accessed the EAP in a variety of ways, most commonly by calling in to the service and talking on the telephone with a licensed mental health professional, or by self-scheduling an initial coaching session online. Every coaching client was a self-referral into the EAP (i.e., none were a formal management referral). All of the coaching sessions were delivered remotely via live secure video over the Internet. [Although coaching delivered via text on smart phone is available, the data for this study set does not include text coaching participants.] The typical study participant had a model determined by their employer that limited the maximum of coaching sessions to 5 per client (51% of sample), whereas other participants had contracted maximums that ranged from 3 to 10 sessions per client (3 session limit = 9%; 6 session limit = 29%; 8, 9 or 10 session limit = 10%).

For this study, we extracted the following information from the operational data system: name of employer/customer, maximum coaching sessions allowed per client in the employer/customer contract, date of first use of the service, date of follow-up survey, employee age (date of birth), employee gender, source of referral to the EAP (self or formal referral from management), primary issue (anxiety, depression, work stress and so on), and the modality (how the coaching was delivered). The typical client engaged in coaching over a 30 to 40-day period (i.e., from date of case open to case close; see Figure 1). During the initial assessment, the outcome measures were collected, either over the telephone or from a brief online survey. After the treatment phase was completed, the coach conducted individual follow-ups with clients about 1 week after the last clinical session to assess the employees’ progress toward meeting the goals of the coaching. At this point, the outcome measure second wave of data was collected. The total amount of time involved for each employee to complete their use of the service and participate in the follow-up varied by participant (ranging from 29 days to 130 days), but averaged about 4 days. Figure 1 shows the typical episode length and follow-up timing in the research study.

![Timing of Outcome Data Collection](image)

**Figure 1:** Timing of longitudinal outcome data collection for a typical coaching client.

2.4. Self-report Outcome Measures

All users of the coaching service were asked to complete measures of depression symptom severity and two work outcomes. The Post use data was collected routinely for all coaching clients for the same three outcomes. Standardized measures of work outcomes and depression were assessed using published and validated scales from the scientific literature and available in the public domain.

**Depression.** The Patient Health Questionnaire 9-item scale (PHQ-9) [54] was used for screening, diagnosing, monitoring and measuring the severity of depression. This scale has been used in many research studies and has established validity and reliability [55-57]. The instructions state: “Over the last 2 weeks, how often have you been bothered by any of the following problems?” It has four response options of: (0) Not at all; (1) Several days; (2) More than half the days; and (3) Nearly every day. The PHQ-9 is scored by adding together the scores for all 9 items. Higher scores on this measure indicate greater depression. Scores are categorized into five levels of severity: Minimal = 0 to 4; Mild = 5 to 9; Moderate = 10 to 14; Moderately Severe = 15 to 19; and Severe 20-27. Based on recent
reviews [58,59] clinical at-risk status for depression was categorized as Moderate or above (i.e., scores of 10+). This scale had high internal consistency at both time points (α = .71 Pre; .77 Post) and a significant test-retest correlation (r_{paired} = .50).

**Work Absenteeism.** Developed by Chestnut Global Partners in 2010 [60], the Workplace Outcome Suite (WOS) is a validated questionnaire with five outcomes that has been used in over 40 EAP studies [18,19]. Only the 5-item Absenteeism Scale from the WOS was used in this study. The instructions are to: “Please report for the period of the past 30 days the total number of hours your personal problems (or presenting issue)”. It uses a fill in the blank response for the number of specific hours of absence in the past 30-days for five ways that refer to how much the employee’s ability to be at work were affected by their personal problem(s). Unlike the other outcome scales in this study, this measure did not use a set of statements with ratings, rather it asked for specific hours of missed work to be provided in five behavioral contexts. The hours listed for each context are added up for total number of hours of missed work. Thus, the internal reliability of the WOS was not relevant to assess. The total hours of absence per person did have a significant test-retest correlation, indicating some stability within clients in this measure (r_{paired} = .44).

Similar to past research [18,19,53], the total for the absenteeism scale at Pre showed a skewed pattern, with the majority of the total hours coming from the first item on missing full day(s) of work (55%) and the remaining 45% coming from the partial day types of absence assessed by the other four items: late arriving to work (9%), leaving work early (13%), change in work location (8%) and personal communication activity while at work (15%). Based on past research using the WOS [19,59], the following five levels were used for the severity of absence: None 0 hours; Minimal < 4 hours; Low 4-8 hours; Moderate 1-3 days (9-24 hours); High > 3 days (25-159 hours). As other research shows the typical employee in the U.S. misses only about 3 hours per month of work due to health-related issues (see review in [61]), problem status for work absenteeism was defined as 4 or more hours of absence.

**Work Productivity.** The brief 6-item version of the Stanford Presenteeism Scale (SPS-6) is a widely used measure for assessing the impact of health problems on the work productivity of employees [62,63]. It consists of two dimensions, one on completing work (items 2, 5, and 6) and a second on avoiding distraction while working (items 1, 3, and 4). It has response options of: (1) Strongly disagree; (2) Somewhat disagree; (3) Uncertain; (4) Somewhat agree; and (5) Strongly agree. The items are answered for the time period of the past month. Three of the six items are reverse scored (items 1, 3, and 4). The SPS-6 score is the sum of the three raw scores and the three reversed scores (range 6–30). A higher total scale score indicates greater work productivity. Based on the Consortium for Mental Healthcare [64], scale scores were grouped into five levels of work productivity, ranging from low to high: Very Low productivity 6-10; Low 11-15; Medium 16-20; High 21-25; Very High 26-30. In our data, this scale had excellent psychometrics with high internal consistency (α = .81 Pre; .73 Post) and a significant test-retest correlation (r_{paired} = .77).

Similar to our previous study [53], we split the distribution of scores into two groups with scores at 15 or below (in the very low to low range) indicating a “problem” level of work productivity or scores at 16-30 as “no problem.” Note that the creators of this scale defined presenteeism as a positive aspect of work productivity [62]: “A decrease in presenteeism can hurt productivity in a way similar to an increase in absenteeism” (p.14). However, almost all other researchers in this area define the concept of presenteeism negatively as a problem of not being psychologically present enough while working to perform one’s job properly [3,18,19,60,65]. Therefore, we retained the original 1-5 direction of the ratings but labelled higher total scores on the SPS-6 as indicating greater work productivity (and less work presenteeism as normally defined) while at work. This interpretation is consistent with our earlier published study of counseling cases with SPS-6 data [53].

**Hours of Lost Productive Time.** We also wanted to determine how much total work productivity loss there was among users of the coaching service. Seminal research conducted for the American Productivity Audit project [66] identified how a single simple metric can be used to index the dual impact of work absenteeism and work presenteeism. This metric is called lost productive time (LPT) [19,67]. It is measured in hours of time per month. We combined data from the WOS work absenteeism measure and the SPS-6 summary score after recoding. The SPS-6 summary score for each client at Pre and Post were assigned new values corresponding to different levels of work productivity on a 0 to 100% scale from low to high. The value of using a 100% scale is that it can be converted directly into hours of work time. The new specific levels of estimated work time that was productive (i.e., see Figure 2) were determined through multiplying the SPS-6 total score by 3.33 (i.e., the maximum score on SPS-6 of 30 becomes a new score of 99.9). Although this is the first study to develop this re-coding of the SPS-6, it follows a similar logic used in past research on EAP counseling outcomes for recoding the WOS Presenteeism measure [19,61]. As expected from past research, the work absenteeism and work productivity scales were modestly intercorrelated among the coaching users (Pre r = -.34; Post r = -.21; both p < .001). Thus, combing the two work measures into a single measure of hours of LPT was empirically supported.
2.5 Determination of Valid Longitudinal Sample

The minimum criteria for inclusion in the longitudinal study sample was having all three outcome measures collected for all items at both Pre and Post. Clients had to be of working age (18-65 years). Clients also had to complete their use of the coaching within a six-month period of time. Based on past research using the WOS [18,19,53,61], employees who were not working were judged as irrelevant to answer questions about absence from work or their level of productivity while working. This criterion was operationalized by excluding all coaching clients who reported 160 or more hours of absence in the past 30 days (i.e., an amount that exceeded a standard U.S. full-time schedule of 8-hour daily work shift performed five days per week). Of 904 clients with data at the start, 872 clients were included in the study as valid sample for analysis (see Figure 3). Thus, only 3% of the starting sample was excluded.

![Stanford Work Presenteeism Scale Scores Recoded as Percentage of Time Worked Productively](image)

**Figure 2.** Re-coding SPS-6 summary scores into estimated percentage of time productive while working.

### 2.6 Profile of Sample of Coaching Users

The sample of coaching clients can be characterized by their demographic and service use factors. All of the clients were employees who lived in the United States. These participants worked at 252 different employers in the United States that provided access to the coaching benefit through the EAP. The employers represented a wide range of industries, including healthcare (22%), education (19%), manufacturing (15%), retail or restaurant (11%), financial or insurance (11%), government or public service (7%), blue collar type jobs (6%), technology (6%) or other (3%). For gender, almost two-thirds of clients were women (64%) and 36% were men. The age of clients ranged from 18 to 65, with the typical client being 37 years old. All of the clients chose to voluntarily use the coaching (100%...
self-referral; none through a formal management referral). All of the contact between client and coach was conducted privately via online secure video. The issues assigned to participants by the coach included: anxiety (47%), personal stress (19%), marital relationships (8%), family issues (4%), and work-related stress (2%). No employees used coaching to address an alcohol or drug issue. The duration of use, measured as days between the first and last sessions of coaching, ranged from 22 to 123 days, with an average of 37 days (SD = 10.98). The distribution for duration was also grouped by number of weeks. This profile is displayed in Figure Set 4.

**Figure Set 4.** Characteristics of EAP coaching clients and service use.
2.7 Comparison Sample of Counseling Users from Same EAP

We also examine results for coaching clients to employee users of counseling services from CuraLinc published in another recent study [53]. That study also used the same three outcome measures in samples of counseling cases obtained over a 5-year period from 2017 through June of 2022. It had longitudinal results from Pre to Post use (start of case to 30-days after the last counseling session used) for 3,372 counseling cases for the WOS 5-item absenteeism outcome, 3,846 counseling cases for the SPS-6 scale for productivity outcome and 292 counseling cases who started counseling at-risk on the PHQ-9 depression outcome.

2.8. Statistical Power and Effect Size

The level of statistical power [68] to detect a small size effect in repeated measures tests at $p < .05$ chance level was very high at .99. We also calculated the statistical effect size for most results using the partial eta squared ($\eta_p^2$) statistic. This estimate can range from 0 to more than 1.00, but it is usually a number closer to the zero end of the scale. These effect sizes can be interpreted as follows [69]: large size effect $\eta_p^2 = .14$ or greater; medium size effect $\eta_p^2 = .06$ to .13; small size effect $\eta_p^2 = .01$ to .05; or trivial size effect $\eta_p^2 < .01$. To allow comparisons with other research, key results also included the Cohen $d$ effect size estimates [70].

2.9. Data Analysis Plan

All analyses were conducted using the Statistical Package for the Social Sciences (SPSS) Version 27. Analyses with categorical variables were conducted with chi-square ($\chi^2$) non-parametric test procedures. The tests of improvement over time (Pre to Post) with the ratings on outcome measures were conducted using a repeated measures analysis of variance procedure (RM-ANOVA). Meaningful findings in this study were defined as requiring both a statistically significant result ($p < .05$) and at least a small size statistical effect ($\eta_p^2$ of .01 or greater).

We also calculated if a client’s score moving from the “dysfunctional population” range into the “functional population” range. For the PHQ-9 measure, this is conventionally a score of 10 or higher to indicate a moderate or more severe level of clinical distress. This is also labelled as experiencing “recovery” after treatment. How many of the total coaching clients moved from having a “problem” status on hours of missed work or level of work productivity was also tested as recovery for these work outcomes. The Reliable Change (RC) index methodology was also used to test if the magnitude of change experienced within-person by each coaching client was beyond chance level using the standardized variance of the outcome scale [71,72]. According to the journal Evidence-Based Mental Health [73], it is most appropriate to calculate this index with psychometric data from the study intervention context. Data from our previous study of over 3,000 EAP counseling cases [53] determined that a decrease from Pre and Post scores on the PHQ-9 of 5 or more points was considered a reliable clinical improvement in depression severity after counseling. Conversely, an increase of 5 or points from Pre to Post was a considered a reliable deterioration in depression after EAP use. This within-person difference of 5 points on the PHQ-9 has been used other studies of EAP counseling [74]. This same approach was also calculated for the work productivity measure (see Appendix A). However, it was not done for the other work outcome. This was because the hours of work absence in the past month are not based on a measurement scale that can have internal consistency across similar items or temporal consistency over time. Thus, the hours of work absence outcome was not appropriate for conducting a reliable change index analysis.

2.10 Ethical Considerations

The privacy of users of the EAP was protected by having all program use and survey data deidentified before being shared with the independent consultant (first author) who conducted all analyses. All data was collected as part of the normal business practices and not for a separate specific research project. As this was an applied study of archival anonymized data collected from routine use of the service, collecting additional informed consent to participate in research from individual participants was not required beyond what was in their initial consent agreement for terms of service use. Project approval from a university internal review board was not required. The use and analysis of archival operational data in this manner for applied research is consistent with the published ethical guidelines of the American Psychological Association [75]. The real-world conditions for this study are like other applied studies published in peer-review journals that have examined the effectiveness of commercial mental health support programs [18,48-53].

III. RESULTS

Results are presented first for the three work outcomes followed by the clinical outcome of depression severity.

PART 1: Work Absenteeism

Range in Absenteeism. Employees who used coaching were distributed across all five levels of the number of hours of missed work at Pre and at Post. The most common outcome was missing zero hours of work and this ideal result almost doubled from the start of
coaching to the follow-up, changing from 45% of clients to 85%, respectively. This result for work absenteeism and others are shown in Figure Set 5.

![Work Absenteeism: Range](chart1)

![Work Absenteeism: Average](chart2)

**Figure Set 5.** Results for the work absenteeism outcome.

**Average Level of Absenteeism.** The RM-ANOVA test found that the average number of hours of absence in the past 30 days was 88% lower at the follow-up, changing from 6.73 hours (SD = 9.55) missed during the past 30 days at Pre to less than 1 hour missed at Post (M = 0.78, SD = 3.05). This result of 5.95 fewer hours of absence per month was significant and a very large size statistical effect: $F(1,871) = 623.66, p < .001, \eta^2 = .42$. [This was tested using the square root transformed variable of absence hours to reduce skew.]

**Moderators of Improvement in Absenteeism.** Only one of the client demographic and context factors was a significant moderator of the extent of improvement in work absenteeism from before to after EAP use. The type of issue had small differences in the amount of absence that was a small size statistical effect (see details in Appendix B). Clients with marital or family issues had the fewest hours of work absence, compared to findings for the other types of issues and thus also had a smaller degree of change from Pre to Post. In contrast, clients with mental health issues had the most absence and also improved the most after use. The level of depression symptom severity when starting coaching was not a moderator of improvement in missed work.

**Problem Status for Absenteeism.** At the start of coaching, 42% of employees ($n = 368$) were classified as having an absence problem (i.e., missing more work than the three hours found for a typical “healthy” employee). This outcome changed to be only 7% of the clients at Post ($n = 59$). This change was a significant improvement: $\chi^2(1,872) = 54.74, p < .001$. Thus, 83% of the clients with an absence problem initially had recovered after use of the coaching to no longer have this work problem.
PART 2: Work Productivity

Range in Productivity. Employees who used the EAP for coaching were distributed across the five levels of work productivity more evenly at Pre that they were at Post. The most common outcome was being at the high or very high levels of productivity, which doubled in prevalence among these clients from the start of coaching to the follow-up (49% of clients vs. 98%, respectively). This result for work productivity and others are shown in Figure Set 6.

Average Level of Productivity. The RM-ANOVA test found that the average score on the productivity scale was 32% higher at the follow-up, changing from $M = 19.83$ (SD = 4.90) at Pre to $M = 26.12$ (SD = 2.87) at Post. This result was significant and a very large size statistical effect: $F(1,871) = 351.73$, $p < .001$, $\eta^2_p = .79$.

Moderators of Improvement in Work Productivity. Just two of the client demographic and context factors were significant moderators of the extent of improvement in work productivity from before to after use (see details in Appendix B). Both results, however, were small size statistical effects. The type of issue had small differences with level of productivity. Clients with marital or family issues had highest productivity, compared to clients with other types of issues and thus also had the least change from Pre to Post. In contrast, clients with work issues had the lowest productivity initially and thus improved the most after use. The year when coaching was used had small differences in the level of productivity. Clients in year 2020 (during the start of the COVID-19 pandemic), had relatively lower productivity compared to clients during the next two years. The level of depression symptom severity when starting coaching was not a moderator of improvement in work productivity.
Problem Status for Productivity. At the start of coaching, 27% of employees \( (n = 233) \) were classified as having a productivity problem (i.e., low or very low level of performance and work focus). After counseling, this changed to be only 1% of the total cases at Post \( (n = 10) \). This was a significant improvement: \( \chi^2(1,872) = 20.69, p < .001 \). Thus, almost all (96%) of the subsample of clients with a productivity problem initially had recovered after the use of coaching to no longer have this problem.

Reliable Change for Productivity. Of the one in four coaching clients who started their use of the EAP with the problem of low work productivity, 94% \( (n = 220 \text{ of } 233) \) had a “reliable improvement.” This means their level of productivity increased after coaching by a meaningful amount beyond chance levels (i.e., at least 20% or more net change or by 6 or more points on the scale). In contrast, only 6% of these clients \( (n = 13) \) stayed in the low productivity problem range and had no reliable change. None of these clients had a “reliable deterioration” in their level of productivity (i.e., got significantly worse). Also, 94% \( (n = 218) \) of clients initially at a problem level for work productivity also achieved the desired result of “reliable recovery” such that their scale score increased by a meaningful extent at the Post and their Post score was also in the medium or better range of productivity.

PART 3: Improvement in Hours of LPT

The final work outcome examined for users of the coaching was the hours of lost productive time (LPT). This measure combined the hours of self-reported absence with an estimated number of hours of time while working that was unproductive (i.e., hours lost to work presenteeism). The findings for absence were already presented above. These results for work LPT are shown in Figure Set 7.

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<th>Variables - Per month</th>
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<tbody>
<tr>
<td>Hours of total scheduled work (i.e., 40-hour week, four weeks in a month)</td>
<td>160.00</td>
<td>160.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Hours unproductive due to missed work</td>
<td>6.73</td>
<td>0.78</td>
<td>-5.95</td>
</tr>
<tr>
<td>Hours actually worked</td>
<td>153.27</td>
<td>159.22</td>
<td>5.95</td>
</tr>
<tr>
<td>Percentage of worked time being productive</td>
<td>70.27%</td>
<td>91.37%</td>
<td>21.10%</td>
</tr>
<tr>
<td>Percentage of worked time being unproductive (level of presenteeism)</td>
<td>29.73%</td>
<td>8.63%</td>
<td>21.10%</td>
</tr>
<tr>
<td>Hours unproductive while working (presenteeism loss)</td>
<td>45.05</td>
<td>13.68</td>
<td>-31.37</td>
</tr>
<tr>
<td>Hours of lost productive time combined (LPT)</td>
<td>51.78</td>
<td>14.46</td>
<td>-37.32</td>
</tr>
</tbody>
</table>

Figure Set 7. Calculation details and results for change in hours of LPT from Pre and Post.

At Pre, the typical coaching client was performing at a 70% level of productivity. By comparison, other research indicates the average worker in the U.S. works at about an 85% level of performance (see review in [61]). The level of unproductivity is the mathematical difference between the performance level and the maximum of 100%. Thus, at Pre, the typical coaching client had a productivity deficit of 30%. But at the follow-up, this outcome had rebounded to be an average of just 9% level of unproductivity. When these percentages are applied to the hours worked, it yields the hours of unproductive time while at work (i.e., presenteeism hours). At Pre, the typical coaching client had a productivity loss of 45 hours. At Post, the typical coaching client had a productivity loss that was much less, at only 14 hours. This change in hours of presenteeism was significant, \( F(1,871) = 2582.13, p < .001, \eta_p^2 = .75 \) (\( d = 1.72 \)).

The RM-ANOVA test found that the average number of combined hours of absence and lost productivity per month had changed from 52 hours at Pre to about 15 hours at Post. This is out of a 160-hour maximum monthly work schedule. The key result of 37 fewer hours of LPT per month was significant and a very large size statistical effect: \( F(1,871) = 2755.79, p < .001, \eta_p^2 = .76 \) (\( d = 1.78 \)). Results for each of the components used to calculate LPT are shown in Figure Set 8. The careful reader will note these findings reveal that the amount of unproductive time lost while working far exceeded the amount of unproductive time lost from absence. Indeed, the presenteeism hours accounted for 87% of the total LPT at Pre and 95% of the total LPT at Post.
PART 4: Depression

Range in Depression Symptom Severity. The employees who used the EAP for coaching were not evenly distributed across the five levels of severity for depression disorder symptoms at Pre and at Post. The most common outcome was being at either the mild or minimal level of severity (i.e., not at-risk), which increased from 80% of clients at the start of coaching to 100% at the follow-up. These results for depression severity are shown in Figure Set 8.

![Depression: Range of Severity](image1)

![Depression Severity: Average](image2)

![Reduction in % Clients with Depression](image3)

![Moderators of Depression Severity](image4)

**Figure Set 8.** Results for depression severity outcome.

At-Risk Status for Depression. On an individual level, at the start of coaching, 20% \( (n = 176) \) of these employees were classified as clinically at-risk. But at Post, no clients remained above the clinical risk level \( (n = 0) \). Interestingly, the percentage of cases identified to use coaching to address an issue of depression was twice as high when compared between the two groups determined later by the status of being at-risk or not for clinical depression at Pre based on their PHQ-9 score: 24% \( (n = 25 \text{ of } 176 \text{ total}) \) of the cases at-risk for depression had an issue of depression compared to 11% of the not at-risk sample \( (n = 78 \text{ of } 696 \text{ total}) \).

Reliable Change for Depression. Of the one in every five coaching clients that started their use of the EAP with clinical depression, 85% \( (n = 150 \text{ of } 233) \) had a reliable improvement in which their level of depression decreased by a clinically meaningful extent (i.e., by 6 or more points). In contrast, only 15% of the at-risk cases \( (n = 26) \) had no reliable change in depression severity. Importantly, none of at-risk clients had a reliable deterioration in their depression symptoms (i.e., got worse). As all of the coaching clients were no longer at-risk for clinical depression at the end of their EAP use, the same 85% of clients initially at-risk depression also achieved the desired result of “reliable recovery” such that their symptom score decreased to a meaningful extent at the Post and their Post score was also in the minimal or mild range. The best combined outcome of “reliable recovery” is when the client has both a large enough reduction in their outcome scores over time to be a reliable change and the absolute level for the outcome at Post was no longer in the clinical status range of scores. This best outcome was achieved by 85% of the clients at-risk for depression.

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Average Level of Depression. The RM-ANOVA test found that the level of depression symptom severity for the average coaching client in the total sample was 66% lower at the follow-up, \( F(1,871) = 1738.88, p < .001, \eta^2_p = .67 \) very large effect. The average score at Pre (\( M = 6.30, SD = 3.29 \)) was reduced at Post (\( M = 2.15, SD = 2.34 \)). Thus, the typical coaching client improved from mild risk to minimal risk of depression disorder. Both of the Pre and Post average scores for the total sample were below the cutoff score of 10 for at-risk status. The same test conducted just within the subsample who started counseling at a clinical level of depression (\( n = 176 \)) also showed an average of a 66% reduction in symptom severity scores, \( F(1,175) = 1671.16, p < .001, \eta^2_p = .91 \) very large effect. The average score at Pre (\( M = 10.96, SD = 0.95 \)) was above the risk threshold in the moderate level of severity and at the Post the average score was below the risk threshold and in the minimal severity range (\( M = 3.76, SD = 2.42 \)).

Moderators of Improvement in Depression. Only one of the client demographic or context factors was a significant moderator of the improvement in depression after EAP use (see details in Appendix B). As expected, clients with the issue type of depression (12% of all coaching users) had initially more severe levels of depression symptoms than did the other 88% of clients with issues other than depression. These same clients also improved the most after the use of the coaching. Thus, matching of the outcome measure with the same clinical issue yielded the strongest results. Yet, all of the other profile factors (including both work outcome measures) had no influence on the improvement in depression after coaching.

PART 5: Summary of Coaching Main Results

For each outcome, starting out a problem or at-risk clinical level was only experienced by a minority of the coaching users. Yet, after use of the service the percentage of clients still at a problem level had dropped substantially: status of having a work absenteeism problem: 42% at Pre to 7% at Post; status of having a work productivity problem: 27% at Pre to 1% at Post; and status of being at-risk for clinical depression: 20% at Pre to 0% at Post. Tests of changes in the average scores on these same outcomes for the typical coaching client were all significant and all were large or very large size statistical effects (see Table 1).

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
<th>Sample</th>
<th>Relative improvement from Pre to Post</th>
<th>Statistical effect size for paired tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Partial eta squared</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>( \eta^2_p )</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>WOS 5-item</td>
<td>Full</td>
<td>88%</td>
<td>.42 large</td>
</tr>
<tr>
<td>Productivity</td>
<td>SPS 6-item</td>
<td>Full</td>
<td>32%</td>
<td>.79 very large</td>
</tr>
<tr>
<td>Depression</td>
<td>PHQ 9-item</td>
<td>Full</td>
<td>66%</td>
<td>.67 very large</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub-sample at-risk Pre</td>
<td>66%</td>
<td>.91 very large</td>
</tr>
</tbody>
</table>

Within-person Change Analyses for Clients At-Risk at Pre

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measure</th>
<th>Sample</th>
<th>Reliability improvement (beyond chance level)</th>
<th>Reliable Change Index</th>
<th>Both outcomes of Reliable Change &amp; Recovered from Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>96%</td>
<td>94%</td>
<td>6%</td>
<td>0%</td>
<td>94%</td>
</tr>
<tr>
<td>Depression</td>
<td>100%</td>
<td>85%</td>
<td>15%</td>
<td>0%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Note: WOS = Workplace Outcome Suite Absenteeism Scale. SPS = Stanford Presenteeism Scale. PHQ-9 = Patient Health Questionnaire depression scale. Tests of longitudinal change in summary mean score within-person for average coaching client. Magnitude for partial eta squared effect from RM-ANOVA is a large size effect if \( \eta^2_p = .14 \) or higher; magnitude for Cohen \( d \) effect measure from paired \( t \)-test is large if \( d = 0.80 \) or higher.

The moderator tests indicated such improvement was experienced consistently across almost all of the different sub-groups of clients based on age, gender, clinical use characteristics and other study context factors. Other studies conducting moderator tests in large samples of counseling cases [18,19,53,61] consistently have found few demographic or program use factors are meaningful moderators of post-treatment improvement in work absenteeism and presenteeism/productivity outcomes, although having more severe depression is linked with worse job performance. Thus, our findings with coaching users with a lack of moderator factors is consistent with other research on EAP counseling. One study of workplace coaching did find small size effects such that improvement on outcomes (including well-being, absenteeism, presenteeism) was weakest when only a single session of coaching was used and strongest when four or more sessions were used [49].

PART 6: Comparison of Coaching Results to EAP Counseling Results

Our coaching results on three outcomes were compared to findings from our other study of counseling cases from the same EAP.
**Work Absenteeism Compared.** The other CurAInc Healthcare study on work absenteeism in EAP counseling cases was that 35% of cases at the start of counseling had a work absence problem but that this was reduced to just 5% of cases at follow-up. These same rates of having an absenteeism problem among our coaching clients in the present study were 42% at Pre and 7% at Post. Thus, about a third of counseling cases and slightly more of the coaching users initially had an absence problem. However, the improvement after use in reducing absenteeism was greater for coaching users than it was for counseling cases. The specific hours of missed work in the past month were also compared: EAP counseling cases averaged 9.0 hours at Pre and 1.8 at Post, whereas EAP coaching cases averaged 6.7 hours at Pre and 0.8 at Post. Longitudinal improvement in average total hours of work absenteeism per employee was significant and a large size statistical effect for both the counseling cases and the coaching users ($\eta_p^2 = .25$ and .42, respectively). The findings for work absence indicate that employees who used counseling were slightly higher in absence at both time points (measured as percentage of users with a problem or as the average hours of missed work across all users) than the employees who chose to use the coaching intervention.

**Work Productivity Compared.** Our other study found that 34% of employees at the start of counseling had a work productivity problem but that this was reduced to just 5% of cases at follow-up. These percentages among the counselor cases are slightly higher than the results found among the coaching clients in the present study, which had a work productivity problem among 27% of users at Pre and just 1% at Post. The findings for work productivity problem indicate that employees who used counseling were slightly higher in this outcome at both time points than the employees who chose to use the coaching intervention. Longitudinal improvement in average scores on the work presenteeism scale scores per employee was significant and a large size statistical effect for both the counseling cases and the coaching users ($\eta_p^2 = .48$ and .79, respectively). These findings indicate that employees who used counseling and those who used coaching were mostly similar on the work productivity outcome.

**Depression Risk Compared.** Our other study did not assess the level of depression symptoms among all of the EAP counseling users, rather that study had collected this data on the PHQ-9 among the roughly 1 in 8 cases that had depression as a primary or secondary issue as the focus of their counseling use. Among those counseling cases with PHQ-9 data who were at-risk for clinical depression at the start of counseling ($n = 292$), 89% were no longer at-risk status at the follow-up after completing their use of the counseling. The same result for the coaching clients in the present study was that 100% of the 1 in 5 users starting out at-risk for depression ($n = 176$) were no longer at-risk for depression at the follow-up. Both findings revealed a very large majority of the employees who started their use of counseling or of coaching had recovered after use to no longer be at-risk for clinical depression. In addition, the percentage of the EAP users initially at-risk for depression in both studies had large enough reductions in their scores over time to qualify as experiencing “reliable improvement” (89% of the at-risk counseling cases; 85% of the at-risk coaching clients).

A meaningful difference between the at-risk depressed users of the counseling and the at-risk depressed users of the coaching services involved the relative mix of specific mental health issues. Of the depressed counseling cases, 69% ($n = 201$) had depression as their primary issue for using the EAP and just 7% had anxiety ($n = 19$) with another 7% having another kind of mental health issue ($n = 21$). In contrast, only 14% of the depressed coaching clients had depression as their primary issue for using the EAP ($n = 25$) and yet 48% had anxiety ($n = 84$) with 11% having another kind of mental health issue ($n = 19$). Thus, among the depressed users of the same EAP, far more of the counseling users had depression as their primary issue than did the coaching users ($69% > 14\%$, respectively) and far more of the coaching users had anxiety as their primary issue than did the counseling users ($48% > 7\%$, respectively). This data suggests that among EAP users who initially exceed the threshold of being at-risk for clinical depression on the PHQ-9 when first accessing the service, employees who choose to use coaching were more concerned about anxiety whereas users who chose counseling were more concerned with depression.

Finally, for coaching clients the severity of depression was uncorrelated with both of the work outcomes at Pre and at Post ($r < .04$, all $ns$). This lack of association for coaching clients contrasts with other findings showing modest positive correlations between depression and work outcomes (especially work presenteeism or productivity) commonly found in other research conducted on samples of employees with more of a range in severity of depression [3,62,65,67].

### IV. Discussion

#### 4.1. Summary of Findings

This project provided favorable real-world conditions with a national multi-year sample to allow us to properly test for improvements in work absence and work productivity as well as risk for depression in employees after voluntary use of coaching. Each of the test results found improvement after the use of EAP coaching with large size statistical effects. Moderator tests indicated such improvement was experienced consistently across almost all of the different sub-groups of clients based on age, gender, clinical use characteristics and other study context factors. A large majority of the coaching clients who started their EAP use at a problem or clinical level on outcomes had improved to no problem or not at-risk status afterwards. The magnitude of this improvement for the two relevant outcomes yielded findings of a “reliable recovery” for 94% of clients initially at a problem level of work productivity and “reliable recovery” for 85% of clients initially at-risk for having clinical depression.
The present study results also compared favorably with findings on the same measures obtained in our other recent study of EAP counseling provided to employees. Both coaching and counseling had similar effect sizes for improvement on the depression and the work absenteeism and work productivity outcomes. The level of problem or at-risk clinical severity at the start of use, however, was greater among the counseling cases than among the coaching clients. Thus, the goal of offering coaching as an alternative supportive resource for employees mostly at the lower end of mental health severity continuum appears to have happened as designed.

4.2. Limitations and Future Directions

This study documents how applied naturalistic longitudinal research on employee outcomes can be done successfully in business settings. However, there are certain limitations to this study. Although it uses a large sample with clients spanning a national geographic context in the U.S., over three years of calendar time, and hundreds of different employers, it nonetheless involved the same commercial EAP vendor that provided all of the coaching.

Another potential limitation is asking employees to report on their work absence, productivity, and depression symptoms. Other more objective records or external sources of these outcomes could have potentially provided more accurate measurements than our use of a self-report approach. Some studies with both sources of such data, however, tend to show that employee self-reports for work absence [76-79] and work productivity [76,80-82] tend to be a good match with company record data. Self-reported levels of depression symptom severity also tend to correspond well with psychiatric records, pharmacy and health care treatment claims data from the same clients [83,84].

Like most applied research on workplace mental health benefit services sponsored by employers, our study had no comparison group nor did we measure the use (if any) of other work or health-enhancing kinds of treatments or supports experienced during the same period as when the coaching was used. Therefore, the causal mechanism of how use of the coaching was specifically related to the improvement results needs further research [85]. A 2021 literature review and meta-analysis [46] determined that effective workplace coaching activities should integrate cognitive coping techniques (e.g., combining cognitive behavioral therapy and solution-focused techniques), using a strength-based approach, and knowledge of certain workplace contextual factors all contribute to positive outcomes. Some research suggests that the level of therapeutic alliance that is fostered between coach and client can improve the success of the coaching experience [86,87].

V. CONCLUSION

This evaluation study provides evidence that use of individual coaching brief support for employees is associated with large size improvements in work absenteeism, work productivity and depression symptoms. Despite some limitations, this study advances our understanding of the experience and the impact of workplace coaching. The online video delivery modality for the coaching had positive outcomes during the COVID-19 pandemic, a finding which is consistent with other research on the general effectiveness of technology-delivered mental health care [52,53,88]. One challenge for managers arising from the COVID-19 pandemic involves how well employees are able to adjust to drastically altered work conditions, such as shifting to remote work environments or implementing new workplace policies and procedures to limit close in-person contact with coworkers or customers [89]. Another change is the potential for greater conflict between the work and family spheres for employees [90]. Our results show how using workplace coaching from an EAP is one way to support employees and managers as they respond to these troubling trends.

APPENDIX A

Reliable Change Index for Work Productivity. For the SPS-6, we used the standard deviation (SD) at Pre of 7.37 and the Cronbach alpha coefficient (α = .94) as the scale reliability level, both taken from the 27,703 total employees at CuraLinc EAP (see [53]) using either counseling or coaching services from 2017-2022 who were working at Pre and had valid data on the SPS-6 at Pre. The RC index for each coaching client initially at a problem level on work productivity was computed in three steps: 1) subtracting their Post score from their Pre score on the SPS-6; 2) dividing that difference by the RC index of 2.55; and 3) comparing the resulting number to the chance-level cutoff of 1.96. This process determined that a score difference of 5 or more was declared as having a reliable improvement (if increased by 5 points) or a reliable deterioration (if the decreased by 5 or more points), or no change if a 0-4 point change. Using these inputs, the RC index was calculated as follows for the Standard Error (SE) and the difference in SE (SE\text{diff}) – see table:

<table>
<thead>
<tr>
<th>Standard Error</th>
<th>Difference of the SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE = SD of scale x (square root of [1 – reliability of scale])</td>
<td>SE\text{diff} = square root of (2 x SE squared)</td>
</tr>
<tr>
<td>SE = 7.37 x (square root of 1.00 - .94)</td>
<td>SE\text{diff} = square root of (2 x 3.26)</td>
</tr>
<tr>
<td>SE = 7.37 x (square root of .06)</td>
<td>SE\text{diff} = square root of 6.52</td>
</tr>
<tr>
<td>SE = 7.37 x 0.24</td>
<td>SE\text{diff} = 2.55</td>
</tr>
<tr>
<td>SE = 1.81</td>
<td>Reliable Change Index = 2.55</td>
</tr>
<tr>
<td>SE squared = 1.81 x 1.81 = 3.26</td>
<td></td>
</tr>
</tbody>
</table>

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APPENDIX B

### Table B1. Results for moderator tests: By outcome.

<table>
<thead>
<tr>
<th>Results for moderator tests: Improvement from Pre to Post in hours of work absenteeism</th>
<th>Issue: $F(3,868) = 5.62, p &lt; .001$, small effect ($\eta^2 = .02$);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental health ($n=582$): $M$ (SD) Pre = 7.07 (9.62) vs Post = 0.75 (3.24)</td>
<td></td>
</tr>
<tr>
<td>Stress personal ($n=162$): $M$ (SD) Pre = 6.68 (10.0) vs Post = 0.70 (2.63)</td>
<td></td>
</tr>
<tr>
<td>Work stress ($n=20$): $M$ (SD) Pre = 6.25 (9.68) vs Post = 0.55 (1.82)</td>
<td></td>
</tr>
<tr>
<td>Marriage / family ($n=108$): $M$ (SD) Pre = 4.99 (8.41) vs Post = 1.14 (2.75)</td>
<td></td>
</tr>
<tr>
<td>Other factors Not significant as moderator of improvement in work absenteeism:</td>
<td></td>
</tr>
<tr>
<td>Industry of employer: $p = .12$</td>
<td></td>
</tr>
<tr>
<td>Year of use: $p = .36$</td>
<td></td>
</tr>
<tr>
<td>Client age: $p = .14$</td>
<td></td>
</tr>
<tr>
<td>Client gender: $p = .77$</td>
<td></td>
</tr>
<tr>
<td>Duration of use: $p = .26$</td>
<td></td>
</tr>
<tr>
<td>Depression severity at Pre: $p = .81$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results for moderator tests: Improvement from Pre to Post in work productivity (score on SPS-6)</th>
<th>Issue: $F(3,868) = 12.83, p &lt; .001$, small effect ($\eta^2 = .04$);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work ($n=20$): $M$ (SD) Pre = 16.60 (2.87) vs Post = 24.60 (3.39)</td>
<td></td>
</tr>
<tr>
<td>Mental health ($n=582$): $M$ (SD) Pre = 19.25 (4.81) vs Post = 25.86 (2.97)</td>
<td></td>
</tr>
<tr>
<td>Stress personal ($n=162$): $M$ (SD) Pre = 20.71 (5.12) vs Post = 26.67 (2.57)</td>
<td></td>
</tr>
<tr>
<td>Marriage / family ($n=108$): $M$ (SD) Pre = 22.23 (4.26) vs Post = 26.97 (2.30)</td>
<td></td>
</tr>
<tr>
<td>Year: $F(2,869) = 5.74, p = .003$, small effect ($\eta^2 = .01$):</td>
<td></td>
</tr>
<tr>
<td>2020 ($n=626$): $M$ (SD) Pre = 19.52 (4.87) vs Post = 25.97 (2.77)</td>
<td></td>
</tr>
<tr>
<td>2021 ($n=135$): $M$ (SD) Pre = 21.09 (4.56) vs Post = 26.50 (3.35)</td>
<td></td>
</tr>
<tr>
<td>2022 ($n=111$): $M$ (SD) Pre = 20.05 (5.24) vs Post = 26.46 (2.78)</td>
<td></td>
</tr>
<tr>
<td>Other factors Not significant as moderator of improvement in work productivity:</td>
<td></td>
</tr>
<tr>
<td>Industry of employer: $p = .37$</td>
<td></td>
</tr>
<tr>
<td>Client age: $p = .24$</td>
<td></td>
</tr>
<tr>
<td>Client gender: $p = .12$</td>
<td></td>
</tr>
<tr>
<td>Duration of use: $p = .64$</td>
<td></td>
</tr>
<tr>
<td>Depression severity at Pre: $p = .57$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results for moderator tests: Improvement from Pre to Post in depression severity (score on PHQ-9)</th>
<th>Issue: $F(1,871) = 22.60, p &lt; .001$, small effect ($\eta^2 = .03$);</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue depression: ($n=103$): $M$ (SD) Pre = 7.41 (2.93) vs Post = 1.98 (2.17)</td>
<td></td>
</tr>
<tr>
<td>Issue not depression ($n=769$): $M$ (SD) Pre = 6.15 (3.31) vs Post = 2.17 (2.36)</td>
<td></td>
</tr>
<tr>
<td>Other factors Not significant as moderator of improvement in depression:</td>
<td></td>
</tr>
<tr>
<td>Industry of employer: $p = .52$</td>
<td></td>
</tr>
<tr>
<td>Year of use: $p = .51$</td>
<td></td>
</tr>
<tr>
<td>Client age: $p = .50$</td>
<td></td>
</tr>
<tr>
<td>Client gender: $p = .27$</td>
<td></td>
</tr>
<tr>
<td>Duration of use: $p = .99$</td>
<td></td>
</tr>
<tr>
<td>Work absenteeism level at Pre: $p = .89$</td>
<td></td>
</tr>
<tr>
<td>Work productivity level at Pre: $p = .60$</td>
<td></td>
</tr>
</tbody>
</table>

ACKNOWLEDGMENT

We acknowledge support of the many clinicians and other staff at CuraLine Healthcare who provided the coaching services and collected the data for this project. We are grateful to the employees who voluntarily used the coaching services for making the study possible.

DECLARATIONS

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**Author Contributions:** MA performed the statistical analyses of the aggregated dataset, conducted the literature review and drafted the manuscript. DP and SF developed the study design, selected the measures involved and coordinated the data collection. All authors discussed the results and contributed to the final manuscript.
Conflict of interest/Competing interests: MA is an independent research scholar and consultant who received financial support from CuraLinc Healthcare for preparing this research manuscript. MA has also occasionally worked on other projects for this company. DP and SF work for CuraLinc Healthcare company.

Institutional Review Board Statement: No formal ethical approval of the study was required due to the retrospective archival naturalistic design of the study. All employees who used the counseling and completed the outcome measures participated voluntarily and had their personal identity protected as all unique identifiers were removed from the data prior to analysis. All counselors involved in the delivery of the clinical treatment services were fully licensed and trained professionals. All aspects of this evaluation project and preparation of the manuscript followed the ethical guidelines of the American Psychological Association [85].

Informed Consent Statement: All data was collected as part of the usual business practices and not for a separate specific research project. Consent for participation in a research study and use of data for publication of study results was therefore not necessary.

REFERENCES

outcomes.


AUTHORS

First Author – Mark Attridge, Ph.D., M.A., President, Attridge Consulting, Inc., 1129 Cedar Lake Road South, Minneapolis, MN 55405, USA; mark@attridgeconsulting.com; ORCID = orcid.org/0000-0003-1852-2168

Second Author – David Pawlowski, M.S., Chief Operating Officer, CuraLinc Healthcare, 314 W. Superior Street, Suite 601, Chicago, IL 60654, USA; dpawlowski@curalinc.com

Third Author – Sean Fogarty, M.B.A., President, CuraLinc Healthcare, 314 W. Superior Street, Suite 601, Chicago, IL 60654, USA; sfogarty@curalinc.com

Correspondence Author – Dr. Mark Attridge, mark@attridgeconsulting.com; phone: 1+612-889-2398

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