



OMNI INSTITUTE REPORT

---

# Impact of Employee Assistance Services on Workplace Outcomes:

## A Colorado State Employee Assistance Program Study

OMNI Institute Report

# **Impact of Employee Assistance Services on Workplace Outcomes**

## **A Colorado State Employee Assistance Program Study**

**Submitted to:**

**Colorado State Employee Assistance Program**

**For More Information:**

[projects@omni.org](mailto:projects@omni.org)

**Acknowledgements:**

OMNI Institute wants to thank the Colorado State Employee Assistance Program, the engaged Colorado State Departments and all Colorado employees who participated in the study for their contributions to the creation of this report.

# Executive Summary

## Introduction

The Colorado State Employee Assistance Program (CSEAP) partnered with OMNI Institute to examine the effectiveness of providing EAP services in improving workplace productivity outcomes in 2013. The findings from that study were published and cited widely by the field, emphasizing the benefits of EAP services to employee mental health (Richmond, et al., 2016<sup>1</sup>; Richmond, et al., 2017<sup>2</sup>) and job performance in terms of reduced absenteeism (Nunes, et al., 2018<sup>3</sup>). In the ten years since the original study, and since the COVID-19 pandemic specifically, there has been greater attention to employee mental health, overall well-being, and changes in behavioral health service delivery, generally.

In 2023, CSEAP partnered again with OMNI to replicate and expand upon the original study as an opportunity to understand how individuals are using EAP services in the current workplace environment which has been influenced heavily by the attention on employees' mental health since the pandemic. This is a critical time to revisit questions that were addressed by previous research to explore changes that may have occurred, investigate any new questions that provide insight into the challenges facing employees today and their access to the EAP, and understand the implications for the EAP in a modern and flexible workplace environment.

A few of the key findings from the 2013 study are highlighted below:



**EAP services significantly reduced symptoms of depression and anxiety.**



**Employees who received EAP services experienced a steeper decline in sick leave usage** as compared to the propensity score matched control group that did not receive EAP services, with estimates of 4.8 to 6.5% fewer hours lost per month to illness.



**Findings indicated employees who sought and received EAP services had significantly greater reductions in absenteeism and presenteeism** than employees experiencing similar mental health/behavioral health situations. A reduction in absenteeism was particularly true for those who began with lower severity of depression and anxiety at baseline. Findings suggested that EAPs contribute to improved productivity and reduced absenteeism by addressing and improving mental health symptoms.

## Current Study

The current study uses the same design as was used in the 2013 study to compare clinical outcomes of employees receiving EAP counseling services to a well-matched group of employees who have not sought CSEAP services. Control participants are matched to intervention participants (e.g., CSEAP clients) who are similar on the psychosocial distress measures of depression, anxiety, alcohol use, and workplace problems that often lead workers to seek services from employee assistance programs.

<sup>1</sup> Richmond, M. K., Pampel, F. C., Wood, R. C., & Nunes, A.P. (2016). The impact of employee assistance services on workplace outcomes: Results of a prospective, quasi-experimental study. *Journal of Occupational Health Psychology*. DOI: 10.1037/ocp0000018

<sup>2</sup> Richmond, M.K., Pampel, F.C., Wood, R.C., & Nunes, A.P. (2017). Impact of employee assistance services on depression, anxiety, and risky alcohol use. *Journal of Occupational and Environmental Medicine*. DOI:10.1097/JOM.0000000000000744

<sup>3</sup> Nunes, A.P., Richmond, M.K., Pampel, F.C., Wood, R.C. (2018). The effect of employee assistance services on reductions in employee absenteeism. *Journal of Business and Psychology*. 33(6), 699-709. DOI: 10.1007/s10869-017-9518-5

## Methods

This study uses a quasi-experimental design and propensity score matching to identify a group of Colorado state employees who are similar in relevant respects (e.g., absenteeism, depression, anxiety) to Colorado state employees who have sought services from CSEAP.

Participant recruitment occurred over a 6-month period (July 2023 through December 2023). Employees seeking counseling services from CSEAP were invited to participate at the time of requesting services. These participants make up the intervention group. Baseline data were collected online from these participants using similar questionnaires and assessments typically administered by CSEAP at program enrollment. Recruitment for the control group was conducted via emails sent to all employees in participating state departments. All employees of the participating state agencies<sup>4</sup> received monthly emails inviting any interested individuals to participate in this study. Those employees who completed the baseline survey online and confirmed they had not received/requested EAP services in the past 6 months prior to the study were included in the propensity score matching analysis to identify the control group.<sup>5</sup>

Those in the matched sample were contacted in April 2024 (4 to 9 months after baseline) and asked to complete a follow-up survey that included the same baseline assessments with the exception of demographic information. Out of the 590 individuals contacted, 363 completed the follow-up survey. The propensity score matching process was conducted a second time to ensure strong matches for those that had both baseline and follow-up survey data. A matched sample of 141 participants from each group was identified as the final sample (282) for analysis.

## Research Questions and Results

Overall, data from 141 well-matched pairs of participants from each of the study groups (control and intervention) were used to answer the research questions. We found that EAP services had a positive impact on certain outcomes, but these outcomes differed from the ones positively impacted in the previous study.

### RESEARCH QUESTION 1:



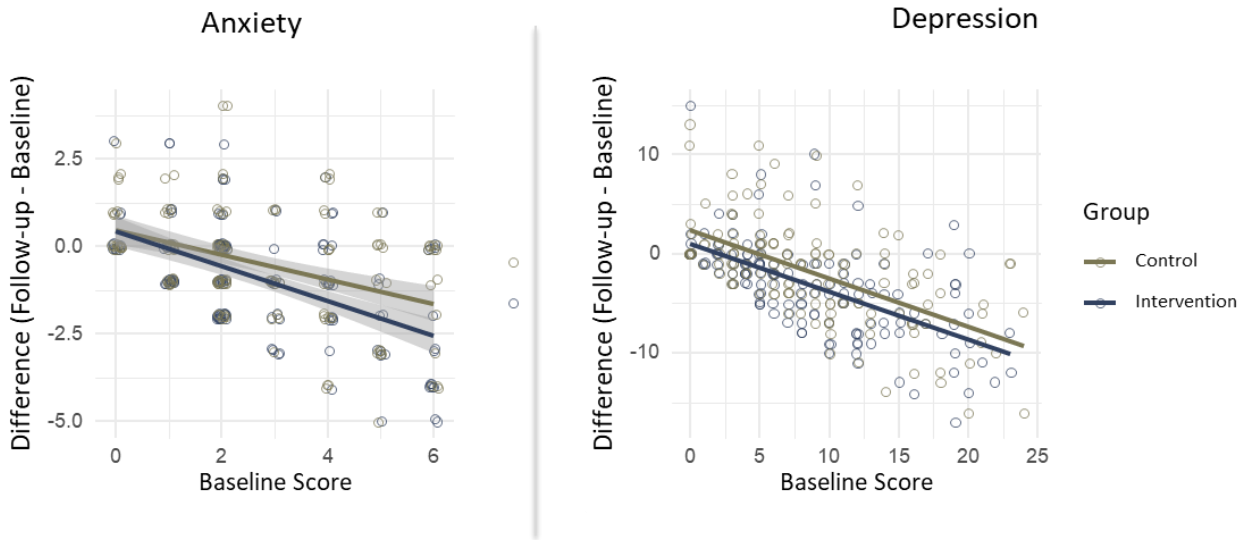
Do employees who receive EAP counseling services show significantly greater reductions in symptoms of anxiety and depression than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

The Intervention group experienced, on average, a greater reduction in anxiety and depression than the control group. Employees receiving EAP counseling services show significantly greater reductions in anxiety and depression than their matched counterparts who did not receive EAP services. This reduction is evident in the figure below, which shows that for any baseline score the intervention group had a greater reduction on both mental health outcomes.

---

<sup>4</sup> A list of Departments that participated in the study can be found in Appendix A of the full report.

<sup>5</sup> Participants in the intervention group were confirmed as having received services from CSEAP and control group members were verified as not having received services from CSEAP between completion of the baseline and follow-up measures.



#### RESEARCH QUESTION 2:



Do employees who receive EAP counseling services show significantly greater improvements in presenteeism (ability to concentrate at work) at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

#### RESEARCH QUESTION 3:



Do employees who receive EAP counseling services have fewer missed work hours at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

#### RESEARCH QUESTION 4:



Do employees who receive EAP counseling services show significantly greater improvements in workplace distress at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

Across absenteeism, presenteeism, and workplace distress, no detectable difference was observed between being in the intervention group compared to the control group. Average scores on these outcomes were lower at follow-up than at baseline for both the Intervention and Control groups indicating that improvements were seen on all three measures from baseline to follow-up regardless of EAP participation.

#### RESEARCH QUESTION 5:



What are the differences in the workplace environment and characteristics of the sample between the 2013 and 2023 studies?

Several changes have occurred in both the workplace environment and in the characteristics of the employees who participated in each study.

**Mental Health:** Data in the current study demonstrate higher levels of anxiety and depression for participants in the intervention and control groups in 2023 as compared to the 2013 study.

**Seeking Professional Help:** Participants in the current study were much more likely to have sought professional help outside of the EAP. The percentage of individuals in the control group who obtained professional help for any personal concerns that were causing them problems increased in 2023 (38.3%) as compared to 2013 (22.3%). This increase in seeking professional help was found in both the matched sample as well as the larger employee population that participated in the baseline survey suggesting the pattern is a reflection of the Colorado state employee population generally. Across all respondents, 25.4% (n=3078) had sought professional help in 2023 compared to the 2013 respondent group, where 12.5% (n=2052) had sought professional help. In other words, in the current study, 38% of respondents in the control group were receiving professional support outside of an EAP.

**EAP Usage:** The average number of sessions for participants in the current study (2.77 sessions) was similar to the 2013 study (2.79 sessions). In both studies, about 55% of participants completed three or fewer sessions. However, with just a few sessions (about 3), 51% of respondents in 2023 reported that their situation improved as a result of receiving CSEAP services.

**Workplace Environment and Time Tracking Changes:** The manner in which employers are supporting and advocating for their employees' mental health has changed in the past decade. Since 2021 Colorado has employed a universal Flexible Work Arrangements (FWA) policy<sup>6</sup> that state departments can implement in addition to using remote work opportunities to maximize efficiencies. These policies, in conjunction with offering EAP services, support Colorado's overall goals to "positively impact retention efforts, work-life balance, workloads, staff commitment, efficiency productivity, and overall work culture" for its employees. The policy allows employees to work with their employer to adjust work location or schedule to flexibly manage unexpected events or illness.

**Technology:** The adoption of virtual technologies provides more options for individuals to connect to their EAP from different locations. Virtual visits are increasingly common and allow employees the opportunity to receive EAP services more efficiently. Most sessions were conducted as virtual (video) visits (79%), 16% in person, and the remainder over the phone.

## Discussion & Conclusions

The current study provides an understanding of the broad level of impact that EAP has on employees. Specifically, the findings indicate that anxiety and depression scores decreased significantly more for employees who received EAP services than for those who did not. The work environment and how people balance work and their personal lives have changed drastically over the past 10 years. The pivot to more flexible work schedules and remote work has significantly changed how employees in Colorado work. Further, the stigma of mental health concerns has decreased as a function of changing attitudes toward mental health generally and potentially resulted in greater numbers of individuals seeking mental health support from providers in the community and EAPs.

Concerns about mental health have generally increased, especially since the COVID-19 pandemic, and this study provides additional evidence of this trend by demonstrating higher levels of anxiety and depression for participants in the intervention and control groups in 2023 as compared to the 2013 study.

Not only are individuals in the workforce demonstrating higher levels of anxiety and depression than 10 years ago, the manner in which employers are supporting and advocating for their employees' mental health has changed. The FWA policy allows employees the flexibility for self-care or appointments while still being able to meet the demands of their jobs by working alternate hours as necessary to accommodate their personal needs.

---

<sup>6</sup> [Universal Policy Flexible Work Arrangements - Published 2021-06-11 Revised 2023.03.02.pdf - Google Drive](#)

These workplace changes that include shifts in how employees think about their working hours may have affected the ability of the absenteeism and presenteeism scales to accurately capture variations in employee productivity. Employees who need to attend a session with an EAP or a behavioral health provider in the community likely do not record that as work hours missed (absenteeism) since they can make up those work hours at a later time. Further, with the opportunity to flex hours, employees having trouble concentrating on work (presenteeism), may feel empowered to take time to address their concerns in ways that allow them to make up those hours with greater focus on work. As noted previously, CSEAP services are more accessible than ever, and attending a session may not take time away from work at all.

## **Opportunities for CSEAP & EAPs Generally**

CSEAP has been providing EAP services to State employees for nearly 40 years. A greater awareness and acceptance of the need to support the mental health of employees has resulted in continued high demand for CSEAP services. Employees continue to reach out to CSEAP for support and doing so can lead to reductions in anxiety and depression. A less anxious and depressed workforce is clearly desirable for employees and employers alike.

The environment in which employees work has changed since the original study was conducted in 2013. With its adoption of universal flexible work policies and integration of remote work opportunities, the State of Colorado has provided employees the opportunity to care for personal concerns thus supporting worker productivity. Further, the reduction in anxiety and depression experienced by EAP participants seem to demonstrate the stated goals of the state including improved work-life balance, staff commitment, and overall work culture.

The results of this study strongly suggest the need to explore how best to determine productivity in the current work environment which has become increasingly more flexible, mobile, and remote. Future research should examine what metrics are most appropriate to measure workplace outcomes and employee productivity in the current era of flexible and remote work environments.

While EAP participation in the 2023 study did not appear to impact the three measurements of productivity (absenteeism, presenteeism, and workplace distress), the impact that the EAP has on reducing anxiety and depression confirm that EAP services continue to have an important and meaningful impact on Colorado employees today.

# Full Report

## Introduction

The Colorado State Employee Assistance Program (CSEAP) partnered with OMNI Institute to examine the effectiveness of providing EAP services in improving workplace productivity outcomes in 2013. The findings from that study were published and cited widely by the field, emphasizing the benefits of EAP services to employee mental health (Richmond, et al., 2016<sup>1</sup>; Richmond, et al., 2017<sup>2</sup>) and job performance in terms of reduced absenteeism (Nunes, et al., 2018<sup>3</sup>). In the ten years since the original study there has been greater attention to employee mental health, overall well-being, and changes in behavioral health service delivery, generally. The COVID-19 pandemic had profound impacts on healthcare and underscored the importance of mental health. This study provides an opportunity to understand how individuals are using EAP services in the current workplace environment which has been influenced heavily by the attention to mental health of employees. This is a critical time to revisit questions that were addressed by previous research to explore changes that may have occurred, investigate any new questions that provide insight into the challenges facing employees today and their access to the EAP, and understand the implications for the EAP which is now operating in a more modern and flexible workplace environment.

## 2013 Study

From 2013 to 2014, OMNI, in collaboration with CSEAP and funded by the Employee Assistance Research Foundation, engaged in a prospective quasi-experimental research study to compare clinical outcomes of employees receiving EAP counseling services to a well-matched group of employees who did not. In this study, participants were asked questions that measured mental health and aspects of work performance that EAP services may impact such as absenteeism (number of hours missed due to a personal concern) and presenteeism (inability to concentrate on work). Propensity score matching was used to identify control participants who were similar to intervention participants (e.g., CSEAP clients) on the psychosocial distress measures of depression, anxiety, alcohol use, and workplace problems that often lead workers to employee assistance programs. A few of the key findings from the 2013 study are highlighted below:



**EAP services significantly reduced symptoms of depression and anxiety.**



**Employees who received EAP services experienced a steeper decline in sick leave usage** as compared to the propensity score matched control group that did not receive EAP services, with estimates of 4.8 to 6.5% fewer hours lost per month to illness.



**Findings indicated employees who sought and received EAP services had significantly greater reductions in absenteeism and presenteeism** than employees experiencing similar mental health/behavioral health situations. A reduction in absenteeism was particularly true for those who began with lower severity of depression and anxiety at baseline. Findings suggested that EAPs contribute to improved productivity and reduced absenteeism by addressing and improving mental health symptoms.

<sup>1</sup> Richmond, M. K., Pampel, F. C., Wood, R. C., & Nunes, A.P. (2016). The impact of employee assistance services on workplace outcomes: Results of a prospective, quasi-experimental study. *Journal of Occupational Health Psychology*. DOI: 10.1037/ocp0000018

<sup>2</sup> Richmond, M.K., Pampel, F.C., Wood, R.C., & Nunes, A.P. (2017). Impact of employee assistance services on depression, anxiety, and risky alcohol use. *Journal of Occupational and Environmental Medicine*. DOI:10.1097/JOM.0000000000000744

<sup>3</sup> Nunes, A.P., Richmond, M.K., Pampel, F.C., Wood, R.C. (2018). The effect of employee assistance services on reductions in employee absenteeism. *Journal of Business and Psychology*. 33(6), 699-709. DOI: 10.1007/s10869-017-9518-5



The current study, which began in 2023, is designed to be a replication and expansion of the 2013 study and seeks to answer the following research questions using the same prospective quasi-experimental design to compare clinical outcomes of employees receiving EAP counseling services to a well-matched group of employees who have not sought CSEAP services.

#### RESEARCH QUESTION 1:



Do employees who receive EAP counseling services show significantly greater reductions in symptoms of anxiety and depression than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

#### RESEARCH QUESTION 2:



Do employees who receive EAP counseling services show significantly greater improvements in presenteeism (ability to concentrate at work) at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

#### RESEARCH QUESTION 3:



Do employees who receive EAP counseling services have fewer missed work hours at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

#### RESEARCH QUESTION 4:



Do employees who receive EAP counseling services show significantly greater improvements in workplace distress at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

The work environment has changed since the 2013 study was conducted. As employers have become increasingly responsive to the behavioral health needs of employees, especially since the COVID-19 pandemic, remote or flexible workplace policies have played a role in changing the expectations of how and when employees and employers expect work to be done. This has an impact on employees' ability to address personal concerns as well as changing the timekeeping structure for many types of roles that can use flexible workplace policies. Not only is the work environment different, but EAP services are more accessible to employees because of the ability to have virtual visits. The current study was conducted within the context of general changes in the workplace environment and convenient access to support.

In light of these differences in work environment, we also explored differences between the original 2013 study and the current study.

#### RESEARCH QUESTION 5:



What are the differences in the workplace environment and characteristics of the sample between the 2013 and 2023 studies?

## Methods

This study uses a quasi-experimental design and propensity score matching to identify a group of Colorado state employees who are similar in relevant respects (e.g., absenteeism, depression, anxiety) to Colorado state employees who have sought services from CSEAP.

Participant recruitment occurred over a six-month period (July 2023 through December 2023). Employees seeking EAP counseling services from CSEAP<sup>4</sup> were invited to participate at the time of requesting services. These participants make up the intervention group. Baseline data were collected online from these participants using similar questionnaires and assessments typically administered by CSEAP at program enrollment. Recruitment for the control group was conducted via emails sent to all employees in participating state departments. All employees of the participating state agencies<sup>5</sup> received monthly emails inviting any interested individuals to participate in this study. Those employees who completed the baseline survey online and confirmed they had not received or requested EAP services in the past six months prior to the study were included in the propensity score matching analysis to identify the control group.<sup>6</sup>

In the 2013 study, an additional step involved obtaining timecard data for individuals who were part of the matched sample and had consented to the state sharing their timecard information. The 2023 study aimed to replicate this approach and initiated discussions with various state government departments and the Colorado Office of Information Technology (OIT) to facilitate the process of pulling data from the Kronos timecard system. Although there was initial support, the management of Kronos had shifted from a centralized system to being managed individually by each department. Only 7 of the 18 participating departments provided timecard data, and OIT was unable to assist the departments in this effort as it had in 2013. For this reason, the current study does not include an analysis of how CSEAP services impacted actual leave time as recorded in timecards.

## Measures

As this study intends to replicate the study conducted 10 years ago, the online survey included the same measures with slight variations (Table 1). Changes to the study were implemented when research supported the validity and reliability of the changed measure. For instance, the study conducted in 2013 used the PHQ-8 where the suicide ideation question was omitted due to concerns regarding the ability to address such concerns in a timely manner. The current study included the item with a banner message on the survey instrument providing information regarding how to contact the Colorado Crisis Services hotline, 9-1-1 or 9-8-8.

The Workplace Outcome Suite (WOS), which measures absenteeism, presenteeism, and workplace distress has been modified over time. The previous study included the entirety of these three scales which in total was 15 items (5 items for each scale).<sup>7</sup> During the 2023 planning phase, a validated 5-item version of the WOS was

---

<sup>4</sup> Employees seeking EAP counseling services were eligible for the study. Employees also reach out to CSEAP for other types of services more directly related to work performance such as professional coaching or mediation, but those seeking such services were not included in this study

<sup>5</sup> A list of Departments that participated in the study is included in Appendix A.

<sup>6</sup> Participants in the intervention group were confirmed as having received services from CSEAP and control group members were verified as not having received services from CSEAP between completion of the baseline and follow-up measures.

<sup>7</sup> Lennox RD, Sharar D, Schmitz E, Goehner DB. (2010). Development and validation of the chestnut global partners workplace outcome suite. *J Workplace Behavioral Health*; 25:107–131. doi:10.1080/15555241003760995.

available with just a single question for each of the three areas of inquiry on the study.<sup>8</sup> Given the demonstrated validity of the 5-item version, and in an attempt to reduce the length of the survey for the participants, the 5-item version was used.

**Table 1. Overview of study measures.**

<i>Name of measurement tool</i>	<i>Purpose</i>
Seeking social support	Measures to what degree participant engages in help-seeking behaviors
AUDIT: Alcohol Use Disorders Identification Test	Measures level of alcohol use
Marijuana Use Item (Past 30-Day Use)	Marijuana Use
DAST: Drug abuse screen test (DAST-10)	Measures level of drug abuse
PHQ-9: Patient Health Questionnaire (previous study included only 8 questions)	Measure of depression
GAD-2: Generalized Anxiety Disorder	Screening Measure of anxiety
Workplace Outcome Suite (WOS) 5 item version (previous study included 15 questions)	Level of absenteeism, presenteeism, workplace engagement, life satisfaction, workplace distress
General Demographics	Age, gender, race, sexual orientation, education

### Study Group Identification

Before conducting the propensity score matching, baseline data were reviewed to identify participants who failed to provide key pieces of information necessary to allow for quality matching or who reported having received CSEAP services in the past six months. The following exclusionary criteria were used to screen the data:

- **Missing key identifiers** to connect survey data to an individual (name or employee ID)
- **Missing contact information** that allows for follow up study participation
- **Duplicate surveys** where a participant’s full name or EID was represented multiple times in the data set, the first entry was retained, and subsequent entries were removed.
- **Reported using CSEAP services** in the past 6 months was an indication that the individual had recently sought assistance from CSEAP making it impossible to assess the individual’s mental health status, etc., pre- and post-intervention.

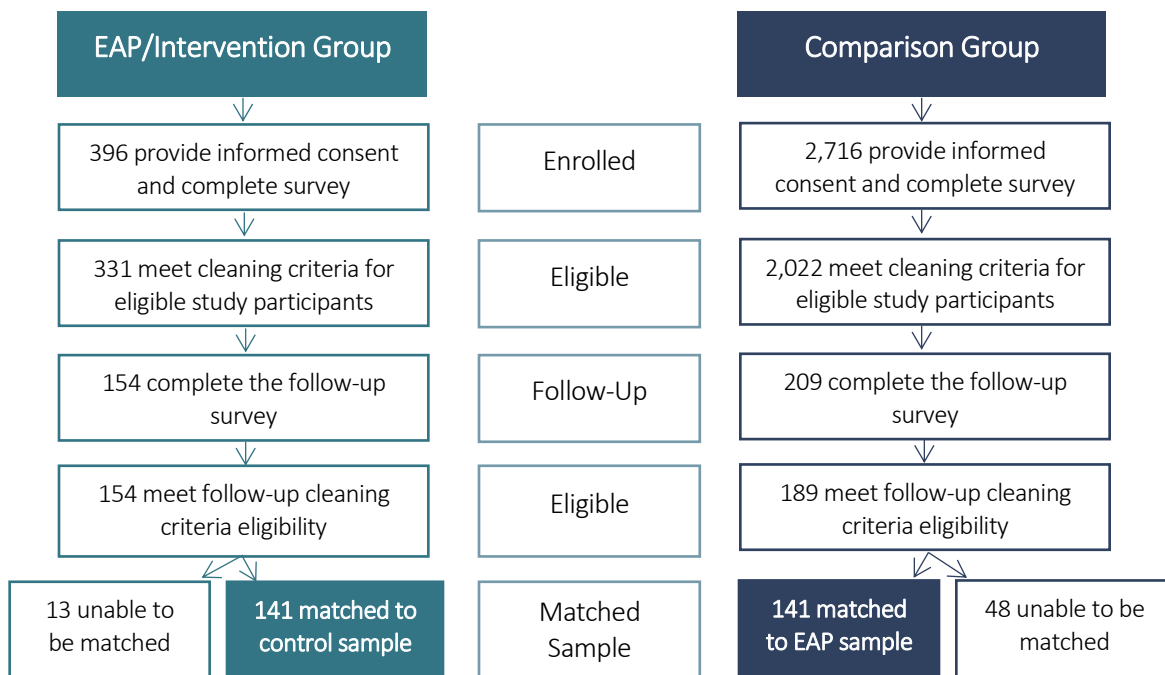
To select a comparison group of participants for follow-up, propensity score matching was conducted using baseline scores for presenteeism, absenteeism, workplace distress, depression, anxiety, alcohol use, marijuana use, ways of coping, drug use and socio-demographic variables. To ensure good matches, we required that the caliper or propensity score distance for a match was less than .20 standard deviations and that all pairs fell within the region of common support.

---

<sup>8</sup> Lennox, R. D., Sharar, D., Schmitz, E., & Goehner, D. B. (2018). Validation of the 5-item short form version of the Workplace Outcome Suite©. *International Journal of Health & Productivity*, 10(2): 49-61.

Those in the matched sample were contacted in April 2024 (4 to 9 months after baseline) and asked to complete a follow-up survey that included the same assessments used at baseline. Out of 590 individuals contacted, 363 completed the follow-up survey. Propensity score matching was conducted a second time to ensure strong matches for those that had both baseline and follow-up survey data. A matched sample of 141 pairs was identified as the final sample (282) for analysis.

**FIGURE 1**



### Analysis

For all research questions generalized estimating equations (GEEs) were used to calculate the relationship between group (Intervention or Control) and each outcome of interest. GEEs are useful because they handle differences within individuals and offer trustworthy estimates without needing the data to fit specific assumptions about normality. Each model controls for the dates of each survey, baseline and follow-up, includes a term for the order of the surveys (baseline = 1, follow-up = 2), and an interaction term between order and group. The response variable (score at follow-up) and the baseline score were adjusted to a common scale by converting them into z-scores, which helps us compare the changes in scores more easily across individuals. We do not need to control for demographic factors in these analyses because the samples are statistically matched and, as a result, have similar characteristics, such as demographics, at baseline.

Absenteeism, measured as the count of hours missed in the past 30 days due to a personal concern, had many zero values and showed a strong right skew. Because of this distribution, we used a negative binomial model, which is well-suited for handling such skewed count data. We started by fitting a negative binomial generalized linear model, similar to our GEE structure, to estimate the dispersion parameter, which helps for accurately modeling the variability in absenteeism. This dispersion parameter was then applied in the negative binomial GEE to ensure that we addressed the challenge of having a highly skewed variable in absenteeism. We initially detected high multicollinearity in the absenteeism model, but we reduced this issue by mean-centering the order term, which improved the model's accuracy.

For each GEE, the test of the hypotheses is in the coefficients for group, which tells us if the intervention group had a different score than the control group, and especially in the coefficient for the interaction between group and order, because this tells us if the group difference varied based on the shift from order = 1 (baseline) to order = 2 (follow-up).

## Results

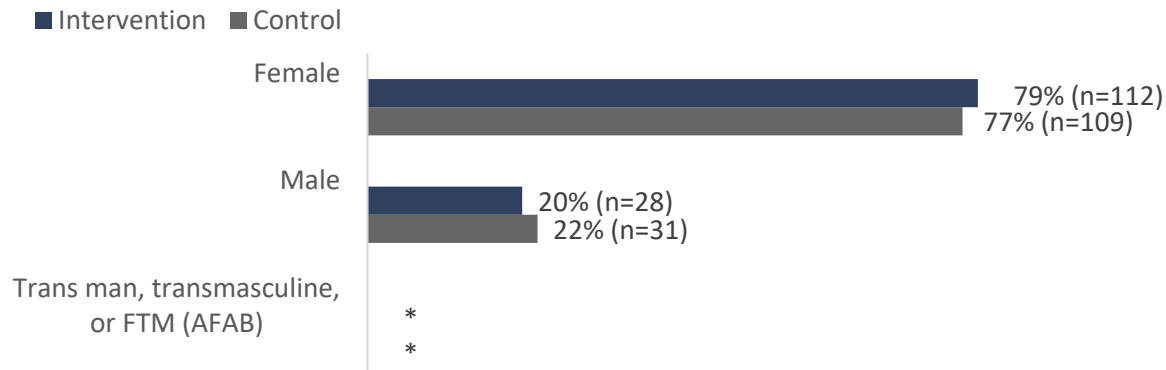
Overall, data from 141 well-matched pairs of participants from each of the study groups were used to answer the research questions. We found that EAP services had a positive impact on certain outcomes, but these outcomes differed from the ones positively impacted in the previous study.

The following provides information regarding the characteristics of the sample and answers to the research questions posed by the study. In order to maintain confidentiality, when fewer than 11 participants were represented, data were suppressed (not displayed) indicated by an asterisk (\*).

### Demographics

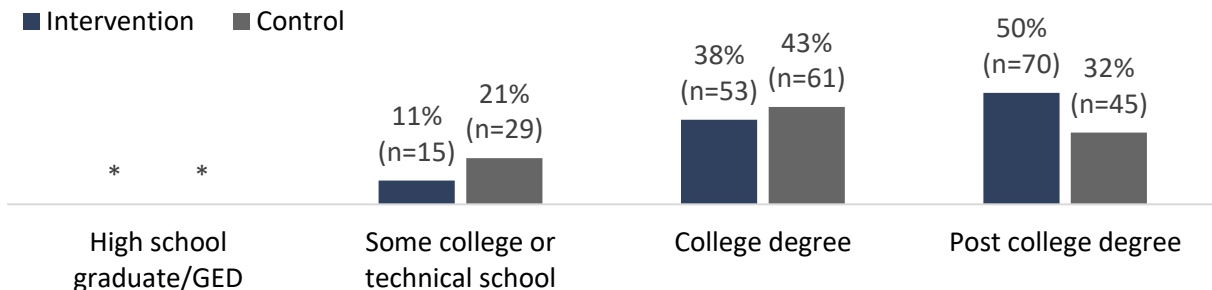
#### Sex

The majority of participants identified as female.



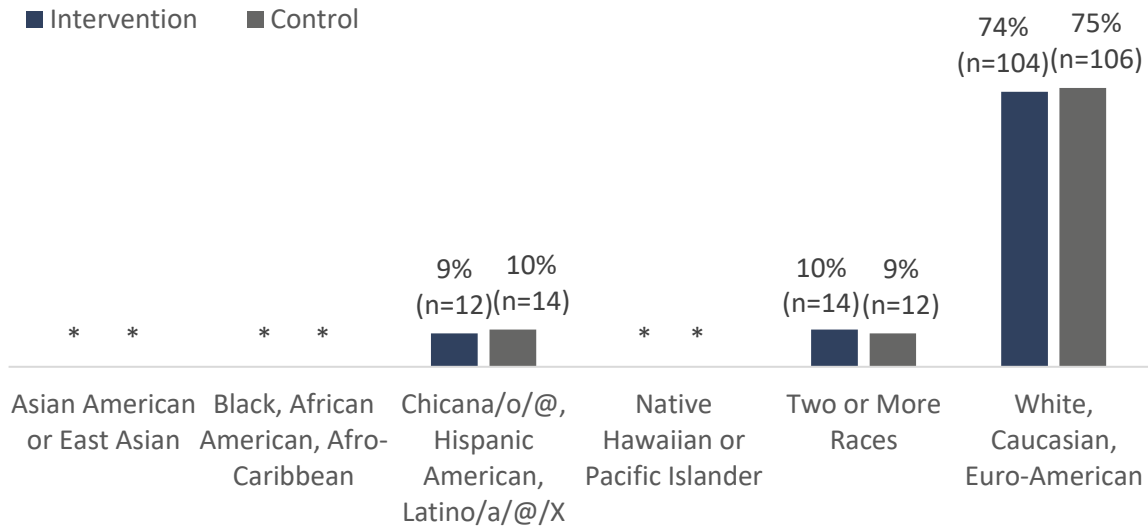
#### Education

The majority of participants received college or post-college degrees. Half of the intervention participants received a post-college degree, nearly 20% more than the control group.



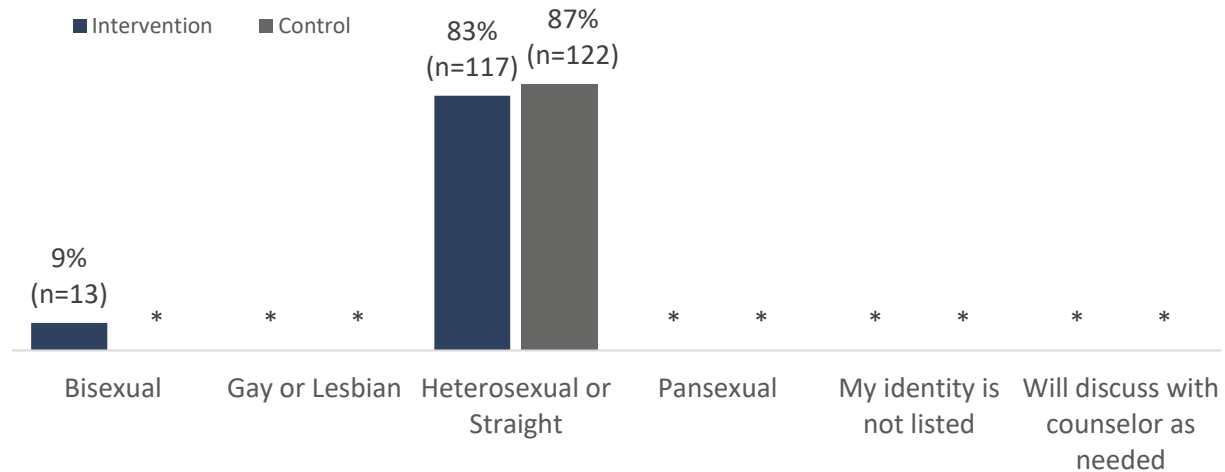
## Race

The racial makeup of the intervention and control groups was similar. Approximately 10% of each group identified as Chicana/o/@, Hispanic American, Latino/a/@/X and approximately 10% of each group identified as two or more races. The majority of participants identified as White, Caucasian, Euro-American. Participants also identified as Asian American or East Asian, Black, African American, Afro-Caribbean, and Native Hawaiian or Pacific Islander.



## Sexual Orientation

The majority of participants in both the intervention and control groups identified as Heterosexual or Straight and 9% of intervention participants identified as Bisexual. Participants also identified Gay or Lesbian, Pansexual, or that their identity was not listed or will be discussed with their counselor as needed, but due to low response rates, the number of participants who reported these sexual orientations is not displayed to protect participants' privacy.



## Propensity score matching

The control and intervention samples were well-matched in all variables included in the propensity score model (Table 2). For each variable, the standardized mean difference is low and none of the differences are statistically significant, which objectively demonstrates their similarities.

**Table 2. Statistical comparison of each group, Control and Intervention, after propensity score matching. The columns for each sample show the mean (and standard deviation) along with a p-value for the difference, and the standardized mean difference. In this case, non-significant p-values are desired to demonstrate there are no differences between the Control and Intervention study samples.**

<i>Matching Variable</i>	<i>Control Sample</i>	<i>Intervention Sample</i>	<i>p</i>	<i>Standardized Mean Difference</i>
Presenteeism	2.95 (1.42)	2.96 (1.42)	0.967	0.005
Absenteeism	4.20 (8.84)	4.38 (8.03)	0.855	0.022
Workplace Distress	2.35 (1.33)	2.40 (1.39)	0.793	0.031
Depression	8.65 (6.13)	8.84 (5.90)	0.797	0.031
Anxiety	2.60 (1.87)	2.70 (1.74)	0.645	0.055
Alcohol Use	4.15 (3.39)	4.23 (4.05)	0.861	0.021
Marijuana Use	2.97 (7.73)	3.02 (8.00)	0.958	0.006
Coping	7.83 (3.99)	7.84 (3.95)	0.976	0.004
Drug Use	0.39 (0.64)	0.42 (0.56)	0.693	0.047
Age	44.02 (11.24)	42.72 (10.03)	0.305	0.123
Length of Employment	6.27 (6.76)	6.08 (6.75)	0.812	0.028
N	141	141		

### RESEARCH QUESTION 1:



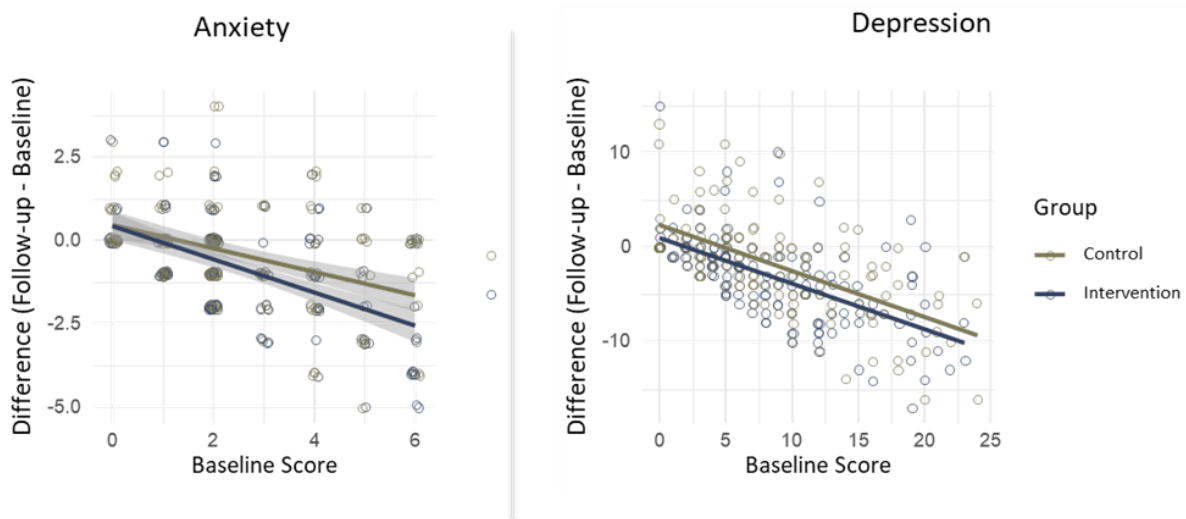
Do employees who receive EAP counseling services show significantly greater reductions in symptoms of anxiety and depression than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

For anxiety and depression, the coefficients for Group and the interaction between Order and Group are significant and negative (Table 3). The Intervention group experienced, on average, a greater reduction in anxiety and depression than the control group. This reduction is evident in Figure 2, which shows that for any baseline score the intervention group had more of a reduction (seen as differences below 0, which indicates lower scores at follow-up) than the control group.

Table 3. Results of GEE model fits for Anxiety and Depression

Predictors	Anxiety			Depression		
	Estimates	CI	p	Estimates	CI	p
Intercept	-37.98	-73.22 – -2.74	0.035	-25.22	-62.35 – 11.90	0.183
Date Control	0	0.00 – 0.00	0.033	0	-0.00 – 0.00	0.175
Order	-0.64	-1.02 – -0.27	0.001	-0.59	-1.01 – -0.18	0.005
Group [Intervention]	0.43	0.06 – 0.81	0.023	0.41	0.01 – 0.80	0.046
Order × Group [Intervention]	-0.29	-0.49 – -0.08	0.006	-0.27	-0.47 – -0.07	0.008
N	282 <sub>id</sub>			282 <sub>id</sub>		
Observations	564			564		

FIGURE 2



**RESEARCH QUESTION 2:**



Do employees who receive EAP counseling services show significantly greater improvements in presenteeism (ability to concentrate on work) at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

**RESEARCH QUESTION 3:**



Do employees who receive EAP counseling services have fewer missed work hours at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?



#### RESEARCH QUESTION 4:



Do employees who receive EAP counseling services show significantly greater improvements in workplace distress at follow-up than a matched group of employees with similar work-related/personal issues who do not receive EAP services?

Across absenteeism, presenteeism, and workplace distress, the coefficients for Group and the interaction between Order and Group are not measurably different from 0, indicating no detectable effect or difference between being in the intervention group compared to the control group for these three outcomes (Tables 4 and 5). The coefficient for order is statistically significant and negative for absenteeism and workplace distress, indicating that the average scores for both groups were lower at follow-up than at baseline.

**Table 4. Results of GEE negative binomial model for Absenteeism.**

<i>Predictors</i>	<i>Estimates</i>	<i>CI</i>	<i>p</i>
Intercept	-146.722	-233.147 - -60.296	0.001
Date Control	0.008	0.003 - 0.012	0.001
Order	-1.558	-2.541 - -0.575	0.002
Group [Intervention]	0.191	-0.205 - 0.587	0.344
Order x Group	-0.067	-0.647 - 0.512	0.820
N	282 id		
Observations	564		

**Table 5. Results of GEE models for presenteeism and workplace distress.**

<i>Predictors</i>	<i>Presenteeism</i>			<i>Workplace Distress</i>		
		<i>CI</i>	<i>p</i>	<i>Estimates2</i>	<i>CI</i>	<i>p</i>
Intercept	9.28	-29.56 – 48.11	0.64	-56.32	-94.61 – -18.03	0.004
Date Control	0	-0.00 – 0.00	0.658	0	0.00 – 0.00	0.004
Order	-0.24	-0.68 – 0.21	0.3	-0.58	-1.02 – -0.13	0.011
Group [Intervention]	0.1	-0.31 – 0.51	0.622	0.2	-0.19 – 0.60	0.308
Order x Group [Intervention]	-0.07	-0.30 – 0.17	0.568	-0.14	-0.36 – 0.08	0.226
N	282 id			282 id		
Observations	564			564		

## RESEARCH QUESTION 5:



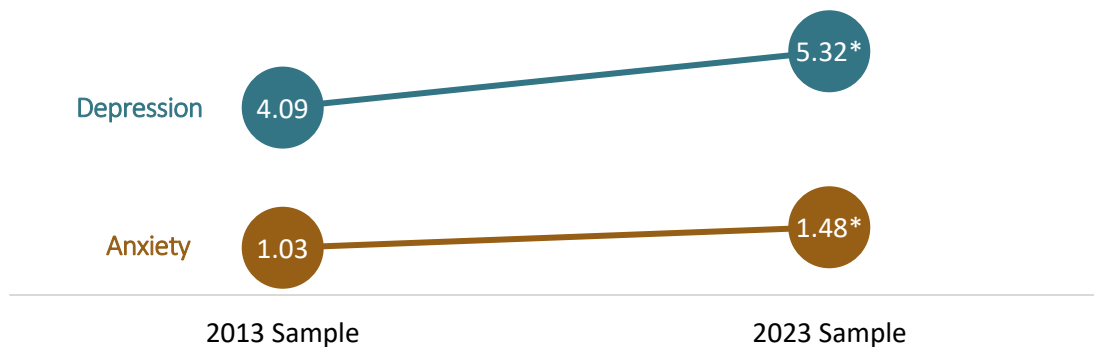
What are the differences in the workplace environment and characteristics of the sample between the 2013 and 2023 studies?

The 2013 study found significant results related to absenteeism, presenteeism, and workplace distress. In the current study, these variables were not significantly lower in the intervention group. To understand the context for these findings we examined whether changes in the work environment or characteristics of the sample had appreciably changed during the 10 or so years between the 2013 and the 2023 study.

### Mental Health Concerns

Participants in the current study have higher levels of anxiety and depression than those in the 2013 study.

We analyzed the baseline scores of all 2023 control group respondents (before matching) and found that as compared to the 2013 sample, employees reported higher levels of depression and anxiety. Simply put, Colorado employees are reporting higher levels of anxiety and depression than they did 10 years ago. However, despite having lower anxiety and depression than in the current study, the 2013 control participants had a lower average presenteeism score (indicating less ability to focus) and higher levels of absenteeism (greater number of missed hours).



\* indicates a statistically significant difference from the 2013 sample to the 2023 sample

### Seeking Professional Help

Participants in the current study were much more likely to have sought professional help outside of the EAP. The percentage of individuals in the control group who obtained professional help for any personal concerns that were causing them problems increased in 2023 (38.3%) as compared to 2013 (22.3%). This increase in seeking professional help was found in both the matched sample as well as the larger employee population that participated in the baseline survey suggesting the pattern is a reflection of the Colorado state employee population generally. Across all respondents, 25.4% (n=3078) had sought professional help in 2023 compared to the 2013 respondent group, where 12.5% (n=2052) had sought professional help. In other words, in the current study, 38% of respondents in the control group were receiving professional support outside of an EAP.

### EAP Use

Of those who received CSEAP counseling services in 2023, the primary reason participants identified for seeking counseling was handling a specific difficult situation, behavioral health concerns, or intimate relationship support (Table 6). Only 12% of intervention participants reported that their primary reason for seeking EAP services was related to workplace relationships or performance at work.

**Table 6. Primary Reason for Seeking CSEAP Counseling Services**

<b>Primary Reason</b>	<b>n</b>	<b>percent</b>
Managing a difficult situation in my life	39	25.3
Concerns related to my mood or mental health symptoms	33	21.4
Intimate relationship concerns	28	18.2
Workplace relationships (i.e. supervisor, coworker, etc.)	15	9.7
Concerns about other personal relationship(s)	12	7.8
Loss of/death of loved one, coworker, pet, significant person in my life.	10	6.5
No response	8	5.2
Parenting concerns	6	3.9
Performance at work	3	1.9

The average number of sessions for participants in the current study (2.77 sessions) was similar to the 2013 study (2.79 sessions). In both, about 55% of participants completed three or fewer sessions. However, with just a few sessions (about 3), 51% of respondents reported that their situation improved as a result of receiving CSEAP services.

Technology has provided more options for individuals to connect to their EAP from different locations. Virtual visits are increasingly common and allow employees the opportunity to receive EAP services in a more efficient manner. Most sessions were conducted as virtual (video) visits (79%), 16% in person and the remainder over the phone.

### Workplace Flexibility and Time Tracking

The manner in which employers are supporting and advocating for their employees’ mental health has changed. Since 2021, Colorado has employed a universal Flexible Work Arrangements (FWA) policy<sup>9</sup> that state departments can implement in addition to using remote work opportunities to maximize efficiencies. These policies, in conjunction with offering EAP services, support Colorado’s overall goals to “positively impact retention efforts, work-life balance, workloads, staff commitment, efficiency productivity, and overall work culture” for its employees. The policy allows employees to work with their employer to establish consistent and regular remote or varying schedule changes providing flexibility for temporary changes to an employees’ schedule or location in order to adjust for unexpected events. The largest proportion of respondents in the intervention sample was employed in professional services (43%) or administrative support and related services (29%) and may reflect roles with more flexible opportunities than those employees working in enforcement & protective services (6%) or labor, trades and crafts (5%).

### Discussion

The current study provides an understanding of the broad level of impact that EAP has on employees. Specifically, the findings indicate that anxiety and depression scores decreased significantly more for employees who received EAP services than for those who did not. The work environment and how people balance work and their personal lives has changed drastically over the past 10 years. The pivot to more flexible work schedules and remote work has significantly changed how employees in Colorado work. Further, the stigma of mental health concerns has decreased as a function of changing attitudes toward mental health generally and potentially resulted in greater numbers of individuals seeking mental health support from

<sup>9</sup> [Universal Policy Flexible Work Arrangements - Published 2021-06-11 Revised 2023.03.02.pdf - Google Drive](#)

providers in the community and EAPs.

Concerns about worsening mental health have generally increased, especially since the COVID-19 pandemic. The data in this study provide additional evidence of this trend by demonstrating higher levels of anxiety and depression for participants in the intervention and control groups in 2023 as compared to the original 2013 study.

Not only are individuals in the workforce demonstrating higher levels of anxiety and depression than 10 years ago, the manner in which employers are supporting and advocating for their employees' mental health has changed. The FWA policy allows employees flexibility for self-care or appointments while still being able to meet the demands of their job by working alternate hours as necessary to accommodate their personal needs.

While timecard data were not included in this study, these workplace changes, that include shifts in how employees think about their working hours, may have affected the ability of the absenteeism and presenteeism scales to accurately capture variations in employee productivity. Employees who need to attend a session with an EAP or a behavioral health provider in the community likely do not record that as work hours missed (absenteeism) since they may be able to make up those work hours through an alternate arrangement. Further, with the opportunity to flex hours, employees having trouble concentrating on work (presenteeism), may feel empowered to take time for self-care so that they are able to make up those hours at a later time with greater focus on their work. As noted previously, CSEAP services are more accessible than ever, and attending a session is efficient and may not take time away from work at all.

## Limitations

Tracking the work experiences of a few thousand state employees for several months and across multiple services and surveys does not come without certain challenges, some of which likely have implications for the results of this study.

Participants in the 2023 study enrolled over a period of six months (July-December 2023) and follow-up data collection was conducted four months after baseline data collection was completed (April 2024). Thus, for some individuals receiving EAP services, they may have had fewer opportunities to engage in services, with the shortest timeframe for enrolling and receiving services being four months and the longest 10 months. There may be some impact on results simply because not enough time had elapsed for the effect of the EAP services to be seen on the productivity measures.

Individuals who volunteer to participate in the study either through the control group or intervention may be different in some way from those individuals who did not choose to participate. Those differences are unknown but may impact the results of the study. Further, CSEAP offers direct professional support to employees through professional coaching and mediation and employees requesting these types of services were not included in the study. As such the specific work-related concerns and challenges facing employees coming to the EAP for coaching or mediation are not reflected in the study.

Finally, the workplace environment has changed significantly since 2013. Changes in the state's remote and flexible schedule policies have altered how employees manage their time. In 2013, employees likely reported higher absenteeism because any time spent away from the office for personal concerns, such as mental health concerns, had to be taken as sick or other manager approved leave. Individuals able to flex time or work remotely may feel greater autonomy to address their concerns by flexing their work hours rather than working less. However, without timecard data, it is unknown how these changes are reflected in employees' time off, especially for those whose roles have limited flexibility or remote opportunities, such as those in law enforcement and protective services.

## Opportunities for CSEAP & EAPs Generally

CSEAP has been providing EAP services to State employees for nearly 40 years. In addition, a greater awareness and acceptance of the need to support the mental health needs of employees has resulted in continued high demand for CSEAP services. Employees continue to reach out to CSEAP for support and doing so can lead to reductions in anxiety and depression. A less anxious and depressed workforce is clearly desirable for employees and employers alike. The environment in which employees are working has changed since the original study was conducted in 2013. With its adoption of universal flexible work policies and integration of remote work options, the State of Colorado provided employees the opportunity to care for personal concerns thus supporting worker productivity. Virtual technologies provide more options for individuals to connect to their EAP from different locations, increasing access to EAP services across the state. Further, the reduction in anxiety and depression experienced by EAP participants support state goals of work-life balance, staff commitment, and overall work culture.

The results of this study strongly suggest the need to explore how best to determine productivity in the current work environment which has become increasingly more flexible, mobile, and remote. Future research should examine what metrics are most appropriate to measure workplace outcomes and employee productivity in the current era of flexible and remote work environments.

While EAP participation in the 2023 study did not appear to impact the three measurements of productivity (absenteeism, presenteeism, and workplace distress), the impact that the EAP has on reducing anxiety and depression confirm that EAP services continue to have an important and meaningful impact on Colorado employees today.

---

# **Appendix A: Participating Departments**

---

Below is a list of the 18 Colorado State Departments that participated in recruiting employees for the study.

Department
Auraria Higher Education Center
Colorado Mesa University
Colorado State University, Pueblo
Department of Agriculture
Department of Corrections
Department of Education
Department of Health Care Policy & Financing
Department of Human Services
Department of Labor & Employment
Department of Natural Resources
Department of Personnel & Administration
Department of Public Health & Environment
Department of Public Safety
Department of Regulatory Agencies
Department of Revenue
Department of the Treasury
Department of Transportation
Office of the Governor