LifeWorks | INTERNATIONAL EAP ASSOCIATION

Workplace Outcome Suite©

Annual Report 2021

EAP counseling use and outcomes, COVID-19 pandemic impact, and best practices in outcome data collection.

Published: April 2022

Published by:

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Production design

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Suggested citation:

LifeWorks. (2022). Workplace Outcome Suite (WOS) Annual Report 2021: EAP counseling use and outcomes, COVID-19 pandemic impact, and best practices in outcome data collection. White paper. Author: Attridge, M. Toronto, ON.

Available at: https://wellbeing.lifeworks.com/resources/wos/

Available at: https://www.eapassn.org/WOS

EAPs that contributed data to the Workplace Outcome Suite (WOS) benchmarking project

The leadership team at LifeWorks and the Employee Assistance Professionals Association extend our thanks to the Employee Assistance Program (EAP) external vendors and employers with internal or hybrid employee assistance programs who collected WOS data at pre and post use of their counseling services and submitted the de-identified raw data to the WOS archive over the years since 2010.

Vendors of EAP:

United States of America

Best Care (Nebraska)*

Cascade Centers (Oregon)*

Child & Family Services (New York)*

Concern (California)*

Continuum (Nebraska)

E4 Health (Texas)

Empathia (Wisconsin)*

Employee Resources System (Illinois)

HelpNet (Michigan)

KGA (Massachusetts)

McLaughlin Young Group (North Carolina)*

New Avenues (Indiana)*

Southwest EAP (Arkansas)*

Work Life (Hawaii)*

Workplace Collaborative (industry group)

International

Benestar (New Zealand)*

LifeWorks Brazil*

LifeWorks China*

Four Dimensions EAP (Hong Kong)*

Groupo Latina Wellness (Argentina)*

Hellas EAP (Greece)

Homewood Health (Canada) – special project

LifeWorks

Resilie Laboratory (Japan)*

Village FSC (Brazil)

WorkWay EAP (Japan)

Employers with EAP:

United States of America

Archer Daniels Midland Company (Illinois)

BayCare Health (Florida)

Carolinas Health Care (North Carolina)

Caterpillar Company (multi-national; Illinois)

Chestnut Global Partners (Michigan)

City of Baltimore (Maryland)

Dupont Company (multi-national; Delaware)

Federal Occupational Health (Maryland)*

Indiana University of Health (Indiana)

LifeSolutions – University of Pittsburgh Medical Center (Pennsylvania)*

Mass General Brigham EAP (Massachusetts)*

Mayo Clinic (Minnesota)

National Institutes of Health (NIH; Maryland)

Ohio State University (Ohio)*

Order of St. Francis HealthCare (Illinois)

Parkview Health (Indiana)*

Sharp Electronics Company (New Jersey)*

Texas Children's Hospital (Texas)

University of Rochester (New York)

Wake Forest Baptist Health (North Carolina)

Emirates Group (Dubai) - employer

* Provided new data for this report.

Past annual reports in WOS series

1 – Chestnut Global Partners. (2016). Workplace Outcome Suite© (WOS) Annual Report: EAPs Can and Do Achieve Positive Outcomes. White Paper (10 pages). Bloomington, IL.

2 – Chestnut Global Partners. (2017). Workplace Outcome Suite© (WOS) Annual Report: Comparing Improvement After EAP Counseling for Different Outcomes. White Paper (46 pages). Bloomington, IL.

3 – Chestnut Global Partners. (2019). Workplace Outcome Suite© (WOS) Annual Report 2018: Understanding EAP Counseling Use, Longitudinal Outcomes and ROI, and Profiles of EAPs that Collect WOS Data. White Paper (86 pages). Bloomington, IL. Lead author: M. Attridge.

4A – Morneau Shepell. (2020). Workplace Outcome Suite© (WOS) Annual Report 2020: Part 1 - Decade of Data on EAP Counseling Reveals Prominence of Presenteeism. White paper (95 pages). Toronto, ON. Lead author: M. Attridge.

4B – Morneau Shepell. (2020). Workplace Outcome Suite© (WOS) Annual Report 2020: Part 2: Profiles of Work Outcomes on 10 Context Factor of EAP Counseling Use. White paper (42 pages). Toronto, ON: Author. Lead author: M. Attridge.

Each annual report above is available for no cost at:
https://wellbeing.lifeworks.com/resources/wos/#reports

WOS research: Primary papers in peer-review scientific journals

Lennox, R. D., Sharar, D. A., Schmitz, E., & Goehner, D.B. (2010). Development and validation of the Chestnut Global Partners Workplace Outcome Suite. Journal of Workplace Behavioral Health, 25(2),107-131. [Original 25-item Version]

Sharar, D., Pompe, J. & Lennox, R. (2012). Evaluating the workplace effects of EAP counseling. Journal of Health and Productivity, 6(2), 5-14. http://hdl.handle.net/10713/2602

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 and Productivity, 10(2), 49-61. http://hdl.handle.net/10713/8973

Attridge, M., Sharar, D., DeLapp, G., & Veder, B. (2018). EAP Works: Global results from 24,363 counseling cases with pre-post data on the Workplace Outcome Suite. International Journal of Health and Productivity, 10(2), 5-25. http://hdl.handle.net/10713/8962

Foreword by LifeWorks

LifeWorks proudly supports the creation of the 2021 Workplace Outcomes Suite Employee Assistance industry report. We believe that measuring the impact of Employee Assistance Programs (EAP) is critical to help organizations to invest in the mental health and wellness support that EAP programs provide. It is only because the industry comes together that we can create compelling data and benchmarking to support this belief. The Employee Assistance Professionals Association (EAPA) endorses this well-established outcome measurement tool that continues to grow in employee assistance provider use, popularity, and available comparison data for reporting. What is exceptional is that between the years 2010 to 2021 we have collected data from a wide range of locations from across the world, from over 50 EAP companies, and from over 45,000 users of EAP counseling.

A special thank you to Dr. Mark Attridge for his continued commitment to work independently and provide leadership in creating the report, and to Kathryn Modisette and Ivan Steenstra for managing the WOS data collection site and providing consultative support to those organizations requiring assistance with their use of the WOS and reporting. My appreciation goes out to all of the organizations that year-over-year have contributed to this growing benchmark data. The collaborating and partnering has allowed us to share this valuable outcome data with the EAP industry.

Barbara Veder, MSW, RSW
Vice President, Global Clinical Services, Research Lead and Chief Clinician
LifeWorks

Foreword by EAPA

This new report clearly highlights the value and utility of employee assistance services, particularly during the ongoing pandemic. The findings underscore the growing demand for effective counseling provided by EAPs in serving today's changing workforce. While only a fourth of EAPs use a research-validated tool to measure work-related outcomes from counseling, EAPA fully endorses the WOS as a best practice for our members.

Julie Fabsik-Swarts, MA, CRFR, CAP
Chief Executive Officer
Employee Assistance Professionals Association
Arlington, Virginia, United States

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Summary of key findings

EAPs serve organizations and their employees in multiple ways, ranging from consultation at the strategic level about issues with organization-wide implications to individual assistance to employees and family members experiencing personal difficulties. As workplace programs, the structure and operation of each EAP varies with the functioning and needs of the organization(s) it serves. The counseling services from an EAP typically are available 24/7, as needed, to provide assessment and brief counseling from licensed clinicians for employees (or their immediate family members) to support emotional/mental health, personal life, marital/family relationships, or work-related issues. This counseling is provided at no cost to the user.

While growing globally, EAPs continue to be very popular in the United States. A recent national survey by the Bureau of Labor Statistics found that 84% of large employers in the private sector had an EAP and 90% of large public sector employers had an EAP. When combined across employers of all sizes and markets, about 74 million workers were estimated to have access to an EAP benefit in year 2021. Assuming standard pricing, EAPs are estimated to be a $1.63 billion dollar industry in United States alone. Considering the scale of investment made in EAP by the over 3.2 million specific companies and over 182,000 public sector organizations, it is important to provide evidence-based industry-wide benchmarks on the effectiveness of EAP counseling for improving work outcomes.

This report is the fifth in an annual series on the Workplace Outcome Suite. It features data collected between 2010 and early 2021 from 47 different sources that provide employee assistance program (EAP) counseling services. This year's report also features results from several survey studies as well. It has three main sections.

Summary of SECTION I. Profile of Study Sample, WOS Measures, and Longitudinal Results

Profile of study sample and use of EAP

This report presents a profile of EAP use based on over 45,726 users of counseling and other individual EAP services across a wide range of contexts. Use of counseling from the EAP accounted for the vast majority of all users with WOS data (97% of the sample; with 3% using other kinds of support specialists). Most of the cases were living in the United States (77%), 12% were from China, 6% from New Zealand, and 5% from 37 other countries. Two-thirds of cases in the study sample (67%) were sourced from external vendors of EAP (n = 25 vendors). About 1 in 5 cases (21%) had used a hybrid model that combined full-time EAP staff at a specific large employer and ancillary services from specialists or EAP vendors (n = 11 programs). Another 12% of cases were from an internal staff model EAP program at a specific large employer (n = 11 programs). A range of industries is represented, with 28% of case working in government, 18% in manufacturing, 16% in health care, 14% in technology, 11% in education, and 13% in many other industries.

Most cases were self-referrals into the EAP (84%), with another 10% referred by a supervisor at work or 6% referred by a spouse or family member. The gender mix of cases was 67% women and 33% men. Cases ranged widely in age, with an average of 38 years. Other demographic factors were not available.

The top reason for seeking counseling from the EAP was for a mental health issue (30% of all cases). A close second was for personal life and general stress issues (29%). Marital or family relationship issues accounted for 19% of cases. Another 19% used the EAP for help with a work problem or work-related stress. Getting support for alcohol and substance abuse issues accounted for only 3% of cases using the EAP. The number of counseling sessions averaged 3.3 sessions per case. The duration of active EAP treatment period averaged about 7 weeks from the date of the first to the date of last session.

Workplace Outcomes Suite

The Workplace Outcome Suite (WOS) was developed for use by employee assistance programs (EAP) to assess the impact of counseling services. It is a measure of change that requires collecting self-report data before and after the use of counseling services. The WOS examines four key aspects of workplace functioning and overall life satisfaction. The popular brief 5-item version has one question per outcome area, whereas the original scale had five items for each outcome (25 total items). The WOS is the only publicly available, free instrument that has been psychometrically validated and tested for use in EAPs. It has been extensively studied in over 50 peer-review and applied research reports.

This study looks at the five outcomes from the WOS: (1) Work Presenteeism, (2) Work Absenteeism, (3) Workplace Distress, (4) Work Engagement, (5) Life Satisfaction. We also report on a sixth measure that combines the results of the absenteeism and presenteeism data that is converted into hours of Lost Productive Time (LPT) at work.

Work outcomes improve after EAP counseling

The WOS scores were collected longitudinally at the first session and again at a post-use follow-up about 90 days after the last session of counseling. The sample sizes for paired WOS data at both before and after EAP use ranged from 38,302 to 39,135, depending on the WOS measure.

- Work Presenteeism (not being able to concentrate on work because of personal problems) was reduced from 56% of cases at before use to 30% of cases at follow-up. Tests of mean scores on the 1-5 rating of work presenteeism indicated significant change with a large size statistical effect. The estimated hours of lost productive time associated with presenteeism per month was reduced from 57.2 hours missed per employee before counseling to 35.7 hours at follow-up. By comparison, other research shows the typical burden of presenteeism is 23.5 hours per employee per month.
- Work Absenteeism (hours missed from work during the past month due to a personal concern) was reduced from 6.8 hours missed per employee before counseling to 2.9 hours missed at follow-up. Tests of indicated a significant change with a medium size statistical effect. By comparison, other research shows the typical employee misses only 3 hours of work a month. When defined as missing 4 or more hours of work as a "problem level" of this outcome, the percentage of EAP cases with an absenteeism problem was reduced from 43% at before to 15% after counseling.
- Work Engagement (being eager to get to work the start the day). Not being engaged in work was reduced from 31% of cases at before use to 23% of cases at follow-up. Tests of mean scores on the 1-5 rating of work engagement indicated significant change with a small size statistical effect.
- **Workplace Distress** (dreading going into work) was reduced from 23% of cases at problem level before use to 15% of cases at follow-up. Tests of mean scores on the 1-5 rating of workplace distress indicated significant change with a small size statistical effect.
- Life Satisfaction (feeling that life overall was going very well). Not being satisfied with life overall was reduced from 37% of cases at before use to 16% of cases at follow-up. Tests of mean scores on the 1-5 rating of life satisfaction indicated significant change with a large size statistical effect.
- Lost Productive Time (hours of work absenteeism combined with estimated hours of lost productivity associated with level of work presenteeism). The hours of lost productive work time per month was reduced from 64 hours at the start of EAP use to 39 hours at the follow-up. Tests of mean scores on the hours of LPT indicated significant change with a large size statistical effect. When starting counseling, the typical employee user had more than twice the amount of productivity loss than the average full-time worker who has 27 hours of LPT per month. This productivity-related burden reflects the acute level of personal distress often experienced by users of the EAP and underscores why brief counseling is needed.

The conclusion is that brief counseling from EAPs improves multiple aspects of work functioning for many users of the service. All WOS outcomes showed statistically significant results, although there were different degrees of impact and improvement. Work presenteeism and life satisfaction outcomes improved the most. Other tests found that the extent of improvement on the summary measure of all five WOS measures was generally consistent across a dozen context factors of different countries, EAP delivery models, client demographics, and other clinical factors. Some differences were found between the 45 different EAPs that provided WOS data, although this was a small size statistical effect.

Summary of SECTION II. COVID-19 Pandemic Impact on EAP Use, WOS Outcomes, and ROI

Impact on EAP use rates. First, major surveys of many employers and EAP providers indicated that the pandemic had greater overall use rates for counseling from EAPs (7.5% in 2019 vs 9.5% in US; 10.3% vs. 11.3% in Canada) and that the number of counseling sessions used per case was also greater (4.0 vs. 5.5). These results are consistent with other research finding substantial increases in the prevalence of mental health and social risk factors in the general population since the pandemic started. Second, a survey of 17 EAPs, representing over 4.4 million covered employees, found a mix of in-person (about 3 in every 4 EAPs) and remote technology-based modalities (about 9 in 10 EAPs) were used during the pandemic to provide access to the counselors. For these EAPs during the pandemic, the clinical treatment averaged around 4 sessions of counseling per case over a 10-week period.

Impact on EAP user profiles. The third set of findings with WOS data found that, overall, the pandemic appeared to have little impact on how the EAP counseling was used at the case level. These findings suggest that once an employee got into an EAP as a user of counseling, those who sought out counseling and the nature of the service experience was similar to that experienced before the pandemic.

Impact on outcome data collection. The pandemic year had a mixed impact on the volume of surveys collected by 17 EAPs for WOS outcomes. The anticipated impact of the pandemic on the effectiveness of counseling for users of EAPs also had mixed results across the different EAPs that were surveyed, with most EAP expecting to find similar effectiveness or not knowing what to expect.

Impact on outcomes. A series of tests looking at the effectiveness of counseling found that the COVID-19 pandemic had little impact on the profile of WOS outcomes after EAP counseling. Thus, the level of work function problems and the extent of improvements in work-related outcomes was about the same for: 1) employees with pandemic-specific issues compared to non-pandemic issues; 2) the pre-pandemic and pandemic periods of time; and 3) the in-person modality of service delivery compared to the remote technology-based contact options.

Impact on ROI.

The return on investment (ROI) for EAP services was estimated using WOS outcomes for a typical employer in the United States in year 2019 and in year 2020. Most of the financial return was came from changes in the work presenteeism outcome (lost hours of work productivity) rather than reductions in the work absenteeism outcome (about 85% vs. 15%, respectively). Results for year 2019 had an ROI of $4.29:1. For the COVID-19 pandemic year 2020, the ROI was $5.04:1. This means there was a positive ROI for both years, but it was slightly higher for the pandemic year, largely because of greater use rates of the EAP. The business case is especially strong when considering the cost of the EAP benefit is about one percent of total benefit budget. Depsite concerns about the utiliation rate for EAPs, the results also show that only about 1 or 2 percent of employees need to use the EAP for counseling per year to yield enough savings in work productivity outcomes to break even on the cost of entire EAP budget.

Summary of SECTION III. Current and Best Practices in Measuring Outcomes of EAP Counseling

A national survey of over 100 EAPs found that although 9 out of every 10 EAPs in year 2021 engages in some kind of measurement of outcomes from their users, it more often about user satisfaction and quality of service than it is to assess clinical or work-related outcomes. More troubling is how only a minority of EAPs (about 1 in every 3) are using research-validated measures to collect data on clinical outcomes (i.e., anxiety/depression or substance use). Of the 1 in 4 EAPs that use valid measure to collect data on work outcomes, almost all of them are using the WOS measures. Also, only about half of those who do collect data use a longitudinal approach, which is needed to properly test for change over time in outcomes from before to after the use of counseling. Overall, most of the external vendors and programs in the EAP industry are not using best practices for outcome data collection.

A survey of 17 EAPs that collected WOS data was conducted to better understand the methods and reporting of the results. A wide range of different delivery types and size of EAPs completed the survey. Most EAPs used electronic methods (emails and online survey tools) to contact cases and to collect outcome data. A key finding was that about 1 in every 6 counseling cases was getting outcome data collected at both the start of treatment and at a follow-up. However, this success rate for getting longitudinal data varied greatly between different EAPs, ranging from 0% of cases at baseline (due to COVID-19 pandemic disruption) to 83% of all cases. The follow-up tended to occur most often at about 90 days after the final counseling session (although this period ranged from 30 to 120 days). These EAPs communicated their WOS results to customers and the public in multiple ways. Using the findings for ROI and making the business case was a popular reason for collecting WOS data.

SECTION I:

Profile of Study Sample, WOS Measures, and Longitudinal Results Profile of Study Sample, WOS Measures, and Longitudinal Results

Chapter 1. Profile of EAP counseling use in global study sample

This chapter profiles how EAP counseling is provided – at least among the convenience sample of vendors, employers, and consortiums that have shared this context data over the past 11 years. The data offers a picture of who uses counseling, why it is used, and in what context it was provided. This wide variety of users offers a diverse set of conditions to examine the outcomes of brief counseling from EAPs. Details of the study methodology are presented in Appendix A.

Profile Factors. This profile is based on the maximum sample size available in the WOS project datafile from 2010 to early 2021. This sample includes cases with longitudinal WOS data as well as others who do not have paired outcome data at both pre and post use of counseling but do have information about one or more of the context factors. Other than year, country, and model of EAP service delivery, the number of cases with valid data for the different context factors varied from 54% of cases to only 5% of full sample.

Year. N = 45,726. The year when the EAP was used at the start of counseling ranged from 2010 (when the WOS was released) to early in year 2021. Starting with 2014, each year has had between 4,000 to 7,000 new cases added to the project. New data for this report came from 6,280 cases, including 5,947 cases from year 2020 and 333 from early in year 2021.

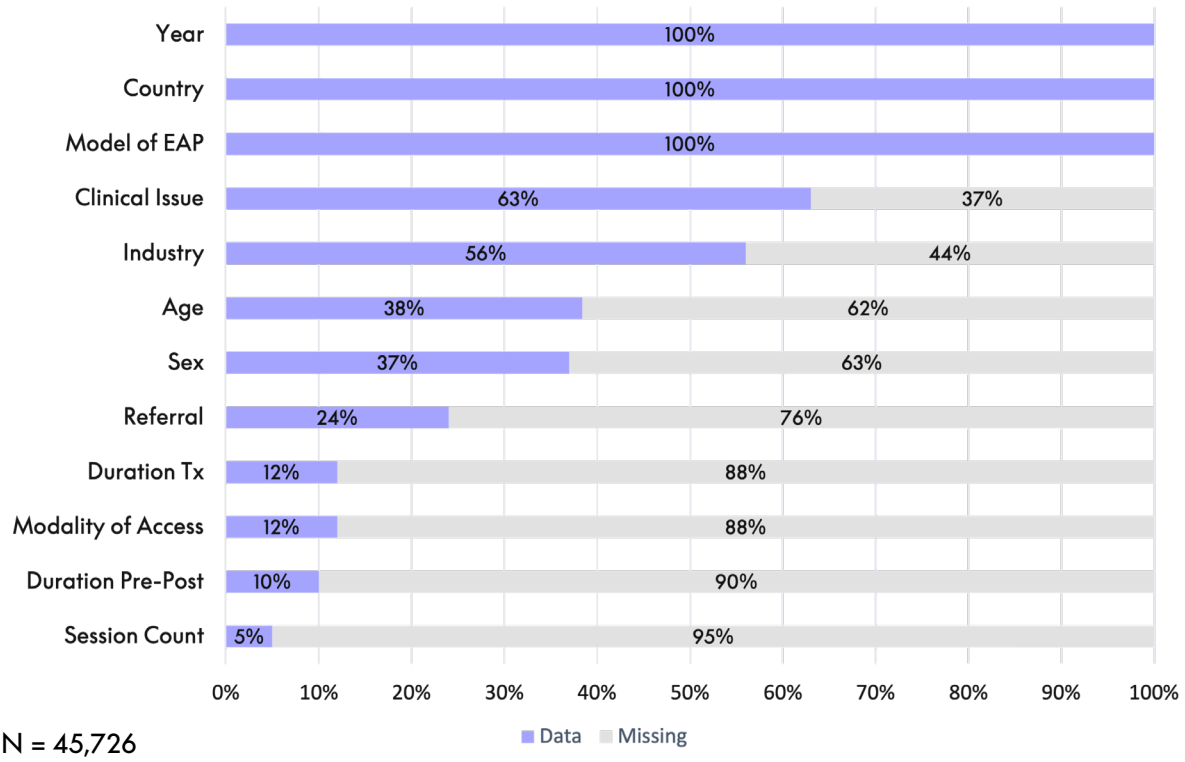
Model of EAP Delivery. N = 45,726 (100% of cases). About two-thirds of the total individual cases in the study sample (67%) were from external vendors of EAP (n = 25 vendor businesses). About 1 in every 8 cases (12%) were from internal staff model EAP programs at large employers (n = 11 programs). About 1 in every 5 cases (21%) had a hybrid model EAP (n = 11 programs). Ten EAPs were based in hospitals or health systems with the goal of primarily serving their own internal employees.

Country. N = 45,726 (100% of cases). A total of 40 different countries were represented, but 95% of the cases came from three countries: United States (72%), China (22%), and New Zealand (3%). The remaining 3% of the sample were spread across 37 other countries.

Regions of United States. N = 29,461 (84% of the cases from the US had state data; some cases from vendors had state unknown). Five regions within the country were examined (based on US Census definition, 2019). The percentage of cases in each region: Northeast (20%); South (11%), Midwest (45%), West (22%) and Pacific (2%).

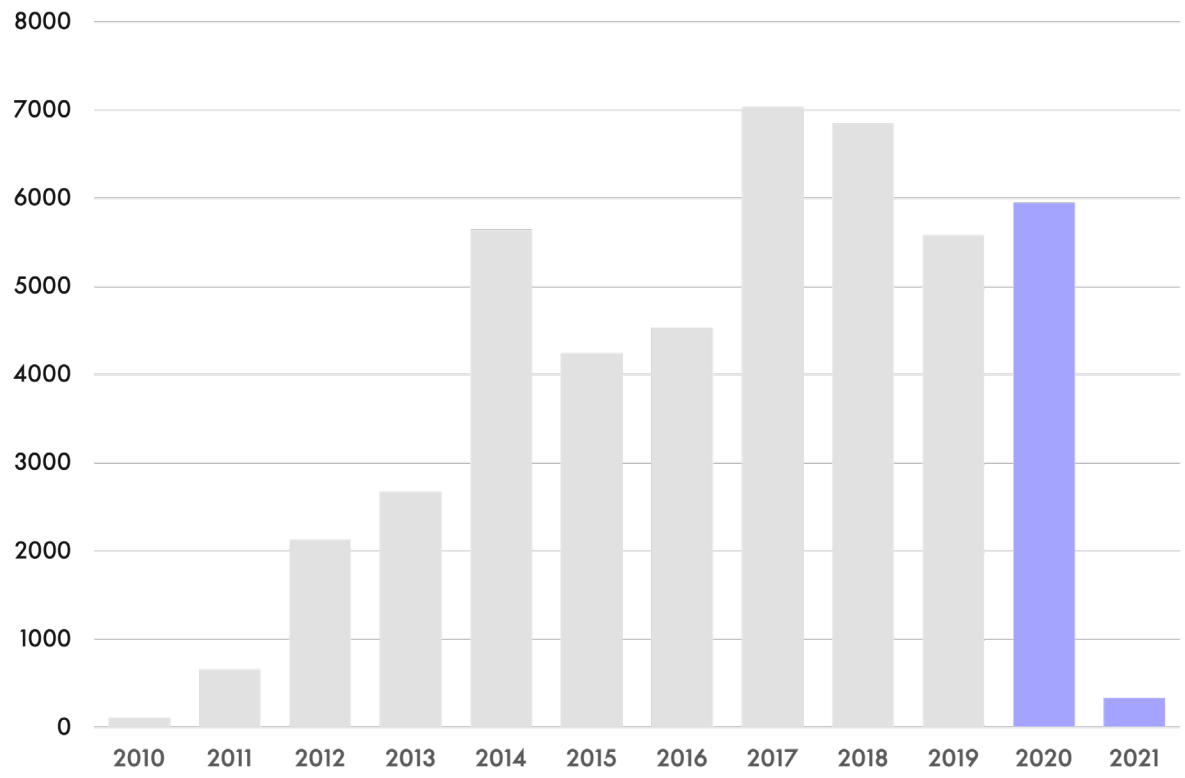
Industry. N = 25,557 (56% of cases; from 36 EAP sources). A wide variety of industries were represented among the employers who sponsored the EAP services. This included: government (28%); manufacturing (19%); health care (16%); and technology (14%); colleges & universities (11%); and other (13%). [Note: missing data on industry from 45% of cases in the full sample.]

Cases with Context Factor Information (% Total Sample)



N = 45,726

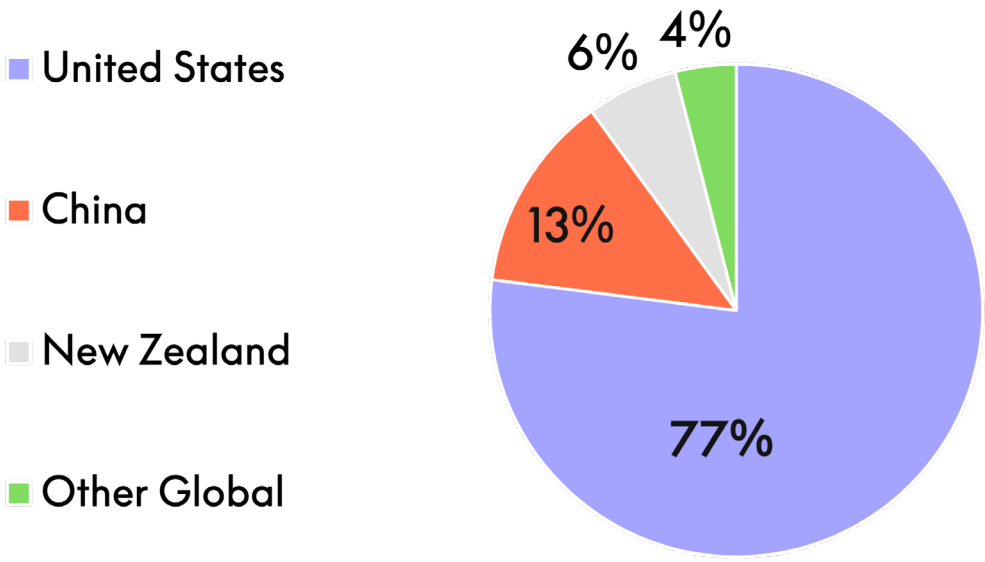
Year of EAP Use



N = 45,726

New 6,280

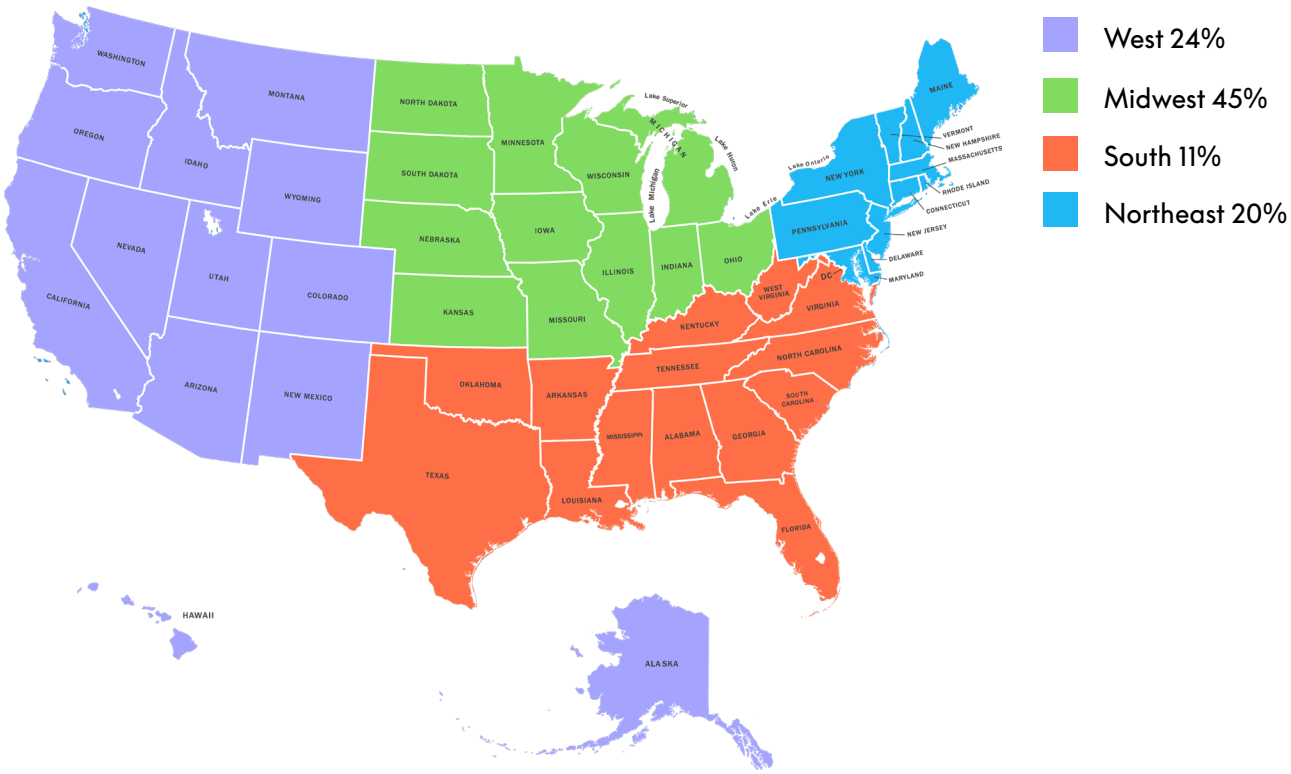
Country of EAP Client



N = 45,726

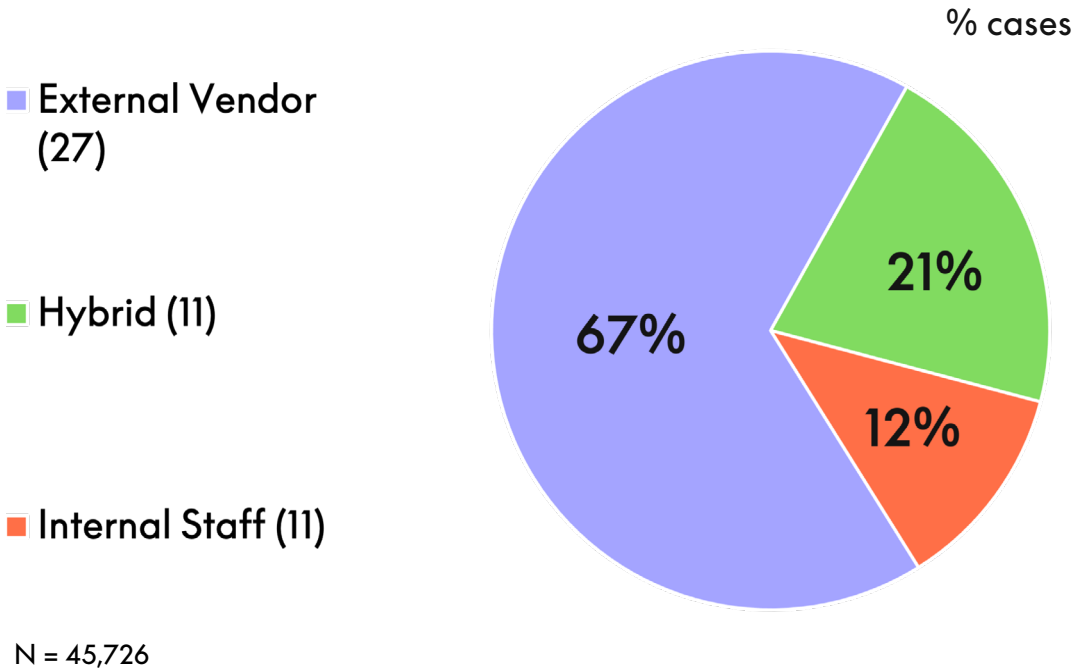
% cases

Regions of United States



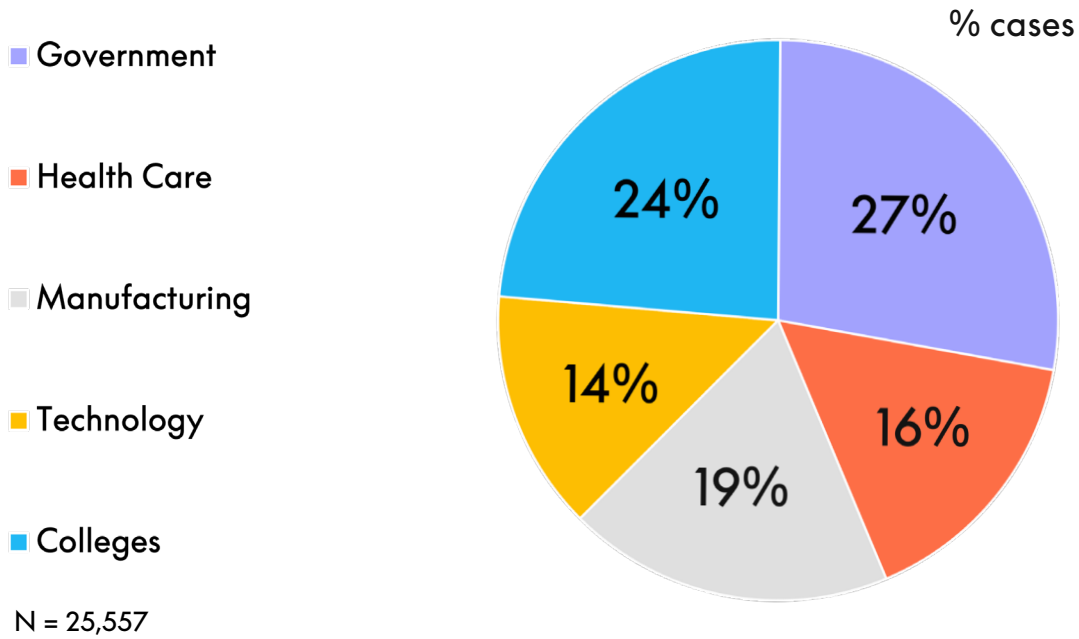
N = 29,461

Delivery Model for EAPs



N = 45,726

Industry of Employer Sponsor of EAP



N = 25,557

Clinical Issue. N = 29,094 (64% of cases; from 35 EAP sources). [Note: missing data on issue from 36% of cases in the full sample.]

There are many reasons why employees seek counseling support. The most common issue area is behavioral health – but that only represents about 1 in every 3 total cases. Specific issues within the mental health category included anxiety, depression, grief, behavioral conduct/anger, violence/abuse/trauma, and general emotional health/other unspecified. A very small percentage of EAP users (about 1 in every 40 cases) discussed their alcohol and other substance misuse or addition problems with counselors from the EAP. This low level among EAP cases is despite the much higher prevalence rates in general society for substance misuse and binge drinking. Perhaps concerns of confidentiality or stigma prevent more employees with substance problems from using their EAP. Overall, this large study indicates that even though the EAP product identity emphasizes mental health and addictions, cases with behavioral health issues represent about 1 in 3 EAP cases.

- Anxiety (7.7%)
- Depression (7.7%)
- Grief (3.3%)
- Behavior / Conduct / Anger (2.9%)
- Trauma / Abuse / Violence (1.4%)
- Other emotional (7.4%)
- Alcohol / Drug / Addictions (2.5%)

The other two-thirds of EAP cases are in three main areas. Of the 1 in 4 cases in the personal life/stress category, which was mostly personal life issues or personal stress.

- Personal life (17.4%)
- Personal stress (5.6%)

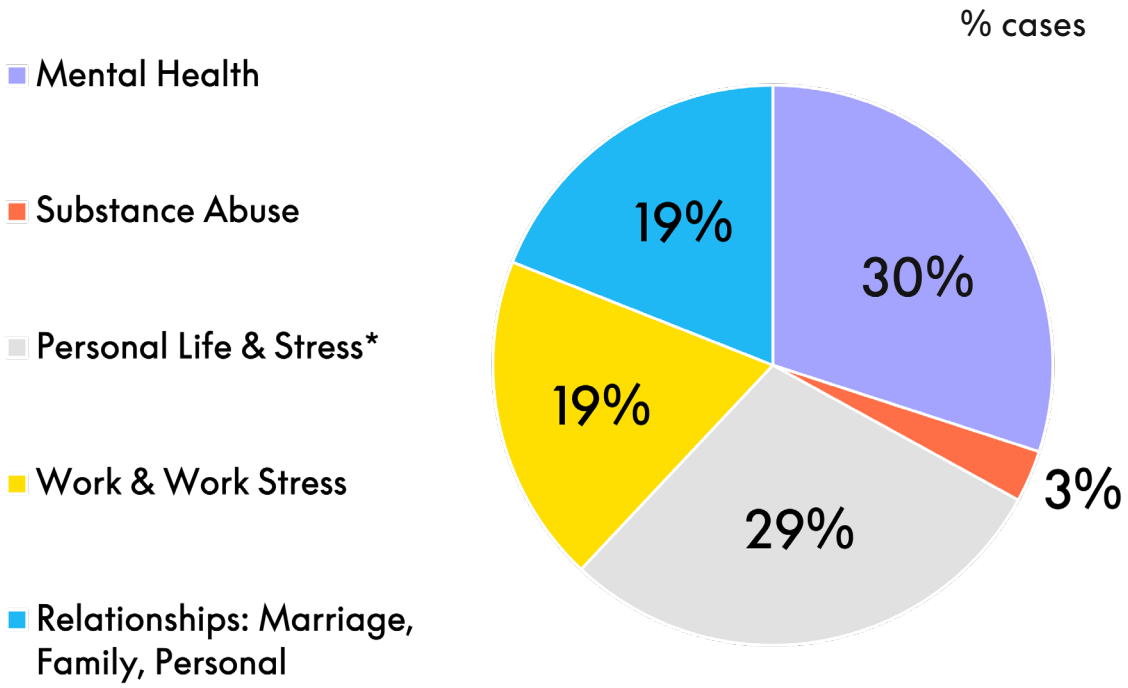
About 1 in 5 cases are in the relationship category, with marital relationships being the most common issue, followed by family relationships and also other personal relationships.

- Marriage relationships (11.8%)
- Family relationships (5.6%)
- Personal relationships (1.8%)

Another 1 in 5 cases in the work category, occupational related issues, and some reporting work stress.

- Work / occupational (13.8%)
- Work-related stress (5.6%)

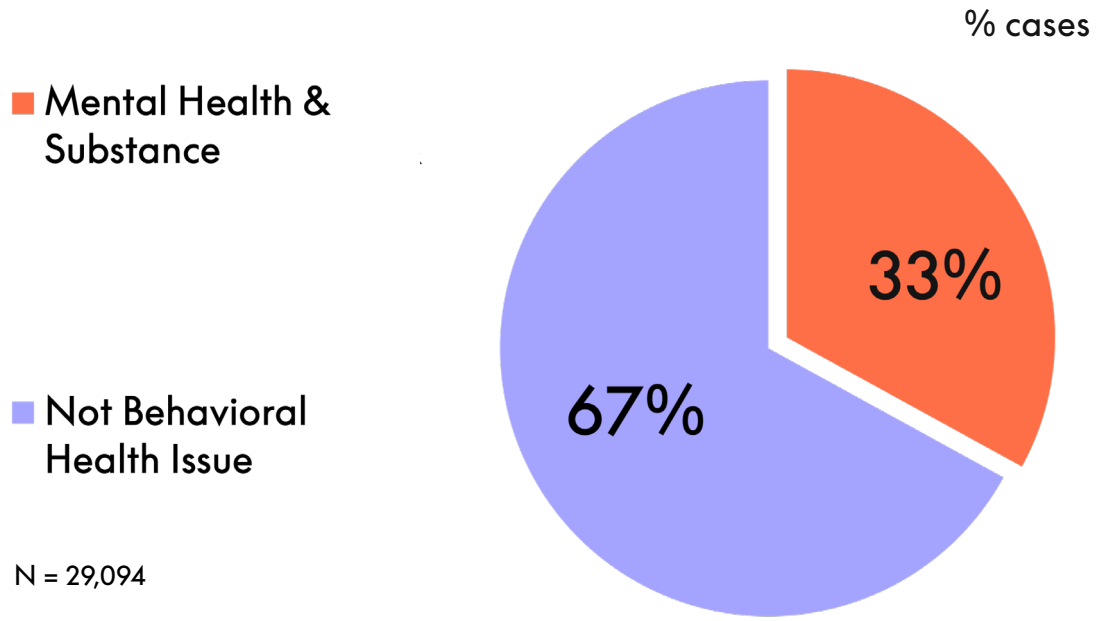
Clinical Issue (Reason for EAP Use)



N = 29,094

* 5% were legal, financial, work/life, wellness/medical specialty EAP services

Clinical Issue: Behavioral Health or Not

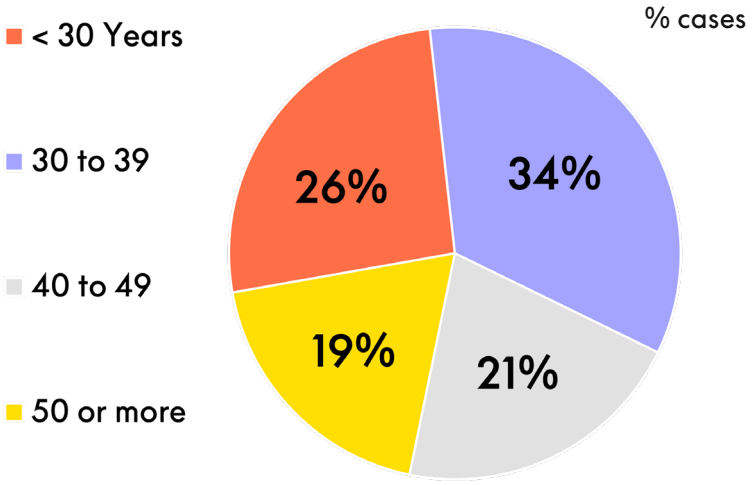


N = 29,094

Client Age. N = 17,546 (38% of cases; from 18 EAP sources). Age of the client was an average of 38 years old. About twenty percent of the total cases were included in each age-decade group. [Note: missing data on age from 62% of cases in the full sample.]

Client Sex. N = 17,053 (37% of cases; from 24 EAP sources). About twice as many women as men used the EAP (67% > 33%, respectively). [Note: missing data on sex from 63% of cases in the full sample.]

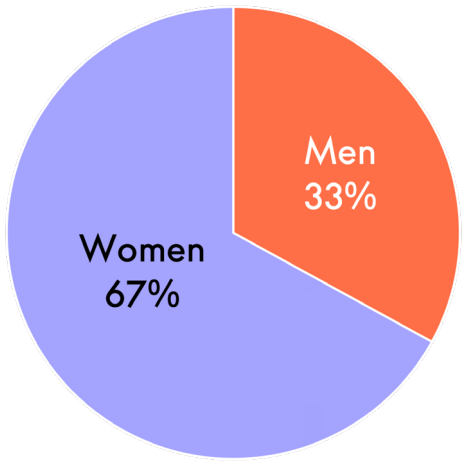
Age of EAP Client



N = 17,863

Average = 38 Years

Sex of EAP Client

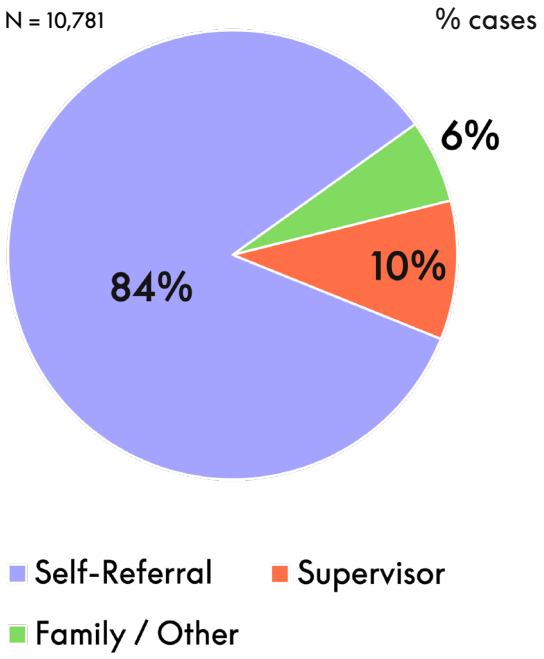


N = 17,053

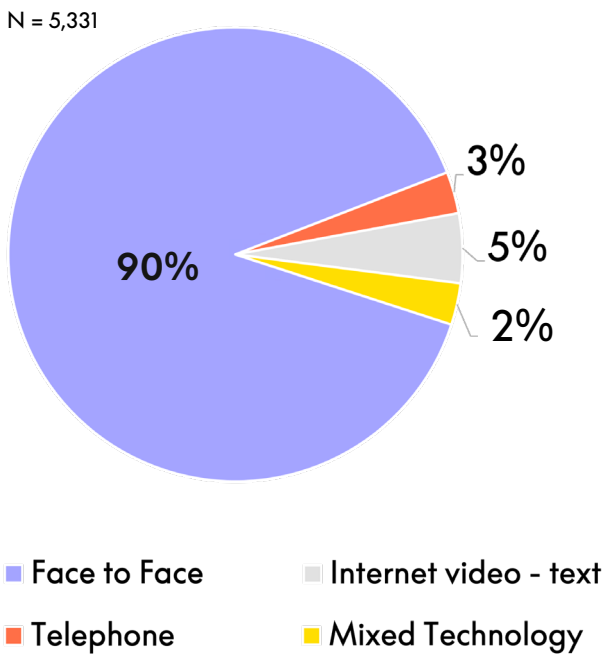
Referral Source Into EAP. N = 10,781 (24% of cases; from 25 EAP sources). Most cases were self-referrals (84%). Referral from a supervisor at work accounted for 10% of cases. Least common was a referral from a family member or other sources – at 6% of all cases. [Note: missing data on referral from 76% of cases in the full sample.]

Modality of Access to EAP. N = 5,331 (12% of cases; from 11 EAP sources). A face to face meeting with EAP counselors was used by 9 of every 10 cases had (90%). Technology-based access was 10% of cases. [Note: missing data on referral from 88% of cases in the full sample.]

Source of Referral Into EAP

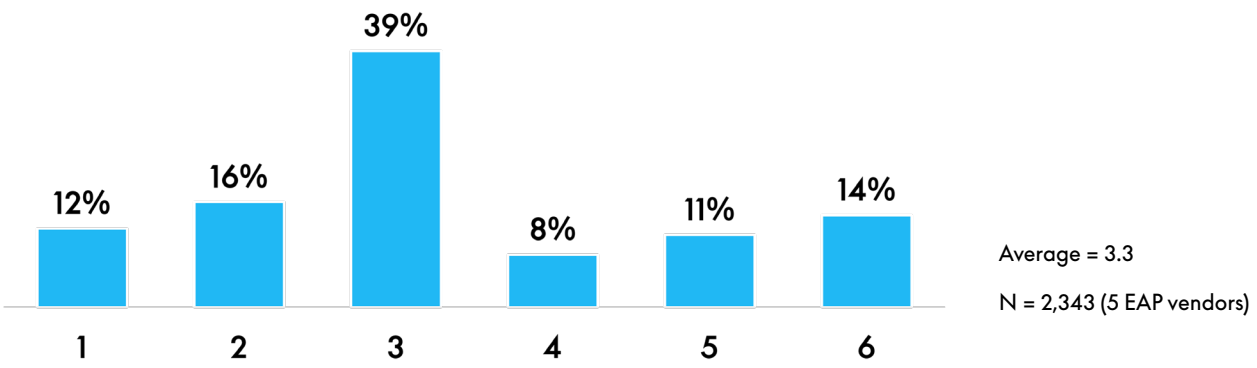


Modality of Accessing EAP



Clinical Sessions. N = 2,343 (5% of cases; from 5 EAP sources). The average case had 3.3 sessions counseling. Less than 1% of cases with 7 to 12 sessions were re-coded to the 6-session maximum. [Note: missing data on this factor from 95% of cases in the full sample.]

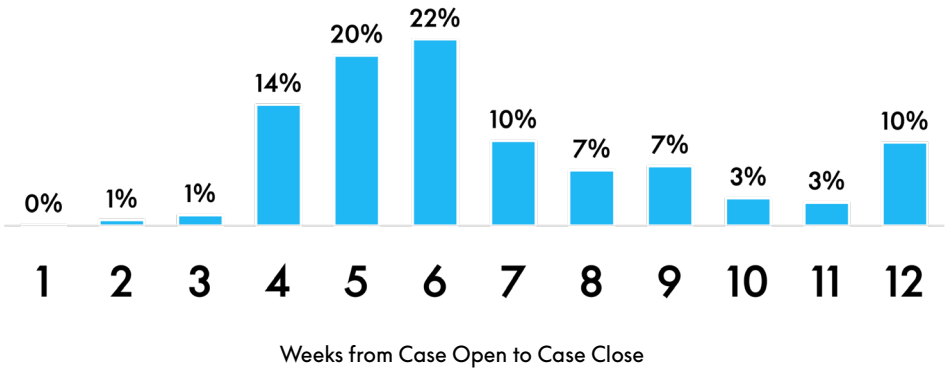
EAP Counseling Sessions Per Case



Duration of Clinical Treatment. N = 5,699 cases (from 2 EAP sources). The average case had about 6 to 7 weeks between the start and end of counseling (median 42 days; mean = 53 days). [Note: missing data on this factor from 88% of cases in the full sample.]

Duration Pre to Post. N = 4,515 cases (from 13 EAP sources). The average case had about three months between the start of counseling and when the follow-up survey was completed (median 86 days; mean = 98 days). [Note: missing data on this factor from 90% of cases in the full sample.]

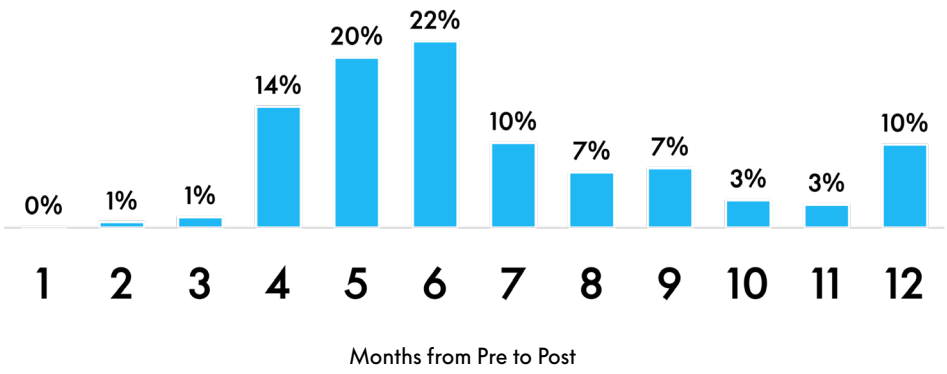
Clinical Treatment Duration: Time Period Case Open to Close



Median = 42 days / 6 weeks
Mean = 53 days / 7.6 weeks

N = 5,699 (2 EAP vendors)

Survey Interval: Time Period Case Open to Post Survey



Median = 86 days / 3.0 months
Mean = 98 days / 3.3 months

N = 4,515 (13 EAPs; mix of 9 vendors & 4 internals)

Chapter 2. What is the WOS?

The Workplace Outcome Suite© is a self-report measure of change examines five key aspects of workplace functioning: Work Absenteeism, Work Presenteeism, Work Engagement, Workplace Distress, and Life Satisfaction. It is an easy-to-administer tool that uses a short, precise, and easy-to-administer survey to collect EAP specific outcome data both at start of the counseling and at a follow-up point after use of the last clinical session (most often at about 75 days or 11 weeks later).

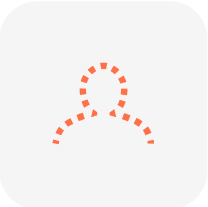
Originally 25 items, the brief 5-item version has one question per outcome area. These five specific items and response options are listed in Table 2.1. The five-item version of the WOS is featured in this report. It is the only publicly available outcome instrument that has been scientifically validated and tested for use in EAP settings. The updated psychometric results on measurement reliability for WOS single items and summary measures are presented in Appendix B.

A new updated version of the brief measure is now available - along with scoring instructions and updated norms. For work absenteeism, it is no longer necessary for the employee to fill in the blank with a specific number of hours. Instead, there are five categories of different amounts of absence to choose from (based on levels determined in the WOS research). Also included in the new version of the WOS is an additional item that more measures the level of work productivity in general. However, all EAPs who collected new data from 2020 and early 2021 still used the 5-item brief version.

Workplace Outcomes Suite (WOS)

The WOS was developed in 2010 (published peer-reviewed research). Now licensed by over 500 EAP vendors and internal programs globally to measure changes from before to after use of EAP counseling.

Figure 2.1 WOS outcome areas



Work Absenteeism

Workplace Distress

Work Presenteeism

Work Engagement

Hours of Lost Productive Time at Work

Life Satisfaction

Work Absenteeism is the missed time away from regularly scheduled work. This is defined as complete workdays or as partial days when the employee arrived late work or left early. Absenteeism is measured with a fill in the blank format with specific numbers of hours absent in the past 30 days. It is colored red in this report because the outcome involves a stoppage of work - like the red color of a traffic stop sign.

Work Presenteeism is when an employee is physically present on the job but is not working at their normal level of job performance because of some health or personal issue. Presenteeism is measured on the WOS with a 1-5 rating scale. It is colored blue in this report because blue is linked to depression ("feeling blue") and being depressed is linked to decreased work performance.

Workplace Distress is the negative feelings an employee may have about the conditions of the work environment. It is directed at the feeling only and should be able to detect improvement in the employee's mental state linked to improvement in work culture, work relationships and other workplace conditions. This is measured with a 1-5 rating scale. Workplace Distress is colored black in this report because it involves a feeling of dread about going to the workplace – and black represents a dark or ominous psychological state.

Work Engagement refers to the extent to which an employee is invested in his or her job. Conceptually, work engagement has three core components: cognitive, emotional, and behavioral. Engaged employees work hard at their jobs, take their work home with them and are excited about being at work. They also tend to think about work even when they are at home and not formally working. The investment these employees put into their work goes beyond the normal level of high job satisfaction to the point where they view the job as a reflection of who they are and taking pride in their job. Work engagement is measured on the WOS with a 1-5 rating scale. Work Engagement is colored green in this report because this outcome involves a growth-oriented approach to work and because green represents healthy plants and nature.

Life Satisfaction simply addresses the level of satisfaction with one's life. As a general construct, this addresses the broader impact of workplace problems on well-being. In the context of EAP counseling, this measure functions as a proxy for level of overall clinical or personal distress. It is measured with a 1-5 rating scale. Life Satisfaction is colored yellow/orange because it reflects a positive and happy perspective on life and happiness is often associated with the color of yellow or orange.

Lost Productive Time (LPT) is the result of combined absenteeism hours and the estimated hours of unproductivity while working due to presenteeism. This outcome is not measured by specific items on the WOS, rather it is derived mathematically from using the combined data from the WOS work absenteeism and work presenteeism items.

What does it mean to be at "problem status" on a WOS measure?

The problem status analytical approach was introduced in the 2018 WOS Annual Report. It uses the meaning embedded in the labels on the response scales of WOS items to determine a more clinically relevant sub-portion of the employee population who are at a "problem level" on the outcome. This method simply asks how many employees (as a percentage of all cases) have a problem on a particular outcome when first seeking counseling and then how many still have a problem at the follow-up after counseling has concluded? The expectation is that the prevalence rate of the more severe levels on these outcomes would go down after counseling when employees had experienced some clinical improvement.

Conceptually, this approach borrows from the wellness field's emphasis on prevention and finding employees who are at-risk for a health issue and then trying to reduce those risks through education and coaching. The results can be used to demonstrate the role of EAP counseling in the risk management of behavioral health issues for work organizations. How this approach is enacted operationally for each WOS measure is shown below.

Table 2.1 WOS-5 brief measure items with response options and recoding for problem status.

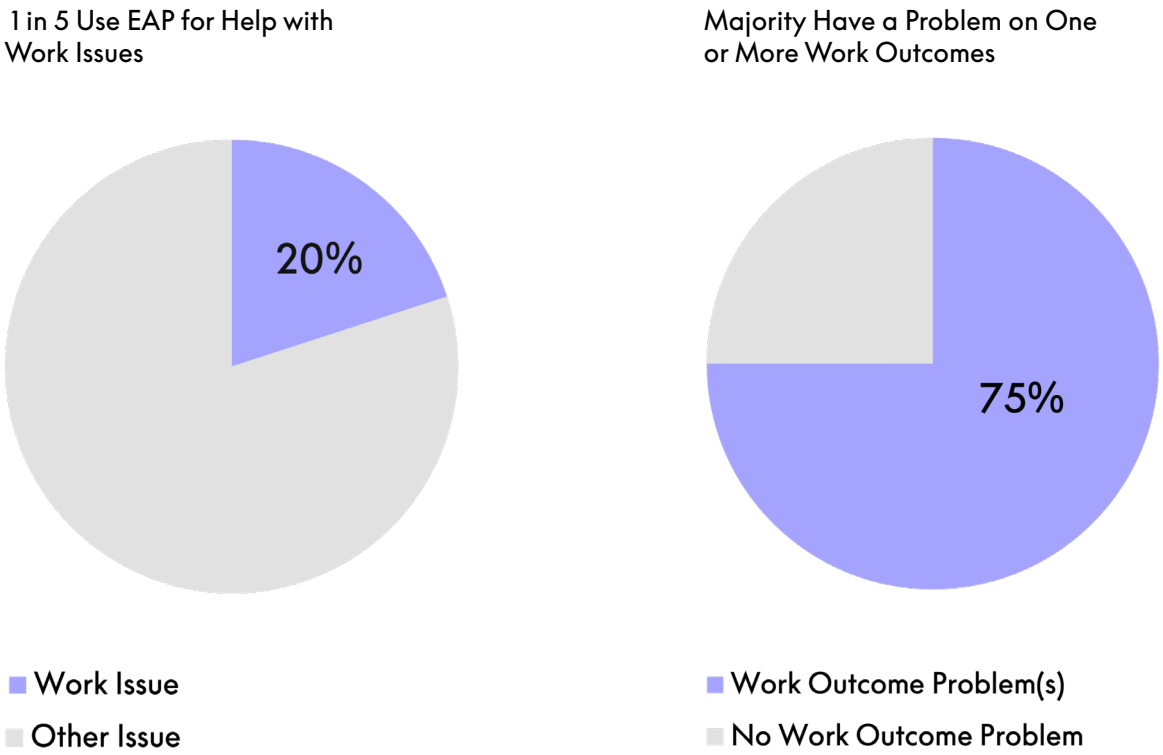
Item on WOS-5	Rating scale	Problem status
WORK ABSENTEEISM: *"For the period of the past 30 days, please total the number of hours your personal concern caused you to miss work. Include complete eight-hour days and partial days when you came in late or left early."* ___	**5 = Absent 25 to 159 hrs** **4 = Absent 9 to 24 hours** **3 = Absent 4 to 8 hours** 2 = Absent 1 to 3 hours 1 = No Absence (0 hours)	**Problem** **Problem** **Problem** Not a problem Not a problem
WORK PRESENTEEISM: *"My personal problems kept me from concentrating on my work."*	**5 = Agree Strongly** **4 = Agree Somewhat** 3 = Neutral 2 = Disagree Somewhat 1 = Disagree Strongly	**Problem** **Problem** Not a problem Not a problem Not a problem
WORKPLACE DISTRESS: *"I dread going in to work."*	**5 = Agree Strongly** **4 = Agree Somewhat** 3 = Neutral 2 = Disagree Somewhat 1 = Disagree Strongly	**Problem** **Problem** Not a problem Not a problem Not a problem
WORK ENGAGEMENT: *"I am often eager to get to the work site to start the day."*	5 = Agree Strongly 4 = Agree Somewhat 3 = Neutral **2 = Disagree Somewhat** **1 = Disagree Strongly**	Not a problem Not a problem Not a problem **Problem** **Problem**
LIFE SATISFACTION: *"So far, my life seems to be going very well."*	5 = Agree Strongly 4 = Agree Somewhat 3 = Neutral **2 = Disagree Somewhat** **1 = Disagree Strongly**	Not a problem Not a problem Not a problem **Problem** **Problem**

Relevance of Work-related Outcomes to Majority of EAP Cases

When excluding the life satisfaction item and keeping the four work-specific outcomes, 75% of all cases had at least one of the four work related WOS outcome at a problem level when starting counseling. This is interesting when only 20% EAP users sought assistance for an issue related directly to work. These findings reveal the hidden negative impacts of personal distress on multiple aspects of work functioning and life satisfaction overall. Employer customers of EAP should recognize the potential for work function deficits among employees who have behavioral health and personal life issues. One practical implication of these findings is that work outcomes are indeed relevant to most employee users of EAP services. Thus, we recommend that work outcomes be assessed by EAP providers for all cases regardless of clinical issue.

Figure 2.2 Percentage of cases with a work-related presenting issue as focus of counseling and percentage of cases with one or more work outcomes at a problem level when starting counseling.

1 in 5 EAP Cases have Work Related Issues – Yet Three Fourths have Problems with at least Work Outcomes



Lost Productive Time – WOS Absenteeism & Presenteeism

Seminal research conducted for the American Productivity Audit project (Stewart et al., 2003) identified how a single simple metric can be used to index the dual impact of work absenteeism and work presenteeism on the level of overall work productivity of employees. This metric is called lost productive time (LPT). It allows us to estimate a cost burden of lost productive time for an EAP case. We can compare the amount of LPT at before counseling to the amount of LPT experienced at the follow-up. This approach has been used in other recent peer-review research studies on workplace outcomes after mental health and workplace wellness interventions (e.g., Attridge, 2020; Attridge & Dickens, 2021; Mitchell, & Bates, 2011). Six steps are needed to calculate LPT in past month:

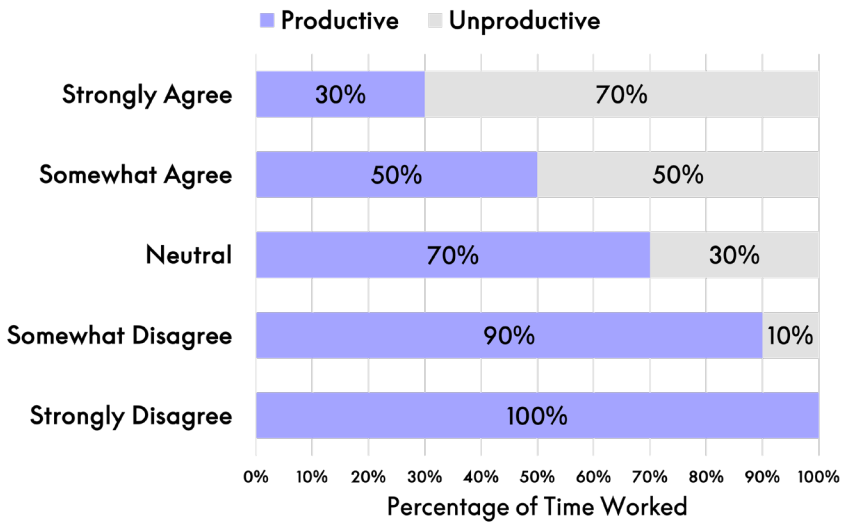
Step 1: The total hours in the normal work schedule for the employee;
Step 2: The hours of work absenteeism during the same time period;
Step 3: The number of hours worked (subtract Step 2 from Step 1);
Step 4: The percentage or level of work presenteeism (0-100%) during the time worked;
Step 5: The hours of work presenteeism (multiply Step 3 by Step 4);
Step 6: Add together Step 2 and Step 5 to yield a count of the total hours of LPT.

For Step 1, we assume a standard work week of 40 hours (five 8-hour workdays) and a 160-hour work month. For Step 2, with the WOS benchmarking study data, we know the specific hours of work absence in the past month. With these two figures we then determine the split of the total hours worked minus the hours absent in a month (Step 3).

Step 4 requires the five ratings of the WOS presenteeism single item to be assigned new values corresponding to different levels of work productivity on a 0 to 100% scale. The new specific levels of productivity were determined through a trial and error process of trying different sets of five percentage levels until the resulting averages calculated for both time periods for the total WOS sample in last year's annual report were a near perfect match with the two targets of 64% productive at Pre and 80% productive at Post developed from a literature review of 12 other studies of EAP work outcomes not measured with the WOS. [The details for the individual studies included in this review on page 34 of the WOS 2020 Annual Report.] Each of the five ratings of the WOS presenteeism single item were assigned new values corresponding to different levels of work productivity on a 0 to 100% scale from low to high.

Figure 2.3. WOS Presenteeism ratings re-coded into percentage of work time that was unproductive

Work Presenteeism 1-5 Ratings Converted to Estimate How Much of Time Worked was Productive or Unproductive



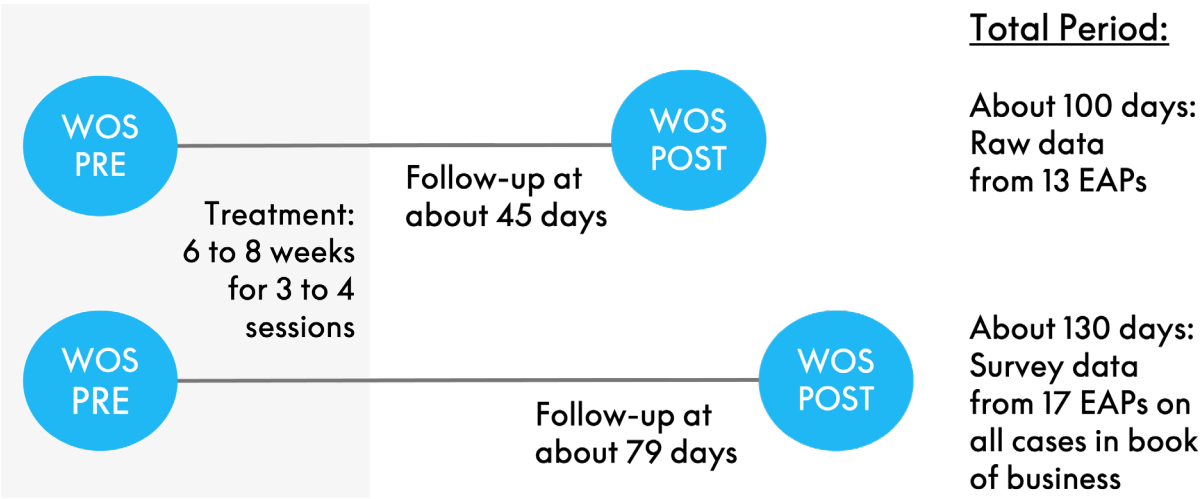
Chapter 3. Improvement in WOS outcomes after counseling

This chapter presents results of statistical tests on the extent of improvement from Pre to Post use of EAP counseling on the WOS measures. Accordingly, these analyses involve only the cases with paired data from both time points. The sample sizes in these tests varied by the WOS measure tested. The test statistics for these results are provided in Appendix E.

Timing of longitudinal data collection at case level

The typical case had used 3 to 4 sessions with a counselor over an 8 to 10 week treatment period. This is about three weeks, on average, between each clinical session. The data suggests the average case had a about 100 days between the Pre and Post. Other data from our 2021 survey of 17 EAPs that collected WOS data indicated the estimated typical time period between Pre and Post was longer at about 130 days. Considered together, the time interval from Pre to Post was estimated to be about 4 months.

Figure 3.1 Timing of WOS data collection at Pre and Post: Two sources from case level data and from EAP book of business reports



PART 1. Improvement tested as problem status on WOS outcomes

Test 1: Reduction in percentage of all cases at problem status on WOS outcomes

The period before starting counseling is when the employee's level of personal distress is likely to be at its peak and this results in the need for the worker to seek out help from an EAP counselor. The stigma often associated with mental health disorders suggests that the level of distress experienced by the employee must be severe enough to overcome the psychological barrier of defining oneself as a person who needs professional help. Given this context, a relevant question is which of the different outcomes assessed by the WOS are most impacted by the distress experienced by the employee? We had over 38,000 users of EAP counseling to examine this question. The results found that work presenteeism was the outcome with the greatest percentage of cases at problem status when starting counseling - with more than half of all cases (56%) saying their issue was making it difficult to concentrate on work. Missing a half day or more of scheduled work time also occurred for about a third of EAP cases (32%). Almost a third of cases (31%) also were not engaged in their work. Finally, dreading going to the workplace (workplace distress) was experienced by about 1 in every 4 cases (23%). Being dissatisfied with life overall was also reported by more than a third of the cases (37%). Each of these rates was significantly lower after counseling. See Figure Set 3.1.

Test 2: Net change in number of cases at problem status per 100 EAP cases in WOS outcomes

Taking the difference between the percentage of cases with problem status on WOS outcomes at before use and at after use of counseling yields the net change over time in problem status. This metric reflects the influence of both the initial prevalence rate and the extent of improvement that was achieved after counseling. Thus, the count of fewer cases at problem status per every 100 EAP cases provides a useful way to compare the different WOS outcomes. There were 26 fewer cases per 100 with a work presenteeism problem; 21 fewer cases per 100 with a life satisfaction problem; 18 fewer cases per 100 with a work absenteeism problem; 8 fewer cases per 100 with a work engagement problem; and 8 fewer cases per 100 with a workplace distress problem. See results in Figure 3.2.

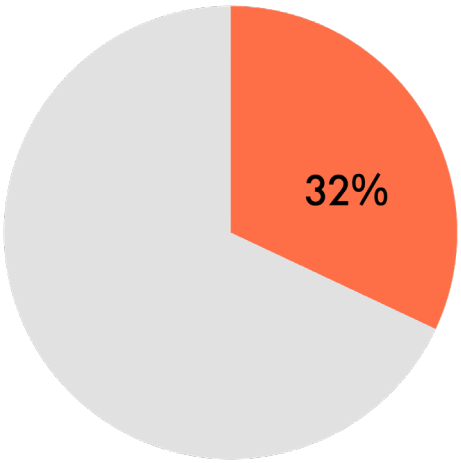
Test 3: Reduction in total number of WOS outcomes at problem status per case

When each of the five WOS problem status measures (yes problem = 1 or no problem = 0) were added up into one composite measure, the score could range from zero problems to 5 for having a problem on all five WOS outcomes. The results showed a significant reduction in the average number of problems per case from before to after use of EAP counseling ($p < .001$). The total number of problems on WOS outcomes per case was cut in half, changing from 2.42 at before use to 1.07 at the follow-up. Looking closer at the data (see Figure 3.3) revealed that the percentage of EAP cases with zero outcome problems changed from no cases at the start of counseling to 42% of cases after counseling. Looking at the right side of the same figure also shows that three higher categories, when combined as one group, was reduced from 40% of cases at before counseling to only 14% at the follow-up.

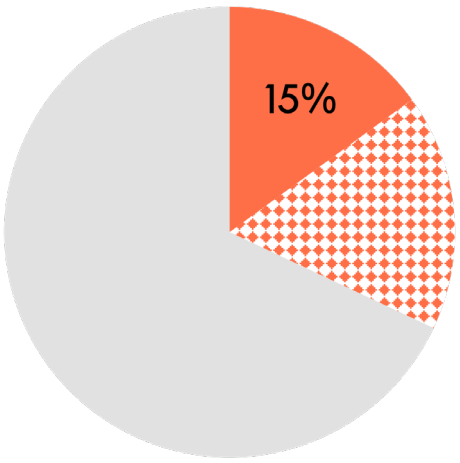
Figure Set 3.1 Percentage of cases at problem at Pre and at Post on WOS outcomes.

Work Absenteeism: Reduction in Problem Status

Before EAP



After EAP

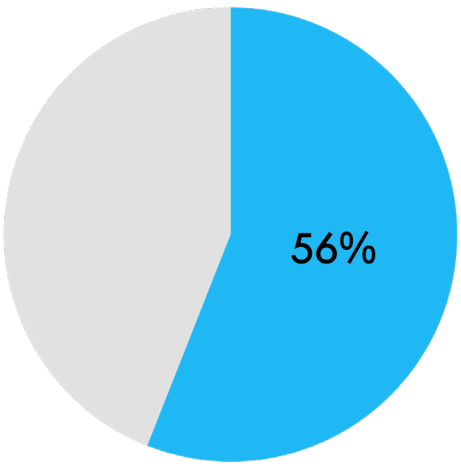


N = 38,302

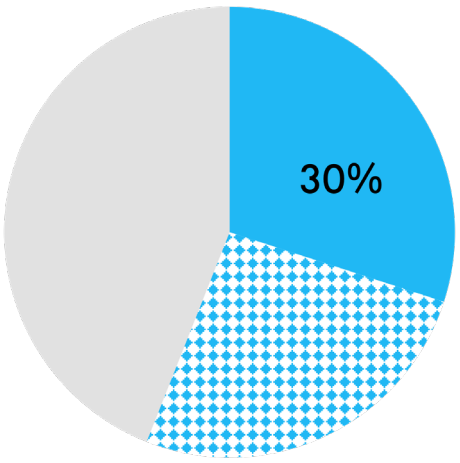
Problem Improved No Problem

Work Presenteeism: Reduction in Problem Status

Before EAP



After EAP

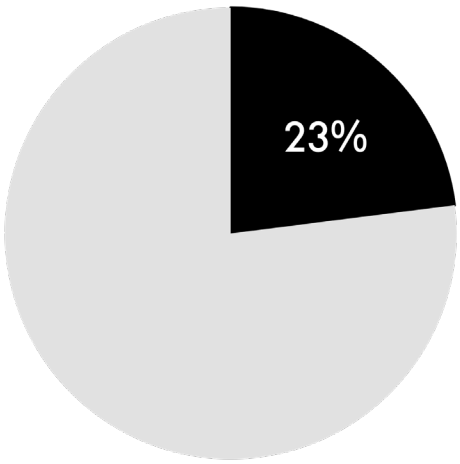


N = 39,135

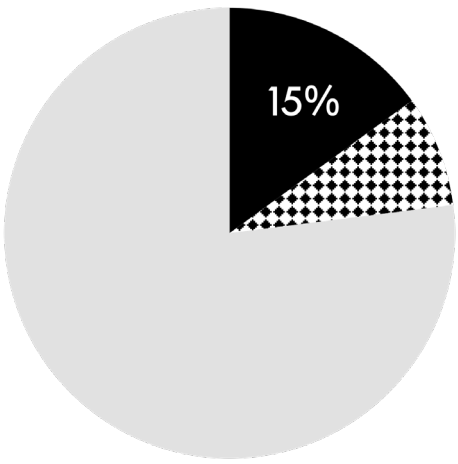
Problem Improved No Problem

Workplace Distress: Reduction in Problem Status

Before EAP



After EAP

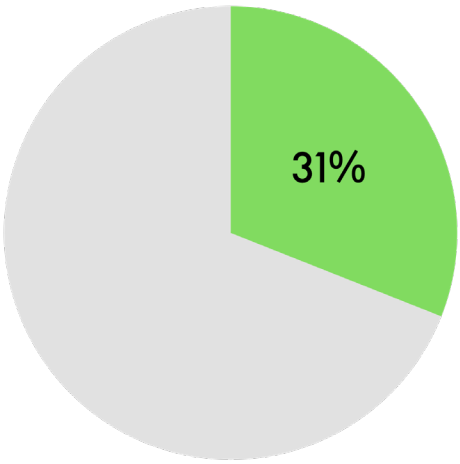


N = 39,135

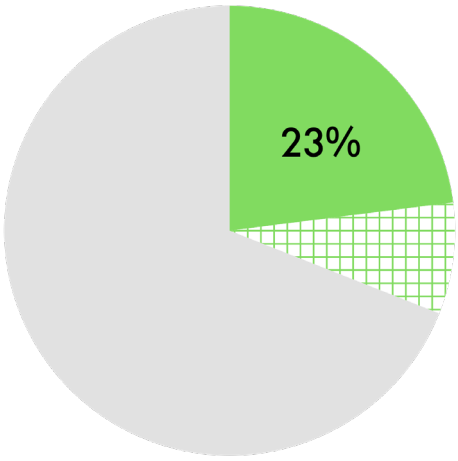
■ Problem ⬚ Improved ■ No Problem

Work Engagement: Reduction in Problem Status

Before EAP



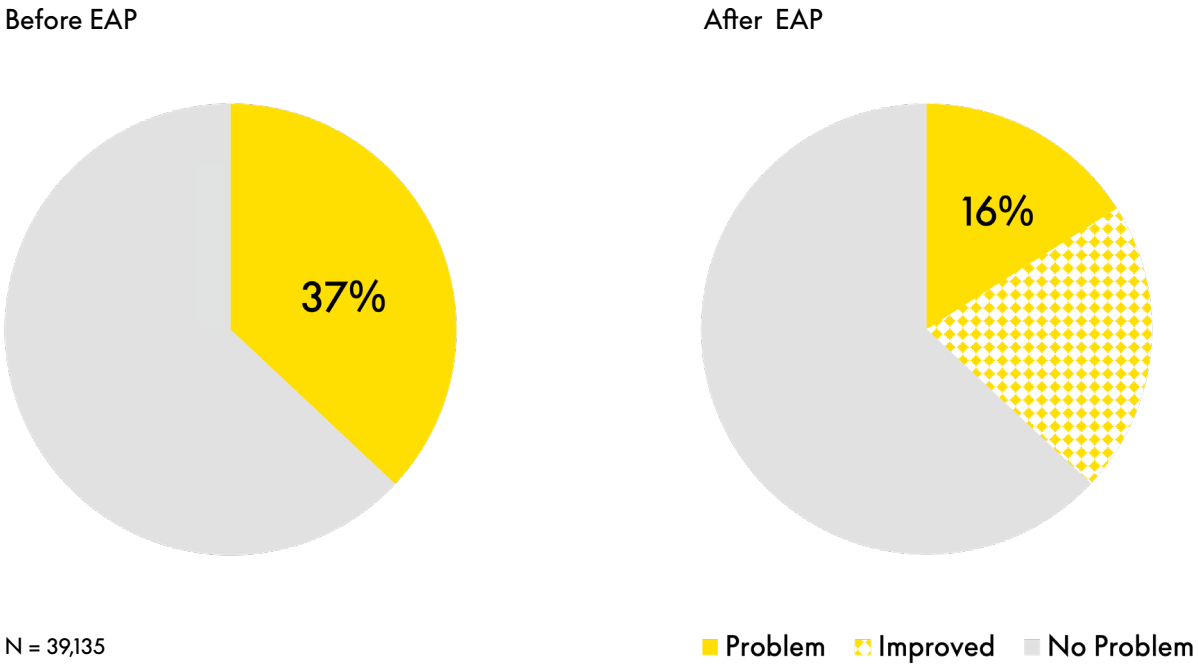
After EAP



N = 38,781

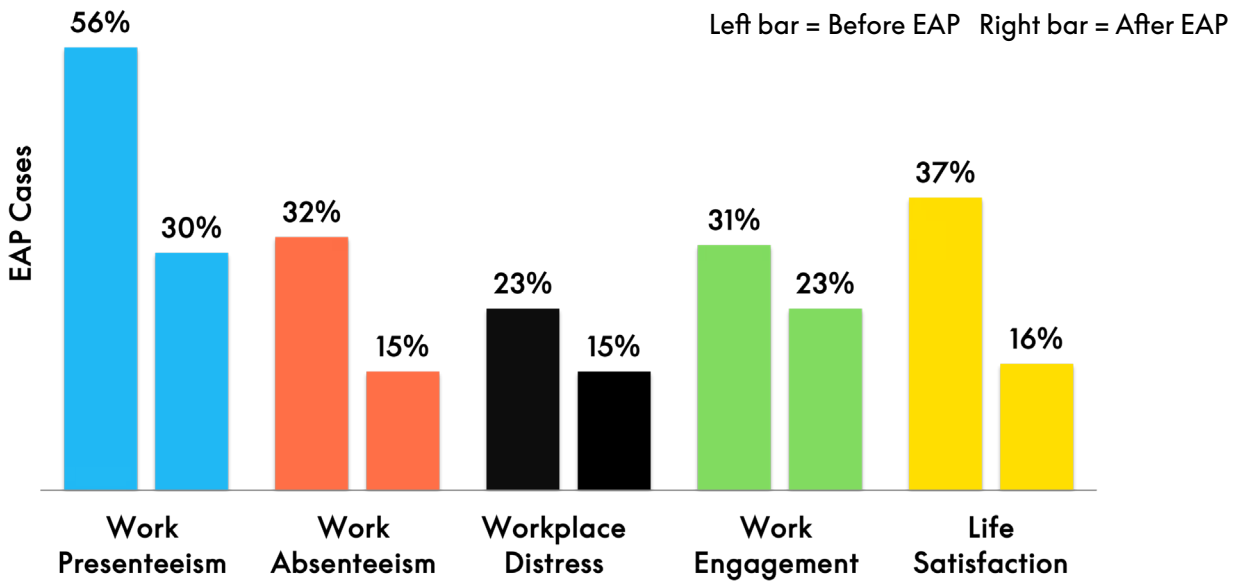
■ Problem ⬚ Improved ■ No Problem

Life Satisfaction: Reduction in Problem Status



N = 39,135

Percentage of Cases at Problem Status on WOS Measures at BEFORE and AFTER Use of EAP Counseling



N = 38,302 – 39,135

Figure 3.2 Percentage of cases at problem at Pre and at Post on WOS outcomes.

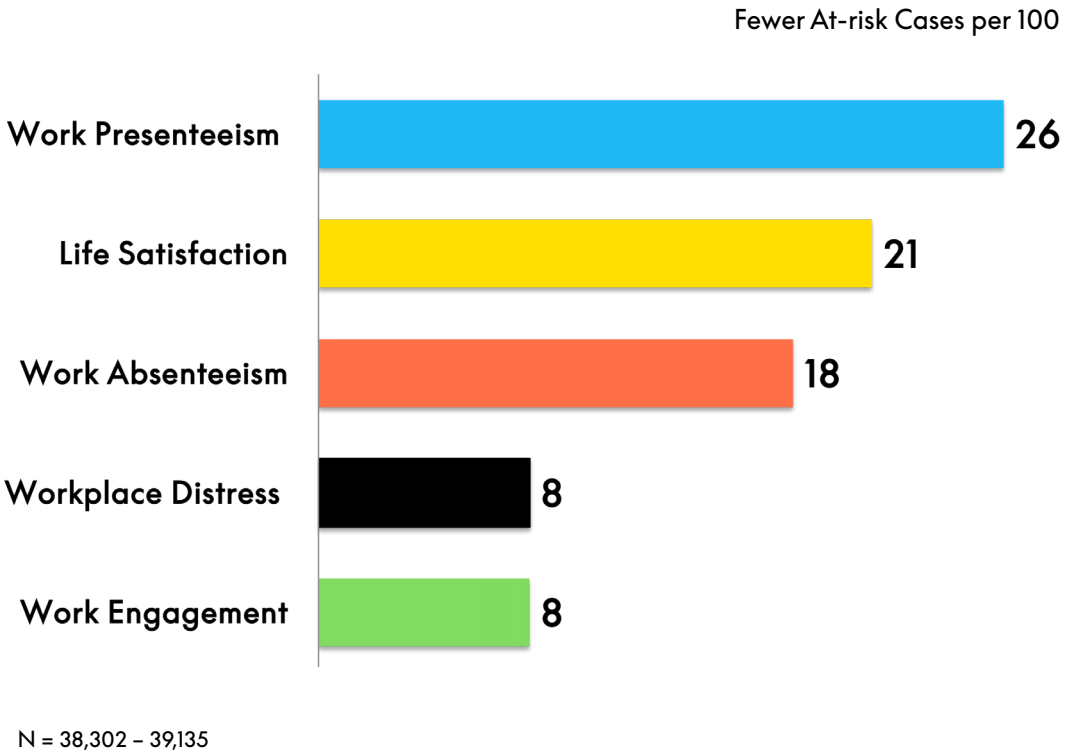
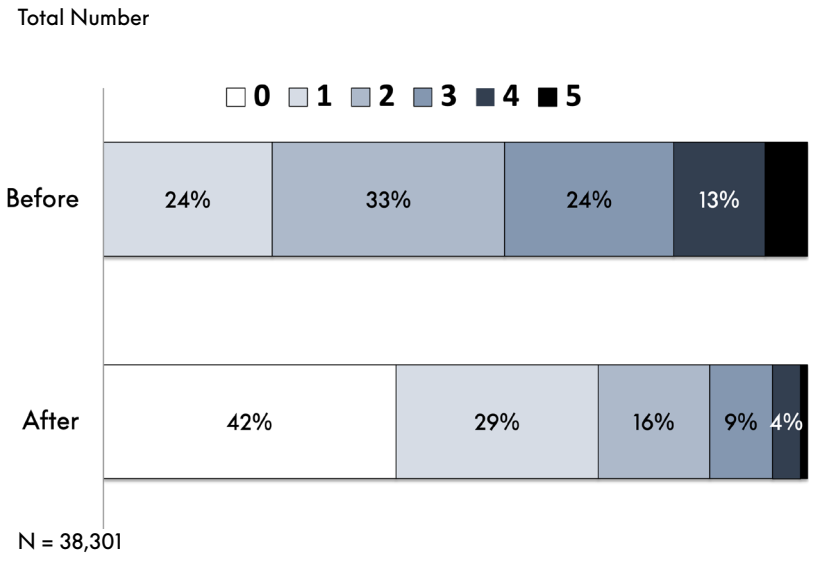


Figure 3.3 Comparison of total number of WOS measures at problem status at before and after EAP.

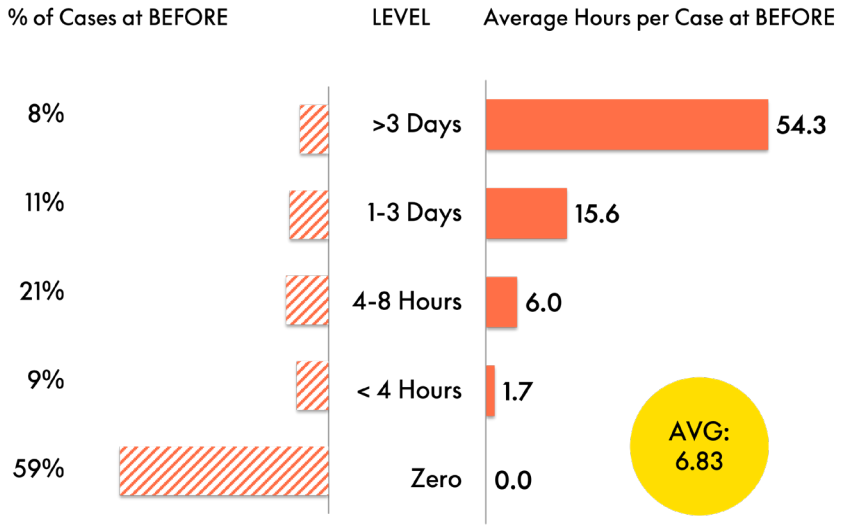


PART 2. Results for hours of lost work time at before and after EAP counseling

Test 4. Reduction in hours of work absenteeism per month

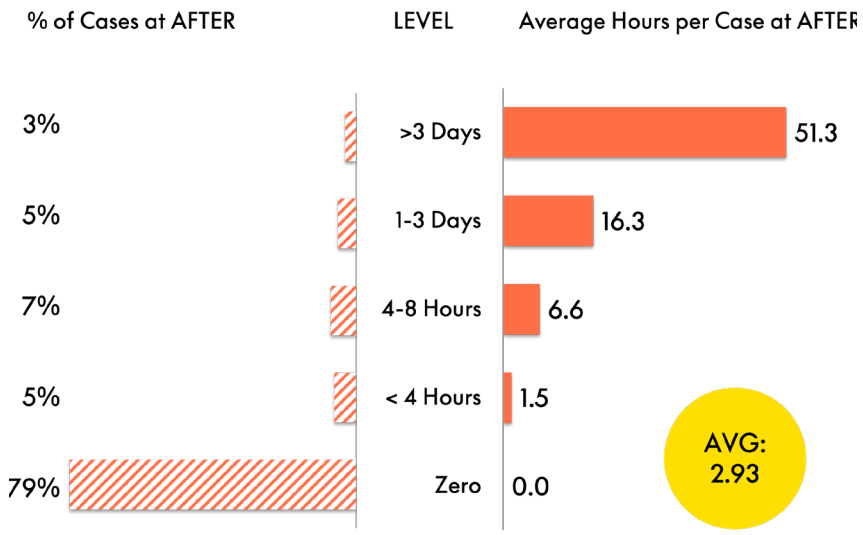
The average was **6.83 hours** absent from work during the month just before starting counseling, with 59% of cases reporting no work absence. But **8%** of cases had more than 3 days of missed work in past month – at an average of 54 hours missed. The average was **2.93** hours absent at the follow-up, with 79% of cases had no work absence after counseling. Yet 3% of cases had more than 3 days of missed work in past month at an average of 51 hours. Comparing the square root transformed versions of the hours of work absenteeism (due to the skew in the data from so many cases at zero absence), revealed a highly significant reduction from before to after EAP use. See Figure Set 3.4 for details. **Figure Set 3.4** Hours of work absenteeism at before and after use of counseling.

Work Absenteeism: Hours at BEFORE Use of EAP



N = 38,301

Work Absenteeism: Hours at AFTER Use of EAP

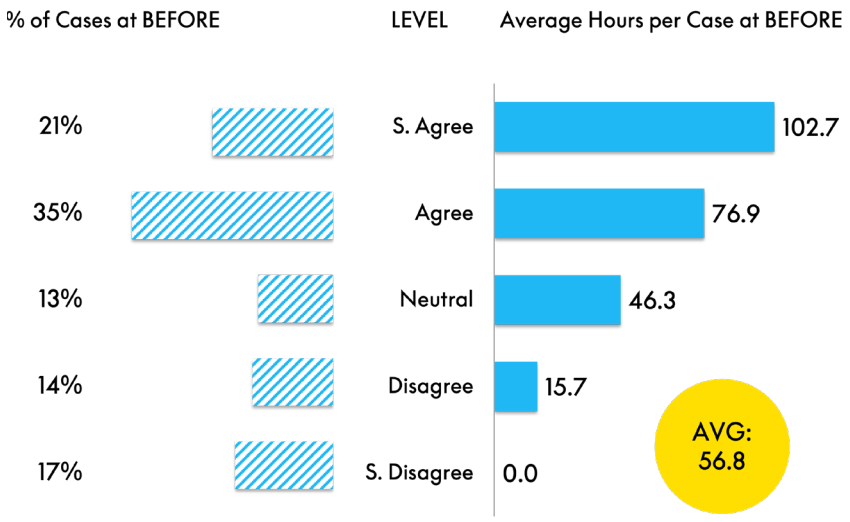


N = 38,301

Test 5. Improvement in estimated level of work productivity and estimated hours of work presenteeism per month

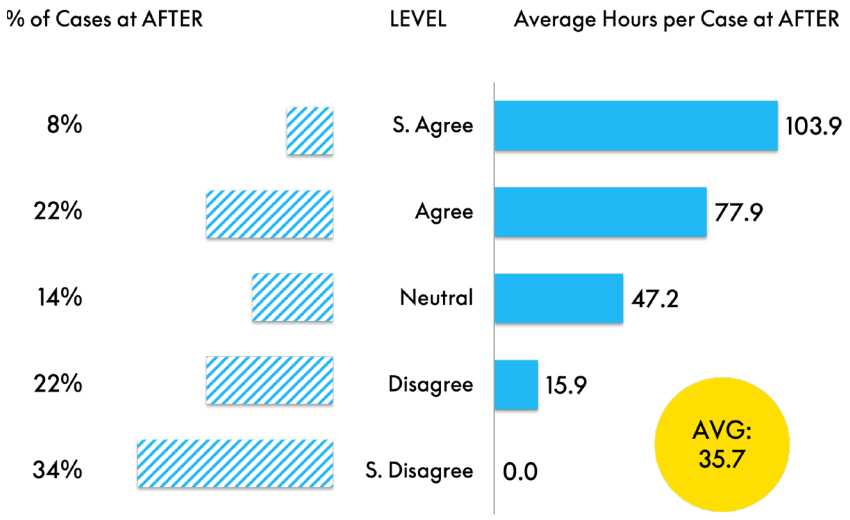
In the sample with paired data on the work presenteeism WOS item, the estimated level of work productivity was 6.2 on a 0-10 scale. At the follow-up, this increased to 7.7. This change was a highly significant reduction. For comparison, other research indicates the typical employee is at 8.5 on a 0-10 rating scale for work productivity (see Appendix F). Across all cases, the average was 56.8 hours of unproductive time when at work during the month just before starting counseling. The average was 35.7 hours at follow-up survey after the end of counseling. Comparing the change revealed a highly significant reduction from before to after EAP use. See Figure Set 3.5 for details. **Figure Set 3.5** Hours of work presenteeism at before and after use of counseling.

Work Presenteeism: Hours at BEFORE Use of EAP



N = 38,301

Work Presenteeism: Hours at AFTER Use of EAP



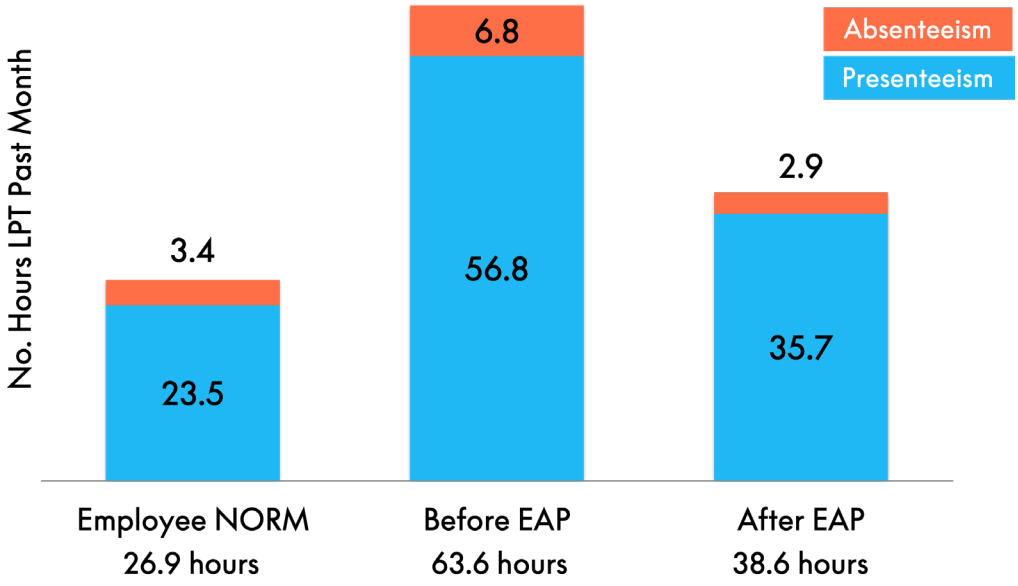
N = 38,301

Test 6. Reduction in combined hours of work absenteeism and presenteeism (LPT)

In the total global sample, the amount of LPT at Pre was compared to the amount of LPT at Post among the sample of case with both absenteeism and presenteeism data at both time periods (n = 38,301). During the month before starting EAP counseling, the lost productive time was 63.4 hours. Later on when employee distress was presumably reduced after benefitting from the EAP counseling, the amount of LPT during the past month at follow-up date was reduced to 38.6 hours. The 25 fewer hours of LPT per month after use of the counseling is a 40% relative reduction of LPT. The key results for LPT are in Figure 3.6.

Figure 3.6 Hours of work presenteeism at before and after use of counseling.

Hours of Unproductive Work Time Per Month: EAP Case at Before & After Counseling vs. NORM



N = 38,301

The hours of LPT at both Pre and Post for the average EAP counseling case were both higher than the 26.9 hours for the typical healthy worker (see Appendix F). However, the excess hours above this normal level of lost productive time changed from 36.7 hours at Pre to only 11.7 hours at the follow-up. Thus, the net change in LPT hours in excess of the normal level was substantial - as more than two-thirds of the excess lost time (68%) at before counseling was converted from unproductive to productive time after counseling.

Chapter 4. Exploring context factors for potential differences on the WOS SuperScore

This section presents results of tests comparing context factors on the average levels of the summary SuperScore outcome scores and on the extent of improvement in these scores over time. Tests were conducted using a repeated measures analysis of variance (ANOVA) model. Each test had the longitudinal factor of time (pre vs. post use of counseling), the context factor being examined with its different subgroups (i.e., sex of client with groups of men and women), and the Pre and Post scores on the WOS SuperScore outcome. The sample sizes varied depending on how many cases had valid data on the context factor being tested and how many cases had paired WOS data. Detailed test results are presented in Appendix E.

Do context factors differ in overall level of work outcomes?

The results found that each of the context factors had statistically significant differences among the subgroups on the average level of WOS outcomes. But most of the differences were trivial and of little importance. Only five of the 12 factors had even a small size statistical effect, these included: The specific EAP program/vendors, country, industry, clinical issue, and number of clinical sessions.

Does improvement in work outcomes vary by context factors?

Other results explored how much the subgroups of a context factor differenced in the extent of change in scores from pre to post. For example, after the use of counseling does work engagement improve more for women than men? All of the factors had significant differences, however only two of the 12 factors had a statistical effect size that was beyond the trivial level. The 45 different specific EAP program/vendors and 5 different regions of the country within the US each had a small size statistical effect of slightly more or less improvement after counseling in WOS total scores among the subgroups.

Conclusion that EAP counseling is effective across many contexts

It is important to recognize that findings for these tests of context factors all had statistical effect sizes that were either trivial or very small size from a practical or business perspective. The results for improvement on the composite WOS SuperScore measure without any context factors in the same test model (i.e., the primary test conducted in the study) was a very large effect size of $\eta_p^2 = .27$. This relationship is much greater than the statistical effect sizes of $\eta_p^2 = .04$ or less for each of the context factor tests. It indicates the small differences on the WOS composite score associated with context factors have almost no practical value.

The present report tested only the composite WOS SuperScore. But a similar lack of findings has been observed in similar tests conducted on each of the specific WOS measures. The interested reader is directed to the Part 2 Report of the 2020 WOS Annual Report from last year. This 42-page paper was devoted entirely to exploring ten different context factors on each of the five specific WOS measures (as problem status scores) and other measures of number of hours of work absence, hours of unproductive time and the combined hours of lost productive work.

Table 4.1 Summary of results of tests of context factors on WOS SuperScore.

Context factor	Differences in overall level of outcome					Differences in extent of improvement in outcome after counseling			
	Statistical effect size:					Statistical effect size:			
	trivial	small	medium	large		trivial	small	medium	large
EAP program/vendor		X					X		
Region of USA	X						X		
Country		X				X			
Industry of employer		X				X			
Referral source		X				X			
Clinical issue		X				X			
Year	X					X			
EAP delivery model	X					X			
Age of client	X					X			
Sex of client	X					X			
Clinical sessions	X					X			
Clinical duration period	X					X			

SECTION II:

COVID-19 Pandemic Impact on EAP Use, WOS Outcomes, and ROI

Chapter 5. Exploring the impact of COVID-19 pandemic on EAP counseling use

This chapter examines how EAP counseling was provided in year 2019 (pre-pandemic) compared to year 2020 and early 2021 during the pandemic.

PART 1. EAP annual clinical case rate for counseling utilization during pandemic: Results from industry surveys

A clinical case utilization rate was obtained from recent national survey studies in the US and Canada from a major benefits organization and also from a survey of EAP providers (see Table 5.1). For the US, the results found that an average of 7.5 people per every 100 covered employees used the EAP for counseling in year 2019 and this rose to 9.5 during the pandemic. For Canada, a smaller sample of 46 employers reported a 10% increase during the pandemic in annual EAP clinical case rate from 10.3% in 2019 to 11.3% in 2021. Other results in the EAP industry survey revealed a 35% increase in the average number of sessions of counseling per case during the pandemic compared to before the pandemic, up from 4.0 vs. 5.5 sessions. Thus, both the number of total cases and the number of sessions of counseling used per case increased during the pandemic. These results represent national data across many EAP vendors and programs.

Table 5.1 Counseling case rate results in 2019 and 2020/21: Two national studies.

Study	Sample	Pre-Pandemic	Pandemic	Impact
Annual Utilization Rate for EAP counseling per 100 Covered Employees				
IFEBP survey	N = 46 employers in Canada	10.3%	11.3%	10% higher
IFEBP survey	N = 237 employers in USA	7.4%	9.2%	24% higher
Attridge survey	N = 96 EAPs in USA	7.7%	9.9%	22% higher
Average Number of Sessions of EAP Counseling Used per Case				
Attridge survey	N = 85 EAPS in USA	4.0	5.5	18% higher

Note: IFEBP = International Foundation of Employee Benefit Plans

[1]**Note:** From Attridge, M. (2021). Pandemic Trends in Utilization and Outcome Measurement: Survey Results for EAP Industry. White Paper. Used in this report with permission of the author.

PART 2. EAP counseling use profile during the pandemic period year in 2020: Survey of 17 EAPs that collect WOS data

Survey sample. We received usable responses on the data collection items from 17 EAPs who were sent the call for participation. The sample included a mix of external vendors (n = 12); internal programs (n = 3), and hybrid programs (n = 4). Most EAPs were located in the United States, but vendors in five other countries also participated.

Delivery channels to access counseling from EAPs in year 2020 during pandemic

N = 17 EAPs. Results showed that during the pandemic, multiple access channels were commonly provided for using EAP counseling, including traditional in-person visits and technology options of video over the internet, telephone, and smart-phone digital tools. Respondents could check all of the delivery modalities that applied for year 2020, when the COVID-19 pandemic started:

- Internet with live video counseling = 94% of EAPs
- Telephone counseling = 88% of EAPs
- Face-to-face counseling delivered in-person at counselor offices = 76% of EAPs
- Virtual contact from smart phone text/chat or from use of self-directed technology tools (iCBT) on the Internet or Apps = 6% of EAPs

Number of counseling sessions in year 2020 during pandemic

N = 16 EAPs. An average of four sessions (4.0) of counseling per case in year 2020. More specifically:

- 3 sessions = 38% of the EAPs
- 4 sessions = 31% of the EAPs
- 5 sessions = 25% of the EAPs
- 6 sessions = 6% of the EAPs

None of the EAPs chose other options of an average for their business of 1 session, 2 sessions, or 7 or more sessions for the past year. Data on the average number of sessions in 2019 (pre-pandemic) was not collected, so a direct comparison was not possible. The average for these 16 EAPs at 4.0 sessions per case was closer to the national average of in year 2019 than for year 2020 found in the other survey.

Duration of Counseling Treatment Period

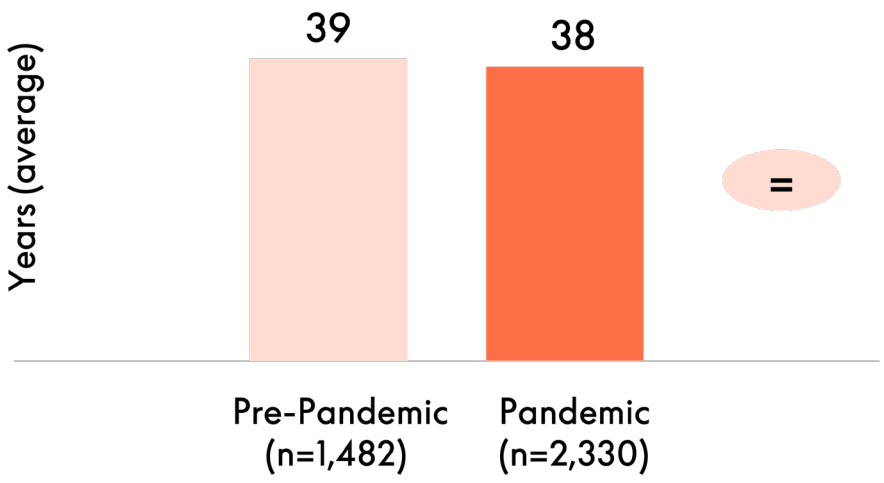
N = 17 EAPs. For these EAPs in year 2020, the average duration of the treatment period for cases engaged in counseling was 74 days (about 10 weeks). But there was a wide range across the different EAPs, from 10 days to 150 days between the case open date and the date last counseling session, with a 90 day interval being the most common (7 of 17 EAPs).

PART 3. EAP counseling use profile compared in WOS data between Pre-pandemic year 2019 and Pandemic period year 2020/21

We also examined the employee-level data available in the WOS project. Sample characteristics of country, US region and EAP delivery model are shown in Table G1 in Appendix G. The sample sizes for these tests varied by each factor. To provide fair comparison conditions, criteria for including case-level data in the testing were such that an EAP had to had at least 50 cases with data in each of the two pandemic period groups (i.e., 2019 year and 2020/21 year). Test results revealed similar profiles for the two periods on the EAP user demographic characteristics of age and sex and also similar profiled on clinical use factors of the kinds of presenting issues, the number of sessions of counseling used per case, and the duration of the counseling episode per case (see Figure Set 5.1). A small size statistical effect was found for only one factor: The pandemic period had slightly more self-referrals into the EAP than the year prior and fewer supervisory and family referrals. See test details in Tables G1 and G2 In Appendix G.

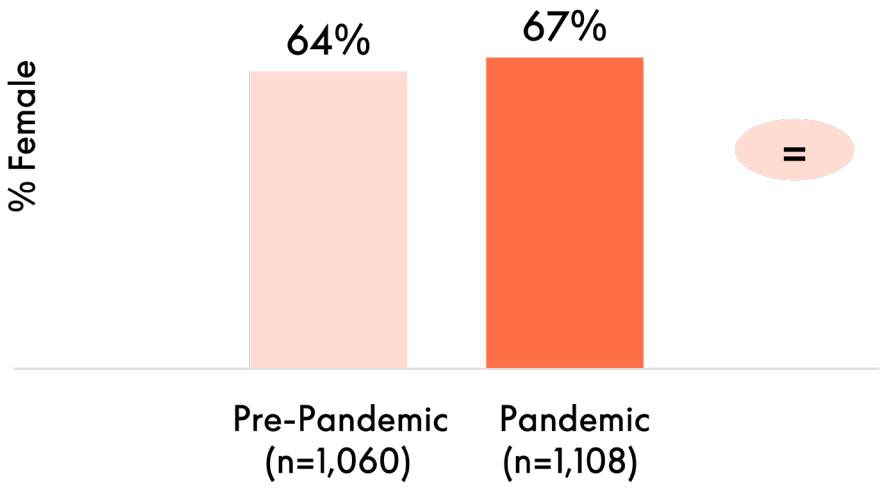
Figure Set 5.1 Pandemic periods compared on demographic and clinical factors in WOS study samples.

Client Age (Years): Pandemic Groups



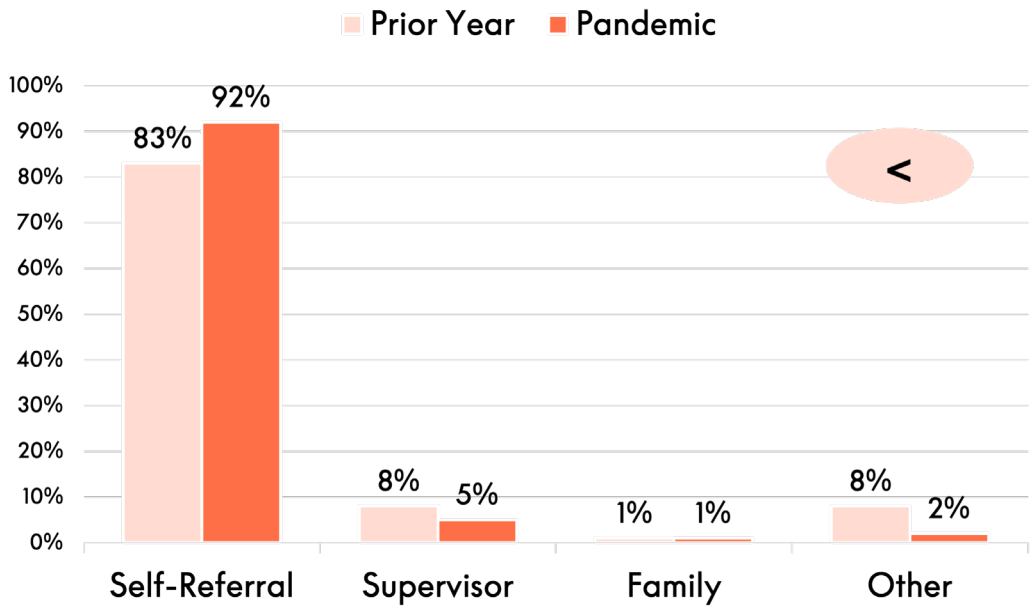
Source: 3 EAP vendors

Client Sex (% Female): Pandemic Groups



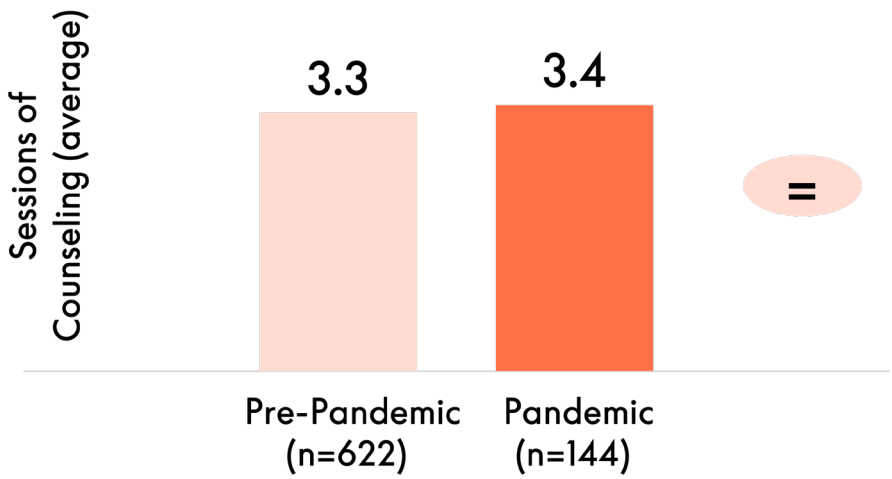
Source: 3 EAP vendors

Referral Source Into EAP



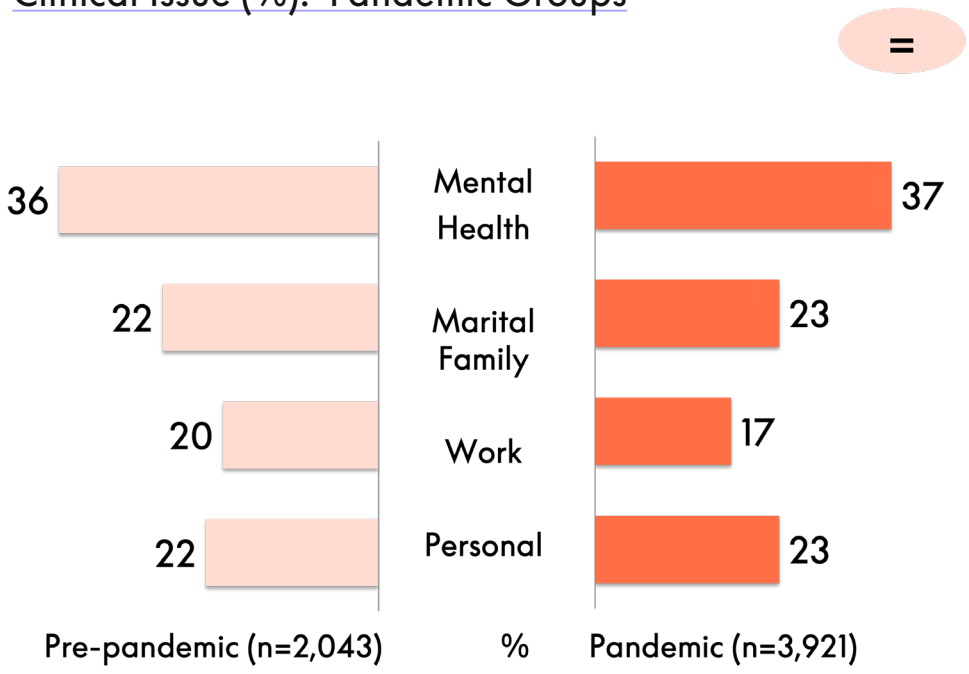
N = 1,452 Prior Year; N = 722 Pandemic; from 7 EAP sources

Clinical Sessions: Pandemic Groups



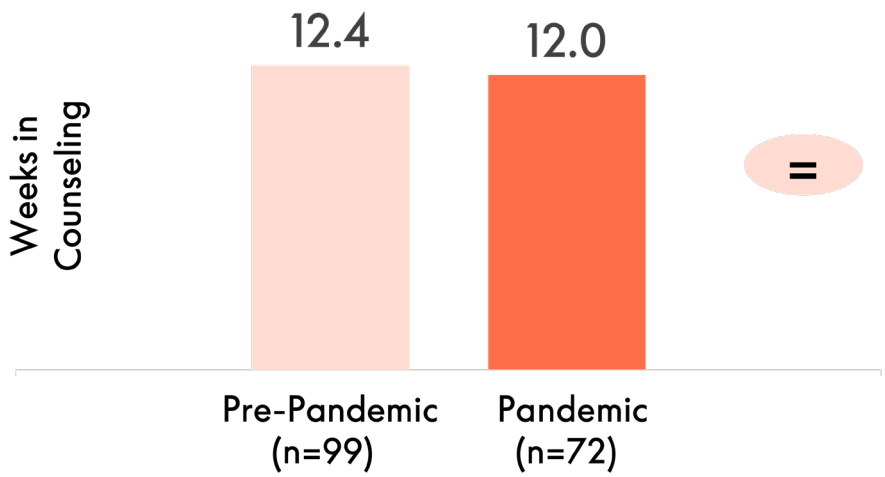
Source: 1 EAP vendor in US

Clinical Issue (%): Pandemic Groups



Source: 5 EAP vendors

Clinical Duration (Weeks): Pandemic Groups



Source: 1 EAP vendor in US

Summary

Three results are important from this chapter. First, major surveys of many employers and EAP providers indicated that the pandemic had greater overall use rates for counseling from EAPs and that the number of sessions used per case was also greater. These results are consistent with other research finding substantial increases in the prevalence of mental health and social risk factors in the general population since the pandemic started. Thus, it is consistent that the use of a clinical response option from EAPs would also increase when the demand for health treatment increased. The increase in clinical intensity at the case level for users of EAPs could be interpreted several ways. There could be a general effect of the distress of the pandemic resulting in greater clinical complexity and thus needing more sessions of counseling to resolve the client issues. It is also possible that employer sponsors increased the maximum allowed number of sessions per case in EAP service contracts to better support employees during the pandemic.

Second, data from 17 EAPs who reported on their book of business representing over 4.4 million covered employees found that a mix of in-person (3 in 4 EAPs) and remote technology-based modalities (about 9 in 10 EAPs) were used during the pandemic to provide access to the counselors. For these EAPs during the pandemic, the clinical treatment averaged around 4 sessions of counseling per case over a 10-week period.

The third set of findings with WOS data found that, overall, the pandemic appeared to have little impact on how the EAP counseling was used at the case level. These findings suggest that once an employee got into an EAP as a user of counseling, those who sought out counseling and the nature of the service experience was similar to that experienced before the pandemic. Having more EAPs provide user and counseling service clinical factor data along with the WOS outcome ratings data would have allowed for better test conditions. For example, note that the small sample size test of the average number of clinical sessions per case from one EAP vendor with WOS data, was slightly higher but not to a significant extent. The other survey data, by comparison, represented 98 different EAPs and thus is a more reliable test.

Chapter 6. Exploring the impact of COVID-19 pandemic on outcome data collection by EAPs and on anticipated outcome results

This chapter examines how EAPs active in collecting WOS data were impacted by the COVID-19 pandemic in the number of cases with outcome data (compared to prior pre-pandemic year) and how these EAP's anticipated the results on WOS outcomes to be impacted by the pandemic experience.

PART 1. Pandemic Impact on Collecting Outcome Data at EAPs

Study 1: Survey of EAP Industry

Sample. Total of 88 respondents. Survey conducted in 2021 by Attridge Consulting. Limited to respondents from EAPs actively collecting outcome data (external vendors or internal / hybrid programs).

ITEM: Has the pandemic impacted your program's ability to collect outcome data that is used to demonstrate effectiveness? More specifically, concerning the program users who typically should have their outcomes data collected, has this activity increased, decreased, or did not change much from normal pre-pandemic levels? (Valid N = 88)

Results. Almost a third of EAPs (30%) indicated a lower number of surveys completed in the pandemic year. A fourth of EAPs reported no change in how many surveys were completed. Only 16% of EAPs reported a higher volume of outcomes data collected in year 2020. Finally, 30% of EAPs did not know how the pandemic impacted their outcome data collection in year 2020.

Study 2: Survey of EAPs with WOS Data

In May and June of 2021, we conducted a survey of key issues for collecting and reporting on WOS data. We wanted to learn from the vendors and programs active in recent years who share their WOS data.

Sample. Twenty EAPs that collect WOS data form Survey in 2021.

ITEM: Compared to 2019, how did the COVID-19 pandemic experience last year impact the ability of your EAP to collect the normal volume of outcome data on your counseling services? More specifically, concerning the EAP users who should have outcomes data collected, has this data activity increased, decreased, or did not change from normal levels? (Valid N = 20 EAPs)

Results found the majority of these EAPs collected less data recently than in the pre-pandemic year (65%). The comments suggest several reasons for why less data was collected, mostly because of how busy the EAP staff were in servicing clients or not changing the data collection source from in-person paper-based approach to using online remote tools. However, 15% had no change and 20% collected more cases with WOS data. The reasons behind collecting more data included higher overall demand for EAP services and enhanced data collection operational practices.

Summary. Considered together (see Table 6.1), the findings from the two survey studies indicated no clear consensus on how the COVID-19 pandemic impacted the sample sizes for outcomes data collection. Of the four response options, having fewer outcome data cases than the year before was the most common response in both studies. Yet this adverse impact of the pandemic was reported by only 36% of EAPs. Having no impact or unknown impact accounted for the almost half the EAPs. Having more outcome surveys completed because of greater overall program utilization during the pandemic was reported by 17% of EAPs.

Table 6.1. Results from EAPs who collect outcomes data on impact of COVID-19 pandemic on the sample sizes obtained compared to pre-pandemic year: By study.

Response:	Study		
	Industry Survey : EAPs collect any kind of outcomes data (n = 88 EAPs)	WOS Survey:EAPs that collect and share WOS data (n = 20 EAPs)	Weighted Average
	%	%	%
Fewer surveys	30	65	36
No change	25	15	23
More surveys	16	20	17
Don't know	30	0	24

PART 2. Anticipate impact of the pandemic on outcome results from EAP counseling

Study 2: Survey of EAPs with WOS Data

Sample. N = 18. The sample included a mix of external vendors (n = 12); internal programs (n = 4) and hybrid programs (n = 4). Most of the EAPs were located in the United States, but vendors in five other countries also participated.

ITEM: Compared to the past, do you think the effectiveness of the EAP service for counseling cases has been impacted by the COVID-19 pandemic context? More specifically, for each of the core outcome areas listed below, how do you think the average results for the recent year during the pandemic compared to prior year (normal) results? (Valid N = 18 EAPs)

Results indicated a range of opinions on how the pandemic experience affected key outcomes from EAP counseling (see Table 6.2). The most common answers were that they had "similar" results on outcomes (39% to 61% of EAPs). Few EAPs reported having "better" outcomes than normal year. No EAPs had "worse" results for key outcomes of problem issue resolution or clinical symptom relief. WOS outcomes were "worse" than usual by about only 10% of the EAPs. Finally, about a fourth of these EAPs "did not know" what the pandemic impact on outcomes would be like.

[2]**Note:** From Attridge, M. (2021). Pandemic trends in utilization and outcomes measurement: Survey results for EAP industry. White Paper. Used in this report with permission of the author.

Table 6.2 Results from EAPs who collect outcomes data on impact of COVID-19 pandemic on the sample sizes obtained compared to pre-pandemic year: By study.

	Response			
	Better results (EAP more effective)	**Similar results**	**Worse results (EAP less effective)**	**Don't know**
Resolution of specific issue related to EAP use	17% (3)	61% (11)	0	22% (4)
Clinical symptoms (stress, anxiety, etc.)	33% (6)	39% (7)	0	28% (5)
WOS Work presenteeism (lack of usual productivity)	6% (1)	61% (11)	11% (2)	22% (4)
WOS Work absenteeism	17% (3)	44% (8)	17% (3)	22% (4)
WOS Work engagement	17% (3)	56% (10)	6% (1)	6% (1)
WOS Workplace distress	6% (1)	56% (10)	17% (3)	22% (4)
WOS Overall life satisfaction	6% (1)	44% (8)	22% (4)	28% (5)
Average:	15%	46%	10%	21%

Summary

Two results are important from this chapter. The pandemic year had a mixed impact on the volume of surveys collected by these EAPs for WOS outcomes. The anticipated impact of the pandemic on the effectiveness of counseling for users of EAPs also had mixed results across the different EAPs that were surveyed, with most EAP expecting to find similar effectiveness or not knowing what to expect.

Chapter 7. Exploring the impact of COVID-19 pandemic on WOS outcomes

Test 1: Comparing WOS outcomes paired data at Pre and Post counseling: Cases with a COVID-19 specific issue vs. cases with all other issues.

The goal to test the WOS outcome profiles for EAP cases who used the EAP specifically for a COVID-19 pandemic-related issue period during the 2020-2021 years (n = 67) versus all other issues in same period (n = 3,179). All of the tests had trivial size statistical effects, which indicated little meaningful differences between cases with COVID-19 issues compared to cases with other issues. See Figure Set 7.1. Details of these tests are in Table G3 in Appendix G.

Test 2: Comparing WOS outcome profile for all cases during COVID-19 pandemic period in year 2020/21 vs. all cases in prior pre-pandemic year 2019, regardless of clinical issue.

The goal to test the WOS outcome profiles for EAP cases during COVID-19 pandemic period during the 2020-2021 years (n = 4,505) versus cases in the prior year 2019 before the pandemic started (n = 4,289). All of the tests had trivial size statistical effects, which indicated little meaningful differences between cases using EAP counseling during the COVID-19 issues compared to cases using EAP counseling during the year prior to the pandemic. See Figure Set 7.2. Details of tests are in Table G4 in Appendix G.

Test 3: Comparing WOS outcomes paired data at Pre and Post counseling: Technology access to counselor during pandemic vs. face-to-face office visits in pre-pandemic and pandemic periods.

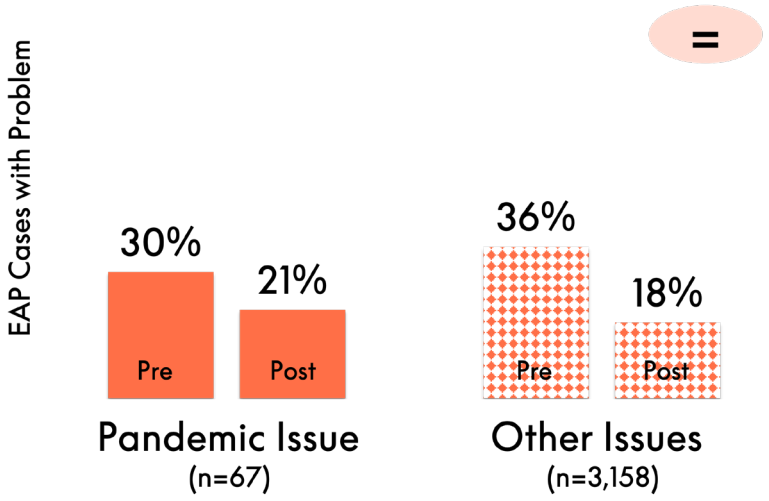
The pandemic caused many services to switch from in-person delivery at clinic offices to be virtual delivery using a form of technology (mostly online video or telephone). Thus, another question concerns possible differences in WOS outcome profiles by modality of how the EAP counseling was provided. Three groups were created for this test: (1) traditional face-to-face counseling used in the year before the pandemic (n = 1193); (2) traditional face-to-face counseling used in the pandemic period (n = 1876) and (3) technology-based counseling used during the pandemic (n = 255; with 239 cases who used video internet & 70 cases who used telephone). All of the tests had trivial size statistical effects, which indicated little meaningful differences between the three groups. Thus, EAP counseling was equally effective at reducing WOS problems whether delivered in-person at counselor offices or delivered virtually over the telephone or Internet video/text. See Figure Set 7.3. Details of tests are in Table G5 in Appendix G.

Summary

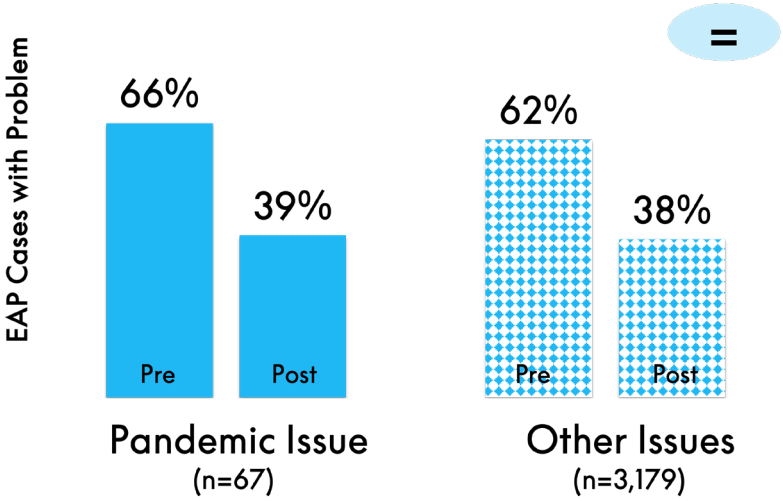
These series of tests generally found the COVID-19 pandemic had little impact on the profile of WOS outcomes from EAP counseling. Thus, the level of work function problems and the extent of improvements in work-related outcomes was about the same for: 1) employees with pandemic-specific issues compared to non-pandemic issues; 2) the pre-pandemic and pandemic periods of time; and 3) the in-person modality of service delivery compared to the remote technology-based contact options.

Figure Set 7.1 Pandemic Test 1 Results: Comparison of WOS outcome profile for percentage of cases at Pre and Post EAP use with a problem on the outcome: By cases with a COVID-19 clinical issues vs. cases with other clinical issues (both samples during pandemic period 2020/2021)

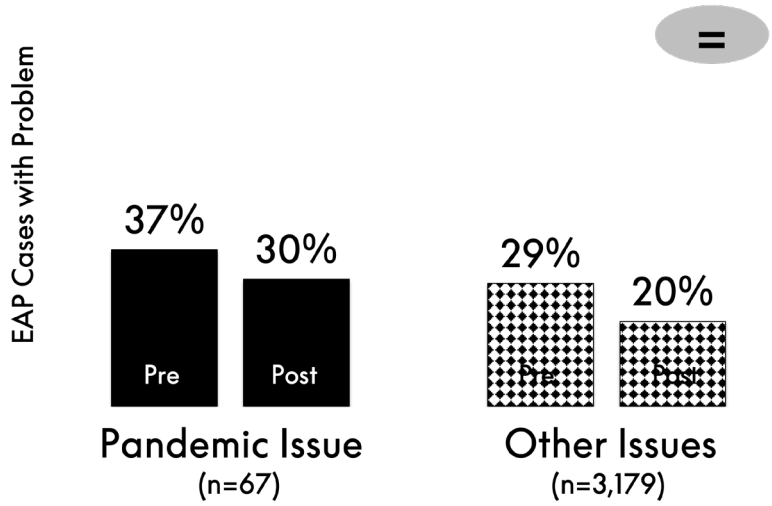
EAP Cases with ABSENTEEISM Problem Before and After EAP: Pandemic Issue vs. Other Issues (Both in 2020-2021)



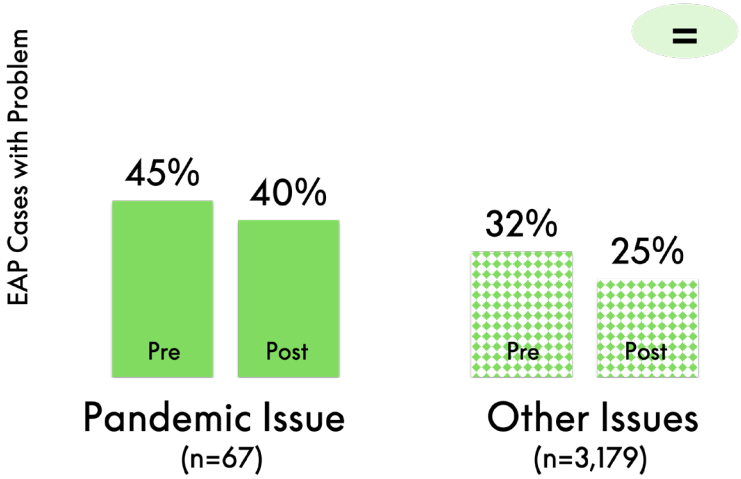
EAP Cases with PRESENTEEISM Problem Before and After EAP: Pandemic Issue vs. Other Issues (Both in 2020-2021)



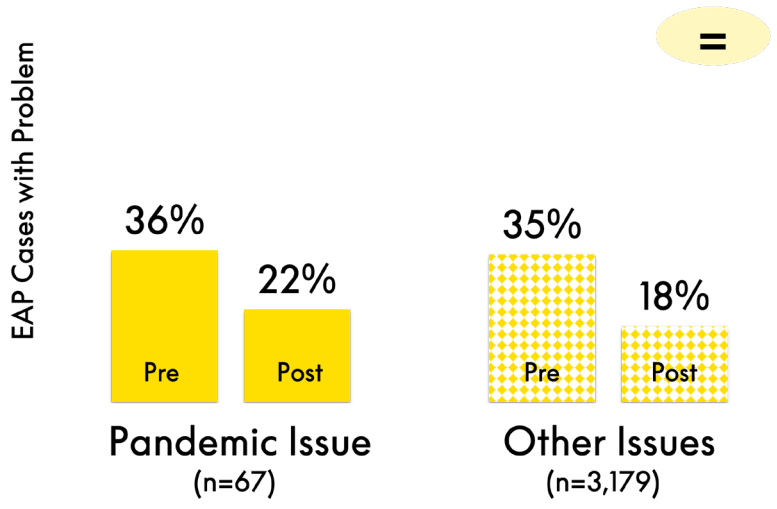
EAP Cases with WORKPLACE DISTRESS Problem Before and After EAP: Pandemic Issue vs. Other Issues (Both in 2020-2021)



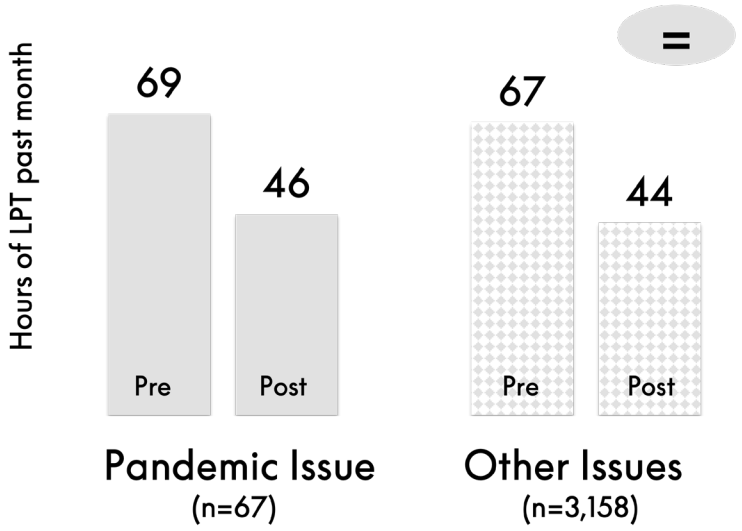
EAP Cases with WORK ENGAGEMENT Problem Before and After EAP: Pandemic Issue vs. Other Issues (Both in 2020-2021)



EAP Cases with LIFE SATISFACTION Problem Before and After EAP: Pandemic Issue vs. Other Issues (Both in 2020-2021)



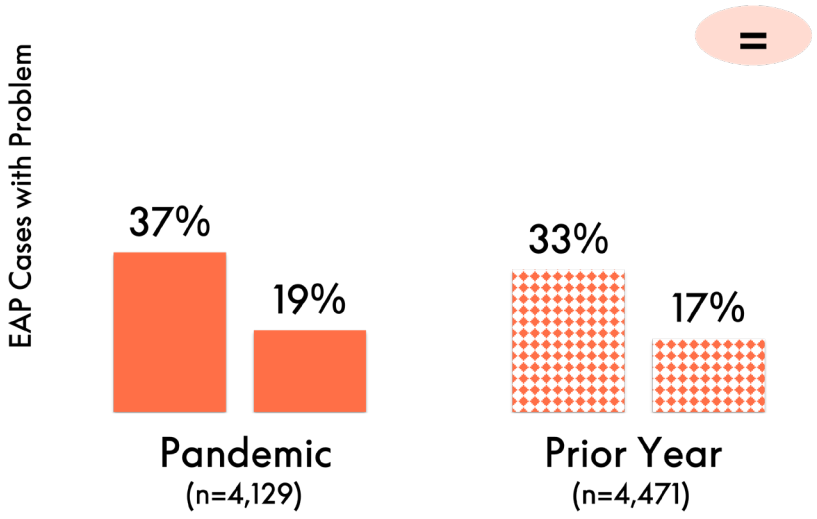
Hours of LOST PRODUCTIVE TIME Before and After EAP: Pandemic Issue vs. Other Issues (Both in 2020-2021)



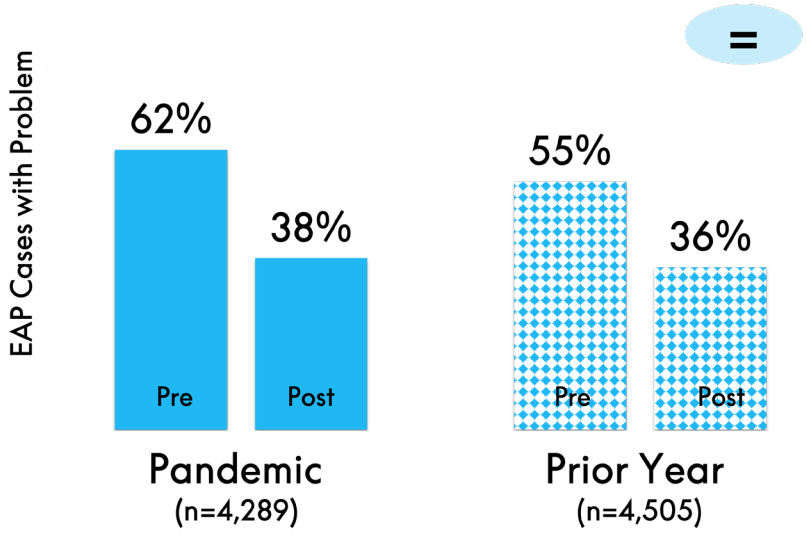
NORM: 27 hours lost work time for typical employee not using EAP

Figure Set 7.2 Pandemic Test 2 Results: Comparison of WOS outcome profile for percentage of cases at Pre and Post EAP use with a problem on the outcome: By cases who used EAP in COVID-19 year 2020/21 vs. all cases who used EAP in pre-pandemic year 2019

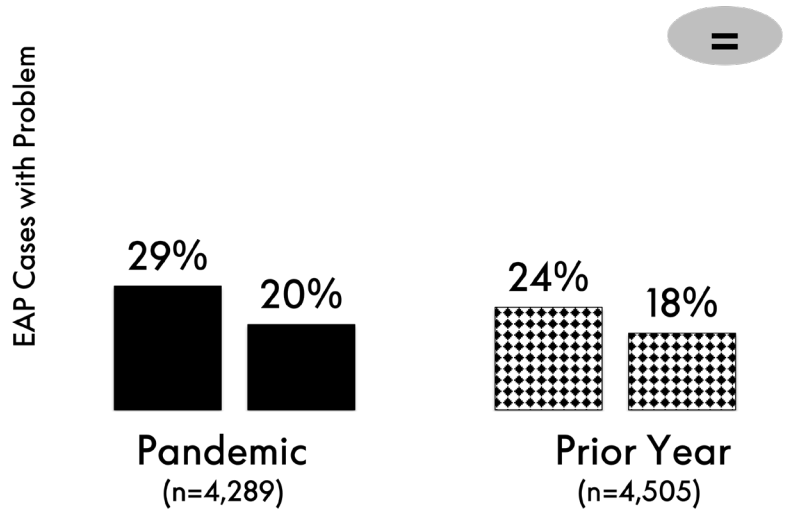
EAP Cases with ABSENTEEISM Problem Before and After EAP: Pandemic Period (2020/2021) vs. Prior Year (2019)



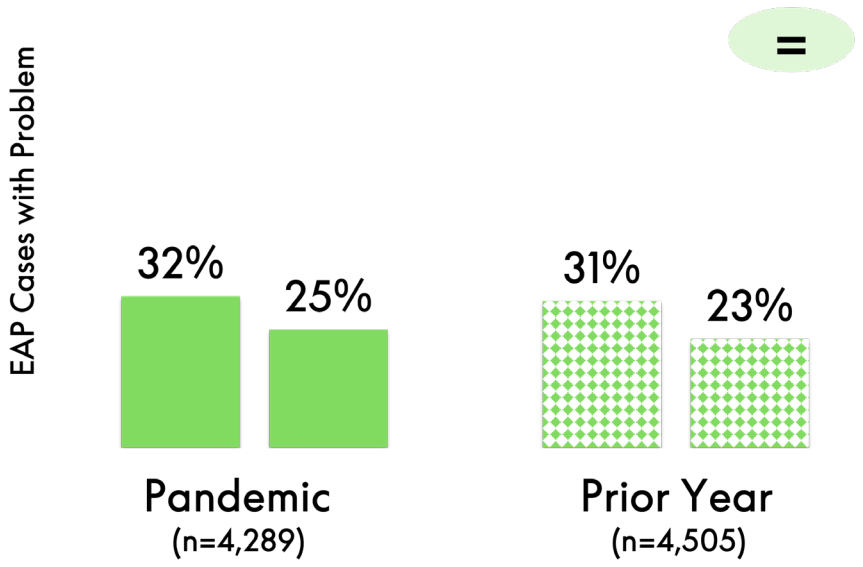
% of All EAP Cases with PRESENTEEISM Problem Before and After EAP: Pandemic Period (2020/2021) vs. Prior Year (2019)



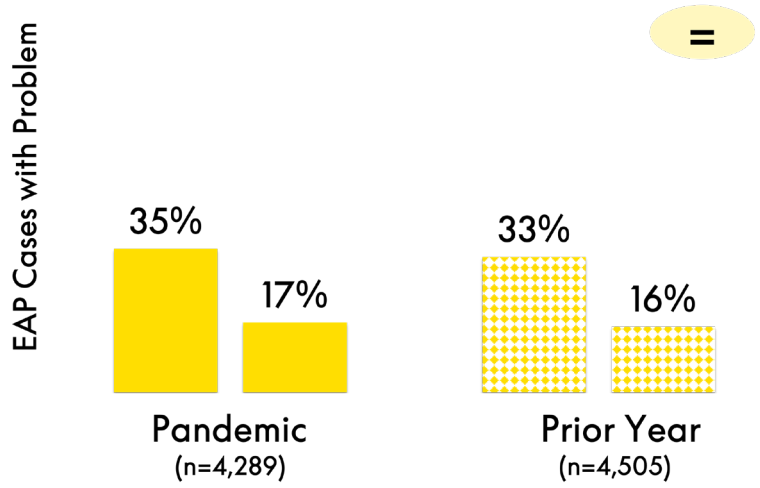
EAP Cases with WORKPLACE DISTRESS Problem Before and After EAP: Pandemic Period (2020/2021) vs. Prior Year (2019)



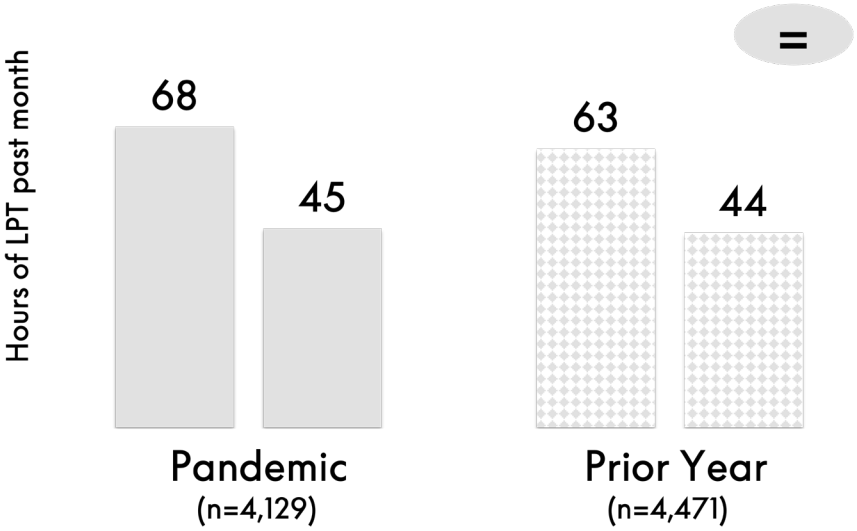
EAP Cases with WORK ENGAGEMENT Problem Before and After EAP: Pandemic Period (2020/2021) vs. Prior Year (2019)



EAP Cases with LIFE SATISFACTION Problem Before and After EAP: Pandemic Period (2020/2021) vs. Prior Year (2019)



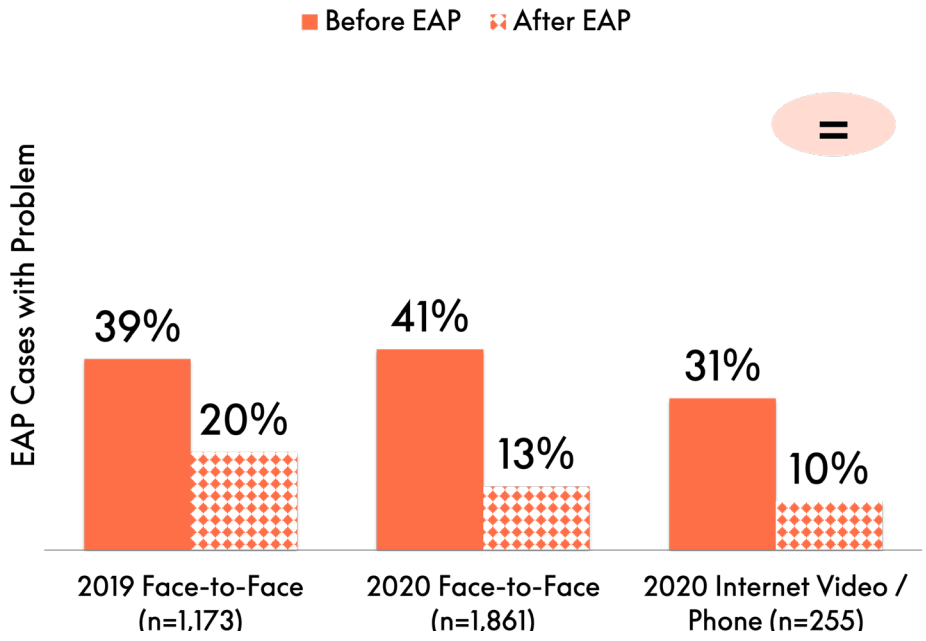
Hours of LOST PRODUCTIVE TIME per Case Before and After EAP: Technology Access to Counseling vs Face-to-Face Access



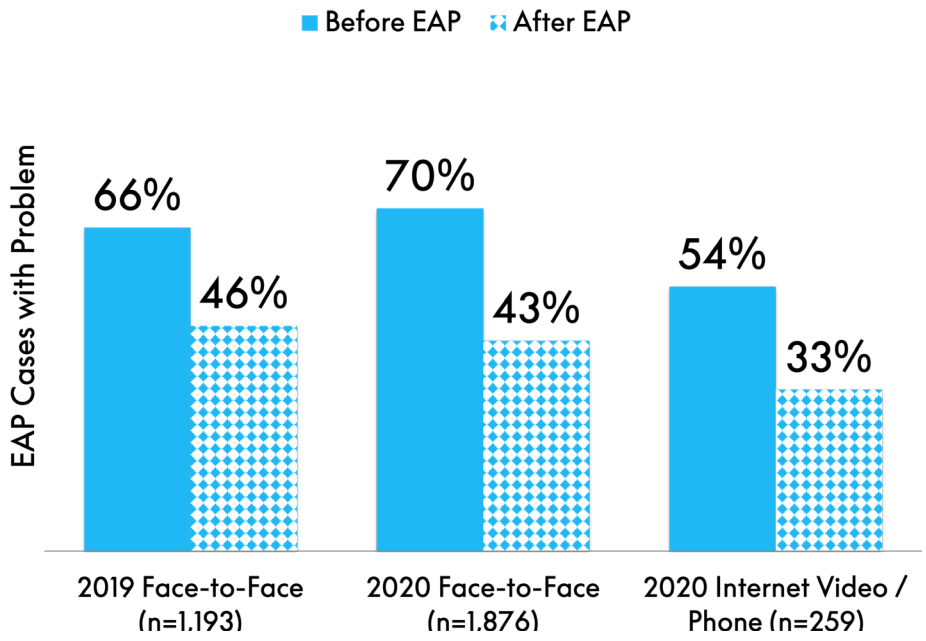
NORM: 27 hours lost work time for typical employee not using EAP

Figure Set 7.3 Pandemic Test 3 Results: Comparison of WOS outcome profile for percentage of cases at Pre and Post EAP use with a problem on the outcome: By cases who used technology to access EAP during pandemic (video or telephone) vs. cases who used face-to-face office visits with EAP counselor during pandemic or face-to-face office visits with EAP during pre-pandemic year in 2019.

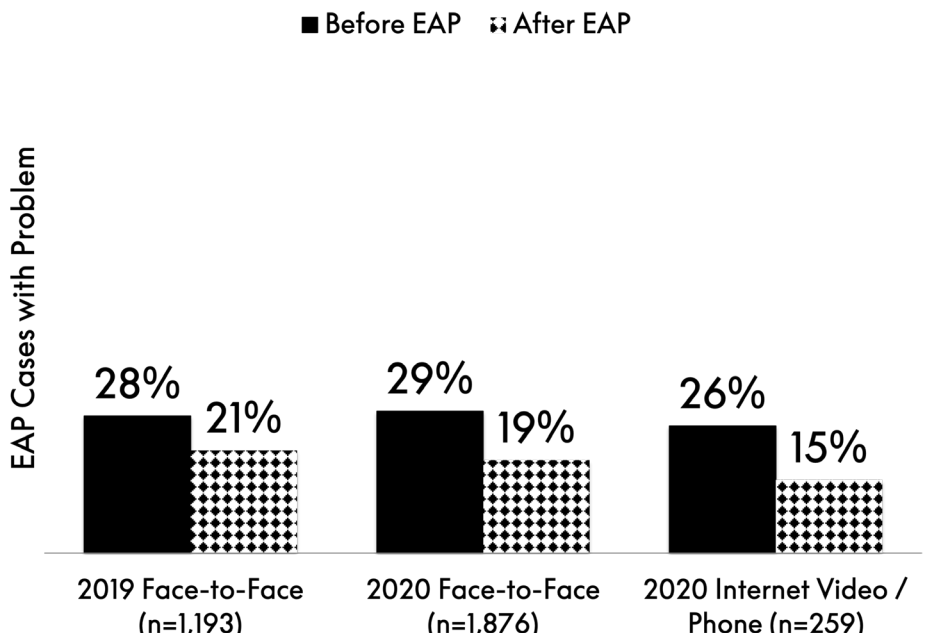
EAP Cases with ABSENTEEISM Problem at Before vs. After EAP: Pandemic Period X Modality



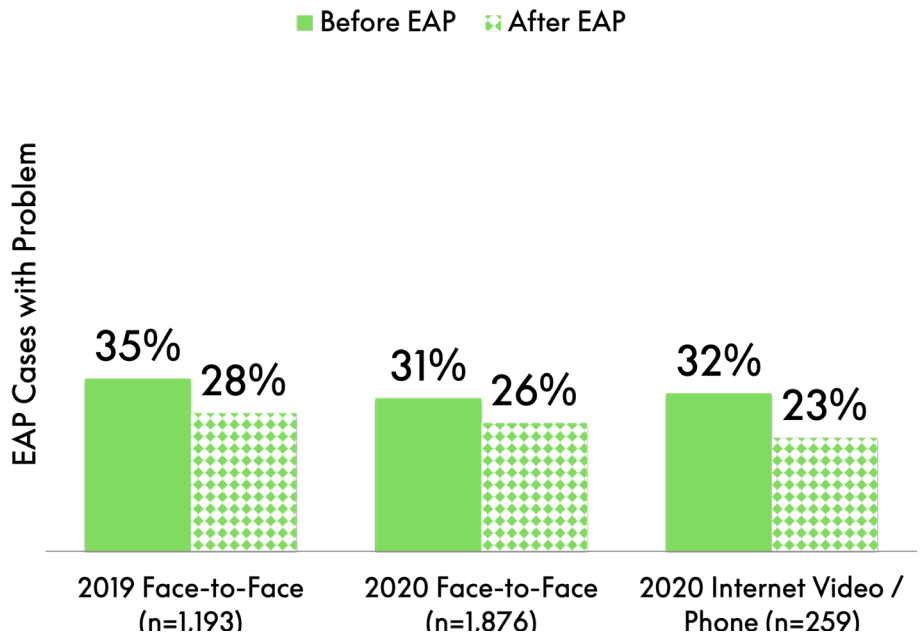
EAP Cases with PRESENTEEISM Problem at Before vs. After EAP: Pandemic Period X Modality



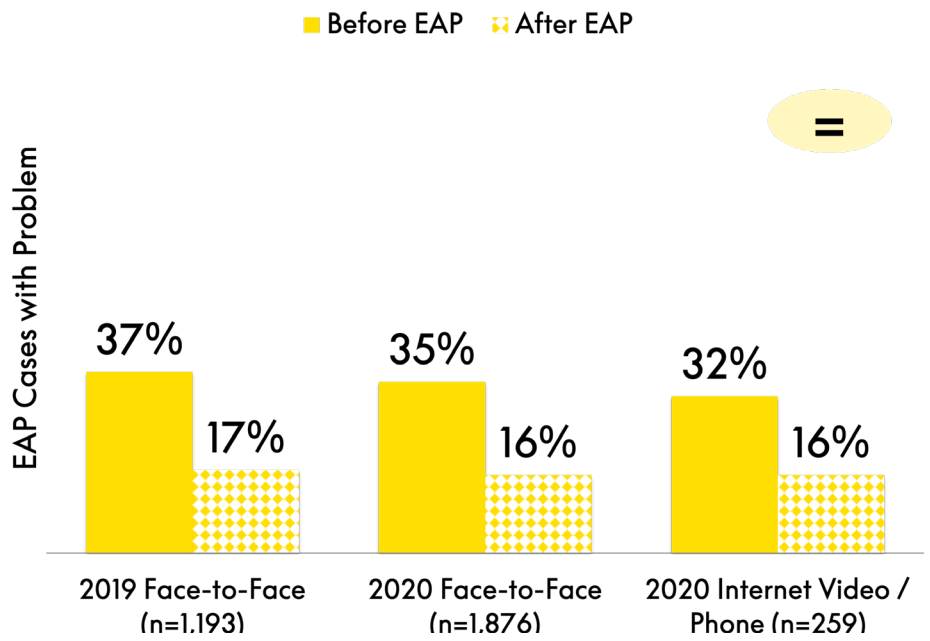
EAP Cases with WORKPLACE DISTRESS Problem at Before vs. After EAP: Pandemic Period X Modality



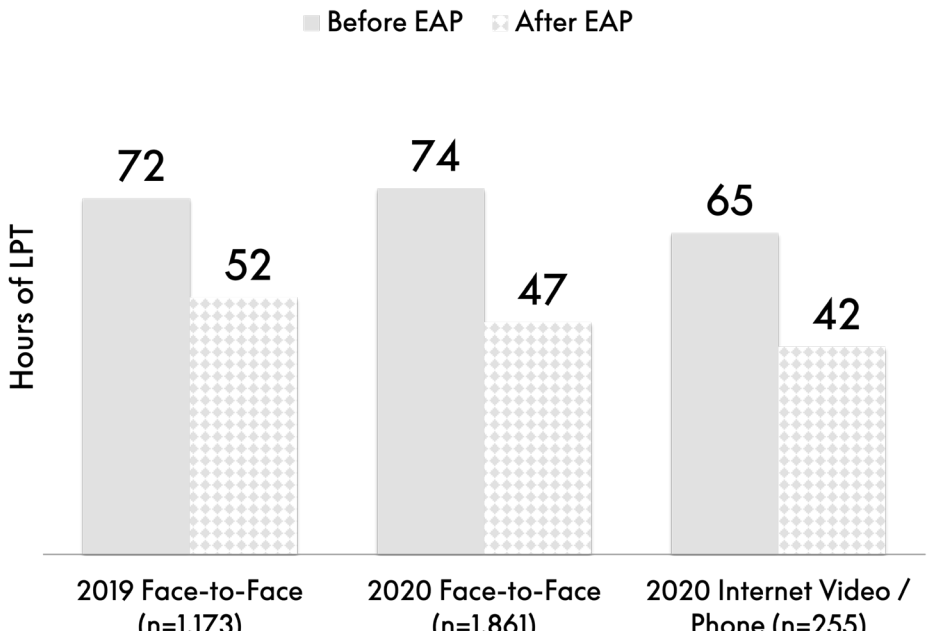
EAP Cases with WORK ENGAGEMENT Problem at Before vs. After EAP: Pandemic Period X Modality



EAP Cases with LIFE SATISFACTION Problem at Before vs. After EAP: Pandemic Period X Modality



Hours of LOST PRODUCTIVE TIME per Case at Before vs. After EAP: Pandemic Period X Modality



Chapter 8. Impact of COVID-19 pandemic on ROI for EAP counseling in United States

PART 1. Profile of the EAP industry in United States of America

How many employers in the United States sponsor an EAP?

EAPs are very popular. A recent national survey by the Bureau of Labor Statistics (BLS) conducted in March of 2021 asked employers which benefits they pay for as part of employee overall compensation. Six types of "quality of life" benefits were specified in the report. Among civilian workers (both private sector and state and local government employers), EAP topped the list, being offered by 55% of all employers.

Private Sector. Based on BLS data in 2021, over 3.2 million private sector employers purchased an EAP in year 2021. The rates of how many private sector workers have an EAP benefit varied by company size:

- 29% with 1-49 workers have an EAP
- 49% with 50-99 workers
- 68% with 100-499 workers
- 84% with 500 or more workers.

o 51% average across all size employers in private sector.

Public Sector. Based on BLS data in 2021, over 182,000 public sector organizations (state and local government) purchased an EAP in year 2021. The rates of how many public sector workers have an EAP benefit varied by organization size:

- 61% with 1-49 workers have an EAP
- 68% with 50-99 workers
- 70% with 100-499 workers
- 90% with 500 or more workers.

o 79% average across all size employers in public sector.

How many employees in total in the United States use EAP counseling?

Based on the BLS data, roughly 58.4 million private sector employees had access to an EAP in year 2021 (based on 51% of 114.5 million total workers represented in their study). Another 14.6 million workers at the state or municipal levels of government had an EAP (based on 79% of 18.5 million total workers). All 1.1 million workers at the federal level of government had access to an EAP within the Federal Occupational Health program. When combined, about 74.1 million U.S. workers had an EAP benefit in year 2021.

[3]**Note:** From Attridge, M. (2021). Facts Don't Lie: Statistical Truths about the Business Value of EAPs. Journal of Employee Assistance. Used in this report with permission of the author.

How much does an EAP cost?

Although there is no reliable public data source to answer this question, in general, as in most industries, the larger the size of the employer, the lower the price of the EAP. On average, the micro, small, medium, and large sized employers that have an EAP, with corresponding per employee per year (PEPY) pricing of $30, $25, $20, and $15, respectively. When these costs for EAP were applied to the number of employers within each size category, the purchase cost in the U.S. for the average private sector employer is $22 per employee per year (PEPY).

How much is America spending on EAPs?

There is no credible national source to answer this question. But to multiply the 74.1 million employees estimated with an EAP benefit by the $22 PEPY benefit cost, the result is $1.63 billion dollars.

What is the hourly cost per employee to provide an EAP over a year?

A full-time employee typically has a schedule of 40 hours of work expected per week. Over all 52 weeks in a year, this becomes 2080 total benefit-related work hours. The $22 PEPY cost when divided into the 2080 hours of compensated work time for the year is just one cent per hour.

How much of the cost is the EAP as percentage of the total cost of employee benefits?

According to the Bureau of Labor Statistics' national survey of employers in September 2021, the average private sector employer paid $26.36 in hourly wages and another $10.88 per hour for employee benefits. These benefits include financial contributions to employee retirement and savings, health insurance, paid leave, and many other voluntary benefits – such as EAP. Over a full year, the typical cost of benefits adds up to $22,630 per employee. Of this sum, the $22 annual cost of the EAP benefit per employee is only about 1% of benefit costs.

PART 2. Estimated Return on Investment from EAP Counseling Work Outcomes

Note: The return on investment (ROI) estimation logic model used in this example with WOS data was developed by Attridge Consulting, Inc. (2015). Used in this report with permission of the author.

In this chapter we compared the estimated ROI for the recent COVID-19 pandemic year in 2020/2021 versus the ROI for a normal prior year in 2019. The United States was chosen for the example because it is the country that has the most cases in our WOS study data, we can determine a specific estimate for employee compensation level from government data, and the level of program use and investment cost can be reasonably estimated. The WOS data is taken from all delivery models (external vendors, internal staff and hybrid programs) in the US. The results are show in Table 8.1.

Reduction in LPT per month

The longitudinal data from EAP cases in the United States was analyzed for hours of work absenteeism and work presenteeism and the combined hours of lost productive time (LPT). A difference of about 18 hours – equivalent to more than two full 8-hour workdays – was determined from the US data for each year period.

Deduction for multi-causality of outcomes

These hours of avoided LPT after use of counseling likely includes the influence of other events and supports that occurred during the same time frame as the EAP counseling. Therefore, how much of this reduction in LPT was because of the use of the counseling? To account for other causal factors, the hours of avoided further LPT were reduced by one-third (see rationale in Appendix E in the WOS 2020 Annual Report).

Time Period Relevant to Cost Savings

If a distressed employee had not used the EAP, it was assumed that the same level of recovery achieved with EAP counseling over three month treatment period would have taken at least twice as long to achieve when untreated. The effect period for cost-savings was assumed to be three months.

Employee Hourly Compensation Rate

The compensation value includes both wages paid and the cost of paying for employee benefits (health care insurance, disability insurance, life insurance, retirement cost matching, and so on). Recent national data from the Bureau of Labor Statistics (BLS) for the US was consulted for employers in private sector and public sector local and state government organizations (combined as civilian category) in each year of interest (BLS 2019 December and BLS 2020 December) for the level of employee compensation (paid wages and benefits combined): $34.72 in 2019 and $38.26 in 2020.

Productivity Multiplier

Economists endorse the concept that an employee's productivity value is greater than how much the employee is being compensated. A metric called a "productivity multiplier" ratio is applied to the employee compensation rate. In this ROI example, a productivity multiplier ratio of 1.3 was used. The source for this 1.3 rate was the average of the results from two published research studies, each with data from hundreds of managers in the US (Nicholson et al., 2006; Pauly et al., 2008).

Case Rate Utilization of EAP Counseling

A clinical case utilization rate was obtained from the average of two recent national survey studies of employer in the US and EAP providers in the US who reported their EAP use in 2019 and 2021 (see Table 5.2). The average results found that 7.5 people per every 100 covered employees used the EAP for counseling in year 2019 and 9.5 during the pandemic. This data indicates a 27% relative increase.

Only Employee Users of Counseling

Work performance outcomes and their associated cost savings are only relevant to the employee portion of the total EAP clinical cases. Thus, it is necessary to remove the non-employee users from the total count of users. We assumed a mix of 80% employees and 20% not employees (e.g., spouse and children). For every 1,000 covered employees, the use rates of 75 users and 95 users were adjusted **down by 20% to remove non-employees** from the user total. This change resulted in 60 employee cases in year 2019 and 76 employee cases in year 2020/21.

Return (Work-related Cost savings) Per EAP Case

The total hours of LPT avoided over a three-month period when multiplied by the business dollar value yields an estimated cost savings of per employee EAP case. In year 2019 this was $1,574 per employee case and in year 2020/21 this was $1,855 per employee case.

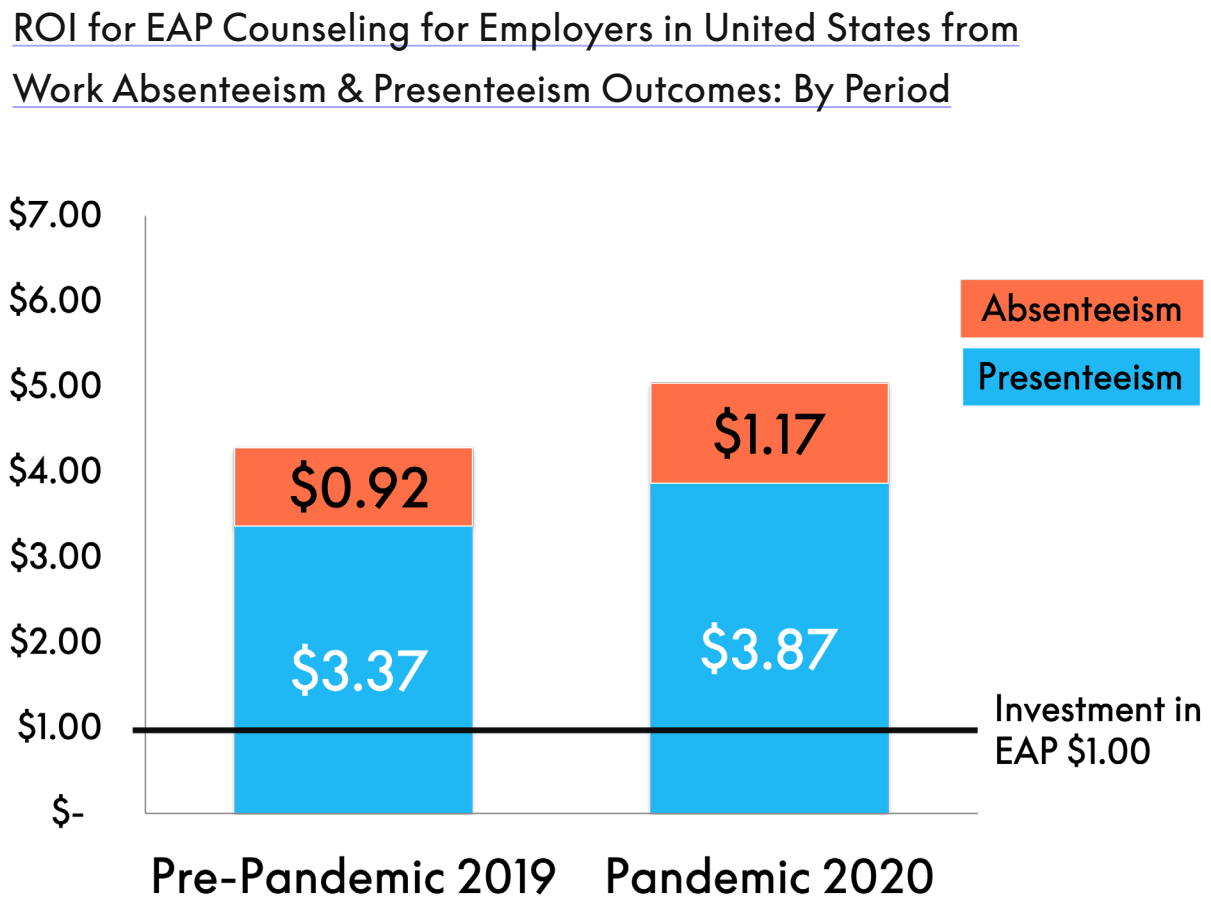
Investment in the EAP

Most EAP services from vendors are offered for sale using a capitated pricing model similar to what is used for providers of health care and employee benefits. The cost to the employer to sponsor the EAP service in order to have it available to all employees varies based on many factors. For this example, the pricing for standard comprehensive EAP services for five-session limit per counseling case was assumed to be $22 per employee per year in 2019 and $28 in 2020 (27% higher rate due to 27% higher use rate).

ROI Results

For year 2019, the ratio of return to investment was $4.29:1. For the COVID-19 pandemic year 2020, the ROI was $5.04:1. This means there was between $4 and $5 in financial return for every $1 invested in the EAP, for the pre-pandemic and the pandemic years. Most of the financial return was from the work presenteeism outcome rather than work absenteeism outcome (see Figure 8.1).

Figure 8.1 ROI model results for Pre-pandemic 2019 and Pandemic 2020 years.



Break-even ROI

Using these figures, for both years, only 2 cases in every 100 employees need to use the EAP for counseling to get a break even ROI of $1:1. This fact is important when many employers are concerned that not enough employees are using their EAP when it is priced on a per capita basis and available to all workers.

Table 8.1 ROI model calculations for typical employer in United States with EAP based on improvements after counseling use for WOS work absenteeism and presenteeism outcomes

ROI Model Factors	Pre-Pandemic 2019	During Pandemic 2020 + early 2021
Sample size WOS outcomes – United States only: n =	3,254	2,009
Hours of work absenteeism in past month (WOS): PRE	8.09	8.71
Hours of work absenteeism in past month (WOS): POST	4.38	4.41
Hours of work absenteeism in past month (WOS): CHANGE	-3.71	-4.30
Hours of work presenteeism in past month (WOS): PRE	53.77	59.84
Hours of work presenteeism in past month (WOS): POST	40.13	45.59
Hours of work presenteeism in past month (WOS): CHANGE	-13.64	-13.98
Hours of combined lost productivity (LPT): PRE	61.86	68.54
Hours of combined lost productivity (LPT): POST	44.51	49.99
Hours of combined lost productivity (LPT): CHANGE	**-17.35**	**-18.55**
Hours of combined lost productivity (LPT): CHANGE %	-28%	-27%
Episode of EAP use and follow-up (months)	3	3
Reduction in total hours of LPT avoided over episode	52.05	55.65
Amount due to EAP use (assume other causes are 1/3 effect)	67%	67%
Net hours of lost productive time avoided by EAP use	**34.87**	**37.29**
Paid compensation total per hour	$34.72	$38.26
Productivity multiplier	1.3	1.3
Business value of an hour of productive work	$45.14	$49.74
Return per EAP employee case (cost savings)	$1,574	$1,855
Employees covered with access to EAP (size of company)	1,000	1,000
Utilization rate for counseling cases per 100 employees	7.5%	9.5%
EAP counseling cases total in year	75	95
Employees as % of all counseling cases (relevant to $)	80%	80%
EAP counseling cases who were employees total	**60**	**76**
Return for EAP – total	$94,440	$140,980
Investment in EAP – rate per employee per year (PEPY)	$22	$28
Investment in EAP – total	$22,000	$28,000
ROI Ratio (Return Total / Investment Total)	$4.29:1.00	$5.04:1.00
EAP Cases Per 100 Employees Needed for 1:1 ROI	14	14
EAP Case Use Rate Minimum Needed for 1:1 ROI	1.4%	1.5%

Closing caveat: EAP business value is much more than just the work-related savings from employee users of counseling

The example in this chapter focused only on one component of EAP services (counseling) and only on one area of cost savings (lost productive work time). These estimates took into account slight differences between the two time periods on the absenteeism and presenteeism outcomes after counseling, employee compensation rates, overall clinical case rates of EAP counseling utilization, and the rates of investment in the overall EAP service.

Other cost-savings from EAP counseling beyond work absenteeism and presenteeism. These results are underestimates of the total business value of an EAP to the employer purchaser or organizational sponsor of an EAP. A more realistic ROI model includes additional components of business value in other areas of short-term and longer-term health care cost savings, avoided employee turnover, reduced workplace accidents, less costly disability claims and other areas.

Other cost-savings from EAP services other than counseling. Employers also get value from EAPs that provide organizational level specialty services such as crisis preparedness and post-incident response, consultations with managers, manager trainings, employee trainings, and referral into other employee benefit programs.

SECTION III:

Best Practices in Measuring Outcomes of EAP Counseling

Chapter 9. Use of best practices in outcome measurement: 2021 survey of 101 EAPs

A survey study was recently conducted (Attridge, 2021) that addressed how EAPs in general collect outcome data and what methods and measures are used in the process. The sample included 101 providers of EAP services with 89 from the United States and 12 EAPs representing nine other countries. Findings were similar between the external vendors (n = 45) and the internal program types of EAPs (n = 56). Thus, overall results are shown in this report.

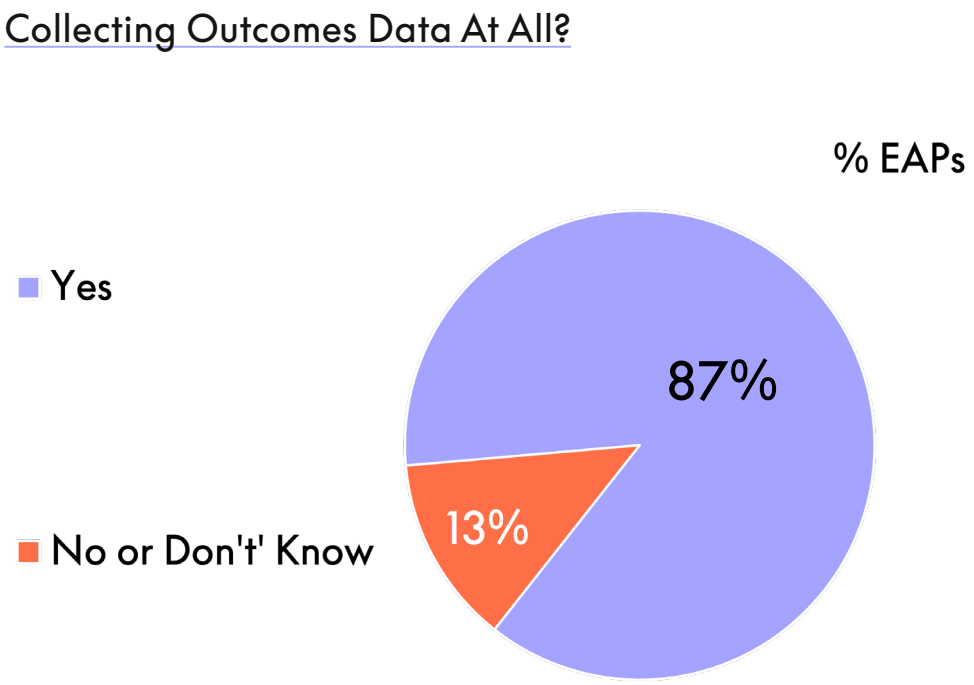
How many EAPs engage in collection of outcome data in general?

The results revealed that most EAPs (87%) do engage in some kind of ongoing measurement of the outcomes of their services involving surveys of individual clients.

Which kinds of research study designs are used in collection of outcome data by EAPs?

The methodology used by the EAPs who actively collect some kind of data is most often one or two designs, either with the classic Pre and Post study design for repeating a measure at the start of use and again later on at a follow-up period after use ended (46%) or with a post-only survey at follow-up (41%). Only 7% of EAPs collected data on outcomes at every clinical session. See Figure Set 9.1.

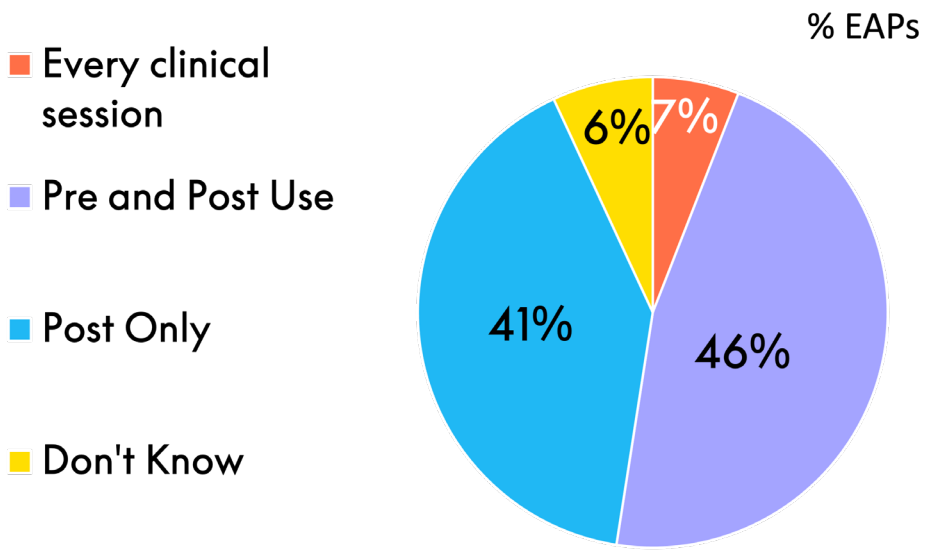
Figure Set 9.1 Results of EAP industry survey on outcome data collection practices in 2021.



N = 101 EAPs in Trends Study

[4]**Note:** From Attridge, M. (2021). Pandemic Trends in Utilization and Outcome Measurement: Survey Results for EAP Industry. White Paper. Used in this report with permission of the author.

Study Design for Collecting Outcomes Data

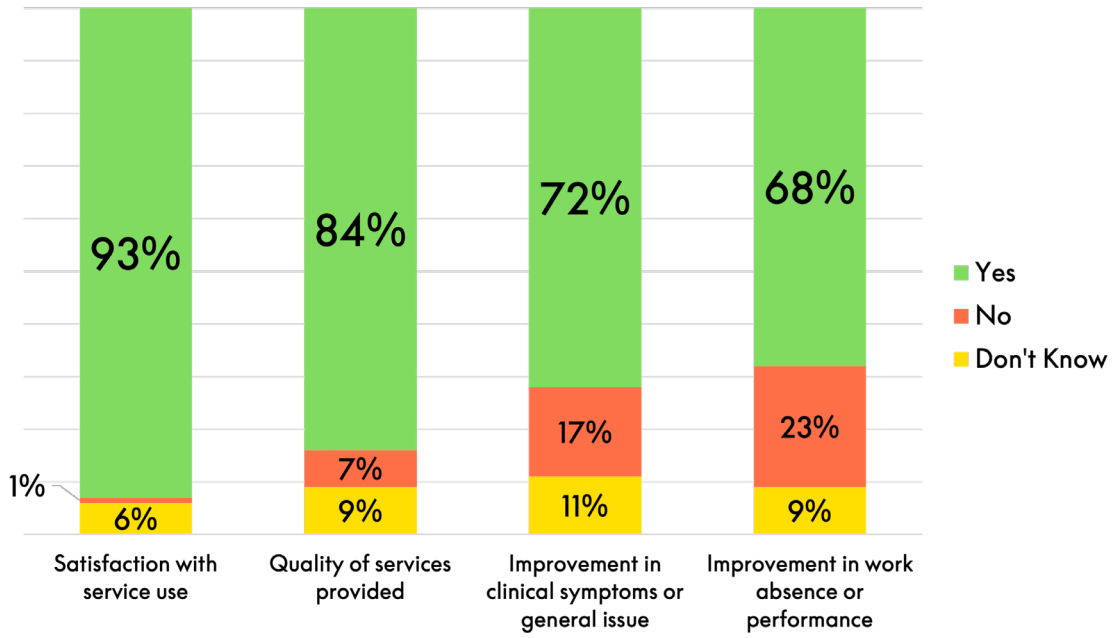


N = 88 EAPs in Trends Study

Which kinds of outcomes are used in collected by EAPs?

Among the EAPs who collected data, the focus of the activities most often was on assessing the level of client satisfaction (93%) and the quality of service (84%). Almost three-fourth of EAPs (72%) asked about how use of the service improved the clinical symptom of clients. About two-thirds of EAPs (68%) asked about how use of the service improved the work absence or work performance of employee users.

Kinds of Outcomes Collected by EAPs



N = 88 EAPs in Trends Study

For comparison, a past industry survey of external vendors (Attridge et al., 2013), examined outcome measurement practices in year 2011. This study found that 87% (62 of the 71 EAPs with valid data on questions about outcome surveys) collected any kind of outcome data. The area most commonly assessed was client satisfaction, which was measured by 81% of EAPs (50 of the 62), followed by 73% of EAPs that measured clinical improvement, 63% that measured work performance (39 of 62), and 45% that measured work absence (28 of 62). The finding today for the EAP industry are similar to results from 10 years ago.

Table 9.1 Waterfall display of how many EAPs per every 100 EAPs in the industry are using research-validated measures for clinical outcomes and for work outcomes of counseling.

Results are the number of EAPs out of every 100 EAPs in Industry

Many employee assistance programs routinely collect self-report data from individual users of the service to assess the level of user satisfaction, quality of service, and outcomes after service use. In general, does your program collect such data on follow-up surveys?

No	**Yes**
13	**87**

If measure outcomes:

Which of the following areas of outcomes do your EAP measure on the follow-up survey?

Improvement in clinical symptoms or general issue		Improvement in work absence or performance	
No	**Yes**	No	**Yes**
24	**63**	28	**59**

If measure clinical outcomes:
Does your EAP currently use any of these research-validated scales for **clinical** outcomes?

GAD-7	25
PHQ-9	21
PHQ-4	14
CAGE	21
AUDIT	20
PSS	9
CORE-10	1
Any of above	35

1 in every 3 EAPs use a research-validated measure for clinical outcomes

If measure clinical outcomes:
Does your EAP currently use any of these research-validated scales for **clinical** outcomes?

WOS	22
WLQ	4
SPS	1
HPQ	0
UWES	0
Any of above	24

1 in every 4 EAPs use a research-validated measure for work outcomes

Clinical Outcome Measures

GAD-7 – Generalized Anxiety Disorder

PHQ-9 – Patient Health Questionnaire (depression symptoms)

PHQ-4 – brief version for both depression and anxiety

CAGE – alcohol misuse screener tool

AUDIT – Alcohol Use Disorders Identification Test

PSS – Perceived Stress Scale

CORE-10 – clinical outcome measures (United Kingdom)

Work Outcome Measures

WOS – Workplace Outcome Suite for EAPs

WLQ – Work Limitations Questionnaire

SPS – Stanford Presenteeism Scale

HPQ – Health and Productivity Questionnaire (Harvard University & World Health Organization)

UWES – Utrecht (university) Work Engagement Scale

For comparison, a past industry survey of external vendors (Attridge et al., 2013), examined outcome measurement practices in year 2011. This study found that only 25 of the 71 EAPs were using a research-validated outcome measure. Thus, not much has changed in the last decade for how many EAPs collect outcomes using valid and reliable measures (35% in 2011 vs. 35% in 2021).

Are work-related outcomes more relevant to EAP counseling than clinical outcomes?

It is interesting that the most commonly used clinical outcome measures by EAPs are for mental health outcomes (i.e., the GAD-7/PHQ-9/PHQ-4) and yet anxiety and depression issues are only 15% of the total cases in our industry-wide profile data (see Chapter 2). Even more interesting is the parallel emphasis for some EAPs on clinical outcome measures for alcohol misuse when only 3% of all cases use EAPs specifically for help with their substance-related problems. In contrast, work-related outcome measures are actually more relevant to the typical EAP, as our findings in this report reveal that although only 20% of all cases seek counseling to address a work-related issue, about three-fourths of all cases nonetheless start out using the EAP being at a problem level on one or more of the WOS work-related kinds of outcomes. See the new article by Steenstra and Veder (Journal of Employee Assistance, Q2 of 2022) for further discussion of this point.

Summary

A national survey of over 100 EAPs found that although 9 out of every 10 EAPs engages in some kind of measurement of outcomes from their users, it more often to assess user satisfaction and quality of service than for assessing clinical or work-related outcomes. More troubling is how only a minority of EAPs are using research-validated measures when collecting data on clinical outcomes (i.e., anxiety/depression or substance use) or work outcomes. Of the 1 in 4 EAPs that does use a validated work outcome measure, almost all of them use the Workplace Outcome Suite measure.

Chapter 10. How to collect WOS data: 2021 survey of 17 EAPs

We wanted to learn about how WOS data is being collected from the EAPs who kindly share their WOS data with us for this industry benchmarking project. In May and June of 2021, we conducted an online survey that asked about collecting data and reporting on WOS results.

Survey sample. We received usable responses on the data collection items from 17 the 23 EAPs who were sent the call for participation. We appreciate the participation of these EAPs. The year when the EAP first started to collect WOS data ranged from 2010 to 2018. Thus, these programs all had four or more years of data collection experience. All but one EAP (95%) was currently collecting data with the brief 5-item version of WOS. Empathia EAP continues to use the 9-item version to have consistency with their past data since 2010. The sample included a mix of external vendors (n = 12); internal programs (n = 3), and hybrid programs (n = 4). Most EAPs were located in the United States, but vendors in five other countries also participated. EAPs of different sizes and delivery models are collecting outcomes for users of their services using the WOS. These 17 EAPs have a combined total of 4.4 million covered employees. See Table 10.1.

Table 10.1 Profile of sample of EAPs in WOS data practices survey 2021.

EAP Delivery Model		
External Vendors	**Hybrid Programs**	**Internal Programs**
UNITED STATES • Best Care EAP • Cascade Centers (now Canopy) • Empathia • Southwest EAP • WorkLife Hawaii INTERNATIONAL • Benestar (New Zealand) • Chestnut Global Partners Brasil • Four Dimensions Consulting (Hong Kong) • Grupo Wellness Latina (Argentina) • WorkWay (Japan)	• Child & Family Services EAP • Federal Occupational Health EAP (US federal government) • Life Solutions EAP – University of Pittsburgh Medical Center • Ohio State University	• Mass General Brigham EAP • Sharp Co. • University of Alabama Birmingham
Number of Employees Covered by EAP Average = 259,842 average per EAP Total covered employees in study for 17 EAPs = 4,417,314		
308,545 (range 33,000 to 1,000,000)	349,250 (range 25,000 to 700,000)	41,000 (range 19,000 to 80,000)

Methods of WOS data collection at Pre & Post used by EAPs in year 2020

N = 17 EAPs. A variety of methods were used by these EAPs for collecting WOS data at Pre and Post time periods (see Table 10.2). The most popular method was sending an e-mail or phone text that linked to the outcome survey on a secure website (59% of EAPs use this at Pre / 72% at Post). Next most used method was making a telephone call (47% at Pre / at 59% Post) to collect outcomes data. About a fourth of EAPs had collected outcomes onsite at the counselor's office (29% Pre / 11% Post). Another fourth of EAPs used a written survey sent to client's home/ office and then mailed back to the EAP (24% Pre / 22% Post).

Table 10.2 Methods of collecting WOS data used by EAPs at Pre and at Post.

Data collection approach (can use more than one)	Pre	Post
E-mail / text that links to survey on a website	59% (10)	72% (13)
Telephone call	47% (8)	59% (10)
In-person while waiting at counselor's office	29% (5)	11% (2)
Written survey mailed to client's home/office and mailed back	24% (4)	22% (4)

Note: N = 17 EAPs.

Time lag for data collection between last counseling session and follow-up at Post

N = 16 EAPs. There was a range across EAPs in the case-level duration of time between the date of the last counseling session and the date when the follow-up contact occurred to collect outcome data. The modal follow-up period was at 90-days (three months) after the last counseling session. The statistical average was 79 days (about 11 weeks) after case close for when the Post surveys were completed. See below:

30 days after case close = 3 EAPs

60 days after case close = 3 EAPs

90 days after case close = 7 EAPs

120 days after case close = 3 EAPs

Sample sizes for WOS data at Pre & Post: Part 1

N = 16/15 EAPs. On average, 61% of all EAP cases in a year had WOS collected at the start of the counseling process (range from over 75% to 10% for different EAP providers). On average, 29% of the EAP cases with WOS data collected at the start of case also had WOS collected at the follow-up (range from over 66% to 10% for different EAP providers). The combination of these two rates indicates that about 1 in every 5 eligible EAP cases (18%) had WOS data collected at both Pre and Post (see Table 10.3).

Table 10.3 Percentage of EAP cases with WOS data collected at Pre and at Post use of EAP.

Percentage of EAP counseling cases with WOS data collected	Time Period	
Valid N:	Pre – Start of Case 16 EAPs	Post (if had Pre data) 15 EAPs
About 75% or more	9	0
About 66%	1	1
About 50%	4	3
About 33%	0	2
About 25%	1	4
About 10% or less of all eligible cases	1	5
Average:	61%	29%
Net for all cases with Pre & Post:	18	

Sample sizes for WOS data at Pre & Post: Part 2

N = 14 EAPs. EAPs were asked how many specific cases in the past year had WOS data collected at Pre and again at Post. See Table 10.4. There was a wide range in the number of cases with WOS data at Pre and at Post, from 0% to 83%. The average was 28%. This indicates that about 1 in every 4 cases that had data collected at the start of EAP use also did the WOS at follow-up after use.

Table 10.4 Counts of cases in year 2020 with WOS data collected at Pre and at Post use of EAP.

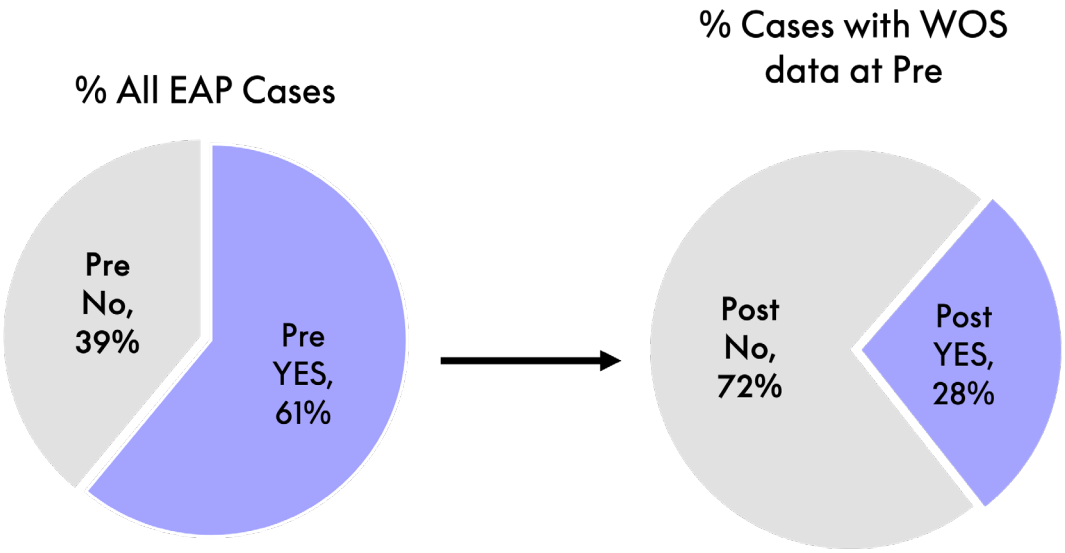
WOS collected at start of EAP use	Days between end of case and survey follow-up	WOS collected at the follow-up	% of Pre cases also with Post
300	90 days	250	83%
100	90 days	60	60%
100	30 days	50	50%
900	60 days	350	39%
200	90 days	73	37%
150	30 days	30	20%
7,608	30 days	1,072	14%
2,318	90 days	268	12%
125	60 days	12	10%
25,000	120 days	2,212	9%
90	60 days	2	2%
1,516	90 days	0	0%
Average success rate for collecting both WOS Pre & Post paired data = 28%			

Note: N = 12 EAPs.

The two approaches to asking about the follow-up response rate had results of 29% and 28% of cases at the Pre also had data collected at the Post. If 28.5% of cases with Pre data also have Post data, then the effective response rate is 28.5% of the 61% of cases who have WOS data at the start of counseling. Thus, for every 100 EAP counseling cases, 17 are represented in the longitudinal data. See Figure Set 10.1.

Figure Set 10.1 Summary of results for EAP cases with WOS data collected at Pre and Post.

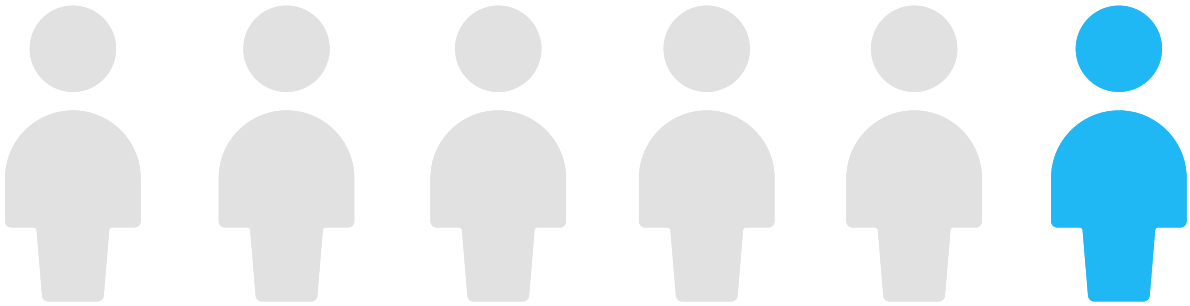
EAP Counseling Cases with WOS Data Collected at both Pre & Post: Survey of EAPs in 2021



Net Result: 17% of all EAP cases had WOS data collected at both Pre & Post

N = 16-14 EAPs

EAP Counseling Cases with WOS Data Collected at both Pre & Post: Survey of EAPs in 2021



Net Result: 1 in every 6 EAP cases had WOS data collected at both Pre & Post

Collecting WOS data for EAP services other than counseling

N = 17 EAPs. As the WOS was designed for use with counseling cases, these EAPs focused on collecting outcomes from their counseling clients. Only about 1 in 3 EAPs also collected WOS data from the users of EAP services other than counseling. These services included, financial support (36% of EAPs), legal support (29%), Work/Life (childcare, eldercare; 24%), crisis incident response (12%) and management consultations (6%). None reported collecting WOS data from participants in trainings for employees or managers provided by the EAP. [Note however, that very little of this data has been shared back into the WOS benchmarking project.] Some of the comments about this approach include:

- All employees who see us for individual counseling, regardless of the issue, is asked to fill out the WOS pretest and posttest.
- Outcomes measures are explored with every client at the time of intake and recorded based upon client's willingness to share.
- Our standard EAP covers financial and legal supports.
- Our legal and financial are EAP cases - other types listed above are not.

Different ways of reporting of WOS outcome results for EAPs

N = 17 EAPs. The EAPs were asked to "describe what you do with the results of the analysis of your EAP outcome data," with four different options to rate. The results are shown in Table 10.5. At least one of the options was used by 16 of the 17 EAPs (94%). The most common use of WOS outcomes was in estimating ROI and building a business case for the service (41% generally done or 24% sometimes). Most EAPs included outcome results in customer reporting or presentations (41% generally done or 12% sometimes). Over 40% of EAPs had publicly shared their outcome data results in a white paper, article, webinar or conference presentation. Among the vendors, about a third provide an outcome report for their book of business that aggregated results across their many customers. Overall, this data indicates that EAPs communicate their WOS results to customer in multiple ways.

Table 10.5. Reporting of WOS results by EAPs.

N = 17 EAPs	Yes generally	Only sometimes	No
Do you use the outcome results in building a business case or financial ROI for the EAP service?	41% (7)	24% (4)	35% (6)
Are the outcome results included in customer reporting and/or special presentations to the organization or key customers?	41% (7)	12% (2)	47% (8)
Do you create one "book of business" report of the outcome data results across all customers and then share that report? [for EAP external vendors only: n = 10]	30% (3)	10% (1)	60% (6)
Have you shared your EAP outcome results publicly (ex: webinar, white paper, article)	Yes = 41% (7)		59% (10)

Comments on reporting of WOS outcome results

The EAPs were also asked to "describe a story or case example of how your WOS outcome results have been shared with a key employer customer of the EAP (if vendor) or within your host organization (if an internal program)?" These comments are below:

- For all our key clients our yearly utilization report and presentation includes WOS results and ROI.
- The WOS outcome data is usually part of our Annual EAP utilization reports.
- It is something that is referred to with all of our customers at their next quarterly meeting.
- We sometimes share statistics at small leadership meetings or with an HR supervisor.
- Some of our larger organizations get a specialized report with more graphics, we would include an infographic representation of our positive results (on the WOS) in that. We may also include it in our annual trends report which would be sent to all of our companies and available to potential companies.
- Shared as part of annual utilization reporting, also shared as part of a customer initiative in which we can help demonstrate additional "change" measures stemming from the initiative.
- We shared the WOS outcome results after a year of service with a large company. They wanted to understand they value of having the Program, they asked for more information than a utilization report.
- The results of the WOS have only been shared with upper management. However, I want us to start sharing it more with key stakeholders in the upcoming year.

Summary

A survey of 17 EAPs that collected WOS data was conducted to better understand the methods and reporting of the results. A wide range of different delivery types and size of EAPs completed the survey. Most EAPs used electronic methods (emails and online survey tools) to contact cases and to collect outcome data. A key finding was that about 1 in every 6 counseling cases was getting outcome data collected at both the start of treatment and at a follow-up. However, this success rate for getting longitudinal data varied greatly between different EAPs, ranging from 0% of cases at baseline (due to COVID-19 pandemic disruption) to 83% of all cases. The follow-up tended to occur most often at about 90 days after the final counseling session (although this period ranged from 30 to 120 days). These EAPs communicated their WOS results to customers and the public in multiple ways. Using the findings for ROI and making the business case was a popular reason for collecting WOS data.

Appendix A: Study methodology

Duplicate cases removed

This project has had five annual reports. It has a master data file for each annual report that has grown bigger each year with new cases being added from dozens of different EAPs who had shared data in the past and also other EAPs new to the project who often share current year and past year data. This process has resulted in a portion of cases being shared that were duplicate data from earlier files. This year, the preparation process included a careful case-by-case investigation to determine which rows of data (i.e., a specific case with WOS data and information on other factors) were unique or which were duplicates. Duplicate cases are invalid and thus were removed from the master dataset.

Kinds of EAP services with WOS data collected

Over 97% of these cases were users of the counseling services rather than other kinds of non-counseling services also provided by the EAP. The remaining 3% of cases non-counseling EAP services with WOS data included legal support, financial support, group trainings, work/life, and wellness. See Table A.1. We excluded another 127 cases in the master file from an EAP that collected WOS data from participants in a depression management program for employees at clinical risk status for depression.

Table A.1 Mix of different kinds of EAP services with WOS data collected.

EAP service	N cases	% of Total	N of EAPs as data sources
Counseling	44,394	97.1%	46
Legal specialists	594	1.3%	17
Financial specialists	296	0.6%	21
Group training from EAP	294	0.6%	1
Work/Life specialists	121	0.3%	8
Wellness specialists	27	0.1%	4
Total	45,726		

Pre-post longitudinal study design

This project has had five annual reports. It has a master data file for each annual report that has grown bigger each year with new cases being added from dozens of different EAPs who had shared data in the past and also other EAPs new to the project who often share current year and past year data. This process has resulted in a portion of cases being shared that were duplicate data from earlier files. This year, the preparation process included a careful case-by-case investigation to determine which rows of data (i.e., a specific case with WOS data and information on other factors) were unique or which were duplicates. Duplicate cases are invalid and thus were removed from the master dataset.

Table A.2 Mix of cases with data from Pre and Post periods: Full sample.

Study Design Timing (at least 1 WOS outcome)	N cases	% of Total	N of EAP sources of raw data
Both Pre and Post WOS data	39,135	85.6%	47
Only Pre WOS data	4,612	10.1%	17
Only Post WOS data	338	0.7%	13
Neither Pre or Post WOS data	1,641	3.6%	10
Total	45,726		47

The number of cases at Pre, at Post, and with paired data from both Pre and Post is shown in Table A.3 for each WOS measure. This large sample of individual users of EAP had some variation on when the WOS data was collected and for which WOS measures.

Table A.3 Valid cases with WOS single-item measure data at Pre and paired Pre and Post: Full sample.

WOS Measure (single-item)	Pre	Post	Pre & Post
Any WOS item	43,453	39,473	39,135
Life Satisfaction	43,453	39,473	39,135
Work Presenteeism	43,453	39,473	39,135
Workplace Distress	43,453	39,473	39,135
Work Engagement	43,099	39,119	38,781
Work Absenteeism	42,993	39,080	38,783
Work Absenteeism – not working (160+ hours absent)	251 (0.6%)	487 (1.2%)	
Work Absenteeism – working (0 – 159 hours absent)	42,742	38,592	38,303
All five WOS outcomes (if working) and SuperScore	42,742	38,592	38,303

Repeat users. Only 1.6% of all EAP counseling cases had used their EAP more than once for different issues. There were only 751 repeat user cases out of the total 45,722 cases in the study sample.

Missing data estimated

A small number of cases who did not have complete answers to the WOS items at one of the Pre or Post periods had the missing item score estimated.

RECODING OF ABSENTEEISM DATA WITH DIFFERENT RECALL TIME PERIODS

Two EAPs (Site ID 2019; Site ID 3000) both used past 14 day recall period in survey, when most used the standard 30-day period in the original instructions. So, we converted this data to be equivalent to the larger 30-day number of hours absent (30/14 = 2.143 as multiplier of raw data).

RECODING OF MISSING DATA FOR SPECIFIC ITEMS on WOS

Missing data repaired for some cases. Estimated missing raw data for each of the WOS 25 items by using two approaches. First, the same case's original data on same item from either at the Pre or the Post as relevant (i.e., if missing Pre = use score from Post; or if missing Post use score from Pre). If option 1 was unavailable, then the mean average for the item with missing score taken from full sample of all cases with valid data on same item at the same time period.

Estimated missing raw data for each 25 items of full scale at Pre or at Post when had only summary scale scores from one EAP in past (n = 227 cases in 2017 from Site ID 2017). For absenteeism, this was done using the percentage of the total hours of all cases with full data on the 5-item scale at the same period that each item accounted for to create the specific hours for each of the five absenteeism items. More specifically, at Pre use of EAP, the absenteeism item 1 was 63% of total hours; item 2 was 6%; item 3 was 8% item 4 was 8% and item 5 was 12%. The person's total hours at Pre and at Post was then multiplied by these different percentages to estimate the hours for each of the five items at Pre and at Post.

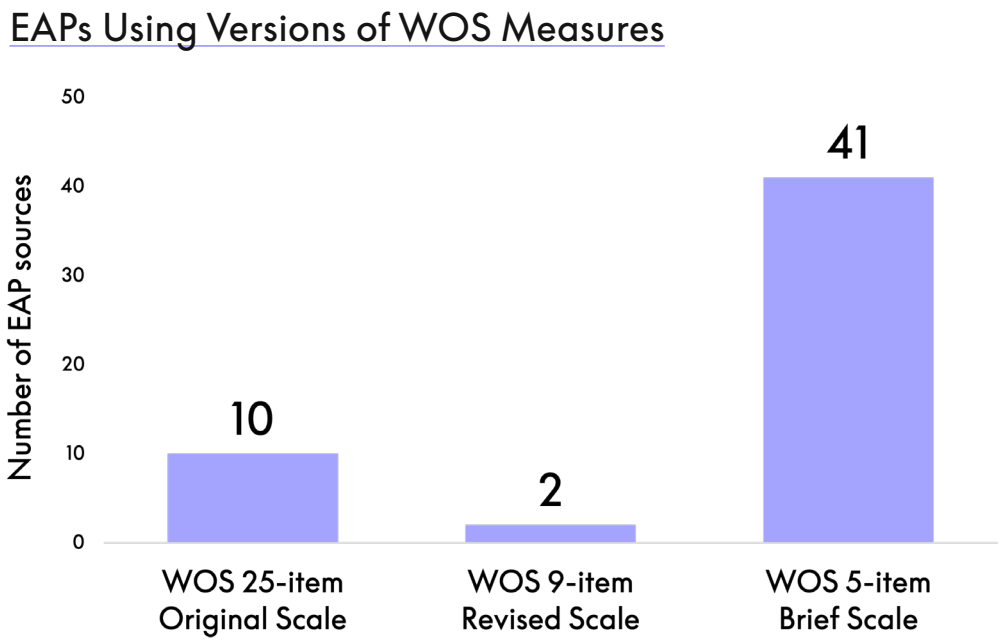
SOME MISSING DATA NOT RECODED

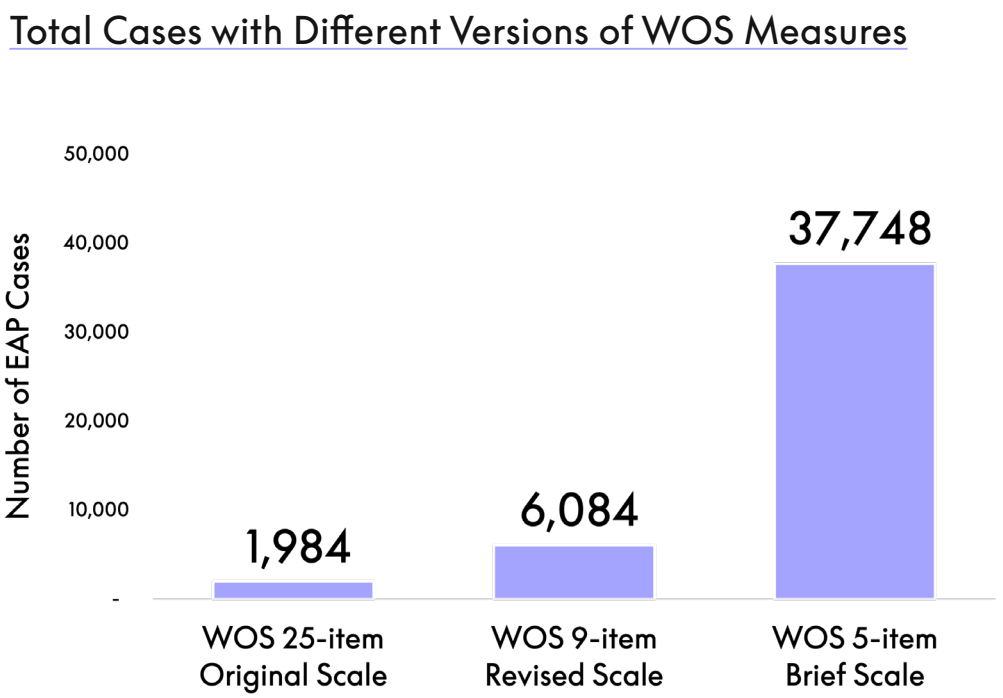
This estimation step was not done, however, if an EAP had purposely not collected any data on a particular WOS scale or item. This applied to the 354 cases in 2017 from the internal EAP (Site ID 2099) which did not ask the WOS absenteeism 5 items, the WOS Engagement 5 items, and two of the Life Satisfaction scale items (#17 & #20); thus, these items all remain as missing data. This no estimation decision also applied to the 145 cases in 2018 from another internal EAP (Site ID 7000) - which did not ask the WOS absenteeism 5 item scale but did collect data on the other four original scales.

Version of WOS measure used by EAPs

The choice of which version of the WOS was used was made independently by each EAP. This study pooled data from all three versions of the WOS (25-, 9- and 5-item versions). Ten EAP sources shared their data on the original 25-item full scale. Just two EAP sources used the 9-item scale, with five items on absenteeism and single items on the other four outcomes. Most of the EAPs (n = 41) used the 5-item brief scale with single items for each outcome area. Seven EAPs used more than one version of the WOS over the different years of data collection. Only the United States had data from all three versions of the WOS. The global countries all used the newer brief version. None of EAPs had used the new 2020 version of the WOS with the 1-5 category rating for work absence.

Figure A.1 Versions of the WOS measures.





Adjusting the 5-item absenteeism results to match the single-item version

A single-item was used for each of the WOS outcomes other than for work absenteeism, which had different items and instructions across the different WOS versions.

Hours of work absenteeism

This section described the conceptual rationale and operational details on how absenteeism hours of data were used in this study from the different WOS versions to yield comparable adjusted data.

Work absenteeism is measured in two ways: the original five-item version and the single-item version from the brief WOS-5. See items in Table A.3. For both measures, any cases with 160 hours or more of missed work were excluded from the study sample as outliers with too extreme a level of missed work (i.e., doing no work at all in past month). It's also possible some of these extremely high counts were reporting or recall errors made by employee when answering the question. Outlier cases were far less than 1% of the total data set. Thus, the upper range for absence hours was restricted to 159 hours per month as still working.

Creating a measure of work absenteeism hours across different versions of WOS

This study used data pooled from all of versions of the WOS measures. Unfortunately, although similar in nature, these two measures of Absenteeism do not have an item that is shared on both versions (like the other four WOS outcomes). Therefore, a strategy was devised to use the data from all cases in the pooled data, even when some cases had data from the original full and other cases had data from the single-item measure. We decided to take only the data from the first three items of the full five-item version of Work Absenteeism. See Table A.4. This action was taken because these three items conceptually match the instructions for the single item on the brief WOS-5 that asks the person to consider absence consisting of missing work altogether, arriving late or taking off early.

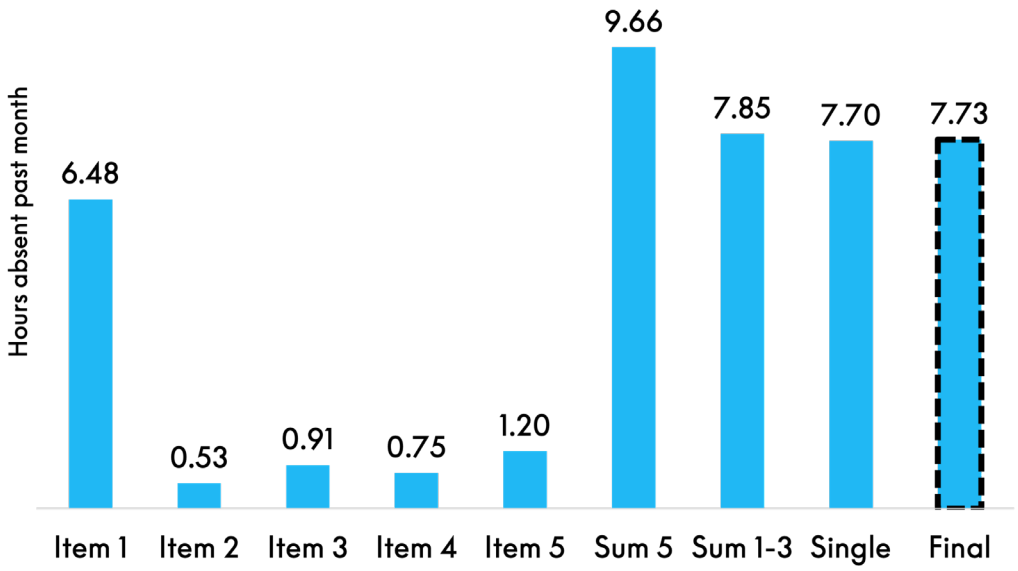
Table A.4 Absenteeism item statements for original WOS-25 & WOS 9-item scales and the WOS-5.

Original 5-item version	Included to match single-item version	Single item version
Caused you to miss work entirely.	Yes	For the period of the past 30 days, please total the number of hours your personal concern caused you to miss work. Include complete eight-hour days and partial days when you came in late or left early.
Made you late for work.	Yes	
Caused you to take off early.	Yes	
Pulled you away from your normal work location.	No	
Required you to be on the phone, e-mail or internet while at work.	No	

Results for the various items and summary measures for work absence from cases in the United States are shown for illustrative purposes in Table A.5 and Figure Set A.2. This analysis was limited to United States for the single-item scores as other countries did not have data on all three versions of WOS (also, China had less absence than US; and New Zealand has more absence than the US on the single-item version; see the Part 2 of the WOS 2020 annual report). As can be see, the taking the first three items of the absence hours from the 25-item and 9-item scales yielded a sum that was very close to the hours from cases who completed the single-item WOS brief version: a 98% match at Pre and a 95% match at Post. Thus, this approach was successful in creating a comparable number of absence hours across all three WOS versions.

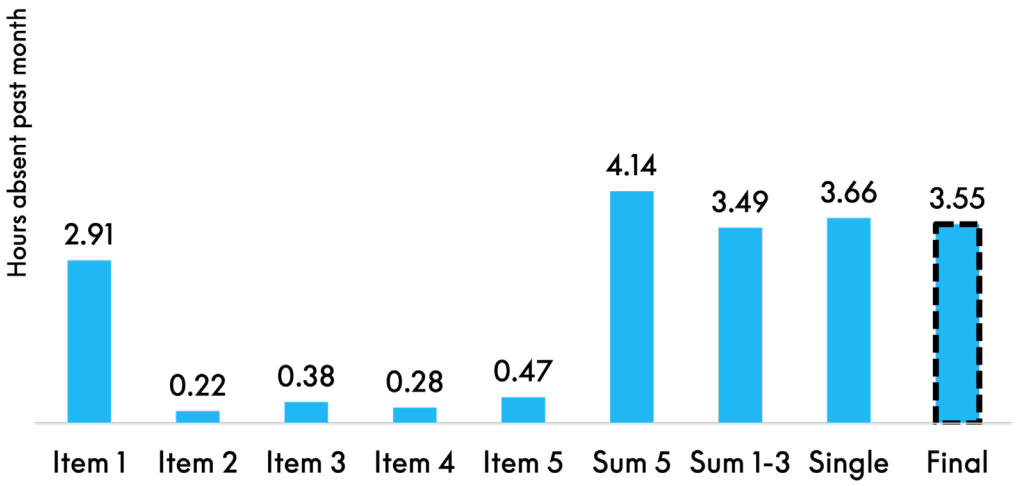
Figure Set A.2 WOS absenteeism hours by item and summary measures at before and after EAP use: United States only

Hours of Work Absence in Past Month By WOS Item at BEFORE Use of EAP: For all EAPs in United States



N varies for measures

Hours of Work Absence in Past Month By WOS Item at AFTER Use of EAP: For all EAPs in United States



N varies for measures

Table A.5 Absenteeism hours by each item, Sum all 5 items, Sum first 3 items, WOS-5 single-item and adjusted all versions measure: At before and after use of counseling for United States.

	WOS Original 25-item & 9-item Versions				WOS Brief 5-item	
	Item 1	Item 2	Item 3	Item 4	Item 5	Single Item
PRE – Before EAP Use						
	6.48 (16.49) n = 6,975	0.53 (3.13) n = 7,011	0.91 (3.34) n = 7,011	0.75 (5.02) n = 7,010	1.20 (5.62) n = 7,005	7.70 (16.66) n = 25,624
Sum 5	9.66 (19.60) n = 6,961					
Sum 3	7.85 (17.72) n = 6,973					
	7.73 (16.90) n = 32,596					
POST – After EAP Use						
	2.91 (13.43) n = 6,949	0.22 (1.44) n = 7,009	0.38 (1.80) n = 7,009	0.28 (2.21) n = 7,009	0.47 (3.58) n = 7,009	3.66 (11.64) n = 21,739
Sum 5	4.14 (14.77) n = 6,941					
Sum 3	3.49 (13.98) n = 6,948					
Study	3.55 (12.24) n = 28,686					

Note: All measures exclude cases with 160 or more hours of absence in past month (i.e., not working). Country limited to United States only as other countries did not have data on all three versions of WOS (also, China had less absence than US; and New Zealand has more absence than US).

WOS SuperScore

The ratings on each of the five measures were also combined into a composite measure - called the WOS SuperScore. The 1-5 categorical version for work absenteeism measure has the same response range and allowed the opportunity to add together the five single-item WOS measures. Work engagement and life satisfaction already are scored such that higher scores indicate a better outcome. Ratings on the other three of the measures – work absenteeism, work presenteeism and workplace distress – were reverse scored so that higher scores indicate a better outcome (i.e., 1 = 5, 2 = 4, 3 = 3, 4 = 2, 5 = 1). This single score represents the impact of EAP counseling across all five kinds of outcomes with a possible range from 5 to 25.

Client privacy

The aggregated dataset provided for the WOS study analysis had only identification numbers for each EAP case and no client specific personal information. Thus, client privacy was achieved for all study data.

Data analysis statistics

All analysis was conducted using SPSS – the Statistical Package for the Social Sciences. The test of improvement over time (Pre to Post) with ratings was conducted using a multi-variate analysis of variance (MANOVA) repeated measures procedure. The percent improvement on each outcome over time was calculated by subtracting the Post EAP mean score from the Pre EAP mean score and then dividing it by the Pre EAP mean score. Other tests of the impact of context factors used a general linear model ANOVA approach with repeated measures of time and the context factor of interest as an interaction effect with time. Tests with WOS problem status (yes / no) or other categorical context variables conducted with chi-square non-parametric test procedures. Given the large sample sizes, most results were only of interest if it had a small statistical effect size (i.e., partial eta squared of at least .01; see below).

Statistical effect sizes

With such an extremely large sample size, the power to detect a particular finding as being statistically significant is very high (power of .99 out of 1.00 maximum to detect a small size effect at p = .05 chance level). Thus, a finding too small to have any practical value can nonetheless be declared "significant" from a statistical perspective (i.e., if the test result is p < .05). Estimates of statistical effect size offer a better way to evaluate results obtained with large sample sizes. Thus, the partial eta squared effect (η_p^2) obtained in SPSS was examined for the WOS study data. 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 (Richardson, 2011):

- large size effect — .14 or greater
- medium size effect — .06 to .13
- small size effect — .01 to .05
- trivial size effect — < .01 even if significant at p -value

Appendix B: Psychometrics of WOS measures

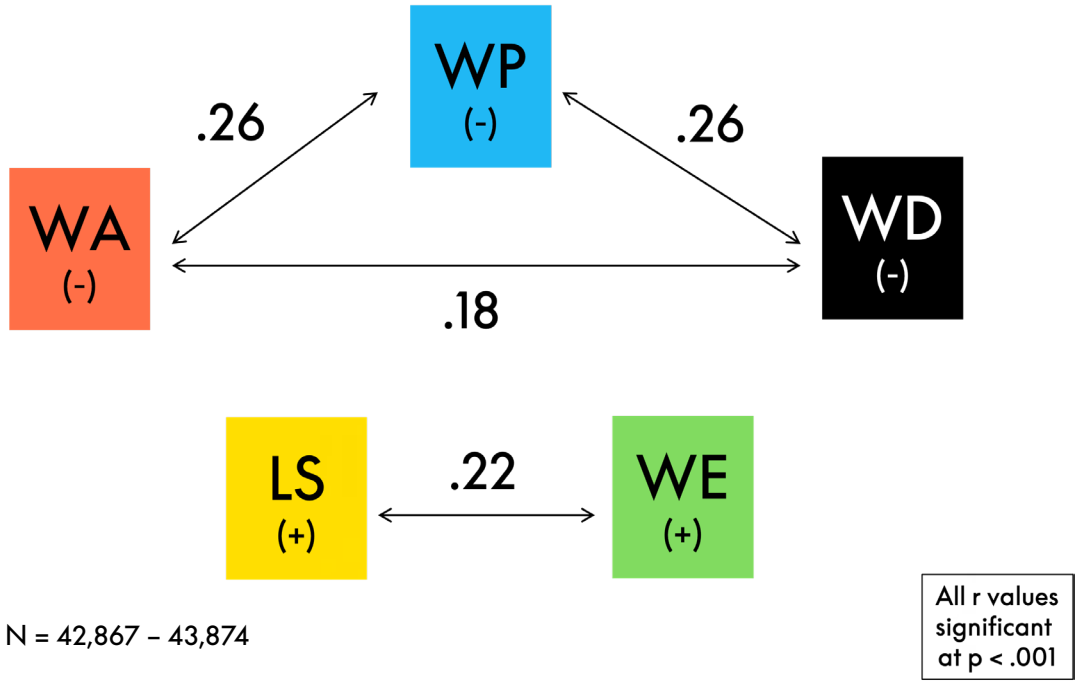
For an EAP to have confidence in using the WOS measures to assess the success of their counseling intervention requires that the WOS items behave in ways that meet scientific standards for psychometric reliability. Data from past research (see last year's annual report) and analyses of the current larger dataset both show that WOS measures have adequate validity and reliability.

How inter-correlated are the WOS measures?

A test of the conceptual differences between the five WOS outcomes involves determining the amount of shared variance between various WOS measures. The extent of shared variance should be low if the questions are indeed assessing different constructs. There is some overlap expected, however, among the WOS items as most address aspects of work performance. The life satisfaction item is the only one not specifically about work. The results indicated significant correlations between the pairs of WOS items scored in same direction, with similar patterns found at both time periods. These results were as expected in direction of association (positive correlations) and low in magnitude (small to moderate size r = .18 to .38). These correlations are shown in black color in Figure B.1. The strongest association was between work presenteeism and workplace distress (r = .27 before EAP & r = .38 after EAP).

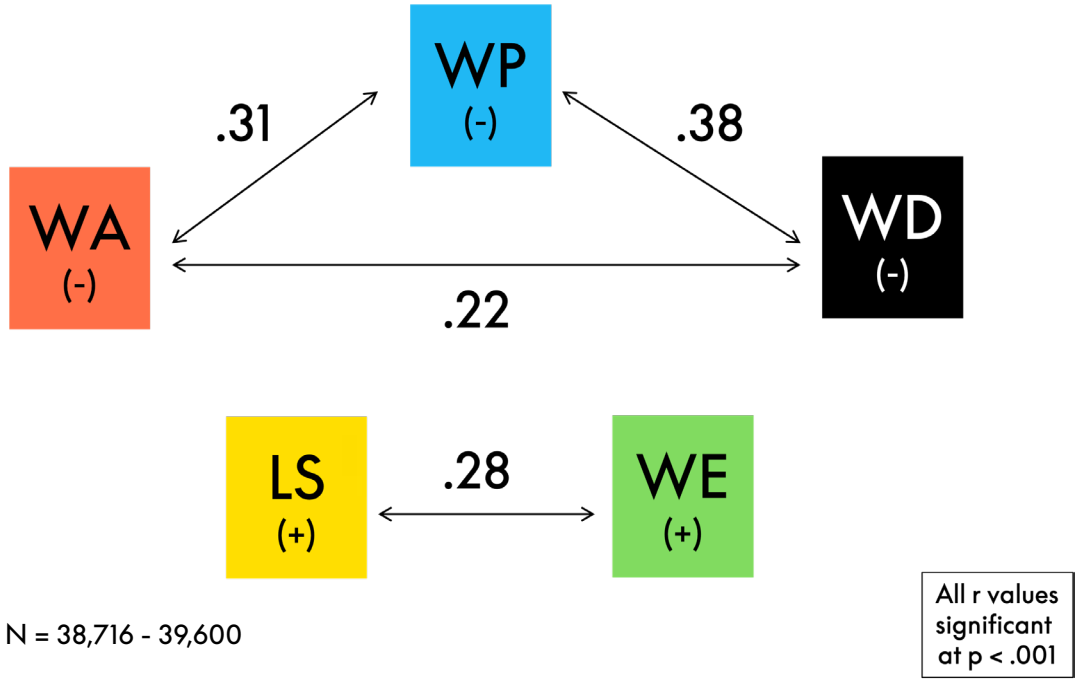
Figure B.1 Positive correlations between WOS items: At before and after use of counseling.

Positive Correlations Between WOS Single-item Measures (1-5 scoring) at BEFORE Use of EAP



N = 42,867 – 43,874

Positive Correlations Between WOS Single-item Measures (1-5 scoring) at AFTER Use of EAP



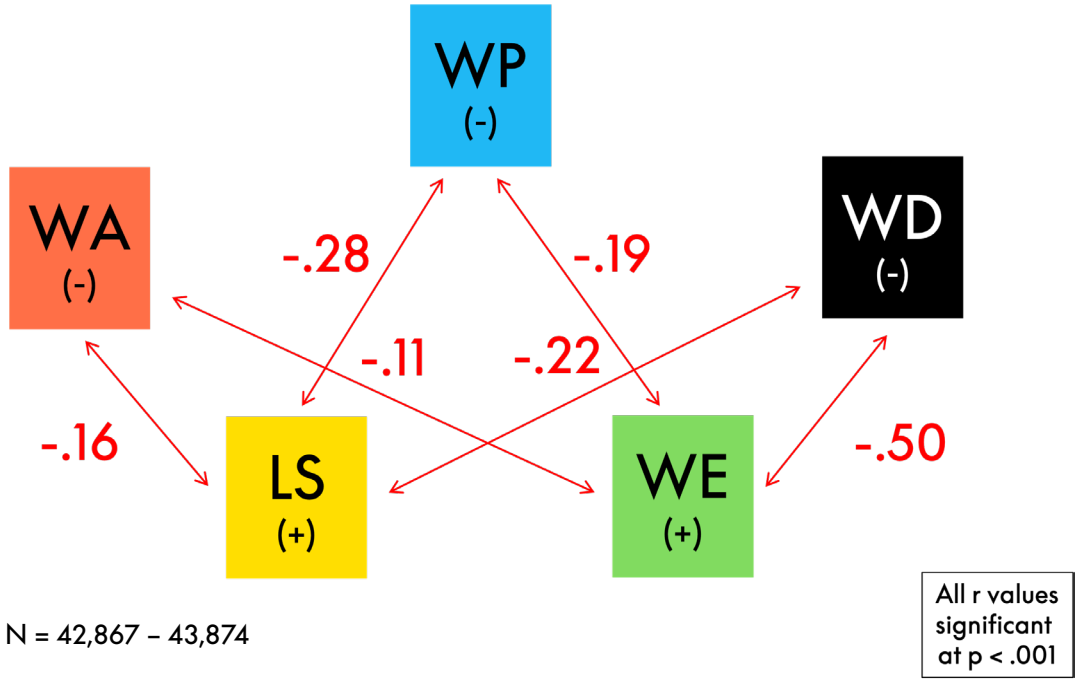
N = 38,716 - 39,600

Other findings indicated significant correlations between the pairs of WOS measures scored in opposite directions. Similar patterns were again found at both Pre and Post periods. These results were as expected in the direction (all negative correlations) and in the magnitude (small to moderate size correlations r = -.11 to -.50) of the associations. These correlations are shown in red color in Figure B.2. The strongest association was between workplace distress and work engagement (r = -.50).

Although these levels of correlation indicate some overlap between the five WOS constructs only about 6% or less of the total variance shared between the different measures. These findings indicate that each item on the WOS-5 has its own meaning and interpretation value as an outcome of EAP use.

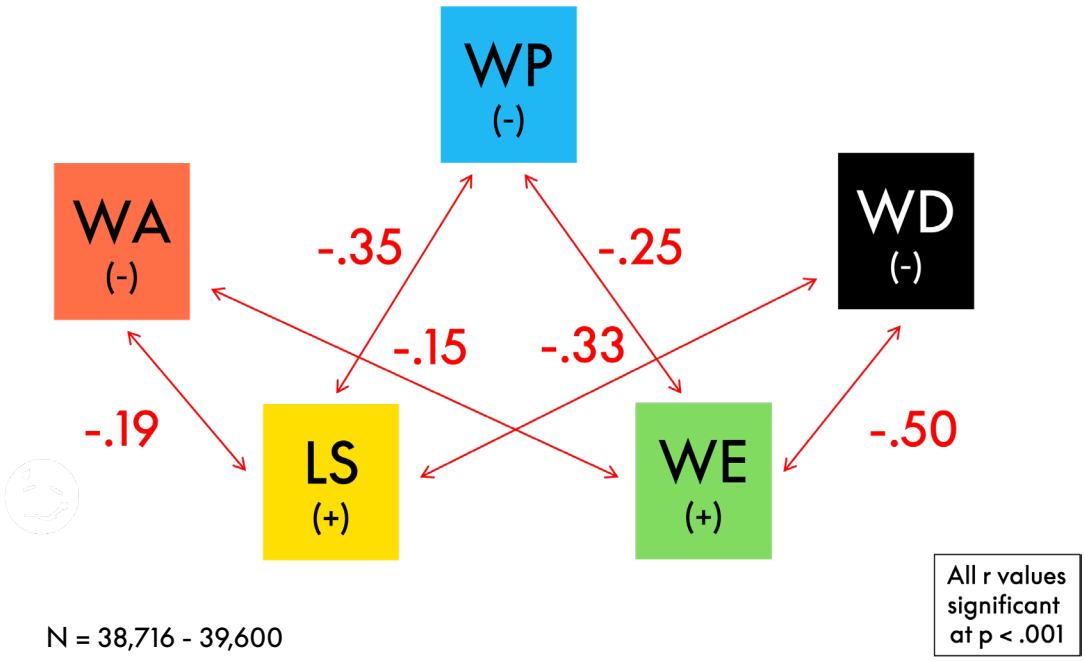
Figure B.2 Negative correlations between WOS items: At before and at after use of counseling.

Negative Correlations Between WOS Single-item Measures (1-5 scoring) at BEFORE Use of EAP



N = 42,867 – 43,874

Negative Correlations Between WOS Single-item Measures (1-5 scoring) at AFTER Use of EAP



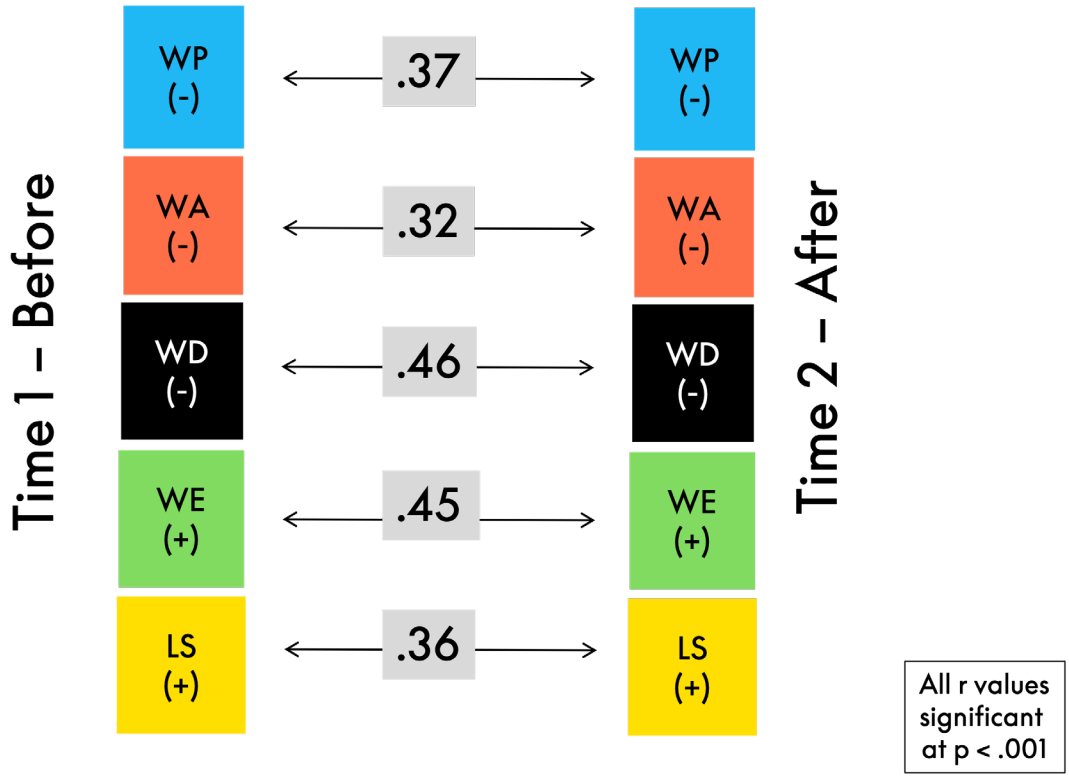
N = 38,716 - 39,600

How stable over time are scores on the WOS measures?

The scores on each WOS measure were also correlated over time within the same person. This is called a test-retest correlation. These findings indicate that each outcome on the WOS was moderately consistent in the level of the rating from the start of counseling to the follow-up, despite an intervention expected to change the rating level from Pre to Post. These correlations ranged from r = .32 to .46, all p < .001.

Figure B.3 Positive test-retest correlations between WOS items.

Paired Correlations Between WOS Measures at Before and After Use of EAP



N = WP 39,262; WA 38,427; WD 39,262; WE 38,908; LS 43,874

Psychometrics for the WOS SuperScore

The summary measure of the WOS SuperScore also had good scale reliability. The five items were all significantly correlated with each other at Pre (average r = .24; range .11 to .50; n = 42,720) and Post (average r = .29; range .15 to .50; n = 38,569). The internal scale reliability Cronbach alpha = .61 at Pre (n = 42,770) and .68 at Post (n = 38,569). The test-retest correlation of scores at Pre with scores at Post within person was r = .49 (p < .001).

Appendix C

WOS 5-item brief version (2013)

WORKPLACE OUTCOME SUITE – 5 ITEM VERSION

GENERAL INSTRUCTIONS
Below is a series of statements that refer to aspects of your work and life experience that may be affected by the personal problems you want to address at the EAP during the past 30 days. Please read each item carefully and answer as accurately as you can.

			NUMBER OF HOURS
AB	1.	For the period of the past 30 days, please total the number of hours your personal concern caused you to miss work. Include complete eight-hour days and partial days when you came in late or left early.	

		INSTRUCTIONS FOR ITEMS 2 – 5 The following statements reflect what you may do or feel on the job or at home. Please indicate the degree to which you agree with each of the statements for the past 30 days. Use the 1-5 response key to the right.	STRONGLY DISAGREE	SOMEWHAT DISAGREE	NEUTRAL	SOMEWHAT AGREE	STRONGLY AGREE
PR	2.	My personal problems kept me from concentrating on my work.	1	2	3	4	5
WE	3.	I am often eager to get to the work site to start the day.	1	2	3	4	5
LS	4.	So far, my life seems to be going very well.	1	2	3	4	5
WD	5.	I dread going into work.	1	2	3	4	5

Appendix D: WOS 7-item version (2020) with updated absence norms in 2021

The 2020 updated version of the WOS brief measure has two new items and changed how the absenteeism question is answered. Item 1 is new and intended to identify the small percentage of respondents who did not work during the past month. If endorsed, this score stops the data collection process as the other work-related questions are not relevant.

Item 6 allows the employee to select one of five choices to indicate the level of work absenteeism. This response format allows for more efficient data collection on smart-phones, mobile devices, and online survey tools. By avoiding the need to fill in the blank with a specific number of hours absent, this change in response format may avoid the missing data sometimes found when using the original open-ended response format. Past analyses identified about 3% of cases at pre and 1% of cases at post that had left the absenteeism item blank – which was about twice the rate of missing data as each of the other WOS items.

For EAPs that want to calculate specific hours of absenteeism, this number can still be calculated on the new measure by recoding the 1-5 ratings for each respondent into default numbers of hours based on the over 42,000 cases analyzed for this 2021 year report with absenteeism hours reported at the start of counseling. These norms excluded any case reporting 160 or more hours of absence (i.e., who was not working at all).

Table D.1 Normative default hours of absence for 1-5 ratings on WOS absenteeism item.

Absenteeism Categorial Item Rating	Default estimated hours (N = 42,741)
1 = zero hours	0
2 = 1 to 3 hours	1.52
3 = 4 to 8 hours	6.65
4 = 2 to 3 days	16.29
5 = 4 days +	51.69

Also included is a new item that more directly assesses the level of work productivity. Item 7 was adapted from the Health and Productivity Questionnaire (HPQ). The HPQ was developed by researchers at Harvard University (Kessler et al., 2003) for use by the World Health Organization. It is one of the most well-researched self-report tools for work productivity. The main benefit is that the 0 to 10 rating can be converted into a 0 to 100% scale (i.e., multiply the rating x 10). This percentage can then be applied to the hours of time worked in month (after deducting hours of work absence) to yield a specific number of hours of lost work productivity (see example in Chapter 5).

Table D.2 Directions for how to code the WOS-7 items for problem status on each outcome.

CODE	Item	Coding for Problem Status	Coding for Not Problem
SC	Screener for valid respondent status	NA	NA
LS	Life Satisfaction item on WOS	Disagree = 1 2	Neutral or Agree = 3 4 5
WE	Work Engagement item on WOS	Disagree = 1 2	Neutral or Agree = 3 4 5
WD	Workplace Distress item on WOS	Agree = 4 5	Disagree or Neutral = 1 2 3
PR	Work Presenteeism item on WOS	Agree = 4 5	Disagree or Neutral = 1 2 3
AB	Work Absenteeism item on WOS	Four hours or more = 3 4 5	Zero or <4 hours = 1 2
JB	Work Performance item adapted from HPQ	0 1 2 3 4 5 6 7	8 9 10

WORKPLACE OUTCOME SUITE (WOS) – 2020 VERSION

GENERAL INSTRUCTIONS
Below is a series of statements that refer to aspects of your work and life experience during the past 30 days that may have been affected by the personal problems addressed at the EAP. Please read each item carefully and answer as accurately as you can. If you work from home or other worksites or conduct your work during evening or overnight shifts, please answer for your context.

SC	1.	**Did you work any part of your normal employment schedule in the past 30 days?** Yes ○ No – Did not work at all * ○
LS	2.	**So far, my life seems to be going very well.** Strongly Disagree ○ Somewhat Disagree ○ Neutral ○ Somewhat Agree ○ Strongly Agree ○
WE	3.	**I am often eager to get to the work site and start the day.** Strongly Disagree ○ Somewhat Disagree ○ Neutral ○ Somewhat Agree ○ Strongly Agree ○
WD	4.	**I dread going into work.** Strongly Disagree ○ Somewhat Disagree ○ Neutral ○ Somewhat Agree ○ Strongly Agree ○
PR	5.	**My personal problems kept me from concentrating on my work.** Strongly Disagree ○ Somewhat Disagree ○ Neutral ○ Somewhat Agree ○ Strongly Agree ○
AB	6.	**How much time did your personal problems cause you to miss work during the past 30 days? Include complete workdays and partial days when you came in late or left early. Please choose the category that best represents the total hours of absence you experienced (if any):** 0 hours ○ 1 to 3 hours ○ 4 to 8 hours ○ 2 to 3 days ○ 4 or more days ○
JP	7.	**On a scale of 0 to 10, where 0 is the worst job performance anyone could have at your job and 10 is the performance of a top worker, how would you rate your overall job performance on the days you worked during the past 30 days?** Worst Performance 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ Top Performance

*Skip to end

Appendix E: Test results of longitudinal differences on WOS outcomes and moderators

Tests of longitudinal change in WOS outcomes as problem status

Table E.1 Statistical details of change over time in problem status on WOS outcome measures.

	Work Absenteeism	Work Presenteeism	Workplace Distress	Work Engagement	Life Satisfaction
N cases	38,302	39,135	39,135	38,781	39,135
Before EAP	32.1%	56.0%	23.4%	30.8%	36.6%
After EAP	15.1%	30.5%	15.3%	22.5%	16.3%
% Change	-53%	-45%	-35%	-27%	-55%
Chi-square	2,985.20	3,244.83	5,139.53	4,686.38	2,707.97
p value	< .0001	< .0001	< .0001	< .0001	< .0001

Table E.2 Statistical details of change in total number of WOS outcomes at problem level for EAP cases.

Time Period:	Total Number of Problems on Five WOS Measures							Average
	0	1	2	3	4	5	Total	Mean (SD)
Before EAP	0%	24%	33%	24%	13%	3%	100%	2.42 (1.15)
Life Satisfaction	42%	29%	16%	9%	4%	1%	100%	1.07 (1.19)
Statistical Test: repeated measures ANOVA F = 56,749, d.f. = 1, 38301. np2 = .597 (very large effect)								

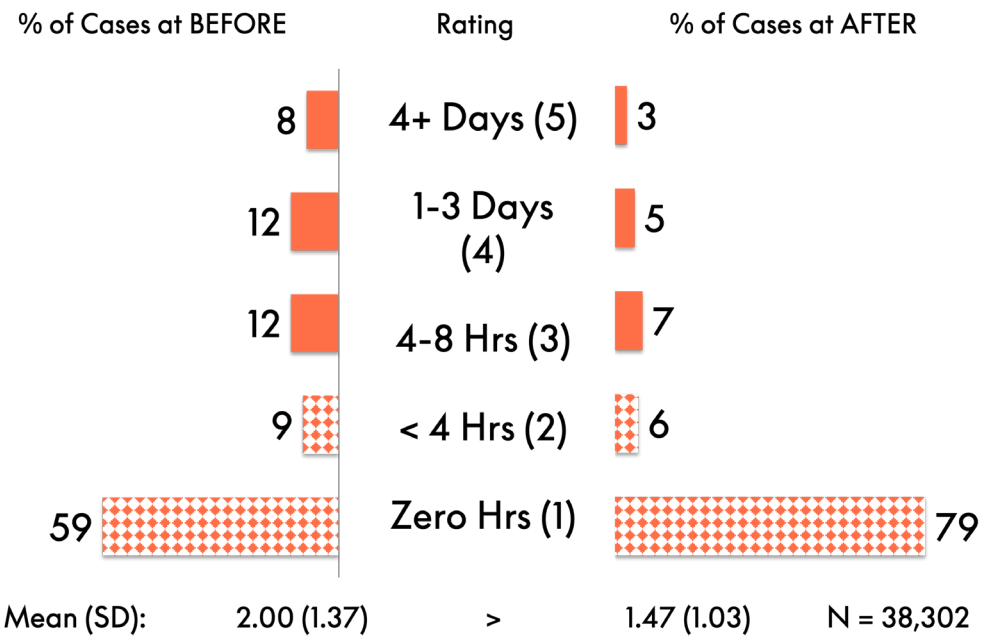
Tests of longitudinal change in WOS outcomes as 1-5 ratings

The most sensitive statistical test of change over time is provided when using the full range of the response scales for each of the WOS items (i.e., scores of 1, 2, 3, 4 or 5). See details for each WOS measure at before and after EAP use in Figure Set E.1. Tests of change over time were conducted using a statistical procedure called repeated measures analysis of variance and the 1-5 ratings collected at before and after counseling for the four WOS measures using the agree/disagree rating format. The specific absenteeism hours reported for each case were re-scored into five categories. This was done to have the same 1-5 range as the other WOS measures. The longitudinal test details are presented in Table E.3.

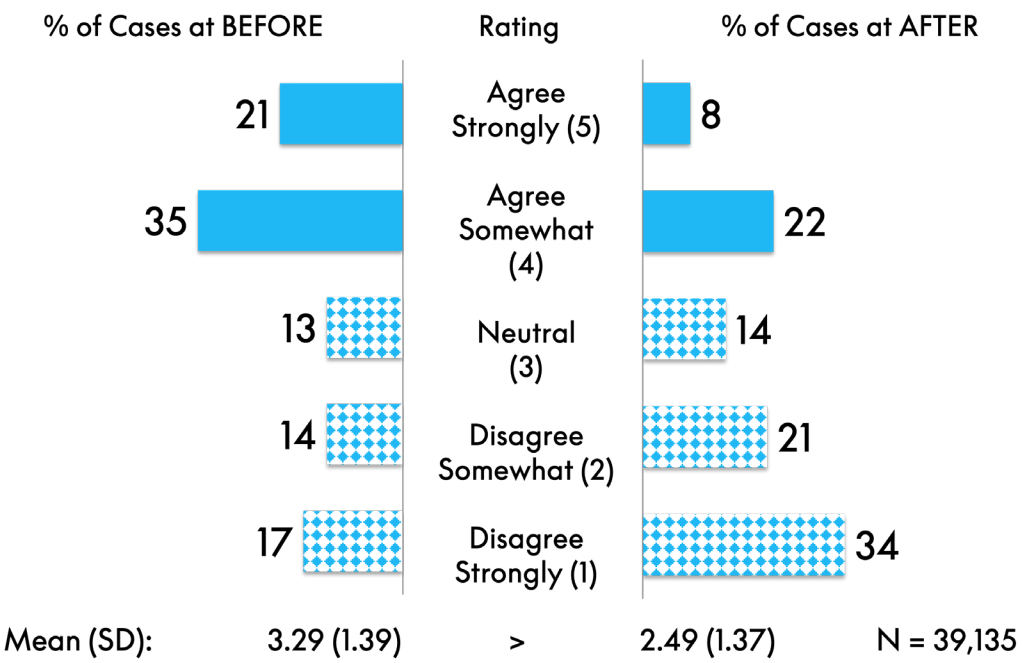
All five WOS measures had improvement over time that was highly significant (all $p < .001$). Yet, how much improvement occurred varied substantially between the different outcomes. The most improvement was found for work presenteeism and life satisfaction, which both had large size statistical effects (η_p^2 = .21 and .18). When tested using the 1-5 categories of increasing amounts of work absence hours, the change over time for absenteeism was a medium size statistical effect (η_p^2 = .12). Work engagement and workplace distress both had the least change and had small effect sizes (η_p^2 = .04 and .03).

Figure Set E.1 Distributions of 1 -5 ratings on WOS outcomes at before and after counseling.

Work Absenteeism: Distribution of Cases on 1-5

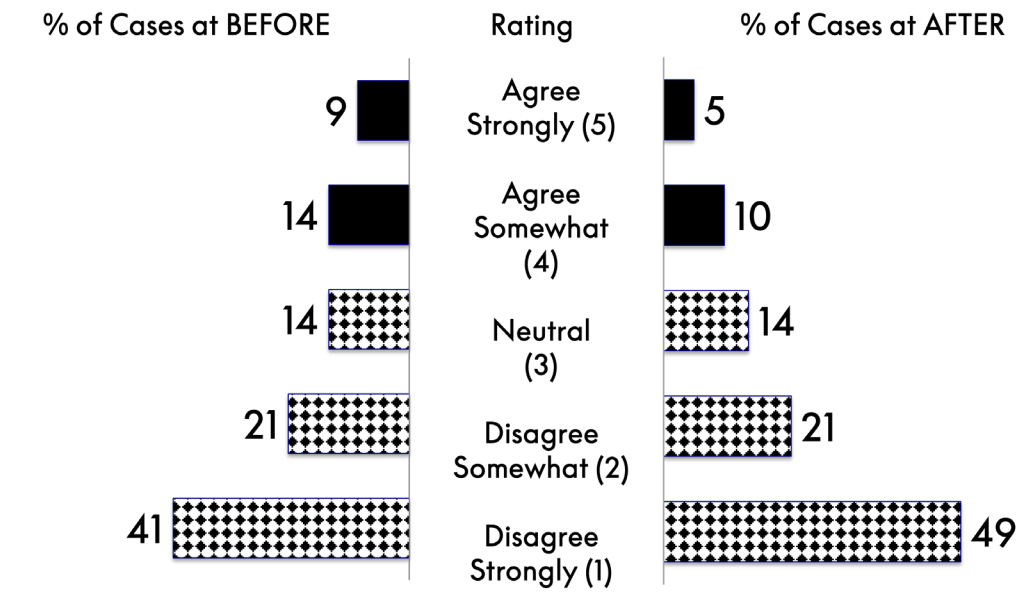


Work Presenteeism: Distribution of Cases on 1-5 Rating



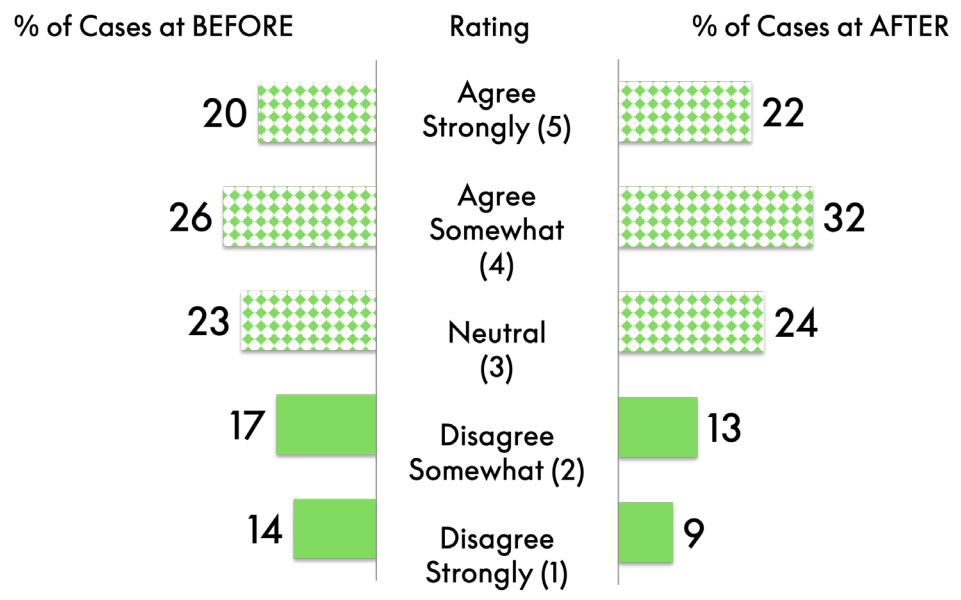
Mean (SD): 3.29 (1.39) > 2.49 (1.37) N = 39,135

Workplace Distress: Distribution of Cases on 1-5 Rating



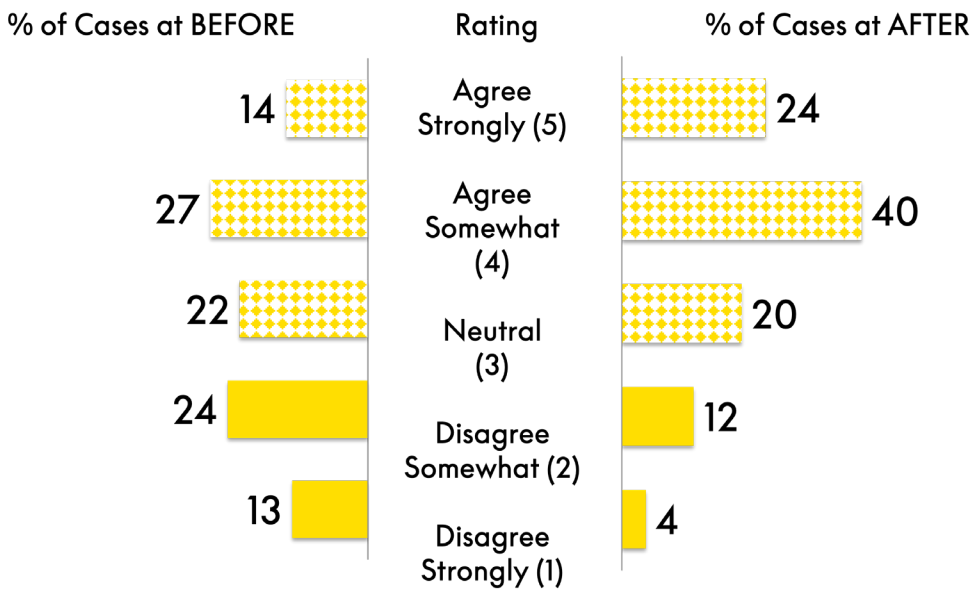
Mean (SD): 2.29 (1.37) > 2.01 (1.22) N = 39,135

Work Engagement: Distribution of Cases on 1-5 Rating



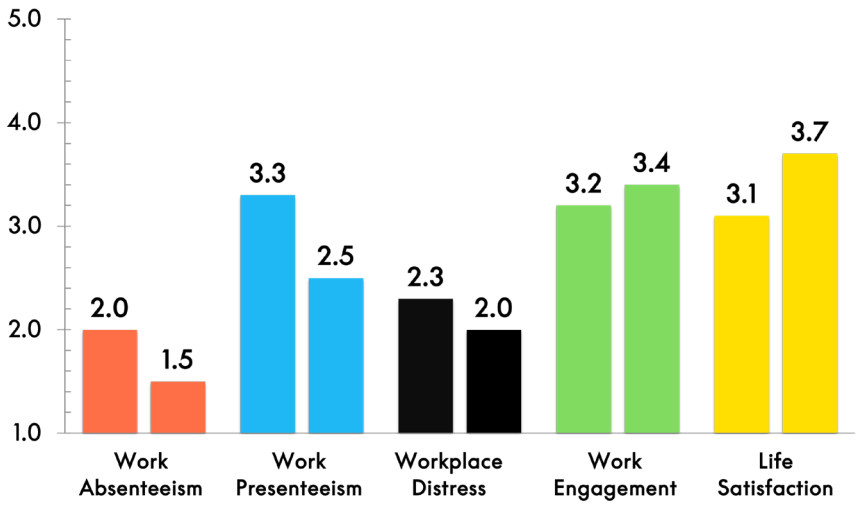
Mean (SD): 3.22 (1.33) > 3.43 (1.23) N = 38,781

Life Satisfaction: Distribution of Cases on 1-5 Rating



Mean (SD): 3.06 (1.25) > 3.67 (1.10) N = 39,135

Average Scores (Rated 1-5) on WOS Measures at BEFORE and AFTER Use of EAP Counseling



WOS SuperScore. The results found that the WOS SuperScore had significant improvement over time. This indicates that counseling from EAPs was generally effective in reducing the initial deficits across this set of five work related outcomes. The statistical effect size for the composite score was large and, as expected, the greatest of the six WOS measures tested.

Table E.3 Statistical details for improvement over time on WOS outcomes rated 1-5 scale.

	Work Absenteeism Hours	Work Productivity Rating 0-10	Work Presenteeism Hours	Lost Productive Time Combined Hours
Items	1	1	1	2
Range	0-159	0-10	0-159	0-159
Better If:	lower	higher	lower	lower
N cases	38,301	38,301	38,301	38,301
Before EAP	6.83 (15.81)	6.24 (3.83)	56.79 (38.13)	63.62 (41.22)
After EAP	2.93 (11.00)	7.69 (2.38)	35.66 (36.65)	38.58 (39.26)
% Change	-57%	23%	-37%	-39%
F test	2,066.16	10,525.05	9,239.35	11,818.28
p value	< .0001	< .0001	< .0001	< .0001
Statistical Effect Sizes				
η_p^2	.051 small	.216 large	.194 large	.236 large

Note: η_p^2 = partial eta squared measure of statistical effect size.

Table E.4 Tests of context factors on WOS SuperScore levels at Pre and Post EAP use.

	Average levels at Pre and Post Between-subjects test		
Context factor	Sample size *n*	F value	Statistical effect size η_p^2
Year	38,300	26.85	.008 trivial
EAP specific provider (45 vendors or programs)	38,300	28.27	.031 small
EAP delivery model (vendor – hybrid – internal)	38,300	10.73	.001 trivial
Country (USA – China – NZ – other global)	38,300	223.56	.017 small
Region of USA	22,822	27.31	.004 trivial
Industry of employer (5 types)	23,441	74.51	.013 small
Age of client (18 or older)	12,611	15.34	.005 trivial
Sex of client	14,016	35.01	.002 trivial
Referral source	9,436	45.26	.010 small
Clinical issue (5 types)	22,456	80.53	.014 small
Clinical sessions (1 to 6)	2,229	3.56	.008 trivial
Clinical duration period (5 groups)	5,556	3.39	.002 trivial

Note: All F test values were significant at $p < .05$. η_p^2 of .01 to .05 considered small.

Table E.5 Tests of context factors on WOS SuperScore improvement from Pre to Post use.

	Improvement from Pre to Post Withing-subjects test		
Context factor	Sample size *n*	Interaction effect F value	Statistical effect size η_p^2
Year	38,300	17.07	.005 trivial
EAP specific provider (45 vendors or programs)	38,300	34.86	**.039 small**
EAP delivery model (vendor – hybrid – internal)	38,300	161.62	.008 trivial
Country (USA – China – NZ – other global)	38,300	47.92	.004 trivial
Region of USA	22,822	117.42	**.015 small**
Industry of employer (5 types)	23,441	32.44	.006 trivial
Age of client (18 or older)	12,611	8.11	.003 trivial
Sex of client	14,016	2.89	.002 trivial
Referral source	9,436	3.65	.001 trivial
Clinical issue (5 types)	22,456	20.17	.004 trivial
Clinical sessions (1 to 6)	2,229	4.20	.009 trivial
Clinical duration period (5 groups)	5,556	6.30	.005 trivial

Note: All F test values were significant at $p < .05$. η_p^2 of .01 to .05 considered small.

Appendix F: Norms for Lost Productive Time (LPT) among healthy employees

Normative LPT for the healthy non-distressed employee

How can one reasonably judge the levels of lost productive time (LPT) at Pre and Post among EAP users? It would be helpful to have a comparison for the number of LPT hours for the typical employee who is not distressed. This comparison number was accomplished from conducting a review of the literature. We identified 10 research studies that had high-quality data from either a national random sample of employees or from a survey of employees at a large employer. The study had to measure work absenteeism (specific number of hours of absence) and work productivity level (all using a published and validated item of job performance; the HPQ). These studies were presented in last year's WOS annual report (Table 5.3 on page 39, 2020 WOS report).

Normative Absenteeism

Eight of the ten of the studies reviewed had results for the hours of health-related absence from work. Note that this absence time excluded vacation days and other kinds of work absence unrelated to health and not every study reviewed used the same specific question about work absence. Most of the studies collected survey data from samples individual employees asking about the period of the past two weeks or the past month, while two other studies asked large samples of employers for their all employee average amount of absence for the past year. The results were standardized for this report into hours of absence per month per employee. The results ranged from 1.76 hours to 5.03 hours, with an average 3.38 hours of absence per month as normal.

- 3.4 hours per month of health-related absence from work

Normative Presenteeism

Researchers from the World Health Organization (WHO) and Harvard University developed the Health and Work Performance Questionnaire (HPQ). The HPQ has been scientifically validated in several studies with the ratings being a close match with company records of work absence and productivity (Kessler et al., 2003). The results on the HPQ question rated on a 0-10 scale in each study was converted to a 0-100% scale by multiplying the result by 10. The results of six different studies ranged from 80% to 89%, with an average employee productivity level was 85%. The finding also indicates the typical employee is not productive during the other 15% of the time worked. Thus, presenteeism experienced for 15% of work time is normal.

- 15 percent of the time worked per month is unproductive

Normative LPT

These literature review findings were used to calculate the hours of LPT for a typical employee. Starting with a standard work month period of 160 hours, the 3.38 hours of health related absence is deducted. The resulting hours worked was applied to the presenteeism average of 15% of time worked being unproductive to yield 23.49 hours of lost productivity while working. Adding up the absenteeism and presenteeism hours resulted in 26.87 hours in total LPT for the typical healthy employee. This amount represents 17% of the 160 total hours of scheduled work time.

- 27 hours per month is unproductive (combined missed work and lost productivity while at work)

Appendix G: Tests of Pandemic Impact on Use and Outcomes

Table G.1 Demographic characteristics for EAP counseling cases: By pandemic period.

Measure	Pre-Pandemic	Pandemic	Test statistics
Country where EAP case lives	n = 5,583	n = 6,280	
	%	%	During pandemic less cases from US and more from New Zealand and China.
United States	76.8	56.4	
New Zealand	9.9	**26.4**	
China	5.6	**11.6**	
Hong Kong	0	2.1	
Brazil	0	1.9	
Japan	5.0	0.8	
Dubai	2.6	0	
Others (8 countries)	0.1	0.8	
Region with United States where EAP case lives	n = 3,597	n = 2,900	During pandemic more cases from West and Hawaii (depends on which EAPs shared data) and less from other regions
	%	%	
North East	**37.1**	13.6	
South	**15.4**	4.2	
Midwest	**29.2**	20.9	
West	18.3	**52.0**	
Pacific (Hawaii)		**9.3**	
EAP Delivery Model	n = 5,583	n = 6,280	During pandemic more cases from external vendors and less from hybrid and very few from internal EAPs
	%	%	
External vendor	55.3	**82.4**	
Hybrid program at one employer	**26.5**	16.0	
Internal staff program at one employer	**18.2**	1.6	
CLIENT DEMOGRAPHICS			
Client Age	1,482	2,330	Chi-square = 8.27, d.f. = 4, N = 3,812, p = .07, η_p^2 < .001 trivial
	%	%	
20 – 29 years	24.9	24.5	
30 – 39 years	34.1	38.3	
40 – 49 years	21.7	20.4	
50 – 59 years	14.0	12.0	
60 or more years	5.4	4.9	F = 5.58, d.f. = 1,3,810, p = .012, η_p^2 = .001 trivial
	Average	Average	
Mean - years	38.87	37.99	
SD	(11.78)	(10.82)	
Interpretation: Significant but trivial size statistical effect. Similar in age. Data Source: 3 EAP vendors.			Chi-square = 2.42, d.f. = 1, N = 2,168 p = .12, η_p^2 = < .001 trivial
Client Sex	1,060	1,108	
	%	%	
Female	64.4	67.6	
Male	35.6	32.4	
Interpretation: Not significant and trivial size statistical effect. Similar in sex mix. -Data Source: 3 EAPs vendors.			

Note: All tests required the same EAP provider source having data (minimum 50 cases) in both pandemic groups.

Table G.2 Clinical use characteristics for EAP counseling cases: By pandemic period.

Measure	Pre-Pandemic	Pandemic	Test statistics
Referral into EAP	n = 1,452	n = 711	
	%	%	Chi-square = 71.60, d.f. = 3, N = 2,163 p < .001, η_p^2 = .033 small
Self	83.6	**95.6**	
Supervisor	**8.3**	2.7	
Family	1.3	0.8	
Other	**6.8**	0.6	
Total	100.0	100.0	
Interpretation: Significant and small size statistical effect. Pandemic more self and less all three other types. Data source: 7 EAPs.			
Presenting Clinical Issue	n = 2,043	n = 3,921	Chi-square = 9.72, d.f. = 3, N = 5,964 p = .02 η_p^2 = .002 trivial
	%	%	
Behavioral health	n = 3,597	n = 2,900	
Relationships	37.3	37.4	
Work	18.4	17.3	
Personal life	19.6	22.7	
Total	100.0	100.0	
Duration of Clinical Treatment (sessions)	n = 633	n = 144	F = 1.23, d.f. = 1, 764, p = .25 ns η_p^2 = .002 trivial
Mean	3.27	3.42	
SD	(1.46)	(1.46)	
Interpretation: Non-significant and trivial statistical effect. Similar number of sessions. Data source: 1 EAP vendor in USA.			
	Average	Average	
Duration of Clinical Treatment (weeks) – exclude outlier cases greater than 6 months open	n = 99	n = 72	F = 0.36, d.f. = 1, 170, p = .55 η_p^2 = .001 trivial
Mean	12.41	12.01	
SD	(4.92)	(3.38)	
Interpretation: Non-significant and trivial size statistical effect. Data source: 1 EAP vendor US.			

Note: All tests required the same EAP provider source having data (minimum 50 cases) in both pandemic groups.

Table G.3 Statistical details of change over time in problem status on WOS outcome measures: By pandemic specific clinical issue compared to all other issues (non-pandemic) in pandemic year period.

Group	Work Absent	Work Present	Workplace Distress	Work Engage	Life Satis.	LPT Hours past month
Other non-pandemic clinical issues – during pandemic year						
N cases	3158	3179	3179	3179	3179	3179
Before EAP	36.4%	61.6%	28.6%	32.1%	35.5%	67.45 (40.58)
After EAP	17.6%	38.0%	20.2%	25.1%	17.9%	43.83 (39.52)
% Change	-52%	-38%	-29%	-22%	-50%	-35%
Pandemic specific clinical issues – during pandemic year						
N cases	67	67	67	67	67	67
Before EAP	29.9%	65.7%	37.3%	44.8%	35.8%	69.45 (39.98)
After EAP	20.9%	38.8%	29.9%	40.3%	22.4%	46.37 (42.09)
% Change	-30%	-31%	-20%	-10%	-37%	-33%
Statistical Tests Between-subjects: groups compared overall level of outcome						
F test	0.14	0.26	4.61	9.34	0.34	0.32
p value	.71 ns	.61 ns	.03	.002	.57 ns	.57 ns
Effect size η_p^2	< .001 trivial	< .001 trivial	.001 trivial	< .003 trivial	< .001 trivial	< .001 trivial
Within-subjects: groups compared change in outcome from pre to post						
F test	2.43	0.26	0.02	0.15	0.38	0.01
p value	.12 ns	.61 ns	.88 ns	.70 ns	54 ns	.93 ns
Effect size η_p^2	.001 trivial	< .001 trivial	< .001 trivial	.003 trivial	< .001 trivial	< .001 trivial

Note: ns = not significant

Table G.4 Statistical details of change over time in problem status on WOS outcome measures: By pandemic periods for all cases for all issue topics.

Group	Work Absent	Work Present	Workplace Distress	Work Engage	Life Satis.	LPT Hours past month
Pre-pandemic year 2019						
N cases	4129	4289	4289	4289	4289	4129
Before EAP	32.9%	55.5%	23.7%	31.5%	32.9%	72.25 (38.69)
After EAP	17.4%	35.6%	17.8%	23.1%	16.5%	52.04 (41.57)
% Change	-47%	-36%	-25%	-27%	-50%	-28%
Pandemic year 2020/21						
N cases	4471	4505	4505	4505	4505	4471
Before EAP	37.5%	62.0%	28.8%	32.0%	35.2%	64.63 (47.24)
After EAP	19.3%	38.1%	19.8%	24.6%	17.2%	41.85 (42.82)
% Change	-49%	-39%	-31%	-23%	-51%	-35%
Statistical Tests Between-subjects: groups compared overall level of outcome						
F test	18.50	29.79	23.37	1.65	4.37	7.97
p value	< .001	< .001	< .001	.20 ns	.04	< .001
Effect size η_p^2	.002 trivial	.003 trivial	.003 trivial	< .001 trivial	< .001 trivial	.005 trivial
Within-subjects: groups compared change in outcome from pre to post						
F test	6.09	10.44	9.21	9.21	1.72	6.93
p value	.01	.001	.002	.37 ns	.19 ns	< .001
Effect size η_p^2	.001 trivial	.001 trivial	.001 trivial	< .001 trivial	< .001 trivial	.004 trivial

Note: ns = not significant

Table G.5 Statistical details of change over time in problem status on WOS outcome measures: By pandemic periods and modality of counseling treatment delivery for all issue topics.

Group	Work Absent	Work Present	Workplace Distress	Work Engage	Life Satis.	LPT Hours past month
Face to face – Pre-pandemic year 2019						
N cases	1173	1193	1193	1193	1193	1173
Before EAP	39.4%	65.5%	27.6%	35.2%	37.4%	72.25 (38.69)
After EAP	19.5%	44.5%	21.2%	27.5%	17.0%	52.04 (41.57)
% Change	-51%	-32%	-23%	-22%	-55%	-28%
Face to Face – Pandemic year 2020/21						
N cases	4471	4505	4505	4505	4505	4471
Before EAP	37.5%	62.0%	28.8%	32.0%	35.2%	64.63 (47.24)
After EAP	19.3%	38.1%	19.8%	24.6%	17.2%	41.85 (42.82)
% Change	-49%	-39%	-31%	-23%	-51%	-36%
Technology – Pandemic year 2020/21						
N cases	255	259	259	259	259	256
Before EAP	31.4%	53.7%	25.5%	32.4%	32.0%	64.63 (47.24)
After EAP	10.0%	32.8%	15.1%	23.2%	16.2%	41.85 (42.82)
% Change	-68%	-39%	-41%	-28%	-49%	-35%
Statistical Tests Between-subjects: groups compared overall level of outcome						
F test	8.24	13.68	1.61	2.38	1.65	7.97
p value	< .001	< .001	.20 ns	.09 ns	.19 ns	< .001
Effect size η_p^2	.002 trivial	.003 trivial	.003 trivial	< .001 trivial	< .001 trivial	.005 trivial
Within-subjects: groups compared change in outcome from pre to post						
F test	6.47	3.68	1.87	1.08	0.77	6.93
p value	.002	.03	.16 ns	.40 ns	.46 ns	< .001
Effect size η_p^2	.004 trivial	.002 trivial	.001 trivial	< .001 trivial	< .001 trivial	.004 trivial

Note: ns = not significant

Appendix H: Research-validated Measures for Clinical and Work-related Outcomes

Table H.1 Research validated self-report measures for clinical outcomes.

Measure	Original Reference	Citations
PSS – Perceived Stress Scale (10 and 4-item versions)	Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 385-396.	26,706
PHQ-9 – Patient Health Questionnaire (depression symptom screener; 9 items)	Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. Journal of General Internal Medicine, 16(9), 606-613.	24,309
GAD-7 – Generalized Anxiety Disorder (anxiety symptom screener; 7 items)	Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. Archives of Internal Medicine, 166(10), 1092-1097	13,119
PHQ-4 – brief version for both depression and anxiety (4-items)	Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: the PHQ–4. Psychosomatics, 50(6), 613-621.	1,836
CAGE – alcohol abuse screener tool 4 items)	Ewing, J. A. (1984). Detecting alcoholism: The CAGE questionnaire. JAMA, 252(14), 1905-1907.	5,683
AUDIT – Alcohol Use Disorders Identification Test (10 and 3-item versions)	Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care. Second edition. (WHO Publication WHO/MSD/MSB/01.6a). Geneva, Switzerland: World Health Organization.items)	9,132
CORE-10 – clinical outcome measures (10 items; from the United Kingdom)	Barkham, M., Bewick, B., Mullin, T., Gilbody, S., Connell, J., Cahill, J., ... & Evans, C. (2013). The CORE-10: A short measure of psychological distress for routine use in the psychological therapies. Counselling and Psychotherapy Research, 13(1), 3-13.	195

Note: Count of citations in Google Scholar as of October 1, 2021.

Table H.2 Research validated self-report measures for work outcomes

Measure	Primary Reference	Citations
UWES – Utrecht Work Engagement Scale (17, 9, and 3-item versions)	Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. Journal of Happiness Studies, 3(1), 71-92.	11,467
HPQ – Health and Productivity Questionnaire (Harvard University & World Health Organization; scales for absenteeism, presenteeism and job performance/productivity)	Kessler, R. C., Barber, C., Beck, A., Berglund, P., Cleary, P. D., McKenas, D., ... & Wang, P. (2003). The world health organization health and work performance questionnaire (HPQ). Journal of Occupational and Environmental Medicine, 45(2), 156-174.	1,108
WLQ – Work Limitations Questionnaire (25 items on work presenteeism & 2 items for work absenteeism)	Lerner, D., Amick III, B. C., Rogers, W. H., Malspeis, S., Bungay, K., & Cynn, D. (2001). The work limitations questionnaire. Medical Care, 72-85.	1,025
SPS – Stanford Presenteeism Scale (6 items)	Koopman, C., Pelletier, K. R., Murray, J. F., Sharda, C. E., Berger, M. L., Turpin, R. S., ... & Bendel, T. (2002). Stanford presenteeism scale: health status and employee productivity. Journal of Occupational and Environmental Medicine, 44(1), 14-20.	796
WOS – Workplace Outcome Suite for EAPs (25, 9, and 5 item versions)	Lennox, R. D., Sharar, D., Schmitz, E., & Goehner, D. B. (2010). Development and validation of the chestnut global partners workplace outcome suite. Journal of Workplace Behavioral Health, 25(2), 107-131.	52

Note: Count of citations in Google Scholar as of October 1, 2021.

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