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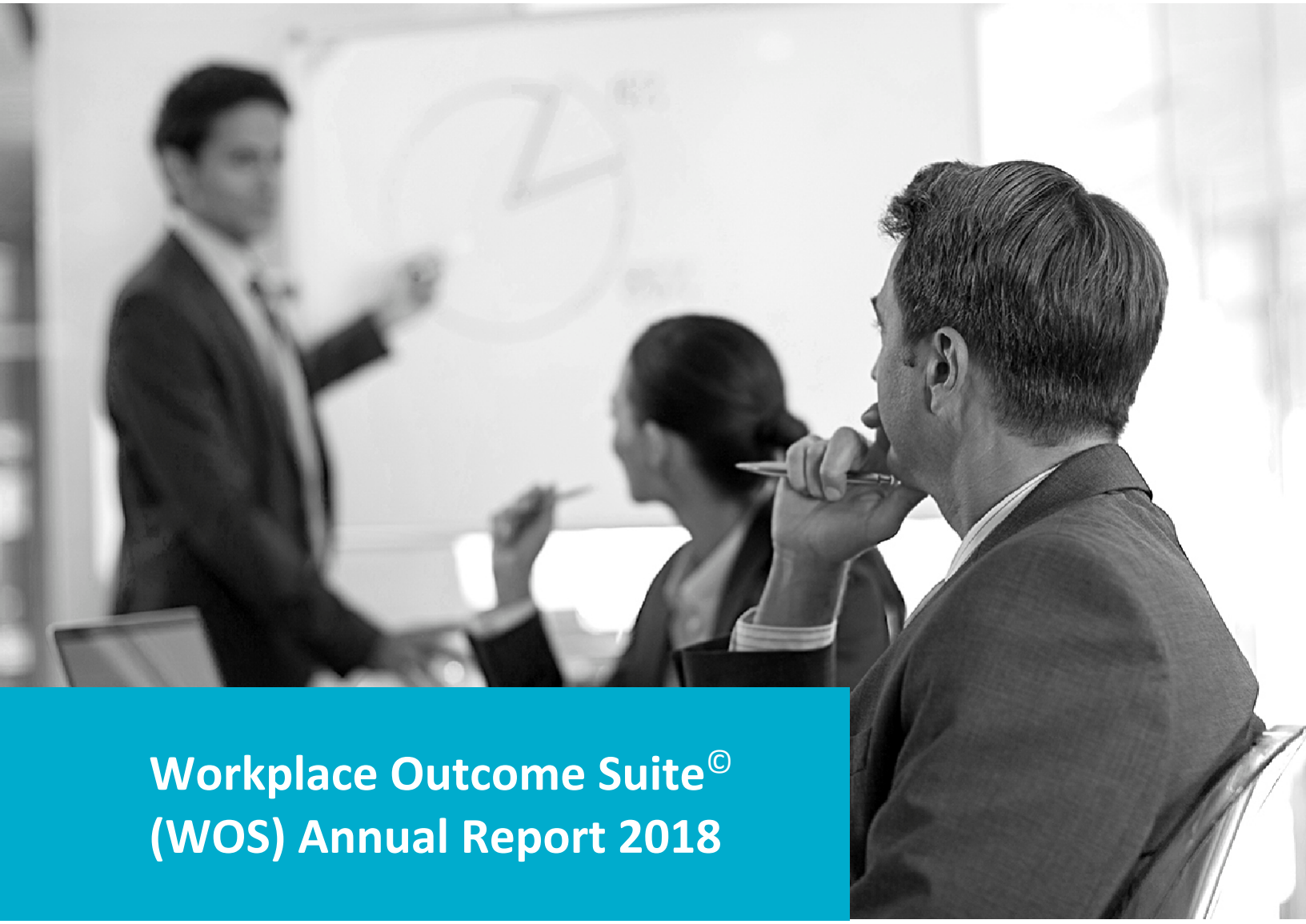

Workplace Outcome Suite© (WOS) Annual Report 2018

Understanding EAP counseling use, longitudinal outcomes and ROI, and profiles of EAPs that collect WOS data

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Past annual reports in the series

2016 WOS Annual Report
Chestnut Global Partners. (2016). *Workplace Outcome Suite© (WOS) Annual Report: EAPs Can and Do Achieve Positive Outcomes*. White Paper (10 pages). Bloomington, IL: Author. Available from: http://chestnutglobalpartners.org/Portals/cgp/Publications/WOS-Annual-Report-2016-06-06.pdf

2017 WOS Annual Report
Chestnut Global Partners. (2017). *Workplace Outcome Suite© (WOS) Annual Report: Comparing Improvement After EAP Counseling for Different Outcomes*. White Paper (46 pages). Bloomington, IL: Author. Available from:
http://www.eapassn.org/Portals/11/Docs/WOS/WOS_AnnualReportFinal2017.pdf?ver=2017-09-15-173501-900

Contributors to this report

The executive leadership team at Chestnut Global Partners (CGP) and the Employee Assistance Professionals Association extend our thanks to those WOS user groups who designed an ongoing EAP evaluation process, collected Pre and Post use data, and submitted their de-identified case-level raw data to CGP. We would also like to acknowledge and thank the following individuals for their contributions to creating this document:

Authors

Mark Attridge, PhD, MA, is President of Attridge Consulting, based in Minneapolis, MN, U.S.A. He was the lead research scientist who created the customized variables and managed the aggregate dataset, conducted the statistical tests, wrote the text, and prepared all of the tables and figures. He also developed the analytical approach for testing change in problem status on WOS outcomes, the measurement advances for the new WOS Work Absenteeism categorical option and the WOS SuperScore, and the logic model for the ROI example.

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Executive summary

The Workplace Outcome Suite is made up of data contributed by multiple employee assistance providers worldwide. The study looks at the utilization and effectiveness of Employee Assistance Programs (EAP) with regards to five specific outcomes: (1) Work Presenteeism (2) Life Satisfaction (3) Work Absenteeism (4) Work Engagement, (5) Workplace Distress, and analyzes the level of each, both before and after intervention through an EAP.

This 2018 report updates Employee Assistance Professionals Association (EAPA) members and other stakeholders in the field of EAP regarding the latest Workplace Outcome Suite data from 24,363 cases. It documents positive results for employee users of employee assistance counseling all over the world. This is the third in a series of annual reports from Chestnut Global Partners, which started in 2016. A total of 28 countries were represented, with 79% from the United States, 15% from China, and 6% from 26 other countries.

Key findings

1. After use of EAP-provided counseling, problem rates were reduced for the five outcomes measured in the study. Thus, EAPs help to reduce the risks associated with workplace problems:
    - Having a "problem" with Work Presenteeism was reduced from 56% to 28% of all cases.
    - Having a "problem" with Life Satisfaction was reduced from 38% to 17% of all cases.
    - Having a "problem" with Work Absenteeism was reduced from 34% to 14% of all cases.
    - Having a "problem" with Work Engagement was reduced from 31% to 21% of all cases.
    - Having a "problem" with Workplace Distress was reduced from 22% to 13% of all cases.
2. Distressed employees spend more than one third of their time at work being unproductive and are off sick one full day per month, on average.
3. Employees struggling with presenteeism are unable to concentrate on their job for more than a third of the total scheduled work time (38 percent) – or about eight total days per month. For context, it is more than twice as much as the typical "healthy" employee. In addition, these employees are also absent from work for an average of 7.36 hours per month. This is about one day of absence in a month.

Profile of EAP counseling participants. Employees of all ages used the EAP. Concerning their sex, about two-thirds of users of EAP counseling were female and one-third were male. About 8 out of every 10 cases were self-referrals, with referrals from a family or other source at 7%, supervisor referrals at 5%, and a mandatory referral from HR or the employer at only 2%. Thus, 98% of these cases were voluntarily using the EAP for counseling. The most common clinical issues were related to mental health (i.e., depression, anxiety) or personal stress (40% of cases), followed by relationship problems of marriage or family life (29%), work and occupational issues (18%), and alcohol misuse and drug problems (4%).

Profile of employers who offer EAP counseling. Most of cases (62%) were from external vendors who sell EAP to many employers, with another 20% from the Employer Hybrid model and 18% from the Internal Staff model program (mostly from employers in health care industry). Employers in four different industries were represented: health care (40%), manufacturing (25%), government (23%), and technology (12%).

New Absenteeism 1-5 rating measure. Even though 58% of EAP cases had no absence from work in the month before use of counseling, the number of hours per month of absence across all cases was 7.36 hours at Pre and 3.86 hours at Post. But the wide range on count of absence hours (0 to 160) does not match the response scale for the other WOS measures. We created a new way to score – and ask about – hours of Work Absenteeism. The goal was to create a new measure scored on a 1-5 response scale. Thus, Absenteeism has the same statistical range as the other four WOS outcomes. The distribution of hours of absence in the master dataset at the start of the case was broken into five segments and the hours defining the cut-offs for each segment were then used to establish the hours of absence for each new category.

New SuperScore combines all five WOS outcomes. Having a new version for work absenteeism with a score that ranged from 1-5 (like the other four outcomes) allowed us to create a composite metric representing all five WOS outcomes as a single score. Higher scores (range 5-25) on this scale – called the WOS SuperScore – indicate a better outcome. This new scale had adequate internal measurement reliability (Before EAP use α = .61; After EAP use α = .67) and test re-test reliability (r = .50) for a scale with only five items.

Improvement after counseling for WOS measures. We compared the change over time from Pre and Post use for the sample averages of the 1 to 5 scores on each measure. Positive results were obtained that were statistically significant at beyond chance levels ($p < .05$) for all five WOS measures but the statistical effect sizes differed by measure. Work presenteeism decreased by 26% and was a large size statistical effect. Life satisfaction was increased by 22% and was a large size statistical effect. The new measure of work absenteeism with 1-5 range decreased by 27% and was a medium size effect. Workplace distress decreased by 14% and was a small size effect. Work engagement increased by 8% and was a small size effect. The combined SuperScore measure had a 16% level of improvement and was a large size effect. Thus, the individual focused outcomes on the WOS improved more than the outcomes reflecting larger workplace and organizational influences (distress and engagement).

Improvement in WOS outcomes and context factors. The positive impact of brief counseling on workplace outcomes was found to be quite consistent across different types of client (age, sex, and country), clinical (sources of referral into the EAP and type of clinical issue) and employer factors (industry and EAP delivery models of external vendor, internal staff or hybrid). There also was almost no difference in the degree of improvement in WOS outcomes for results from different years of data collection from 2010 to 2018. These factors did not affect how much the WOS outcomes improved over time in 38 of 48 tests. No differences at all were found for the eight context factors with the WOS measures of Workplace Distress, Work Engagement and Life Satisfaction. The 10 context findings that were obtained with Work Presenteeism, Work Absenteeism and the SuperScore, were all had very small effect sizes and thus were of little practical consequence. Overall, finding so few and such small differences across all of these factors is important to demonstrate the industry-wide general effectiveness of EAP counseling.

ROI for EAP counseling. The results from the WOS norms in this report for reductions in absenteeism and presenteeism were used to estimate the return on investment (ROI) for employee assistance programs. The amount of lost productive time (LPT) experienced during the month before EAP use was projected over a three-month episode of distress. Changes in the outcomes revealed that almost 5 days of productive work time were restored per case due to the use of EAP counseling. This effect is after removing the part of the

improvement that was likely caused by other naturally occuring influences other than EAP counseling. This result due to the EAP was worth an estimated **$1,731 USD per case**. Most of this savings amount came from the outcome of work presenteeism with only a small part from work absenteeism (79% vs. 21%, respectively). With typical annual levels of program use and cost, the ROI for EAP counseling was conservatively estimated
at **$3.37:$1**.

Why EAPs collect WOS data. To better understand the kinds of EAPs who provided WOS data, 13 providers and large employers are also profiled for how and why they collect WOS data from their counseling cases. These include a mix of vendor and internal delivery models from the United States and four other countries. Knowing how leading EAPs collect WOS data can inform best practices for practical aspects of outcomes for other EAPs.

Special edition of international journal of health and productivity on WOS

Interested readers are also directed to a Special Edition of the *International Journal of Health and Productivity* published in December of 2018, Volume 10, Number 2. This peer-review scientific journal is published in association with the Institute for Health and Productivity Management (IHPM). This issue has five articles that all focus on aspects of the Workplace Outcome Suite. The first article is based on the aggregated dataset featured in this WOS 2018 Annual Report.

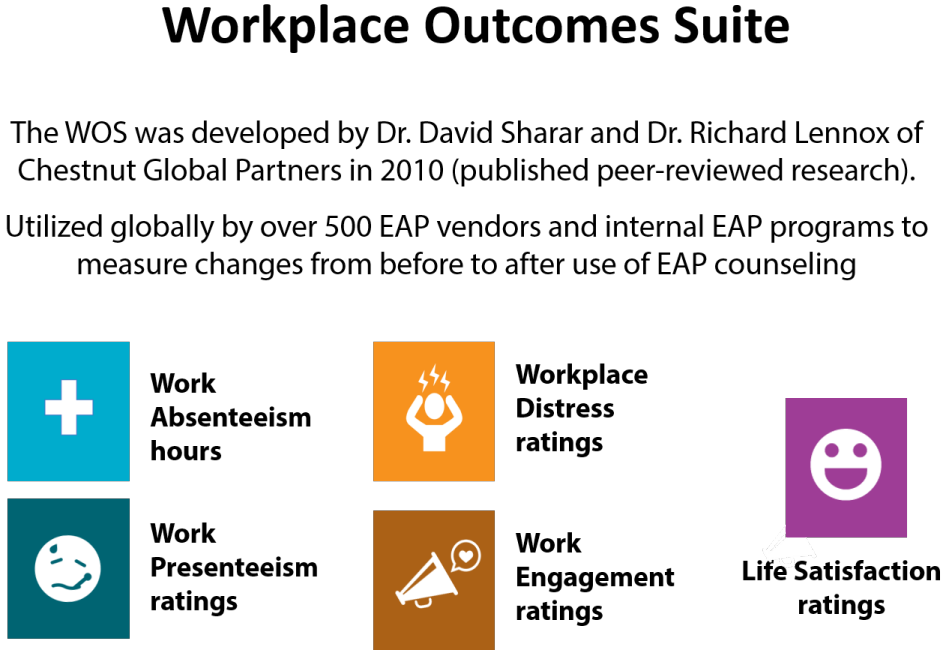
ARTICLE 1 **EAP Works: Global Results from 24,363 Counseling Cases with Pre-Post Data on the Workplace Outcome Suite© (WOS)** Mark Attridge, PhD, MA David Sharar, PhD Gregory DeLapp, MHS, CEAP Barbara Veder, MSW, RSW	**ARTICLE 4** **Validation of the 5-item Short Form Version of the Workplace Outcome Suite©** Richard D. Lennox, PhD David Sharar, PhD Eileen Schmitz David B. Goehner, LCSW
ARTICLE 2 **Demonstrating Value: Measuring Outcome & Mitigating Risk: FOH EAP Study Utilizing the Workplace Outcome Suite©** Jeffrey Mintzer, LICSW, CEAP Veronica Y. Morrow, MSW, LCSW-C, CEAP Melissa Tamburo, PhD, LCSW-C David Sharar PhD Patricia Herlihy PhD, RN	**ARTICLE 5** **Measuring Coaching Effectiveness: Validation of the Workplace Outcome Suite© for Coaching** Richard D. Lennox, PhD David Sharar, PhD Francine Miller
ARTICLE 3 **Development and Validation of a Critical Incident Outcome Measure** Richard D. Lennox PhD David Sharar, PhD Patricia A. Herlihy, PhD, RN Matthew Mollenhauer, MS	IHPM and CGP are grateful for the following sponsors of the Special Edition: • *Corporate Counseling Services* • *LifeWorks by Morneau Shepell* • *PAS – Personal Assistance Services* • *R3 Continuum* • *wayForward*

A no-cost download is available here: http://www.ihpm.org/pdf/IJHP_V10N2_2018.pdf

Introduction

What is the Workplace Outcome Suite?

The Workplace Outcome Suite (WOS) is an easy-to-administer tool developed by Chestnut Global Partners (CGP) Division of Commercial Science. It uses a short, precise, and easy-to-administer survey that collects EAP specific outcome data both before (pre – at start of the counseling) and after (post – usually after three months) EAP services. Thus, the WOS is a measure of change that examines five key aspects of workplace functioning: *Work Absenteeism, Work Presenteeism, Work Engagement, Workplace Distress, and Life Satisfaction*. The WOS is the only publicly available, free instrument that has been psychometrically validated and tested for use in EAP settings. In 2018, more than **600** EAPs had requested use of the WOS. However, only a small portion of these (about 30 EAPs) voluntarily submit their data to CGP in order for this pooled report to be created.



What are the items on the WOS-5?

The single items for each WOS outcome area are listed below.

- **Work Absenteeism** (measures the hours absent due to a personal problem taking the employee away from work). *"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."*

- **Work Presenteeism** (measures decreases in productivity even though the employee is not absent per se but not working at his or her optimum due to unresolved personal problems). *"My personal problems kept me from concentrating on my work."*

- **Workplace Distress** (examines the degree of anxiety or stress at work). *"I dread going in to work."*

- **Work Engagement** (refers to the extent to which the employee is invested in or passionate about his or her job). *"I am often eager to get to the work site to start the day."*

- **Life Satisfaction** (addresses one's general sense of well-being). *"So far, my life seems to be going very well."*

Work Absenteeism is a fill in the blank response whereas the others are rated on a Likert-type response of: 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neutral*, 4 = *somewhat agree*, and 5 = *strongly agree*.

Why has EAPA endorsed the WOS?

The Employee Assistance Professionals Association (EAPA) has endorsed the WOS as an EAP Best Practice for measuring and evaluating work-related outcomes of services provided by EAPs. With access to thousands of employee assistance professionals across the globe and a deep commitment to the highest standards of practice, EAPA believes the WOS, when properly implemented, can bring clarification to our field's value proposition and need for greater evidence of effectiveness.

What's important or different about this year's report?

1 – More cases in the cumulative dataset for WOS. This year's report features a much larger sample size of 24,363 total cases than prior reports. The data represents pre and post use scores on various versions of the WOS collected since its introduction in 2010 from over 30 different EAP vendors and programs in 29 countries. This adds another 7,571 cases to the pooled dataset from last year's total of 16,792 cases. This is a 45% increase in the number of cases in the data sample from the 2017 report. This dramatic increase demonstrates that greater numbers of EAPs are finding that the WOS can be useful for demonstrating improvement for their EAP counseling clients. We invite more EAPs to please share their WOS data to add to the global benchmarks.

2 – Greater global representation. The larger sample size included over 5,000 cases from countries around the world other than the United States – where the WOS started. This large international sample finally allowed for the opportunity to conduct statistical tests of improvements of WOS scores in different countries. These results comparing certain countries are new in this report. There are now versions of the WOS-5 in the following languages: Greek, Japanese, Mandarin, Portuguese and Spanish.

3 – Focus on WOS-5 brief measures. As almost three-fourths of the sample used the WOS-5 version, this report focuses on the five items that comprise the short version of the WOS using only single items for each outcome. Data from the longer versions of the WOS was still used in the analysis as the single items for each construct are shared on the brief and full-length five item scales. The only challenge was for Absenteeism, which does not have the same single item on the long and short versions. New to this report is an alternative scoring methodology for the five-item Absenteeism version. The hours from three of the five questions on the long version were retained and summed into a new single score representing the three kinds of absence that are specified in the instructions for the single item measure.

4 – Problem status and EAP as risk management. We repeat the Problem Status analytical approach first introduced in last year's annual report as an alternative procedure for coding the case-level WOS data

and for analyzing the results for change over time. This method asks, for each WOS outcome area, how many employees (as a percentage of all cases) have problems when first seeking counseling and how many remain having problems at the follow-up? The difference in these two percentages indicates how many cases had improved and no longer had a "problem" with missing work, with work engagement, and so on.

5 – New 1-5 category version of absenteeism. We also created a new way to score – and ask about – hours of Work Absenteeism. The goal was to create a new measure scored on a 1-5 response scale. Thus, Absenteeism would have the same statistical range as the other four WOS outcomes. The actual full distribution of hours of absence in the master dataset at the start of the case was broken into only five segments and the hours defining the cut-offs for each segment were then used to establish the hours of absence for each new category. Using a 1-5 simple rating also may reduce the number of instances of missing data on the WOS when some people fail to fill in the item asking for a specific number of hours.

6 – New composite measure: WOS "SuperScore". The advance of a score for Work Absenteeism with the same 1-5 range as the other four WOS measures allowed us, for the first time, to create a summary score representing all five outcomes in a single composite metric. This new "SuperScore" allowed us to determine the larger potential impact of EAP counseling across the set of five outcomes. The result was that EAP counseling had a significant and large size effect on improving workplace outcomes overall for employees. Importantly, this 16% average improvement was found consistently across many different contexts of EAP use.

7 – Statistical effect sizes. To consider the clinical and practical application of the findings we emphasize the statistical effect sizes for all results. Effect sizes allow for a fair and direct comparison of the magnitude of findings. This added level of interpretation is critical when using an extremely large sample size that creates the undesirable situation where even a tiny difference in Pre and Post scores can be declared "statistically significant" at beyond chance levels (i.e., $p < .05$), even when the practical significance of such a small difference is questionable. The *partial eta squared* effect (η_p^2) can range from 0 to more than 1.00, with levels of: small (.01 to .05); medium (.06 to .13); and large (.14 or greater); effect sizes of less than .01 are considered very small and thus of little practical meaning.

8 – Exploring moderating factors of user context. The typical user of EAP counseling in this study sample was a 38-year-old female, living in the United States, who referred herself into the EAP, seeking help for a mental health or stress issue, and who also worked for a manufacturing company that had an external vendor to provide the EAP services. Analyses are presented that replicate the findings from the 2017 Annual Report on testing the levels of change from before to after use of EAP counseling for cases in various subgroups based on client demographic, clinical, and employer contextual factors. New to this year's report is the added factor of the country where the client lives (USA vs. China vs. other countries) and year of WOS data collection.

9 – ROI for EAP counseling. We present a methodology for calculating the workplace cost savings enjoyed by employers based on the global average changes found for the WOS outcomes of Work Absenteeism and Presenteeism. These outcomes are combined into hours of lost productive time (LPT) at work per case. The results for brief counseling from the EAP is contrasted against a three-month period of continued initial level of distress if the case had gone untreated.

10 – Profile of EAPs that collect WOS data. The final part of the report offers something new in profiling 13 different EAPs that collect WOS data. What kinds of EAPs collect WOS data? What are the operational practices used to collect the WOS data? How are the results shared with EAP customers? Has

the EAP presented or published their WOS outcome findings? The answers provide examples of best practices in collecting longitudinal outcomes data for counseling cases from various kinds of EAPs. These EAPs considered having their own data and a positive workplace outcomes story as something important and valued by their employer customers.

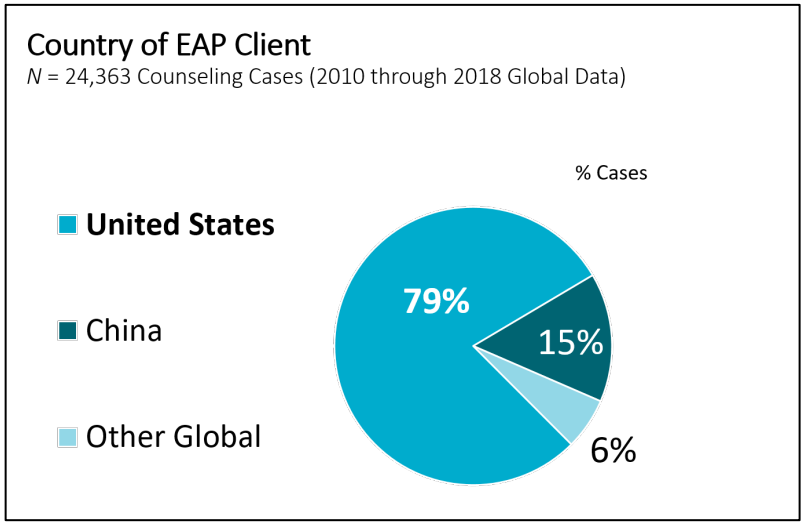
Section 2 – The context of EAP counseling use

Who uses EAP counseling and why and how is it provided? This section profiles the EAP user experience based on eight context factors. This data offers a descriptive profile of how EAP counseling is provided – at least among the convenience sample of vendors, employers, and consortiums that have shared this context data with Chestnut Global Partners over the past nine years. The data in this WOS Annual Report offers a useful picture of who uses counseling, why it was used, and in what context it was provided. Only the first two context factors had data representing all of the cases in the full sample while the other factors reflect a smaller sub-set of the sample ranging from 24% to 43% of all cases.

2.1 Context factor 1: geographic location by country of where the client lives

Every case in the sample was able to be coded individually for the country where the client lived at the time of their EAP use. Most were determined by the location of the EAP vendor while others were determined at the case level from data coding provided by large global employers that had employees located in multiple countries. A total of 28 different countries were represented. Other cases were merely coded as "Not in the USA". The mix of how many cases were from different countries was quite skewed. The vast majority of cases were from the United States (79% of the total cases). The second most common country was China (with 15% of the total cases) and 99% of these cases were from one external EAP vendor – Chestnut Global Partners China. The remaining 6% of the study sample was from 26 other countries. These are all listed in Table A.2 in Appendix 1. For purposes of conducting analyses, the country variable was re-coded into just three groups, based on frequency in the total sample, of: USA, China and "Other Global" (i.e., all countries other than USA or China). This distribution is shown in Figure 2.1.

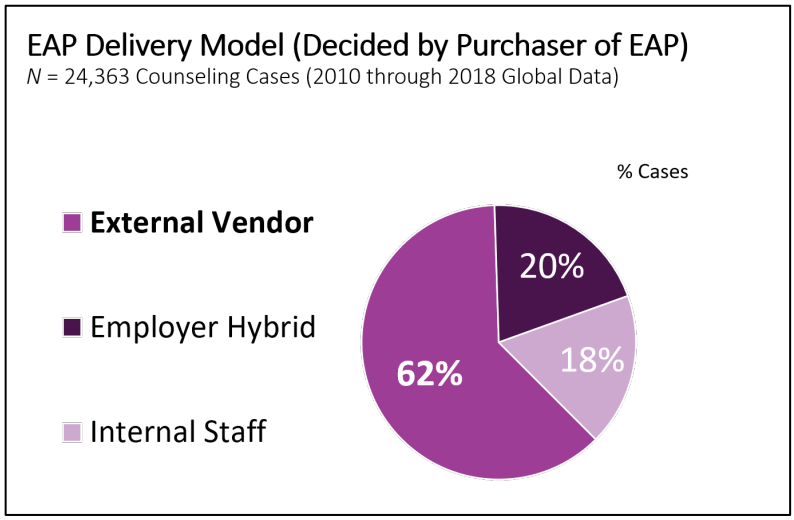
Figure 2.1. Profile of country of EAP Client



2.2 Context factor 2: EAP delivery model

The type of EAP delivery model was determined by the study authors for all cases based on the EAP provider or employer. This variable was coded for all cases. Most of cases (62%) were from External Vendors – those providers who sell EAP services to more than one customer (employer organizations). The remaining cases were represented fairly evenly into the Employer Hybrid model (20%; mix of some internal staff or managers who provide EAP services but also with one or more external vendor partners) or the Internal Staff model program (18%; an organization that has full-time EAP staff without an external vendor).

Figure 2.2. Profile of EAP delivery model



As the full sample had data on both Country and EAP Delivery Model, these two factors were compared (see Table 2.1). The US and the Other Global groups both had a mix of all three models, whereas the External Vendor model was 99% of cases from China. Over half of the cases in the United States had the External Vendor model. The Employer Hybrid model most was most popular for the Other Global country cases.

Table 2.1. Profile of country of EAP client by EAP delivery model

	Country of EAP Client		
EAP Delivery Model	United States	China	Other Global
Count of Cases	*1,923*	*3,615*	*1,514*
External Vendor	57%	**99%**	39%
Employer Hybrid	21%	1%	47%
Internal Staff	22%	0%	15%
Total	100%	100%	100%
Statistical Test	Medium size effect $\eta_p^2 = .09$		

2.3 Context factor 3: industry of the employer

A total sample of 10,461 cases had the industry for their employer identified (43% of the total). Within this sub-sample, there was a mix of cases represented for each kind of industry, with Health Care having the largest share at 40%. Manufacturing and Government each had around a fourth of the cases. Technology was the least represented, accounting for 12% of all cases. See Figure 2.3. Industry had a varied mix within the United States but was somewhat unknown in other countries due mostly to missing data. The Health Care industry accounted for almost all of the cases from the Internal Staff model, whereas Government and Manufacturing industries accounted for most of the cases from the Employer Hybrid model (see Table 2.2).

Figure 2.3. Profile of industry of employer sponsor of EAP

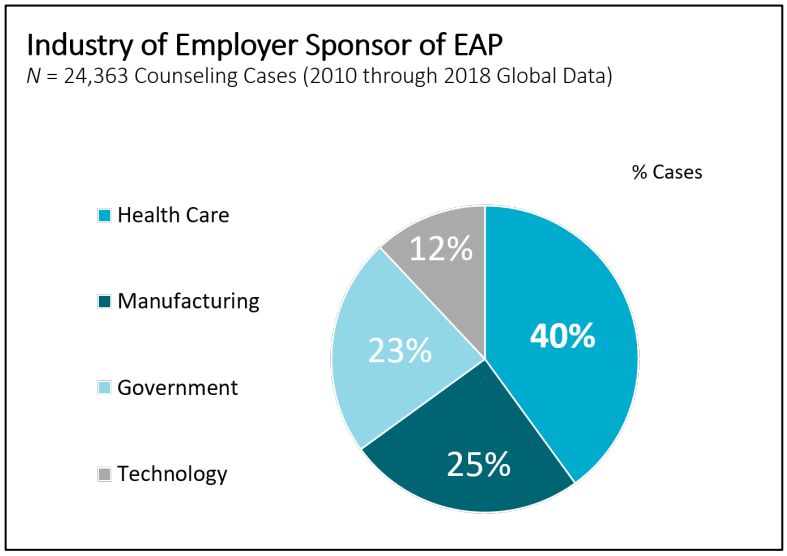


Table 2.2. Profile of industry - by country of EAP client and by EAP delivery model

	Country of EAP Client				EAP Delivery Model		
Industry Type	United States	China	Other Global		External Vendor	Employer Hybrid	Internal Staff
Count of Cases	*9,490*	*44*	*927*		*2,223*	*4,558*	*3,860*
Health Care	**44%**	0	0		11%	10%	**94%**
Manufacturing	17%	**100%**	**100%**		24%	40%	6%
Government	26%	0	0		8%	**50%**	0
Technology	13%	0	0		**56%**	0	0
Total	100%	100%	100%		100%	100%	100%
Statistical Test	Large size effect $\eta_p^2 = .31$				Very large size effect $\eta_p^2 = .63$		

Note: China and Other Global groups excludes most of cases in this profile of industry of each case. External vendor model excludes most of cases that did not have data for industry of each case.

2.4 Context factor 4: age of the EAP client

A total sample of 8,810 cases had their age identified (36% of the total sample). The age of the EAP counseling client was provided by 10 different EAPs – 8 from United States and 2 with global status. Age ranged from 17 to 72 years old, with an average of 38 years old. Within this sub-sample, there was a mix of cases in each of the age groups – see Figure 2.4. However, the two youngest age groups accounted for about two-thirds of all of the users with age. As shown in Table 2.3, age was similar between the US and Other Global countries but was much lower for China. Age was also lower for cases in the External Vendor model than the other models.

Figure 2.4. Profile of age of EAP client

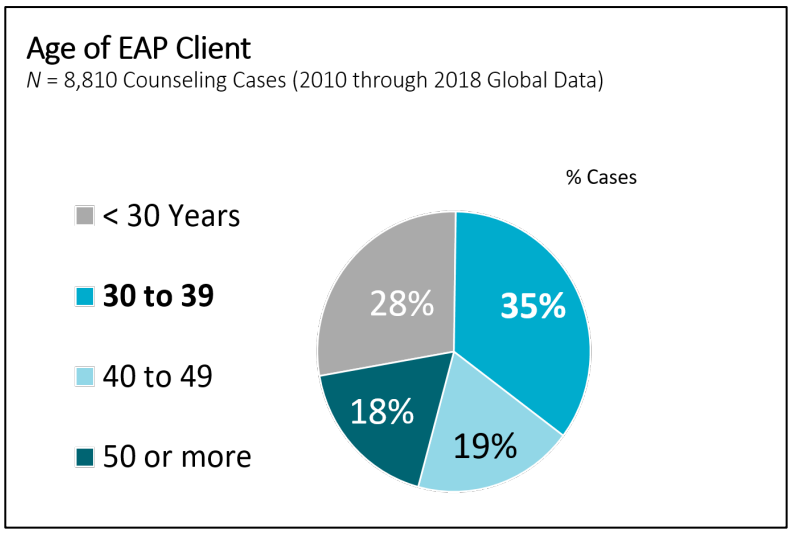


Table 2.3. Profile of age - by country of EAP client and by EAP delivery model

	Country of EAP Client				EAP Delivery Model		
Age of Client	United States	China	Other Global		External Vendor	Employer Hybrid	Internal Staff
Count of Cases	*5,189*	*3,552*	*69*		*6,606*	*350*	*2,063*
Average Years	42.4	30.1	38.4		36.0	42.3	43.3
Age < 30 years	16%	47%	20%		33%	14%	15%
Age 30 – 39 years	29%	44%	64%		**38%**	30%	26%
Age 40 – 49 years	27%	8%	16%		16%	30%	27%
Age 50 years or older	29%	1%	-		13%	27%	32%
Total	100%	100%	100%		100%	100%	100%
Statistical Test	Large size effect $\eta_p^2 = .24$				Medium size effect $\eta_p^2 = .07$		

Note: There was a small positive correlation of age and absenteeism hours (r = .11*). This means that older clients tended to report slightly more absence hours during the month before use of EAP than younger clients.

2.5 Context factor 5: sex of the EAP client

A total sample of 9,219 cases had their sex identified. The sex of the user of EAP counseling was provided by 11 different EAPs – 9 from United States and 2 with global status. Thus, about 38% of the total study sample had data on the sex of the client. Within this sub-sample, there were about twice as many women as men (see Figure 2.5). Women accounted for both a majority of EAP cases in each country and for each kind of EAP delivery model (see Table 2.4).

Figure 2.5. Profile of sex of EAP client

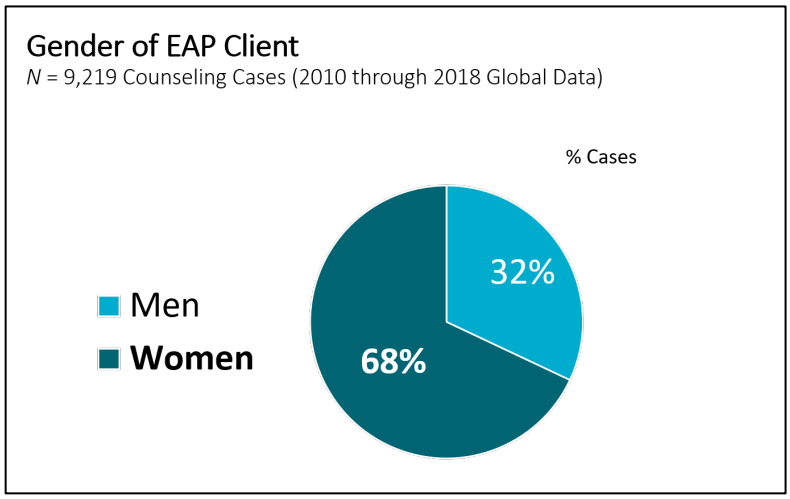


Table 2.4. Profile of sex of client by country of EAP client and by EAP delivery model

	Country of EAP Client				EAP Delivery Model		
Sex of the Client	United States	China	Other Global		External Vendor	Employer Hybrid	Internal Staff
Count of Cases	*9,219*	*3,600*	*70*		*2,929*	*759*	*2,063*
Men	32%	33%	23%		34%	19%	29%
Women	**68%**	**66%**	**77%**		**66%**	**81%**	**71%**
Total	100%	100%	100%		100%	100%	100%
Statistical Test	No difference				Trivial size effect $\eta_p^2 < .01$		

2.6 Context factor 6: referral source into the EAP

A total sample of 5,751 cases had the source of their referral into the EAP identified. The source of who made the referral into the EAP for counseling was provided by 13 different EAPs – 12 from United States and 1 with global status. Thus, about 24% of the total study sample had data on referral source of the client. Within this sub-sample, the vast majority of cases were self-referrals - at 86% of all cases. Next was a referral from a family member or other sources at 7%. Referral from a supervisor at work was only 5% and a mandatory referral from HR or the employer was just 2% (see Figure 2.6). The source of referral was similar in each country and mostly similar for each of the EAP delivery models (see Table 2.5). However, a small size effect showed that the Internal Staff EAPs had about twice as many referrals from Family and from Work sources than the other two delivery models. This finding may reflect the relatively greater rapport of the local EAP staff with managers compared to more external relationships and EAP account management approaches of vendor models.

Figure 2.6. Profile of referral source of EAP client

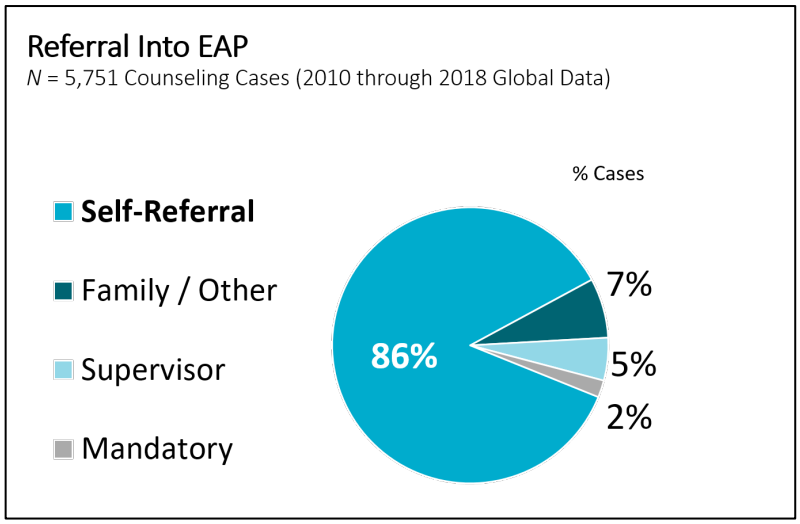


Table 2.5. Profile of referral by country of EAP client and by EAP delivery model

	Country of EAP Client				EAP Delivery Model		
Referral Type	United States	China	Other Global		External Vendor	Employer Hybrid	Internal Staff
Count of Cases	*5,582*	*0*	*169*		*2,929*	*759*	*2,063*
Self-Referral	**86%**	na	**85%**		**89%**	**96%**	**78%**
Family or Other	7%	na	5%		6%	1%	11%
Supervisor or HR	7%	na	10%		5%	3%	11%
Total	100%		100%		100%	100%	100%
Statistical Test	No difference				Small size effect $\eta_p^2 = .03$		

2.7 Context factor 7: presenting concern / clinical issue

A total sample of 7,428 cases had their issue identified (30% of all cases). Data on type of presenting concern or clinical issue for each EAP case was provided by 15 different EAPs – 13 from United States and 2 with global status. Within this sub-sample, the most common issue was related to mental health (i.e., depression, anxiety) or personal stress, with 40% of cases. Followed by relationship problems of marriage or family life (29%), then work problems and occupational issues (18%), and finally alcohol misuse and drug problems (only 4%). See Figure 2.7 below. The mix of different clinical issues was similar in each country (China was excluded due to missing data) and mostly similar for EAP delivery models. Internal Staff EAPs had a slightly higher proportion of cases with work problems than the other two delivery models (see Table 2.6).

Figure 2.7. Profile of presenting concern of EAP client

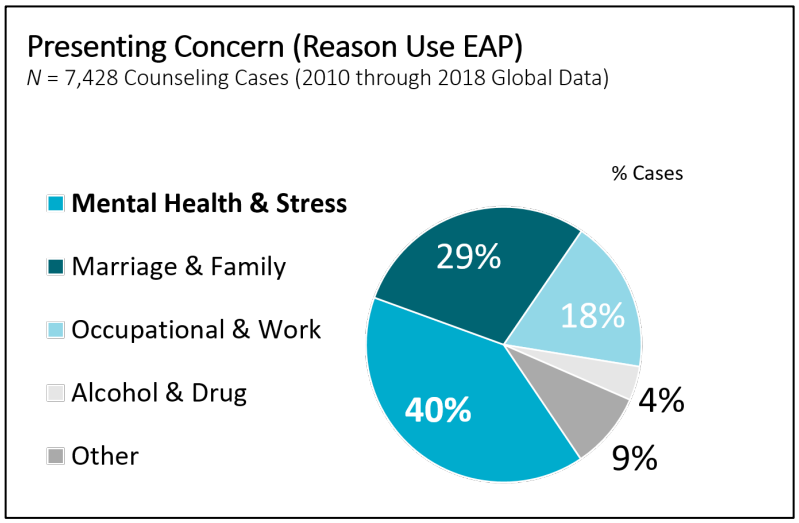


Table 2.6. Profile of presenting concern by country of EAP client and by EAP delivery model

	Country of EAP Client				EAP Delivery Model		
Presenting Concern	United States	China	Other Global		External Vendor	Employer Hybrid	Internal Staff
Count of Cases	*7,194*	*0*	*234*		*3,867*	*1,393*	*2,168*
Mental Health & Stress	**41%**	na	29%		**41%**	**45%**	**36%**
Marital & Family	29%	na	**37%**		30%	25%	30%
Work	17%	na	22%		15%	14%	25%
Alcohol & Drug	4%	na	1%		4%	4%	3%
Other Issues	9%	na	10%		10%	11%	6%
Total	100%		100%		100%	100%	100%
Statistical Test	Trivial size effect $\eta_p^2 < .01$				Small size effect $\eta_p^2 = .01$		

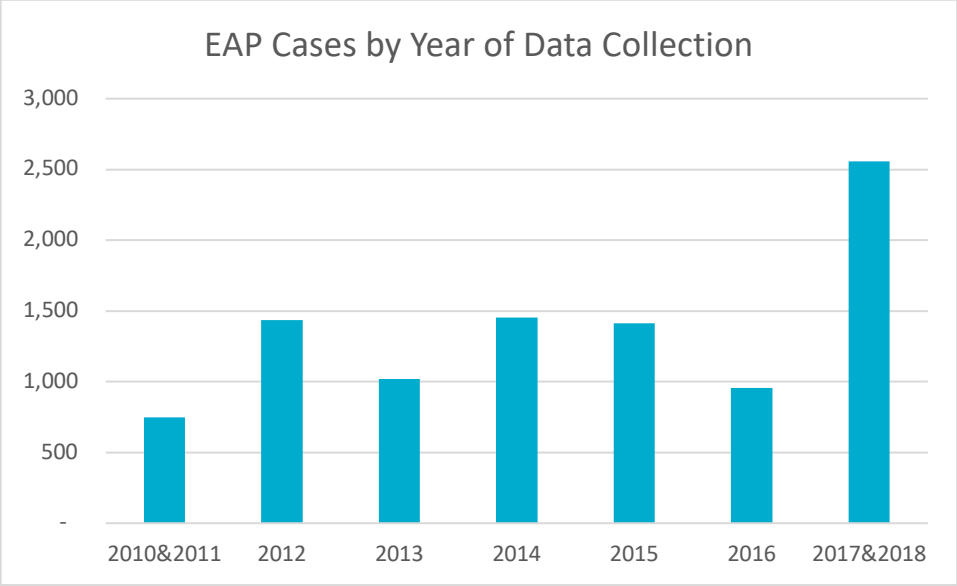
2.8 Context factor 8: year of data collection

A total sample of 9,588 cases had the year of the data collection specified for each case (39% of all cases). The years ranged from 2010 when the WOS was first released to early 2018. Counts of cases in each year are listed in Table 2.7. For purposes of comparisons between the years, data from 2010 and 2011 were combined into one group (*n* = 750) and the data from 2017 and 2018 were combined into another group (*n* = 2,555) – see Figure 2.8.

Table 2.7. Count of cases by year of data collection

Year	*Frequency*	*Percentage*
2010	105	1
2011	645	7
2012	1,437	15
2013	1,021	11
2014	1,455	15
2015	1,413	15
2016	957	10
2017	2,468	26
2018	87	1
Total	**9,588**	**100%**

Figure 2.8. Count of cases by year of data collection



2.9 Key facts about context factors of EAP counseling

This section profiled the EAP user experience on context factors related to the demographics of the client, the nature of the clinical experience and the employer sponsor of the EAP. The typical EAP case in this global data set was a 38 year old female, who was a self-referral into an external vendor of EAP services who was seeking help from a counselor for a mental health concern.

- The mix of cases in the study from different countries was skewed with 79% from the United States, 15% from China, and 6% of the study sample from 26 other countries.

- Most of cases (62%) were from employers with external EAP vendors, with 20% from the Employer Hybrid model and 18% from the Internal Staff model of employee assistance programs.

- Employers in four different industries were represented: health care (40%); manufacturing (25%); government (23%); and technology (12%). Manufacturing was mostly a hybrid delivery model and the health care industry was mostly the internal staff delivery model.

- Employees of all ages used the EAP. The average EAP client was 38 years old.

- About twice as many females as males used the EAP.

- About 8 out of 10 cases were self-referrals, with family or other sources at 7%, supervisor at 5% and a mandatory referral from HR or the employer only at 2%.

- The most common clinical issue (reason for using the EAP) was related to mental health (i.e., depression or anxiety) or personal stress (40% of cases), followed by relationship problems of marriage or family life (29%), work and occupational issues (18%), and alcohol misuse and drug problems (4%).

- Overall, these case-level user factors tended to be similar across EAPs in different countries and different models of EAP delivery.

- Year of data collection had roughly about the same number of cases each year, other than the first two years (which had the fewest cases) and the most recent year (which had about twice as many cases as previous years).

Section 3 – Advances in measurement: Work Absenteeism & SuperScore

3.1 What is Work Absenteeism?

Broadly defined, absenteeism is when an employee does not show for scheduled work time (Johns, 2010). This could be missing an entire work shift or also coming in late to work or leaving work earlier than planned. Holidays or vacation days are generally not relevant to Absenteeism as these are usually scheduled days off. Absenteeism from work for health-related reasons accounts for a very small part of the average employee's monthly time. Several studies have found only about 2 to 3 hours per month as the typical amount for absenteeism in the United States (see Attridge, 2016, for a review of four national survey studies). A full-time workweek is 40 hours and with four weeks in a month, the total work month is 160 hours of scheduled work. Thus, typical health-related absence accounts for less than 2% of time.

3.2 How is Work Absenteeism measured on the WOS?

On the WOS, Work Absenteeism is measured in two ways: the original five-item version and the single-item version from the brief WOS-5. These are both presented below. For both measures, any cases with more than 160 hours of Work Absenteeism were excluded from the study sample as outliers with too extreme a level of missed work (i.e., likely not at 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 range for absence hours was restricted from 0 to 160 hours.

Figure 3.1. WOS items for measuring Work Absenteeism

Absenteeism - WOS Items

Instructions for items 1-5 **Please report for the period of the past thirty (30) days the total number of hours your personal problems:**		
ABSENTEEISM	1.	Caused you to miss work altogether.
	2.	Made you late for work.
	3.	Caused you to take off early.
	4.	Pulled you away from your normal work location.
	5.	Required you to be on the phone, e-mail, or internet while at work.

Response: fill in number of hours: _____

Single Item: *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.* _____

Exploratory analyses conducted on approximately one-fourth of the sample with data on the original five-item Absenteeism measure (*n* = 6,295 EAP users) revealed an interesting pattern of results for the amount of absence at baseline before starting EAP counseling. The first item, *causing the employee to miss work altogether,* had the highest amount of absence of the five items on the original scale at 7.39 hours and this amount accounted for more than two-thirds (69%) of the total hours of absence on the 5-item scale. The next item: *arriving late for work* had an average of 0.50 hours. The third item: *taking off early from wor*k had an average of 0.85 hours. The fourth item: *being pulled away from normal work location* had an average of 0.72 hours. Finally, the last item: *being on the phone, e-mail or Internet while at work because of the EAP concern* had an average of 1.19 hours. Also important is that for every one of these five items, the vast **majority of cases reported zero hours absent** (i.e., 73%, 90%, 85%, 87%, and 80%, respectively). Thus, absenteeism was affecting only a small sub-group of these employees.

The single-item for Absenteeism on the WOS-5 brief scale at baseline before EAP use had an average number of hours of absence in the past month of 6.80 hours (*SD* = 16.80), based on the subgroup of 17,578 EAP cases from the total study sample. Note that when asked with five questions, the average missed work time in the past month was greater by about 4 hours than when asked with a single question (see Table 3.1).

Table 3.1. Work absenteeism hours in past month before use of EAP on versions of WOS measures

Measure	N cases paired data	Pre EAP Use
		Mean (SD)
5-item on Original WOS-25-item Scale	629	12.62 (24.05)
5-item on Revised WOS-9-item Scale	5,847	10.57 (22.69)
5-item on either 9 or 25 version	6,476	**10.77** (22.83)
3-items from full version to match instructions for single item WOS-5	6,356	**8.93** (20.97)
1-item on Brief WOS-5	17,578	**6.80** (16.80)
Adjusted measure (based on 3-item or 1-item version depending on case source)	24,363	**7.36** (17.90)

3.3 Creating a pooled sample measure of Work Absenteeism hours

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 new strategy was devised to use all of the cases in the pooled data even when different subgroups had data from the original full Work Absenteeism scale and others in the sample had data from the single-item measure of Work Absenteeism. We decided to take only the data from the first three items of the full five-item version of Absenteeism. This was done because these three items conceptually match the instructions for the single item on the brief WOS-5 for Absenteeism that asks the person to consider absence consisting of missing work altogether, arriving late or taking off early.

In contrast, the other two items on the original Absenteeism scale of types of absence consist of being taken away from the workplace or being on phone, email or Internet while at work. Data for these items were excluded as these kinds of absence are more aligned with the concept of Work Presenteeism than of missing work. When only the first three items from the 5-item scale were summed together, the average number of hours of absence in the past month at baseline changed from 10.77 hours with all five items to 8.93 hours

when based on only three of the same five items. Although conceptually the same, the average of the sum of the three items is still more than 2 hours greater than the single-item version average of 6.80 hours.

When these two measures (i.e., the brief single item and the revised 3-item matching set of items) were both used to provide a count of the work absence hours for everyone in the study sample (*N* = 24,363), the average amount of absence hours at baseline was **7.36 hours**. With a range of 0 to 160 hours, this measure has substantial variability between cases and a standard deviation more than twice as large as the mean score. Such extensive variability on a measure is not appropriate for most statistical tests that examine mean scores.

3.4 A new version of Work Absenteeism with 1-5 response range

On the WOS, Work Absenteeism is measured in hours (range from 0 to 160) and usually has a highly skewed distribution of scores as most of the cases report either zero absence (58% of cases at Pre EAP) or a very small number of hours. This wide range and skewed distribution of scores is very different from the other four WOS dimensions, which are all measured with agree-disagree ratings on a much smaller response option range of only 1-5. These results for the other WOS measures have a more normal bell-shaped distribution of scores across the five rating options with most cases in the middle of 1-5 score options.

From a conceptual perspective, hours of Absenteeism and ratings of agreement on the other four measures is like comparing apples and oranges. However, to more fairly conduct statistical tests using all of the WOS measures and to compare Work Absenteeism results against the other four measures, it was important to standardize the range of the scores across the five measures.

In order to match the 1-5 Likert-type rating scale used for the other four WOS measures and more equally compare the five outcomes to each other, the Absenteeism measure was adapted from the specific hours of work missed (range of 0-160) to a metric with only 5 categories (each with a different number of hours of absence). This was accomplished in three steps.

Step 1: The distribution of Absenteeism hours at the Pre EAP use period (based on the full sample measure described in the above section that used either the WOS-5 single item score or the score from three-item adapted version of the original full scale) was tabulated and sorted from zero to the maximum of 160 hours.

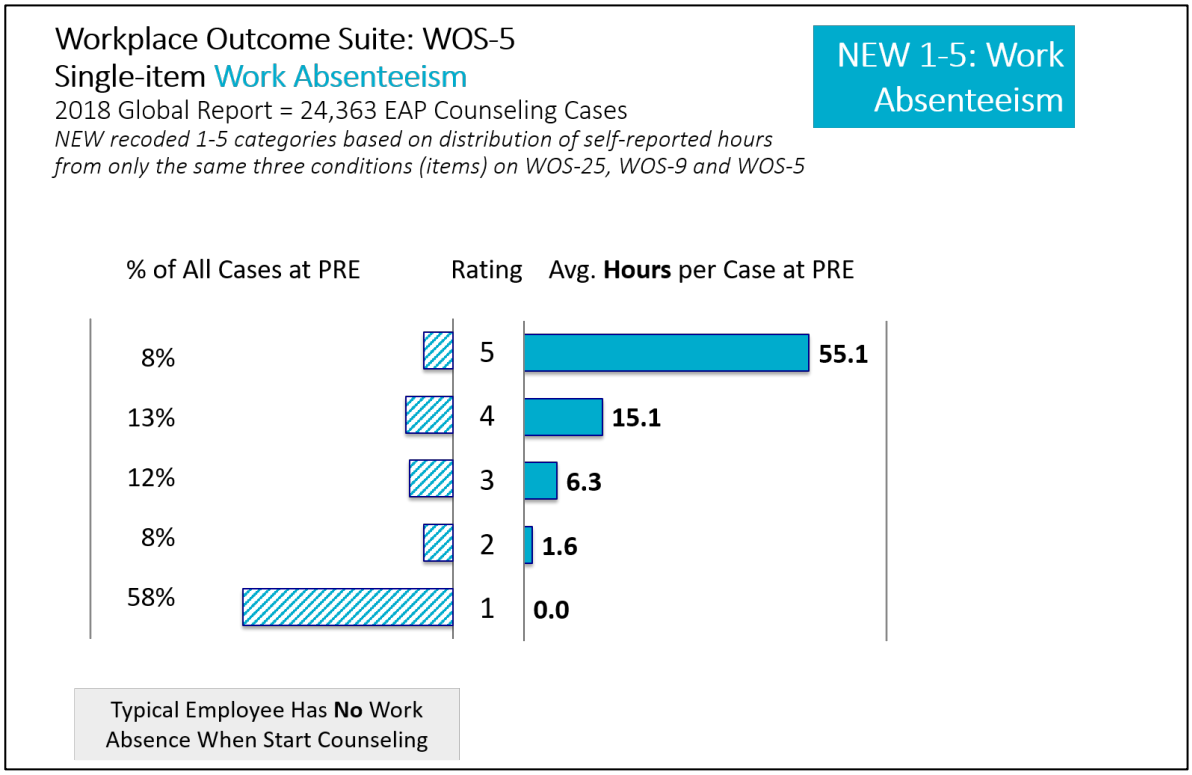
Step 2: The distribution of absence hours was then examined carefully to set the cutoff points needed to break the distribution into five segments to correspond to a 1-5 score range. The first segment was no absence (zero hours) and was the majority of cases in both subsamples. The rest of the distribution that had at least some amount of absence was divided into fourths to evenly balance the remaining cases in the sample into four segments. See Table 3.1 on next page.

Step 3: Each case in the full sample was assigned a new score of 1 to 5 for Absenteeism at Pre use of the EAP. The same cutoff levels were used to assign a new score of 1 to 5 for Absenteeism at Post use.

This new measure represents a simple alternative to the original “fill-in-the-blank” response format that required the person to estimate a specific number of total hours of work absence. This effort was successful in developing a revised measure of Work Absenteeism that met both the criteria of having a score with the same 1- 5 range of the other WOS measures and being a score that was available for all of the cases in the full sample (which included source data pooled into one master file using 25-item, 9-item and 5-item versions of the WOS).

Even though the Work Absenteeism does not use the same Agree – Disagree Likert scale type of rating as the other four WOS measures, it does have the same minimum to maximum range of 1-5 with an ordering from lower to higher and does not have problem of such wide variance and extreme skew as the original method of using hours of time. See Figure 3.2 on next page.

Figure 3.2. Frequency distribution new five levels of Work Absenteeism hours at pre EAP use



3.5 Estimating hours from new 1-5 rating Absenteeism measure

To support potential future use of this new version on how to measure absenteeism, see Table 3.2 that includes modified instructions (adapted from the WOS-5 Absenteeism single-item) and the new definitions of the range of work absence hours for each rating option.

Table 3.2. New version of WOS Work Absenteeism measure with 1-5 rating scale

INSTRUCTIONS: Please select the choice that best represents the amount of time your personal concern caused you to miss work during the past 30 days. Include in the total complete eight-hour workdays and partial workdays when you came in late or left early.				
1	**2**	**3**	**4**	**5**
No Absence (0 hours)	Absent less than half a day (< 4 hours)	Absent Less than a full day (< 8 hours)	Absent from one to three days (8 to 24 hours)	Absent more than three days (25 to 160 hours)

3.6 Estimating hours from new 1-5 rating Absenteeism measure

If this new version is used, however, the specific hours of absence are lost. An alternative to include a follow-up question if the person choses a response other than No absence, that asks the person to fill in a specific number of hours. For conditions where this added step is not of interest, we have created new default number of hours of absence to assign to case for each of the new 1-5 categories. These are derived from calculating the average amount of reported absence hours in the total sample of 24,363 cases within each level (i.e., the mean for the subsample representing each of the five levels of Absenteeism):

- Category 1 = 0 hours
- Category 2 = 1.58 hours
- Category 3 = 6.32 hours
- Category 4 = 15.08 hours
- Category 5 = 55.07 hours

3.7 What is the WOS SuperScore and how is it measured?

Some EAPs that collect WOS data have been interested in having just one composite score to represent the overall set of outcomes. A single score can be simpler way of indexing the impact of EAP counseling across these five kinds of outcomes.

Now with the new 1-5 categorical version for Work Absenteeism (or by re-scoring each case into the same five categories from older raw data of specific hours – see Table 3.2), having a measure of Work Absenteeism with the same response range allows the opportunity to add together the five single-item WOS measures for a new total score with a maximum possible range from a low of 5 to a high of 25.

Work Engagement and Life Satisfaction already are scored such that higher scores indicate a better outcome. Ratings on three of the measures – Work Absenteeism, Work Presenteeism and Workplace Distress – were reverse scored so that higher scores indicate a better outcome.

After the reverse scoring was done, each of the five items were positively correlated with the composite score (average inter-item correlation: Before EAP use $r = .24$; After EAP use $r = .29$). The SuperScore scale also had an acceptable level of internal measurement reliability (Cronbach alpha coefficient: Before EAP use $\alpha = .61$; After EAP use $\alpha = .67$). The test-retest reliability for the SuperScore was demonstrated in a positive and significant correlation between the composite scores at Pre and Post EAP use ($r = .50$, $p < .001$).

Section 4 – Improvement in WOS measures

4.1 Reduction in percentage of EAP cases at "problem" level on WOS outcomes

The Problem Status analytical approach is an alternative procedure for coding the case-level WOS data and for analyzing the results for change over time. This method asks, for each WOS outcome area, how many employees (as a percentage of all cases) have problems when first seeking counseling and how many remain having problems at the follow-up? This metric is simply the percentage of total cases that are at a "problem level" on each of the WOS measures. The meaning embedded in the labels on the response scales was used to determine a more clinically relevant sub-portion of the EA user population who score at a "problem level" on a particular WOS outcome. This approach borrows from the wellness field's emphasis on 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 addressing Risk Management issues for organizations.

Rescoring WOS items into "problem" or "no problem". The WOS data was re-coded for problem level status in the following manner. The two WOS measures that are phrased as unhealthy constructs (Presenteeism and Workplace Distress) were considered to be at a "problem level" when a person either *agreed* or *strongly agreed* with the item (i.e., ratings of 4 or 5). Conversely, the other two WOS measures that are phrased as healthy constructs (Work Engagement and Life Satisfaction) were considered to be at a "problem level" when cases *dis*agreed with the item (i.e., selected either of the options of *disagree* or *strongly disagree* for the ratings of 1 or 2). Finally, for Absenteeism this re-coding process had to be done differently. As the typical employee misses less than half a day of work each month due to health reasons, a criterion of four hours absence per month was established and an EAP user with 4 or more hours of absence was considered a "problem level" of Absenteeism. The WOS scores were re-coded in this manner for all cases in the total sample from the single-item WOS measures and the new 1-5 version of Work Absenteeism.

Results. Having a "problem" with the different WOS outcomes at the start of EAP counseling ranged from 56% to 22%. The most defining problem for employees who used EAP counseling was presenteeism. After use of the counseling, these rates were reduced for all five WOS outcomes. See Figures on the next page. Thus, EAPs help to reduce the risks associated with workplace problems.

Having a "problem" with **Work Presenteeism** was reduced from 56% to 28% of all cases.

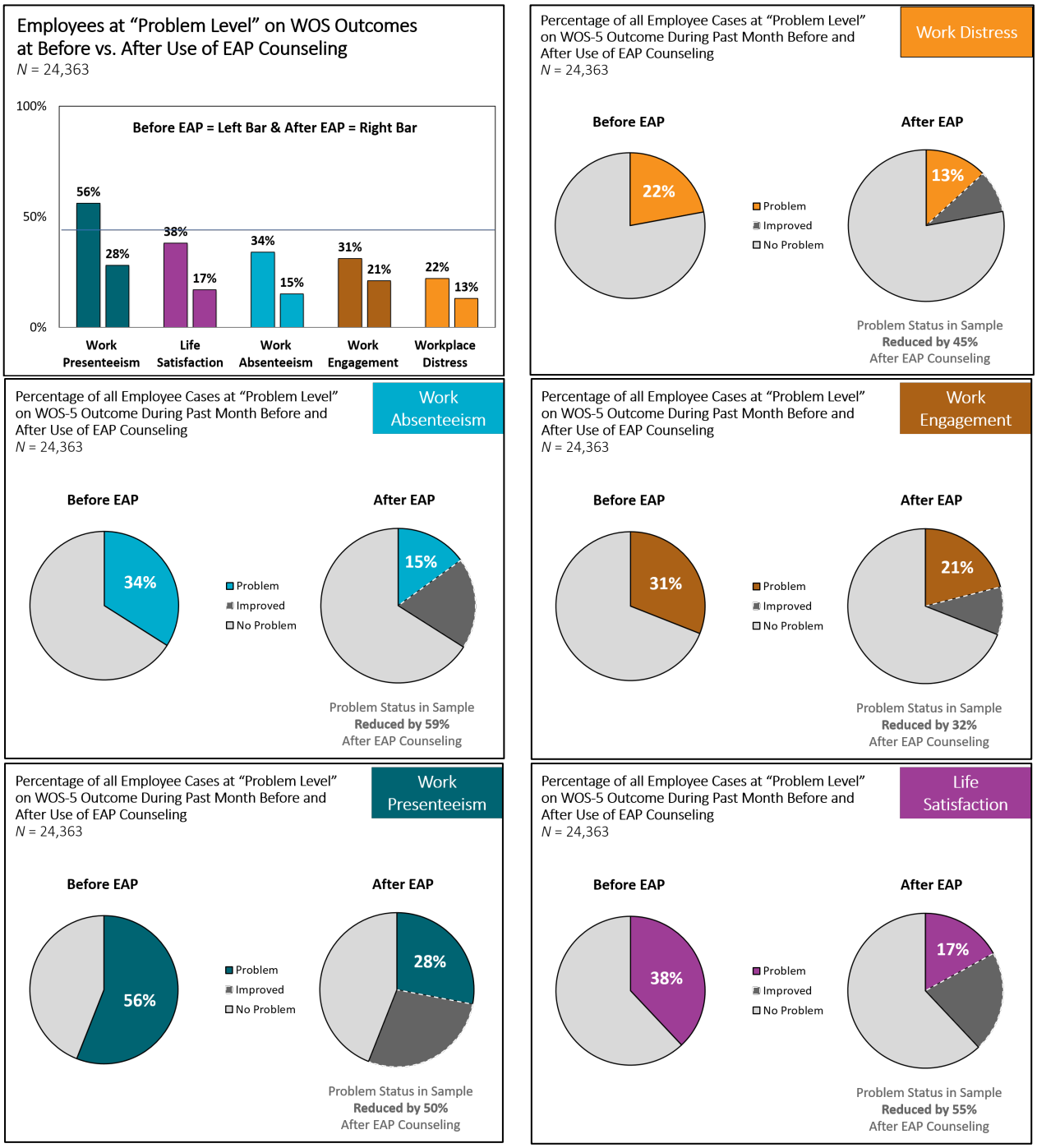
Having a "problem" with **Life Satisfaction** was reduced from 38% to 17% of all cases.

Having a "problem" with **Work Absenteeism** was reduced from 34% to 14% of all cases.

Having a "problem" with **Work Engagement** was reduced from 31% to 21% of all cases.

Having a "problem" with **Workplace Distress** was reduced from 22% to 13% of all cases.

Figure Set 4.1 for change in "problem" status prevalence among sample of EAP users on WOS measures



4.2 Reduction in average scores on WOS outcomes

Each of the WOS measures was tested for the extent of improvement over time by comparing the average scores between Pre and Post use of EAP counseling. See statistical details in Table C.1. in Appendix C. For other tests of change over time using the original 5-item versions of the WOS scales, see Table C.2 in Appendix C.

Work Absenteeism (1-5). Even though most cases (58%) have no absence, the average number of hours across all EAP users was 7.36 hours at Pre use and 3.86 at Post use. That is a net difference of 3.50 hours. This difference represents a 49% reduction in hours of absence per month. When the mean scores on the new 1-5 measure were tested for change over time from Pre to Post, the 27% reduction over time was statistically significant ($p < .001$) and was a medium size effect ($\eta_p^2 = .13$).

For other tests of change over time using the various versions of the WOS Work Absenteeism items, see Table C.3 in Appendix C.

Work Presenteeism (1-5). When the mean scores of this measure were tested for change over time from Pre to Post, the typical case had a 26% reduction in their rating of Presenteeism. This finding was statistically significant ($p < .001$). This change over time was a large size effect ($\eta_p^2 = .24$).

Workplace Distress (1-5). When the mean scores of this measure were tested for change over time from Pre to Post, the typical case had a 14% reduction in Workplace Distress. This finding was statistically significant ($p < .001$). This change over time was a small size effect ($\eta_p^2 = .05$).

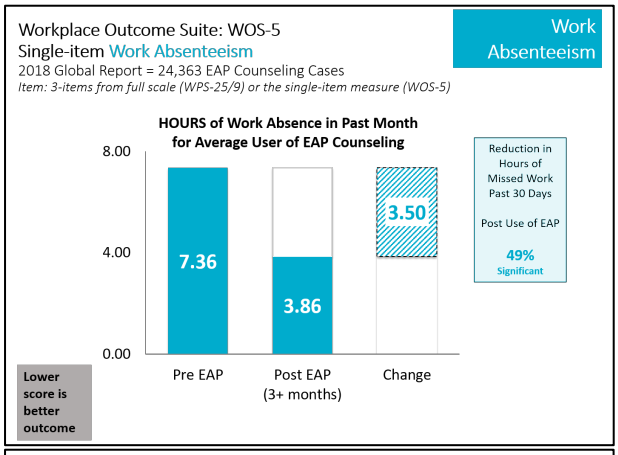
Work Engagement (1-5). When the mean scores of this measure were tested for change over time from Pre to Post, the typical case had an 8% improvement in their level of Work Engagement. This finding was statistically significant ($p < .001$). This change over time was a small size effect ($\eta_p^2 = .04$). The reduction in Work Engagement is the smallest effect size of all five of the WOS measures.

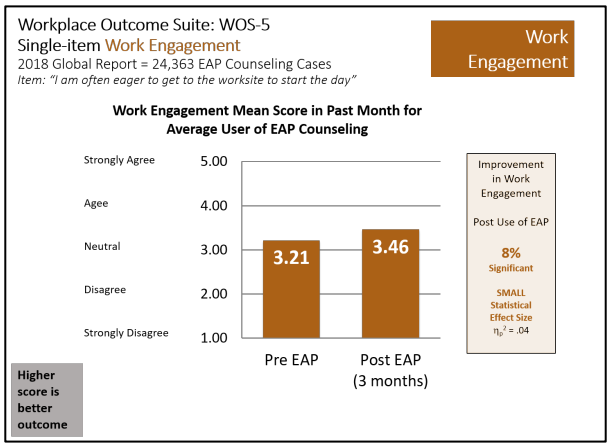
Life Satisfaction (1-5). When the mean scores of this measure were tested for change over time from Pre to Post, the typical case had a 23% improvement in their level of Life Satisfaction. This finding was statistically significant ($p < .001$). This change over time was a large size effect ($\eta_p^2 = .19$). The improvement in Life Satisfaction is the second largest effect size of all five of the WOS measures.

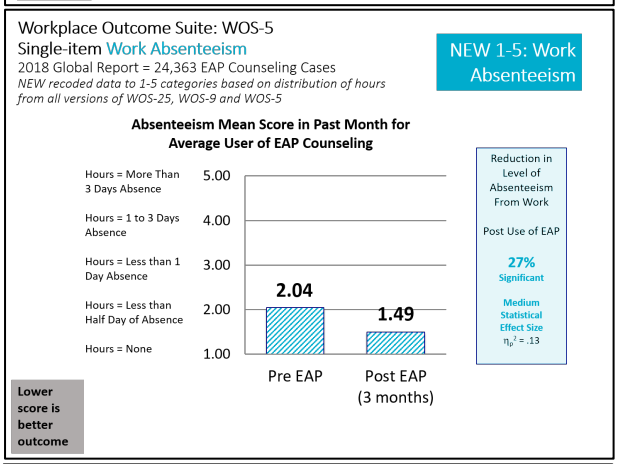
WOS SuperScore (5-25). The scores on the SuperScore in the full study sample ranged from a low of 5 to a high of 25 for both time periods. When the mean scores of this measure were tested for change over time from Pre to Post, the typical case had a 16% improvement in the WOS outcomes as a set. This finding was statistically significant ($p < .001$). This change over time was a large size statistical effect ($\eta_p^2 = .30$). The improvement in WOS SuperScore is the largest effect size for any of the WOS measures. The distribution of scores on the WOS SuperScore from 5 to 25 shows a shift over time of a greater frequency of higher scores at Post use of the EAP.

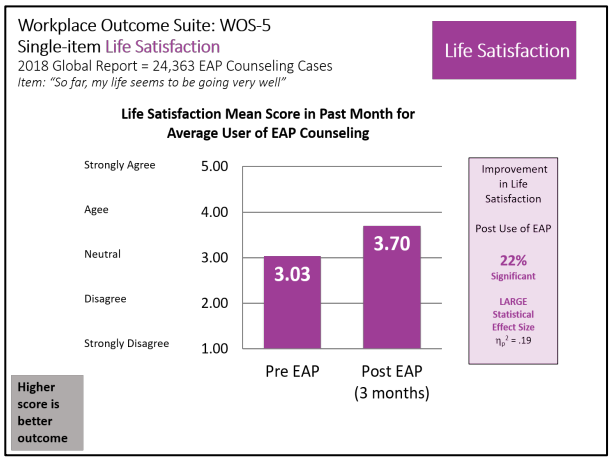
Each of these results are displayed in the charts on the next page.

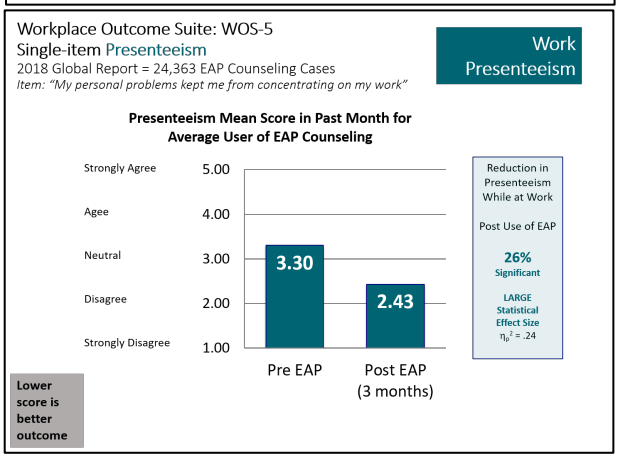
Figure Set 4.2 for change in mean scores on WOS measures among full sample of EAP users

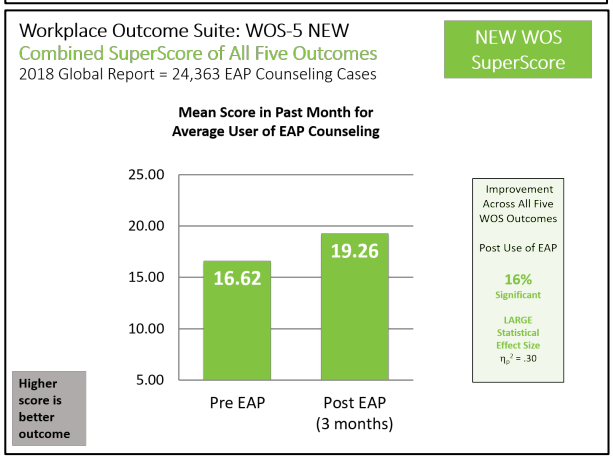


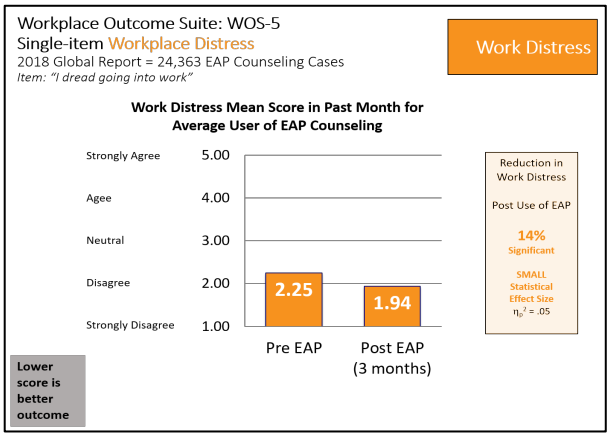


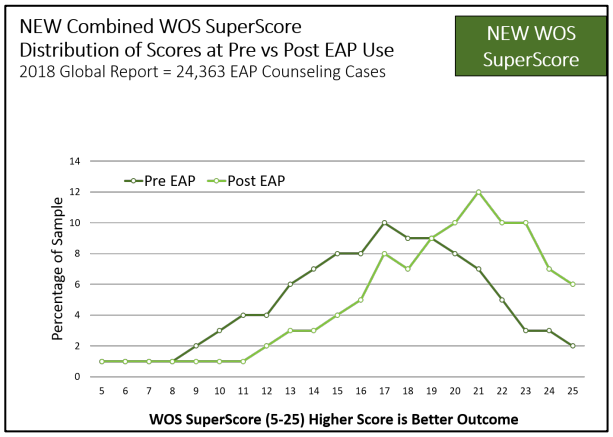












4.3 Summary: Some WOS outcomes improve more than others

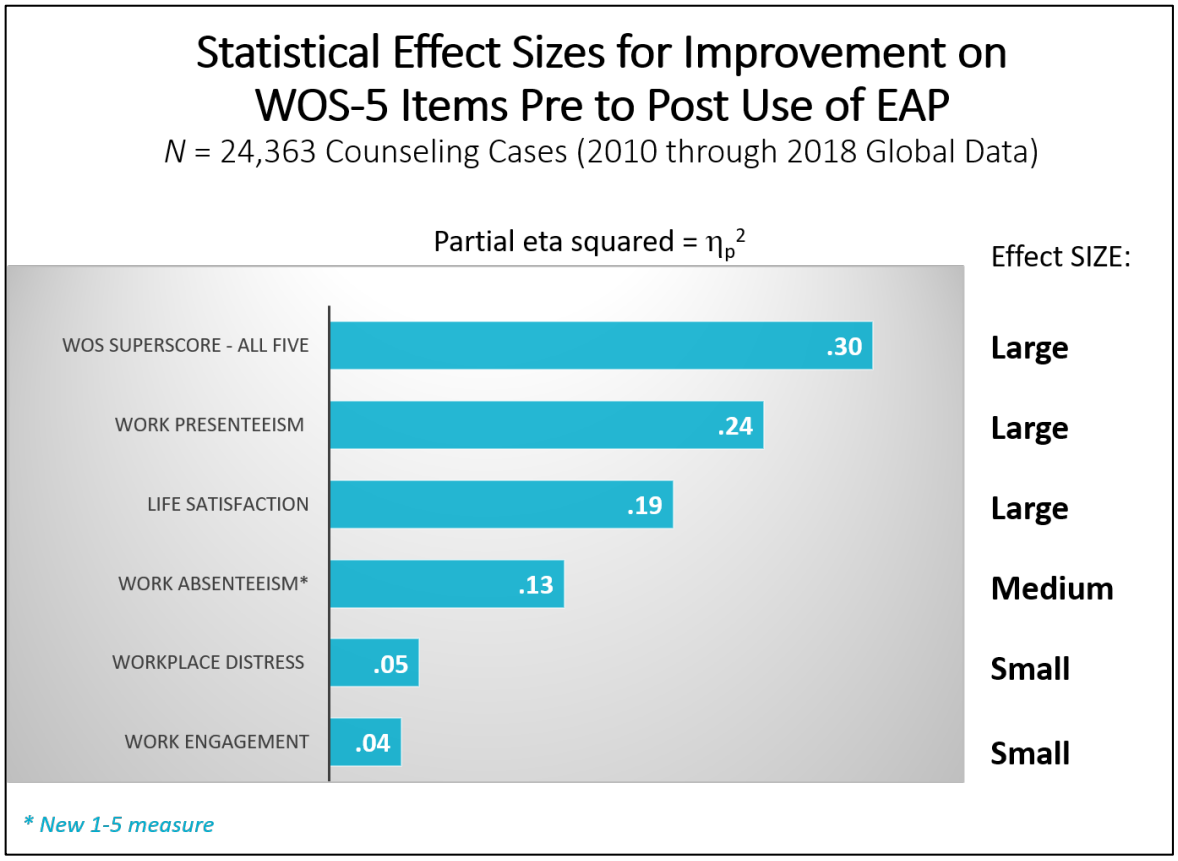
The biggest improvements were found for Work Presenteeism and Life Satisfaction. Both Presenteeism and Life Satisfaction had large effect sizes. The average user of counseling reduced the hours of missed work from 7.36 hours to 3.86 hours per month. This difference of 3.50 hours is a 49% reduction in the hours of absence per month. When tested using the new 1-5 level measure, the change over time was a medium size statistical effect. Absenteeism was limited as an outcome by most cases having zero absence at the start of the case and thus no room to improve after EAP use. Although EAP use also moved Work Engagement and Workplace Distress outcomes in positive directions, these outcomes both had much smaller effect sizes than the other three WOS measures.

- **WOS SuperScore** improved by an average of 16% after counseling (large size statistical effect).
- **Work Presenteeism** improved by an average of 26% after counseling (large size statistical effect).
- **Life Satisfaction** improved by an average of 23% after counseling (large size statistical effect).
- **Work Absenteeism** improved by an average of 27% after counseling (medium size statistical effect).
- **Workplace Distress** improved by an average of 13% after counseling (small size statistical effect).
- **Work Engagement** improved by an average of 8% after counseling (small size statistical effect).

It may be that EAP interventions delivered at the individual level by counselors in private sessions have less opportunity to impact the larger workplace and managerial conditions operating at the organizational level that more directly influence the outcomes of Work Engagement and Workplace Distress. Counseling the employee may well provide helpful coping strategies and action plans for the how to interact better with the workplace.

The primary findings are displayed in Figure 4.3 on next page.

Figure 4.3. Statistical effect sizes for WOS measures for improvement after EAP counseling



Section 5 – Context factors and improvement in WOS measures

5.1 Context factors

The dataset included some other variables related to use of EAP and the data collection context in addition to WOS measures. These other factors included:

1. Age of the EAP client
2. Sex of the EAP client
3. Referral type into the EAP
4. Clinical reason for using the EAP
5. Industry of the employer sponsor of the EAP
6. Delivery model of the EAP
7. Country where EAP case received counseling
8. Year of data collection

A series of repeated measures GLM analyses were conducted with the two time points of Pre and Post use of the EAP and each of the context factors. The goal was to see if the interaction effect for time and context factor was significant and if so, was there at least a small statistical effect size to indicate that the rate of improvement in the outcome had some degree of differences between the subgroups of the context factor (e.g., for men or women). This same testing process was repeated with the all six WOS measures.

5.2 Context factors and improvement in Work Absenteeism

The new Work Absenteeism 1-5 measure was tested as the dependent measure. Improvements in Work Absenteeism 1-5 scores occurred to a similar extent for most factors, but differences were found for the three factors below. See details in Appendix C.

Industry: The improvement after EAP use in Work Absenteeism was lower in the technology (*M* = 17%) and health care (*M* = 22%) industries than in the manufacturing (*M* = 31%) and government (*M* = 41%) industries. Thus, counseling was not equally effective at reducing Work Absenteeism for workers in different industries. This was a small effect.

Delivery model: The improvement after EAP use in Work Absenteeism was lower in Internal Staff model programs (*M* = 20% improvement) and External Vendors (*M* = 25%) than in Employer Hybrid models (*M* = 37%). Thus, the Hybrid model EAP had the most improvement in reduced work absence. This was a small effect.

Country: The improvement in Work Absenteeism over time was lowest among the EAP cases from China (*M* = 17%) compared to the United States or Other countries (*M* = 28 & 24%). This was because of the much lower level of absenteeism hours in China at both Pre and Post use of the EAP. This was a small effect.

5.3 Context factors and improvement in Work Presenteeism

Improvements in Work Presenteeism ratings occurred to a similar extent for context factors of the sex of the client, the type of referral into counseling, and the different kinds of clinical concerns, but five other context factors had differences. See details in Appendix C.

Age of the client: The improvement in Work Presenteeism decreased with the age of the EAP client (under age 30 *M* = 33%; age 30 to 39 *M* = 31%; age 40 to 49 *M* = 22%; age 50+ *M* = 6%). Thus, EAP counseling was slightly more effective at reducing Work Presenteeism among younger workers. This was a small effect.

Industry of the employer: The improvement in Work Presenteeism over time was lower for the health care industry (*M* = 17% improvement) than for the other industries (Technology *M* = 23%; Government *M* = 25%; Manufacturing *M* = 31%). Thus, EAP counseling was somewhat less effective at reducing Work Presenteeism for workers in the health care industry than in other industries. This was a small effect.

Delivery model: The improvement in Work Presenteeism was lower for the Internal Staff model (*M* = 17%) than for the Employer Hybrid model (*M* = 25%) or the External Vendor model (*M* = 29%). This was a small effect.

Country: The improvement in Work Presenteeism was highest among the EAP cases from China (*M* = 40%) compared to the United States or other countries (both *M* = 24%). Thus, EAP counseling was slightly more effective at reducing Work Presenteeism among workers in China. This was a small effect.

Year of data collection: The improvement in Work Presenteeism was slightly lower in the most recent year of data collection (18%) but similar in all other years examined (range 26% to 31%). This was a small effect.

5.4 Context factors and improvement in Workplace Distress, Work Engagement and Life Satisfaction

Improvements over time in the other three WOS outcomes occurred to a similar extent for all eight of the context factors.

5.5 Context factors and improvement in WOS SuperScore

Improvements over time in the WOS SuperScore ratings occurred to a similar extent for all but two of the context factors. There were differences for Industry and delivery model. See details in Appendix C.

Industry of the Employer: The improvement in SuperScore was greater for manufacturing and government (*M* = 18% and 17%, respectively) compared to health care and technology (both *M* = 11%). This was a small effect.

Delivery Model: The extent of change in SuperScore over time was lower for the Internal Staff model (*M* = 11%) than for the other two models (both *M* = 17%). This was a small effect.

Summary: Improvement in WOS outcomes consistent across most contexts of use

The impact of brief counseling on improving workplace outcomes was found to be quite consistent across different types of clients (age, sex), clinical (sources of referral into the EAP and type of clinical issue), employer factors (industry and EAP delivery model), country, and year of data collection. These factors did *not* affect how much the WOS outcomes improved over time in 38 of 48 tests (see Figure 5.1). No differences at all were found for context factors with Workplace Distress, Work Engagement and Life Satisfaction. The 10 tests that were obtained with Work Presenteeism, Work Absenteeism and the SuperScore, were all had very small effect sizes and thus were of little practical consequence.

Key Point: Finding so few and such small differences across all of these factors is important to demonstrate the industry-wide general effectiveness of EAP counseling.

Figure 5.1. Summary of tests of context factors and improvement over time on WOS measures

Context Factors of EAP Use Unrelated or Had Small Size Effects for Improvement Pre to Post Counseling on WOS-5 Outcomes

	Workplace Outcome Suite Measures					
Context Factor:	WA	WP	WD	WE	LS	Super Score
Age of Client	No Effect	Small	No Effect	No Effect	No Effect	No Effect
Sex of Client	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Referral Type	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Clinical Problem	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
Industry of Employer	Small	Small	No Effect	No Effect	No Effect	Small
EAP Delivery Model	Small	Small	No Effect	No Effect	No Effect	Small
Country Location	Small	Small	No Effect	No Effect	No Effect	No Effect
Year (2010 – 2018)	No Effect	Small	No Effect	No Effect	No Effect	No Effect

Note: WA = Work Absenteeism; WP = Work Presenteeism; WD = Workplace Distress; WE = Work Engagement; LS = Life Satisfaction. Small effect = statistical effect size was small (η_p^2 ranged from only .03 to .01).

Section 6 – ROI and pricing issues

There are at least 100 applied research and evaluation studies globally that support the business case for companies to provide workplace mental health and employee asssistance program services (Attridge, 2011, 2012). Several published reviews have also reviewed the outcomes research that show modest improvements in clinical and employee work performance outcomes that result from use of brief counseling from EAPs (Csiernik, 2011; McLeod, 2010; Joseph, Walker & Fuller-Tyszkiewicz, 2018). This section uses the aggregated results from the WOS norms in this report and inputs from other EAP research studies to estimate the return on investment (ROI) for employee asssistance programs under conditions of typical cost and use.

6.1 ROI for EAP counseling from restored work productivity

Ideally, estimating the financial value for EAP services should include the full range of EAP services (counseling, work/life, financial, manager consultations, crisis event response, leadership support, educational services and so on) and their impact on multiple kinds of ouctomes, such as improved work productivity, avoided employee turnover, fewer workplace accidents, and lower overeall health care costs. The WOS meaures, however, only address the employee counseling service delivery component of EAP and only the associated work productivity outcome area (created by reductions in employee absenteeism and presenteeism). The other WOS outcomes of work engagement and distress over the workplace may also affect certain organizational level outcomes but that is more complicated process to asign a specific dollar amount as part of the financial return.

This ROI estimation logic model was developed by Attridge Consulting, Inc.. It involves several steps and a number of inputs that come from the EAP, the employer customer, the WOS data results, and from the research literature. The defaults in this example can be customized to the real experience for particular EAP simply by changing the inputs.

6.2 Calculating reduction in lost productive time

Based on research conducted for the American Productivity Audit project (Stewart, Ricci, Chee, & Morganstein, 2003), a single metric is used to simplify the result of the change in overall work performance. We focus on the hours of lost productive work time in a month. A "past month" period of time is what is used in the WOS questions on absenteeism and presenteeism. Lost productive time (**LPT**) comes from knowing three factors: (1) total hours are in the normal work schedule for the employee in a month; (2) hours of work absenteeism (when no work was done and zero productivity); and (3) hours of work presenteeism (being at work performing at less than normal level of productivity). We first determine how much of a work productivity loss there was when the employee was in distress and first seeking counseling and then we compare this amount of LPT to that experiened at the follow-up. The difference between the Pre and Post LPT is the result of interest to ROI.

<u>Determine hours of scheduled work in a month</u>. How many hours does the employee usually work in month? We want to know this figure to establish the specific amount of work time in hours that are missed and that are unproductive (i.e., Presenteeism). The standard work week in the United States is 40 hours per week based on five 8-hour work days. With four weeks in a month, this is **160 hours** per month. In other countries or for different employers this work schedule figure can be adjusted to fit that context.

Pre EAP use: Hours of Absenteeism. How many hours is the employee absent from work when in distress? This absence is due to the employee's personal concern related to why he or she used the EAP. Vacations and other reasons for absence unrelated to EAP use are excluded. The WOS Work Absenteeism normative result at Pre EAP was **7.36 hours** per month. This is about one day of absence in a month.

Pre EAP use: Actually worked in the past month. After deducting the time not at work reveals how much the employee actually worked in the past month. This figure is needed for calculating the Presenteeism loss. Deducting the 7.36 hours of absence from the 160 hour schedule yields **152.64 hours worked**.

Pre EAP use: Level of Work Presesenteeism as percentage of work time. When the employee was not absent and was working, how much of that work time was productive and conversely how much of that time was unproductive? The WOS Presenteeism question asks about "concentrating" at work. This is not a measure of that can be directly converted to hours of productive of work time. So it is better to use other research on EAP work outcomes that does directly assess work productivity and job performance for this input to the ROI logic model. Based on a global research review of nine EAP vendors and internal programs from Australia, Canada and the United States that represented over 232,000 cases (Attridge, 2016), the average EAP case at the start of counseling is only 64% productive (on a range from 0% to 100%. (Note: This result presented here excluded the WOS results that were included in the original 2016 conference presentation.) Subtracting the level of productivity from the maximum 100% yields the percentage of time the employee was unproductive. In this example, 100% total minus 64% productivity leaves **36%** of worked hours as unproductive.

As an alternative to using a research-based input, it is recommended that EAPs augment their WOS data collection to also collect at case open, at case close and at 90-day follow-up data from the single-item used to measure employee work productivity in many studies (see below). It was developed in 2003 by Professor Ron Kessler and researchers at Harvard University as part of the Health and Productivity Questionnaire (HPQ) tool kit created for the World Health Organization (WHO).

Job Performance Self-report Item from the HPQ

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?

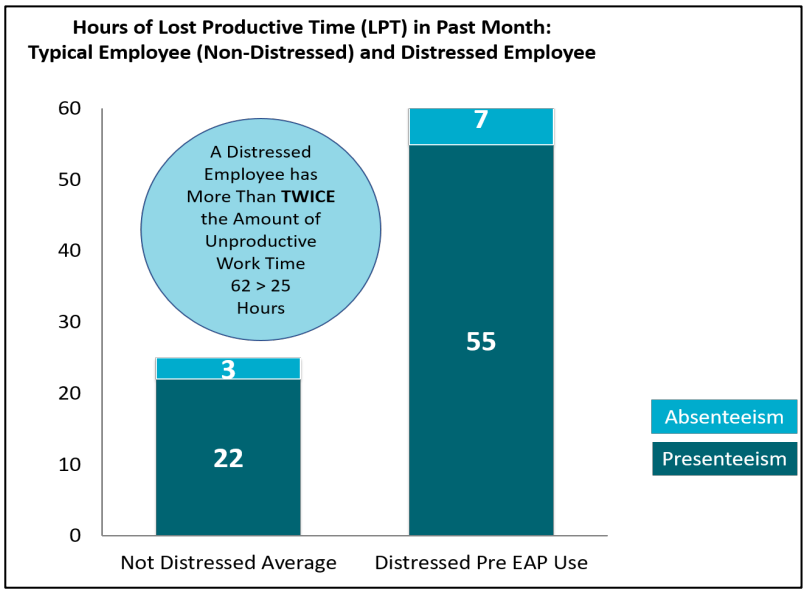
Worst performance 0 1 2 3 4 5 6 7 8 9 10 Top performance

Note: Convert 0-10 rating to 0-100% as level of work productivity.

Pre EAP use: Hours of Work Presesenteeism. What is the specific number of hours of unproductive time at work? This is calculated by a 36% level of productivity applied to the 152.64 hours worked in the past month. This result is **54.95 hours** of lost productive time while at work.

Pre EAP use: Combined hours of lost work productive time. What is the specific number of hours of unproductive time combined from the hours missed from work and hours when working? This is a total of **62.31 hours of LPT** at Pre EAP use. This amount represents more than a third of the total scheduled work time (38%) – or about 8 total days per month. For context, it is more than *twice as much* as the typical "healthy" employee, who has 25 hours of LPT monthly – from 3 hours of work absence and 22 hours of work presenteeism (based on global averages from many studies; see review by Attridge, 2016). Thus, there is a good reason to use the EAP to try to reduce some of this much higher level of unproductive time. See Figure 6.1 on next page.

Figure 6.1. Comparison of hours of lost productive time per month for average and distressed employees



Post EAP use: WOS data collection. The follow-up survey data for the WOS is most often collected about 90 days after the counseling was concluded (see data from the Profiles of EAP in Section 7 later in this report).

Post EAP use: Hours of Absenteeism. The WOS Work Absenteeism norm at Post EAP was **3.86 hours per month**.

Post EAP use: Hours actually worked in past month. How many hours were actually worked in the past month at the follow-up after EAP use? We take the 160 hour schedule and deduct the 3.86 hours of missed work to yield **156.14 hours worked**. This is slightly higher number than at Pre EAP.

Post EAP use: Hours of Presesenteeism. Calculating this figure involves two steps. First, the level of work presenteeism from research literature used at the Pre period (36% of time worked) was adjusted down by the 26% reduction found in the global norms for the extent of improvement in WOS Presenteeism item from Pre to Post (26% reduction of the 36% level removes 9.36%). After this amount was deducted, the WOS adjusted rate of Presenteeism at Post is 27%. Taking 27% of the hours worked is **41.60 hours** of Presenteeism at Post EAP.

Post EAP use: Hours of lost productive time. The total lost work productive time at Post EAP is based on adding together the Work Absenteeism hours and the Presenteeism hours and this totals **45.46 hours of LPT**.

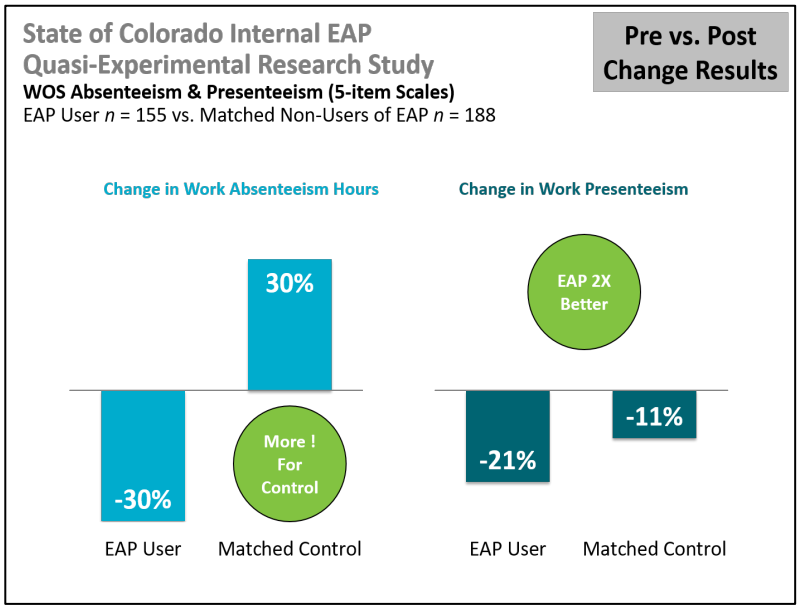
Change in hours of lost productive time from pre to post. The difference in the total hours of Lost Productive Time per month from before to after counseling changed from 62.31 hours to 45.46 hours – a difference of **16.85 hours**. This is the primary outcome of interest to the ROI question. This amount of hours correpsonds to a total of 2.1 full days of productivity restored per month after use of EAP counseling. This total has a mix of 21% from absenteeism and 79% from presenteeism. Thus, the change comes mostly from improved productive time while at work and much less from reducing the amount of time away from scheduled work.

6.3 Adjustment to LPT outcome for "natural improvement" without EAP use

In the WOS normative data collection process, there was no control group of other similar employees who were equally distressed but did not use EAP. However, the internal EAP program for the public employees of the State of Colorado conducted a study with this kind of design (see Richmond et al., 2015). The study was funded by a large grant from the Employee Assistance Research Foundation (EARF). It featured Pre and Post data from an EAP user group (at four months later; *n* = 158) and also from a matched control group (at eight months later; *n* = 188) on the WOS measures of Work Absenteeism, Work Presenteeism and Workplace Distress (all the original 5-item versions).

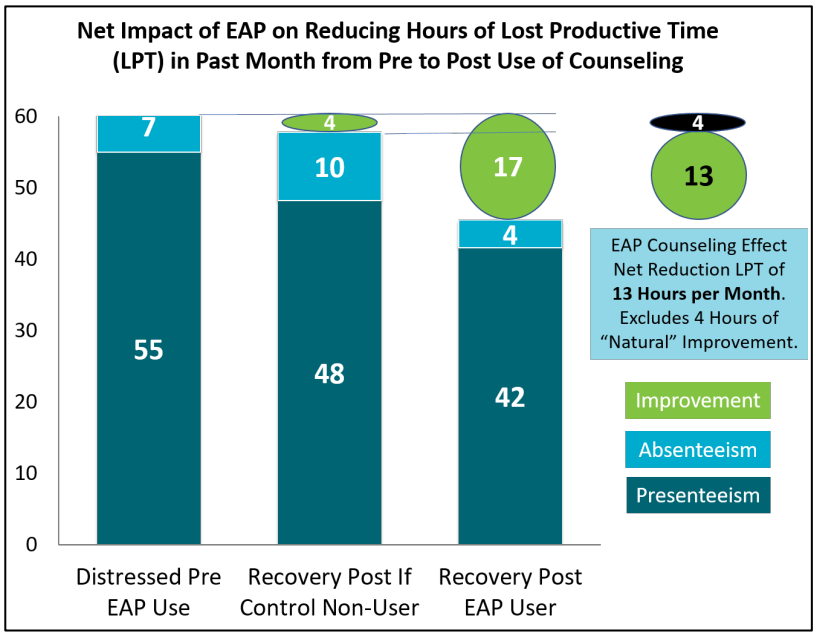
The results showed that the users of the Colorado EAP had reduced their level of Work Presenteeism by 21%, which was significantly more than the 11% reduction in the control group. The EAP user group also had a decrease in Work Absenteeism (from 15.0 hours per month at baseline to 10.7 hours at follow-up), whereas the control group had an *increase* (from 13.0 hours per month at baseline to 16.9 hours at follow-up). For context, the typical employee working at this organization had about 9 hours of absence per month. Both groups had a similar decrease over time in ratings of Workplace Distress (-11% EAP vs. -7% Contol). See Figure 6.2.

Figure 6.2. Results for pre to post on WOS Work Absenteeism and Presenteeism compared for EAP users and matched non-users in state of Colorado EAP quasi-experimental study



The same defaults and calculation process for Lost Productive Time was repeated using the WOS inputs from the Colorado study. The Colorado EAP user group had a 21% reduction in LPT. The matched control non-EAP user group had only a 5% reduction in LPT. Details on these results are show in Table C.13 in Appendix C. Comparing these results shows that the non-users of EAP only achived about one-fourth of the reduction in combined hours of lost work as did the users of the EAP (5% divided by 21% = 23%). This finding can be used to adjust down the amount of return in the ROI model for the EAP users by **23%** in an attempt to statistically remove the portion of the outcome that may occur natuarlly over time without use of professional counseling. This adjustment is displayed in Figure 6.3.

Figure 6.3. Change in hours of lost productive time per month for EAP users vs. non-user control group



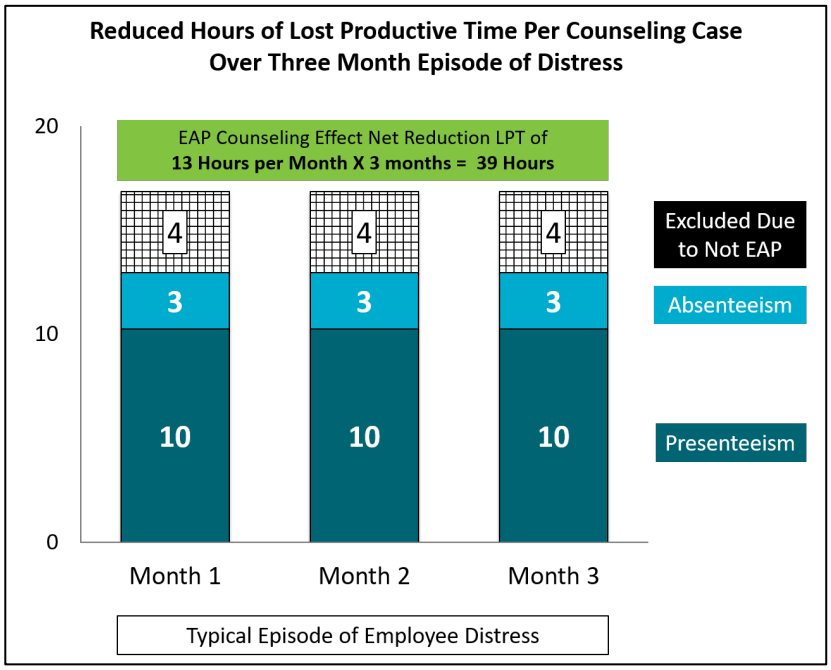
6.4 Relevant time period of employee distress

The result obtained of a net 17 hour reduction in LPT after counseling is only for one month of work. That is because the WOS items use a past month time frame. But how long would it take for a distressed employee who did not use the EAP to get better clinically to allow a return to a more normal level or work performance? The answer provides a multiplier for how many months the change in hours of LPT from before to after EAP are counted as a realistic total "savings" from the EAP.

The EAP ROI Calculator© from Chestnut Global Partners uses a **three-month period of time** as the default for episode of distress for an employee seeking help from an EAP counselor (Attridge et al., 2015). An episode duration of three months is based on the logic of doubling the typical time period of the EAP counseling treatment phase. Data from the book of business annual reports from 45 EAP vendors (mostly from the US) revealed an average 2.5 sessions per case (Attridge et al., 2013). Research from six EAP vendors in the United Kingdom (Mellor-Clark, Twigg, Farrell, & Kidder, 2012) had an average of 4 sessions per case (based on over 28,000 cases). If it takes one or two weeks between counseling sessions, the clinical phase at EAP vendors usually takes a total of about 6 weeks. Doubling the six weeks of the treatment phase is 12 weeks (or 3 months). Please note, however, that the treatment time may be longer for other EAP delivery contexts.

Hours of lost productive time restored per episode. Assuming a three month episode of distress and 16.85 hours of restored lost productive time for each month is a total of 50.56 hours per case. However, to be conservative, we remove 23% of this result to account the portion of the improvement that may have occurred anyway if the employee had not used the EAP (based on findings from the study with the matched control group of employees who did not use the EAP but improved slightly on their own). Thus, only 12.97 of the full 16.85 hour effect is attributed to the EAP. Over the three month period of distress, the total savings is **38.93 hours of avoided LPT due to use of the EAP.** See Figure 6.4. This is equivalent to almost five days - or *one full work week* - of total of lost productive time over the period of distress that was restored by the EAP.

Figure 6.4. Total hours of avoided lost productive work time attributed to EAP over 3-month episode



6.5 Financial value of work productivity

The next step is to determine what is the business value of an hour of work productivity.

Employee hourly compensation rate. According to the recent Bureau of Labor Statistics in the United States (from June 2018), the average private sector worker was compensated at **$34.19 per hour**. This is the combined cost of wages and benefits ($23.59 + $10.60; 69% and 31% of the total, respectively). Some ROI analyses use this amount. However, most employers endorse the concept that an employee's productivity value should be greater than how much the employee is compensated.

Business value of productive work time – the productivity multiplier. What is the full business value of an hour of productive work? To determine how much more, some HR experts and economists use a metric called a "productivity multiplier" that is applied to the hourly compensation rate (see Attridge, 2012; Nicholson et al., 2006; Mitchell & Bates, 2011; Pauly et al., 2008). In this ROI model, we use a multiplier of **1.3**. This is a conservative figure averaged from two research studies of managers in the U.S. When the multiplier of 1.3 is applied to the hourly compensation rate of $34.19, it yields **$44.45** as the business value of an hour of work.

Financial value of productive work time per EAP case. What is total cost savings per employee case? This is answered by multiplying the 38.93 hours of further work loss avoided over the three-month episode of distress by the $44.45 business value for an hour of work. The answer is **$1,731** in workplace productivity return per average employee who used the EAP.

6.6 EAP utilization, investment cost and ROI

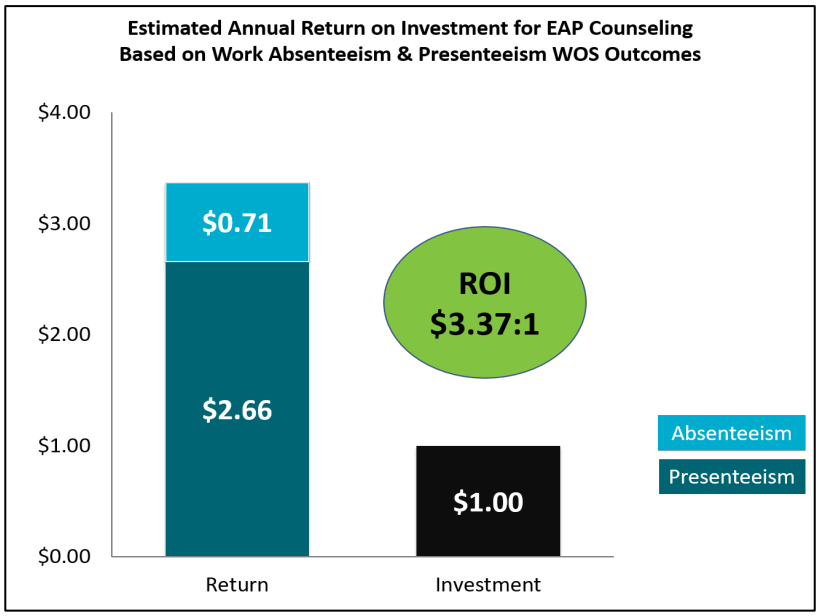
The individual level result for impact of EAP counseling needs to be applied to an employer context. Thus, the typical total number of employee cases is needed for our example as well as the amount of investment in the EAP. These inputs are estimated below from industry average data.

Utilization case rate of EAP. What is the total number of employee users of EAP counseling in a year? We can assume a **4.9% annual use rate** for a number of counselor cases that are employees in a 12-month period. This use rate is based on 4.88% rate from the average of 43 different EAP vendors with standard capitated or fee-for-service pricing models – but excluding "free embeded fee pricing model" providers with very low use rates (Attridge et al., 2013). This rate excludes other kinds of non-counseling services provided by the EAP. For a 1,000 covered employee population, this rate has 49 total counseling cases.

Selecting only the employee users of EAP. However, work performance related outcomes are only relevant to the employee portion of the total EAP clinical cases served during the year. It is reasonable to assume an 80% mix of employee users of the EAP, with the other 20% being non-employees, such as spouse, children or others. This is based on normative industry data from 57 different EAP vendors (Attridge et al., 2013). In our example, **39 cases were employees** and thus relevant to the work ROI.

The financial return is derived from 39 cases X $1,731 per case in avoided cost burden from lost work productivity = **$67,490** total for all cases. Assume an investment cost of $20 per employee per year ($1.67 PEPM). For a 1,000 employee size company this is an investment of **$20,000**. The ROI is calculated by $67,490 return / $20,000 investment = $**3.37 : $1.00**. This indicates a ratio of $3.37 returned to the company for every $1.00 invested in the EAP. See Figure 6.5.

Figure 6.5. ROI for EAP counseling



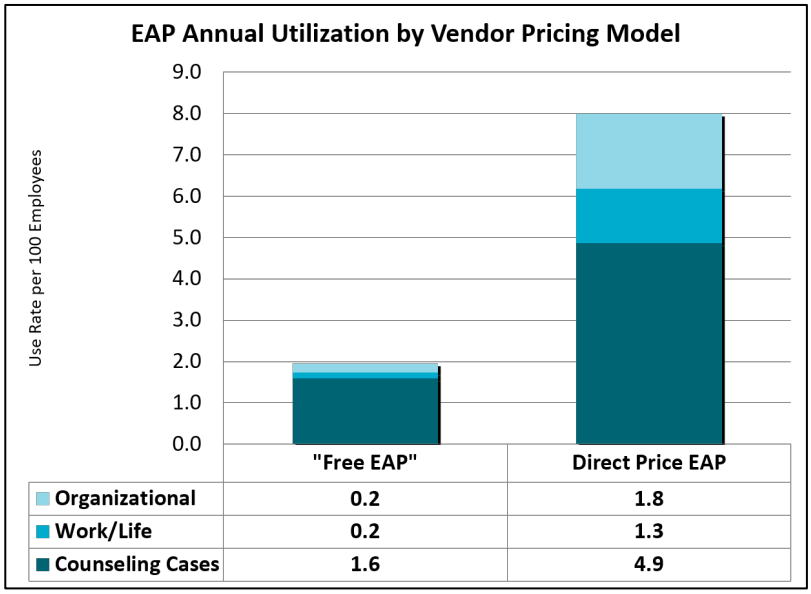
6.7 EAP pricing and program utilization - implications for ROI

To examine the implications of product pricing for the ROI for EAP, we must recognize the rise over the past decade of the minimal EAP product in North America that is sold with a "free" pricing model (i.e., sold at no direct cost to the employer organization). Instead, the real cost of the EAP is hidden or embedded into other much larger bundled fees (often for disability or other health care insurance products) that the employer pays. This kind of EAP product typically offers a very limited set of EAP services – telephonic counseling, website-based educational resources, access to crisis response services (if needed), and minimal promotional activity.

The published survey of 82 external vendors of EAP (see the National Behavioral Consortium study in the *Journal of Workplace Behavioral Health* by Attridge et al., 2013), examined different models of pricing for EAP as well as the rates of program utilization across all of the EAP's customer contracts. Among the five vendors with predominately a "Free EAP" model, their annual program utilization was the lowest. The profile for this same utilization metric for the 43 other vendors with a direct pricing model (either capitated or fee-for-service models for the majority of their customer contracts) reveals a comparatively much higher level of program utilization than characteristics of the "free EAP" pricing model.

When combined across the three service components, the "Free EAPs" had a 2.0% total use rate and the full service EAPs, offering a more comprehensive mix of services, had an 8.0% total use rate – which is four times higher. When just considering the core service of counseling, the full service EAPs had three times the use rate than the embedded fee EAPs (4.9% vs. 1.6%, respectively). Thus, the "Free" EAP provides a minimal level of utilization primarily for individual counseling services and almost no workplace-based services to the employer organization (Attridge, 2017). Whereas the full service, higher priced EAP delivers three times the rate of individual users of counseling and almost ten times the level of organizational services from the EAP. See Figure 6.6.

Figure 6.6. Utilization rates for EAP services for "free" and full-service EAP providers



The willingness of the purchaser to truly invest in the EAP (or not) has clear implications for how much the EAP can be promoted and integrated into the organization and thus ultimately for the level of business value expected from the EAP. Put another way, you get (or don't get) what you pay for with EAP services. It is important that businesses, HR professionals, and brokers of employee benefits and insurance products understand this basic difference between types of EAPs based on hopw they are priced. The result of our example of greater than $3:$1 ROI supports the business value of EAP at an average level of use and price.

With epidemiological data showing that roughly 1 in 5 working adults are at-risk for experiencing behavioral health issues each year, the use rates for the average vendor-based external EAP is reaching only about 1 in 4 of this target sample size of the employees who are at-risk in the organization and most relevant to use the EAP. Some of this at-risk group are probably getting professional care from outpatient mental health benefits or psychiatric medications. But nonetheless, the use rate for EAP often could be higher. Indeed, there are many examples of employers that do fully fund and actively promote the EAP and in return tend to get double or triple the average annual EAP program usage. Even with an appropriately larger investment in the EAP is needed to offset the added cost of serving more employees, the overall ROI is still positive in such conditions and the cumulative boost to productivity at the organization is worth it.

6.7 EAP ROI calculator tool available from Chestnut Global Partners

The example in this report featured only one kind of cost savings – from employee productivity (combined change in outcomes of Work Absenteeism and Presenteeism). A more comprehensive ROI for EAP should take into account the impact of counseling on other outcomes. The EAP ROI Calculator© from Chestnut Global Partners was released in 2015. It uses standard financial terminology and measures to give company benefits managers, HR personnel, and CFOs a reasonable indication of the impact of the program on reducing a variety of business relevant costs associated with employee personal and behavioral health issues who use the EAP. It includes data for many variables: the investment made in the EAP; average employee compensation; opportunity cost of capital; prevalence rates of EAP-related personal issues; adjusted effects for different durations of the episode of distress; costs and rates of employee turnover; workplace accidents and medical claims; and the level of utilization of the EAP and related metrics for the clinical effectiveness rate of the EAP and other outcomes. The calculator uses these inputs to produce three summary ROI metrics commonly used in business financials: internal rate of return; net present value, and cost/benefit ratio. It can also accommodate inputs from WOS survey data from the EAP on Work Absenteeism and Presenteeism.

The goal is for each employer to fine-tune the inputs that are specific to their experience and their EAP cost and use data. For example, rather than a crude "productivity multiplier" ratio, it uses a detailed database of daily productivity contributions of employees that varies by occupation, industry, and geographic region. The results of the EAP ROI Calculator are generally higher than what was estimated in the example in this report. That is because of the inclusion of multiple kinds of financial outcomes from EAP counseling in addition to the workplace performance outcomes of absenteeism and presenteeism and often higher per hour rates of the business value for work productivity, which are customized to the employer and industry.

A full description of the methodology and research-based defaults used in this calculator tool are available in other documents from Chestnut Global Partners (See white paper by Attridge, Servizio, Sharar, & Mollenhauer, 2015) and brief articles (Servizio, 2017; Servizio, Mollenhauer & Shjerven, 2016).

Section 7 – Profiles of EAPs that collect WOS data

7.1 EAPs that collect WOS data

The final part of the report offers something new in profiling different EAPs that collect WOS data. What kinds of EAPs collect WOS data? What are the operational practices used to collect the WOS data? How are the results shared back to EAP customers? What is the reaction of customers to outcome results? Has the EAP presented or published their WOS outcome findings? The answers to these questions are provided for the 13 EAPs listed below.

External EAP vendors – United States

- Cascade Centers EAP
- Concern EAP
- Empathia
- KGA

External EAP vendors – International

- Benestar (New Zealand)
- Chestnut Global Partners – China
- Hellas EAP (Greece)

Internal EAPs – United States

- Caterpillar Co. (U.S.-based multi-national employer with Hybrid model)
- Federal Occupational Health (U.S. government with Hybrid model)
- Life Solutions – University of Pittsburgh Medical Center
- Partners HealthCare System EAP (Boston, MA)

Special projects

- DuPont Corp. (U.S.-based multi-national employer with Hybrid model)
- Homewood Health (Canada – Depression Care Specialty Clinical Management Program)

Cascade Centers, Inc.	
Country: **United States (based in Oregon)** Type of EAP: **External Vendor – Regional focus** Size: **Number of Covered Employees: 235,000**	CASCADE CENTERS INCORPORATED
Year Collect WOS Data: 2011 - 2012 - 2013 - **2014** - **2015** - **2016** - **2017** - **2018** Total = **5 Years**	
Version of WOS Scale: **5-item** Why: **ease of data collection**	Total EAP cases with WOS Data: **295**
COLLECTION OF DATA	
What types of EAP users are included in WOS data collection process? **Counseling cases referred to face-to-face sessions**	
What types of EAP users are excluded from WOS data collection? **Non-employees; Work/Family/Life**	
How many EAP cases complete the WOS at the start of clinical process? **About 50-60% of eligible cases get a Pre survey. We do about 100 Pre surveys per month.**	
Time period between dates when collect Pre and the Post WOS data? **60 days**	
Of cases with WOS data for the Pre, how many also complete the follow-up? **About 80% of cases**	
How do you collect follow-up data on WOS? **Telephone and email.** How many attempts are done to get a successful contact at follow-up? **Up to 4** Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes - We have a staff member with dedicated time to call and collect data over the phone or email surveys when appropriate.**	
REPORTING	
Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP? **We report the WOS in several ways. We create an annual report for each company we work with. A section of that report is dedicated to providing Cascade's book of business WOS data. During Marketing presentations to potential business, we report our outcomes as a way to show our effectiveness. The majority of our groups see our overall results because we put it in their annual report. For our larger groups, we also review this in our in-person annual review. Only a handful of our groups have been large enough to have enough returned surveys to have their own specific results. When we have had this data specific to the employer, we report their results and also convert that to an ROI savings on Absenteeism.**	
ROI	
Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe. **For our groups that have enough surveys to enable a specific report for them, we do use this as a data to report on the financial ROI for the EAP. Usually by converting the Absenteeism data into a monetary number based on salary to demonstrate the amount saved due to EAP intervention.** Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**	
STORY	
Can you briefly describe a story or case example of how your WOS results have been shared? **We presented WOS results to one of our largest customers – a public institution with approximately 55,000 employees. Outcome data is important to this group to demonstrate to them effectiveness and ROI. We provide this data to them as part of their annual report. Because of the size of this group, we provide the WOS results specific to the employer group as well as a summary of the Cascade book of business. For this group, the primary benefit has been to add credibility to the EAP services that we provide. We have had a long-term relationship with this group and generally, they have been supportive of EAP and believe in the value of the services. However, being able to show the WOS results the last few years has added an element of credibility that is very appealing to this group. Demonstrating in "hard" numbers that we are providing positive outcomes is valued by this group. This group is very interested in the overall WOS report on the 5 items and skip over the estimates of dollars saved from the change in Absenteeism hours. The conversation is always focused on the data regarding the 5 areas measured by the WOS as more meaningful and valuable.**	
Thanks to: **Julie Marshall, PhD**	

CONCERN	
Country: **United States (based in California)** Type of EAP: **External Vendor** Size: **Number of Covered Employees: 300,000**	
Years Collect WOS Data: 2011 - **2012** - **2013** - **2014** - **2015** - **2016** - **2017** - **2018** Total = **7 Years**	
Version of WOS Scale: **5-item** Why? **Feedback from employees that the 9-item version was too lengthy.**	Cases with WOS Data Past Year: **340**
COLLECTION OF DATA	
What types of EAP users are included in WOS data collection process? **Counseling cases face-to-face and occasionally telephonic counseling cases**	
What types of EAP users are excluded from WOS data collection? **Services other than counseling cases; some cases we service from partner vendors lacking the Knox-Keene license required in State of California.**	
How many EAP cases complete the WOS at the start of clinical process? **About 10% of cases**	
Time period between dates when collect Pre and the Post WOS data? **90 days**	
Of cases with WOS data for the Pre, how many also complete the follow-up? **About 25% of cases**	
How do you collect follow-up data on WOS? **This summer we changed from using written hardcopy surveys post mailed to now using emailed surveys.** How many attempts are done to get a successful contact at follow-up? **1** Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes**	
REPORTING	
Do you create one "book of business" summary report of the all of the data results across all customers and then share that report? **Yes, as well as two customer reports with only their specific data. We share our book of business WOS results in our annual reports for all clients. The WOS results are also included in special presentations to the organization or key employer customers.**	
ROI	
Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe. **Yes. WOS results resonate with our prospects, especially those in Silicon Valley. Many of our current and potential customers are data-driven and analytic. They value the use of a psychometrically valid tool to measure a few important outcomes. The use of the WOS reinforces the understanding that Concern cares about providing services that truly help clients feel better and perform well.** Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**	
STORY	
Can you briefly describe a story or case example of how your WOS results have been shared? **A large corporation client of ours in the high technology industry located in Silicon Valley bases its benefit decisions on data. Most specifically, they want us to answer the question: "Are the employees who utilize the EAP getting better?" Concern uses the WOS to help answer that question. CGP helped determine that this corporation's WOS response rate yielded statistically significant results, so we report their results as compared to our Concern book of business results. This customer evaluates their employee benefit programs focusing on three aims: Experience (client satisfaction), Efficiency (access, case resolution) and Effectiveness. We report the effectiveness of the EAP by highlighting the changes to the Life Satisfaction (10% improvement) and Absenteeism (30% reduction in hours) questions on the WOS.** **Interestingly, during the 2017 annual review, the customer requested a deeper dive into the WOS results. They wanted to know whether the average percentage change between Pre and Post responses were skewed due to a few responses showing great improvement and thus masking other responses that may have had little to no improvement. We learned that the group who started out with the fewest problems showed some increase to more problems at follow-up. This is to be expected due to a statistical artifact – they had nowhere else to go. Or perhaps this group gained an increased awareness of their problems by participating in counseling.**	
Thanks to: **Humberto Chacon, MS; Susan Haws, MS, MA; Jennifer Hudgins, LMFT**	

Empathia, Inc.

Country: **United States (based in Wisconsin)**
Type of EAP: **External Vendor**
Size: **Number of Covered Employees: 735,000**

EMPATHIA

Years Collected WOS Data: **2011 - 2012 - 2013 - 2014 - 2015 - 2016 - 2017 - 2018** Total = **9 Years***

Version of WOS Scale: **9-item**
Why: **The number of questions fits our intake and follow-up service model very well. Also, the questions for the 9-item version fully match the 25-item version, unlike the 5-item version, which allows us to retain past data collected with the original full scale.**

Cases with WOS Data Past Year: **730**

COLLECTION OF DATA

What types of EAP users are included in WOS data collection process? **We endeavor to collect WOS data on every client who accesses our EAP via our toll-free number. However, we honor the client's preference to answer WOS questions, as well as intake counselor clinical discretion.**

What types of EAP users are excluded from WOS data collection? **We will not collect WOS data on cases in which it would clinically inappropriate to ask the WOS questions at intake (i.e. at-risk cases, duty to warn or protect, etc.) and on cases in which the client refuses a follow-up call.**

How many EAP cases complete the WOS at the start of clinical process? **About 33% of all cases**

Time period between dates when collect Pre and the Post WOS data? **28 days +**

Of cases with WOS data at start, how many complete the follow-up? **About 33% of cases**

How do you collect follow-up data on WOS? **Telephone survey**
How many attempts are done to get a successful contact at follow-up? **1 if message left, 3 times if no message**
Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **No**

REPORTING

Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP?
We publish a "book of business" summary report for all Empathia customers as well as make individual client company reports available (for 33 clients last year), which may include a comparison to the "book of business" and comparisons to similar industry groups. Further, we provide WOS reports for certain groups, including "all client" results, "EAP" service results, and results for clients who were formally referred to the EAP as part of a performance improvement plan. About 60% of our total customers see the book of business results on the WOS outcomes. WOS results are also included in sales presentations and RFP responses.

ROI

Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe**. We provide a variety of scenarios and talking points based upon our WOS results. The extent to which we provide a financial ROI is based upon the amount of correlating financial information we are able to receive from our customers. Our WOS results are a part of the larger ROI message we share with our customers.**
Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **Yes**

STORY

Can you briefly describe a story or case example of how your WOS results have been shared?

We provided WOS results to help demonstrate the impact a customer's benefits integration initiative had upon their employee/dependent population. Using WOS results pre-benefit integration and during benefit integration, we were able to provide evidence to how the benefit integration initiative impacted overall employee/dependent health and performance.

Thanks to: **David Goehner, MSW, LCSW**

* Note: David Goehner from Empathia was one of the co-authors of the original article published in JWBH in 2010 introducing the WOS full scale. Empathia also participated in the validation study for the brief 5-question version of the WOS instrument.

KGA, Inc.	
Country: **United States (based in Massachusetts)** Type of EAP: **External Vendor – Regional focus** Size: **Number of Covered Employees: 171,000**	
Years Collect WOS Data: 2011 - 2012 - 2013 - **2014** - **2015** - **2016** - **2017** - **2018** Total = **5 Years**	
Version of WOS Scale: **5-item** Why: **everyday practicality**	Cases with WOS Data Past Year: **310**
COLLECTION OF DATA	
What types of EAP users are included in WOS data collection process? **We collect data for any counselor case in which the caller says "Yes" to the question, "Is the reason for which you called negatively impacting your ability to do your job (work)?"**	
What types of EAP users are excluded from WOS data collection? **Yes, anyone do does not believe/feel their issue is impacting their work.**	
How many EAP cases complete the WOS at the start of clinical process? **About 10% of all cases**	
Time period between dates when collect Pre and the Post WOS data? **90 days**	
Of cases with WOS at Pre, how many also complete the follow-up? **About 75% of cases**	
How do you collect follow-up data on WOS? **Email is sent 90-days after completed WOS at Pre.** How many attempts are done to get a successful contact at follow-up? **If case does not complete it within 2 days, a second email is sent. If they don't respond to email within a week, a phone call is attempted.** Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes, an efficient and tracked process.**	
REPORTING	
Do you create one "book of business" summary report of the all of the data results across all customers and then share that report? **No** Approximately how many of your total customers see the overall results from your company (book of business data) on the WOS outcomes? **Only one client asks to see our book of business data.**	
ROI	
Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe. **No. Most client do not have enough cases of WOS data for a valid sample size to allow for an analysis. If anything, we use the summary analysis report provided by Chestnut Global Partners.** Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **Yes**	
STORY	
Can you briefly describe a story or case example of how your WOS results have been shared? **We have a prominent higher education client (~15,000 lives) that is very data focused and has requested to see the outcome data. While they do not have enough data as a standalone organization to produce statistically significant results year to year, we do share what CGP publishes annually and WOS data for KGA's book of business and then help them to understand the degree to which they are in alignment with this data. This helped them appreciate the value of KGA's EAP.** **Having data from the WOS is enormously helpful in sales situations. The development of this instrument has provided meaningful data about EAP efficacy, particularly when applied to Presenteeism. We have used the data in blog and newsletter posts to show the value of EAP and are planning to add the composite data to our utilization reports.**	
Thanks to: **Kathy Greer, MEd, LMHC; Seth Moeller, MA; Tyson Puetz**	

Benestar NZ (formerly Stratos)	
Country: **New Zealand (based in Auckland)** Type of EAP: **External Vendor** Size: **Number of Covered Employees: 140,000**	Benestar Be your best you
Year Collect WOS Data: 2011 - 2012 - 2013 - 2014 - 2015 - **2016** - **2017** - **2018** Total = **3 Years**	
Version of WOS Scale: **5-item** Why: **ease of data collection at first counseling session**	Total EAP cases with WOS Data: **550**
COLLECTION OF DATA	
What types of EAP users are included in WOS data collection process? **Counseling cases face-to-face sessions**	
What types of EAP users are excluded from WOS data collection? **Face-to-face cases have the opportunity for counselors not to ask the questions if not clinically appropriate**. **Excluded from WOS are telephone only counseling and other non-clinical support services.**	
How many EAP cases complete the WOS at the start of clinical process? **About 75% or more**	
Time period between dates when collect Pre and the Post WOS data? **90 days from last session**	
Of cases with WOS data for the Pre, how many also complete the follow-up? **About 10% of cases**	
How do you collect follow-up data on WOS? **Mailed hardcopy and e-mail link to survey on website** How many attempts are done to get a successful contact at follow-up? **2** Do you have one person who has as part of their job as being responsible for doing the follow-up surveys**? No – but this is because our system generates the follow up by email or regular post mail to home.**	
REPORTING	
Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP? **We create summary of overall results for total customer pool. Specific results to date have been analyzed for one customer only.**	
ROI	
Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe. **No** Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**	
STORY	
Can you briefly describe a story or case example of how your WOS results have been shared? **Not Applicable** Are the annual report of WOS results used in sales or marketing or responding to RFPs? **Yes**	
Thanks to: **Warwick Harvey, BA, DistFHRINZ**	

Chestnut Global Partners - China

Country: **China (based in Beijing)** Type of EAP: **External Vendor** Size: **Number of Covered Employees: 700,000**	
Years Collect WOS Data: 2011 – **2012** - **2013** - **2014** - **2015** - **2016** - **2017** - **2018** Total = **6 Years**	
Version of WOS Scale: **5-item** Why: **The five-item version is short and easy to administer. Employees are more willing to participate with this version. Translated WOS into Mandarin language for China.**	Cases with WOS Data Past Year: **683**

COLLECTION OF DATA

What types of EAP users are included in WOS data collection process? **Counseling cases only, both the face-to-face and the telephone delivery types**

What types of EAP users are excluded from WOS data collection? **None - all counselor cases included**

How many EAP cases complete the WOS at the start of clinical process? **About 75% or more of all cases**

Time period between dates when collect Pre and the Post WOS data? **90 days**

For cases with WOS data at Pre, how many also complete the follow-up? **About 25% of cases**

How do you collect follow-up data on WOS? **Telephone**
How many attempts are done to get a successful contact at follow-up? **3**
Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes, several staff**

REPORTING

Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP.
We include an aggregated pre-post analyses in our annual EAP Utilization Report, provided the number of cases for a particular corporate client in that year exceeds 50. We have submitted 18 such reports since 2012.

ROI

Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe.
No, we do not (see below for reason)
Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**

STORY

Can you briefly describe a story or case example of how your WOS results have been shared?

We provide the WOS analyses to our larger clients with a total number of cases each year exceeding 50 in our annual reports. These clients come from a variety of industries, such as technology, manufacturing and transportation. We inform our clients that we are unique in collecting data on treatment effectiveness with WOS in China. Most client representatives view the data favorably, as an indication of our concern for program evaluation in particular and professional excellence in general. Presentation of the results also helps make the impression that we are abreast with the latest international developments in the field.

However, we avoid getting into convoluted discussions with clients about interpretation of the data, especially with respects to ROI. Clients are suspicious about self-report data, as well as the assumptions, the model and parameters for estimating ROI with EAP and wellness programs in general. Moreover, not many clients in China adopt EAP for the sake of saving medical costs or production loss. Instead, they use EAP for risk control, crisis response, employer brand and corporate culture. Return on value is a much more relevant and appealing concept than return on investment.

Thanks to: **Peizhong Li, PhD; Matt Mollenhauer, BA, MS**

Hellas EAP

Country: **Greece (based in Athens)**
Type of EAP: **External Vendor**
Size: **Number of Covered Employees: 45,000**

Years Collect WOS Data: 2011 – 2012 - 2013 - 2014 - **2015** - **2016** - **2017** - **2018** Total = **4 Years**

Version of WOS Scale: **5-item**
Why: **For practical reasons: There is a resistance for long questionnaires by EAP users. We had initially used the full 25-item version. Translated WOS into Greek language.**

Cases with WOS Data Past Year: **40**
Data in 2018 has slowed due to new European regulation on personal data protection and resistance of EAP users.

COLLECTION OF DATA

What types of EAP users are included in WOS data collection process? **Counseling cases only for face to face**

What types of EAP users are excluded from WOS data collection? **Telephone 24/7 access counseling cases**

How many EAP cases complete the WOS at the start of clinical process? **About 10% of all cases**

Time period between dates when collect Pre and the Post WOS data? **90 days**

For cases with WOS data at Pre, how many also complete the follow-up? **About 25% of cases**

How do you collect follow-up data on WOS? **Email and text survey via our website**
How many attempts are done to get a successful contact at follow-up? **Up to 3**
Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes**

REPORTING

Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP
Use it for the measurement of ROI, when applicable. Also, to prove and promote the value of EAP.
Do you create one "book of business" summary report of the all of the data results across all customers and then share that report? **Yes - We do this approximately every two years, depending on the number of total WOS questionnaires that we have completed (Pre and Post).**
Approximately how many of your total customers see the overall results from your company (book of business data) on the WOS outcomes? **Our most recent results were sent to all of our clients.**
Are the WOS results included in customer reporting and/or special presentations to the organization or key employer customers? **Due to sample size limits on WOS data for specific customers, only about 5% so far.**

ROI

Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe.
Yes, mostly the Absenteeism and Presenteeism Outcomes for the measurement of change (improvement) in combined metric of Lost Productive Time for employee users of EAP (Face to Face Counseling)
Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**

STORY

Can you briefly describe a story or case example of how your WOS results have been shared?

Forum Presentations. In May 2017, at the 5th EAP Forum organized by Hellas EAP and held in Athens, Greece. Two presentations featured WOS data. The keynote by Dr. Mark Attridge featured of a successful case study and ROI. analysis from the implementation of the EAP program in 2016 at our client Piraeus Bank (the largest bank in Greece). The ROI for work productivity factor of combined Absenteeism and job performance outcomes was 2.89:1 euro. Another presentation showcased our book of business data from WOS full 25-item scale from 110 EAP cases. This data showed positive results on four of the five scales: a 65% reduction in Absenteeism (3.5 hours less per month per case), 32% reduction in Presenteeism, 13% reduction in Workplace Distress, <1% change in Work Engagement; and 13% improvement in Life Satisfaction.

EAPA Quality Award. The WOS was one of the evidenced-based tools that was incorporated into our nomination for the 2017 EAP Quality Award to demonstrate effectiveness in quantifiable business terms. Hellas EAP is the first Greek EAP provider to receive the international recognition of this award from the Employee Assistance Professionals Association (EAPA).

Thanks to: **Anastasia Rush, PhD; Ritsa Oikonomou, MA**

Caterpillar, Inc.	
Country: **Global (based in Illinois, United States)** Type of EAP: **Hybrid with Internal EAP Staff and External Vendors** Size: **Number of Covered Employees: 75,000 in 2018 (but 100,000 in 2019 with expansion of EAP)**	CATERPILLAR®
Years Collect WOS Data: **2011 – 2012 - 2013 - 2014 - 2015 - 2016 - 2017 - 2018** Total = **8 Years**	
Version of WOS Scale: **5-item** Why: **ease of use (brief)**	Total cases with WOS Data: **150+**
COLLECTION OF DATA	
What types of EAP users are included in WOS data collection process? **Limited to EAP counseling cases with employee as the client. All forms of counseling delivery (face to face; telephone; online and so on)**	
What types of EAP users are excluded from WOS data collection? **Non-employee, work/life, financial/legal**	
How many EAP cases complete the WOS at the start of clinical process? **Done as standard part of the clinical intake, so we generally get WOS data from well over 75% of those eligible cases**	
Time period between dates when collect Pre and the Post WOS data? **60 days post intake**	
Of cases with WOS data for the Pre, how many also complete the follow-up? **10% or less – lately. In past have achieved over 30% but then we had a dedicated staff person doing that follow-up contact work.**	
How do you collect follow-up data on WOS? **Telephone and online (Survey Monkey)** How many attempts are done to get a successful contact at follow-up? **3** Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **We used to have a single employee to address all follow up but now use a team approach.**	
REPORTING	
WOS results are part of the summary annual report for our internal EAP.	
ROI	
Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe. **Yes. For the most part, no senior decision makers are concerned with the data on a routine basis. As the EAP manager, I have used the data to indicate program performance and quality to external consultants who collaborate with the EAP. I have also used it as a differentiating factor to evaluate different external vendors during the RFP process.** Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**	
STORY	
Can you briefly describe a story or case example of how your WOS results have been shared? **In my experience, there is a staggering lack of process measures and outcome metrics in all facets of human resources (HR), occupational health and benefits delivery. [However, this may be less so in outsourced models where vendors are expected to deliver reports and metrics.] To varying degrees, the employee benefit managers, HR managers and occupational health professionals would be challenged to deliver operational (utilization) metrics. Most are completely void of data (aside from perhaps program costs) that indicate workplace impact. By comparison in this business context, the WOS data – even if rarely presented - is extremely valuable in those instances when you need to go beyond utilization and program cost data and discuss the business value of EAP. Regardless of the details found in the data set, the simple fact that EAPs *have the data* is what sets EAP apart from other workplace benefits/programs that lack outcomes data. From my experience, EAPs with an outcome data set rise above other workplace programs and employee benefits.**	
Thanks to: **John Pompe, PsyD, LP, SPHR, CEAP**	

Federal Occupational Health

Country: **United States (based in Maryland)**
Type of EAP: **Hybrid – Federal Consortium for Employees of U.S. Government with some internal EAP Staff**
Size: **Number of Covered Employees: 1.1 million**

Years Collect WOS Data: 2011 - 2012 - 2013 - 2014 - **2015** - **2016** - **2017** - **2018** Total = **4 Years**

Version of WOS Scale: **5-item** Why: **ease of data** | Cases with WOS Data Past Year: **2,197**

COLLECTION OF DATA

What types of EAP users are included in WOS data collection process? **Counseling cases only**

What types of EAP users are excluded from WOS data collection? **All other users excluded, including formal referrals, work/life, financial/legal**

How many EAP cases complete the WOS at the start of clinical process? **About 66% of all cases**

Time period between dates when collect Pre and the Post WOS data? **90 days**

For cases with WOS data at Pre, how many also complete the follow-up? **About 50% of cases**

How do you collect follow-up data on WOS? **Telephone survey**
How many attempts are done to get a successful contact at follow-up? **2**
Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes**

REPORTING

Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP?
We create a "book of business" summary report of the all of the data results across all customers. This marketing report is used for customer-wide distribution. We have not folded the WOS report into the individual customer utilization report. However, we have presented the FOH book of business survey results to employer customers during a quarterly meeting. All 400-plus agency Points of Contact are invited to attend and approximately one-third of the agency actually participated. In addition, reports were offered at professional conferences (EAPA, EASNA) and at government innovation forum.

ROI

Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe.
Yes. Recently, a *large* group was questioning the value of what they purchased. We were able to turn the discussion to the level of investment they were willing to make and the return on that investment.
Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **Yes**

STORY

Can you briefly describe a story or case example of how your WOS results have been shared?

FOH leverages the aggregate data results in discussion within Health and Human Services to demonstrate the value of the EAP. Most recently, this was accomplished through the WOS results that were highlighted in the FY2017 EAP year-end executive summary distributed to key stakeholders and leaders within the organization. FOH has also utilized our WOS data to demonstrate EAP services value to the federal community. Our results were submitted to the Office of Personnel Management in support of their *Federal Work-Life Survey Government-wide Report* released in 2018 and distributed by FOH via an email campaign to reach and educate potential government partners outside of the consortium. A review of the aggregate WOS data has become a part of the presentation Account Executives provide to customer agencies during the annual program utilization review. This review is conducted for each customer organization and examines the utilization data specific to their workforce. The results of the WOS coupled with the year-end analysis of the ROI associated with our program are performance indicators that our customer agency points of contact can highlight with their own leadership and key stakeholders to retain funding for EAP services. This data also is oftentimes utilized to champion for additional EAP products. Both the WOS survey and ROI data support the building of strong business cases for many of our customers and in the federal marketspace where budget justification is frequently required, we have received affirming feedback from customer organization that WOS, ROI coupled with their workforce program usage has allowed for program budget retention.

Thanks to: **Jeffrey Mintzer, MSW, CEAP; Roni Morrow MSW, CEAP**

Life Solutions (University of Pittsburgh Medical Center)	
Country: **United States (based in Pennsylvania)** Type of EAP: **Hybrid – Internal Staff and vendor to local employers** Size: **Number of Covered Employees: 600,000**	WorkPartners | Life Solutions
Years Collect WOS Data: 2011 - 2012 - 2013 - 2014 - **2015** - **2016** - **2017** - **2018** Total = **4 Years**	
Version of WOS Scale: **5-item** Why: **brief time needed**	Cases with WOS Data Past Year: **750**
COLLECTION OF DATA	
What types of EAP users are included in WOS data collection process? **Counselor cases**	
What types of EAP users are excluded from WOS data collection? **None, any client using counseling services**	
How many EAP cases complete the WOS at the start of clinical process? **About 50% of all cases**	
Time period between dates when collect Pre and the Post WOS data? **About 90 days**	
For cases with WOS data at Pre, how many also complete the follow-up? **About 33% of cases**	
How do you collect follow-up data on WOS? **Telephone and E-mail** How many attempts are done to get a successful contact at follow-up? **1** Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes**	
REPORTING	
Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP? **We create one "book of business" summary report of the all of the data results across all customers and then share that report with all of our customers. This includes featuring WOS results included in customer reporting and special presentations to the university.**	
ROI	
Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe. **Not Applicable** Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**	
STORY	
Can you briefly describe a story or case example of how your WOS results have been shared within your host organization (if an internal program)? **Not Answered**	
Thanks to: **Jim Kinville, MA**	

Partners HealthCare EAP

Country: **United States (based in Massachusetts)**
Type of EAP: **Internal Staff Model**
Size: **Number of Covered Employees: 72,000+**

Years Collect WOS Data: **2011** – **2012** - **2013** - **2014** - **2015** - **2016** - **2017** - **2018** Total = **8 Years**

Version of WOS Scale: **5-item** Why: **brief time needed** | Cases with WOS Data Past Year: **220**

COLLECTION OF DATA

What types of EAP users are included in WOS data collection process? **Counselor cases with contacts types of in-person and telephone. We are offering virtual visits starting September 2018.**

What types of EAP users are excluded from WOS data collection? **Work/Life – cases of Mothers Corner's (Lactation Support) and Childcare Searches**

How many EAP cases complete the WOS at the start of clinical process? **About 50% of all cases**

Time period between dates when collect Pre and the Post WOS data? **60 days (45-75 range)**

For cases with WOS data at Pre, how many also complete the follow-up? **About 33% of cases**

How do you collect follow-up data on WOS? **E-mail / text survey via website**
How many attempts are done to get a successful contact at follow-up? **1**
Do you have one person who has as part of their job as being responsible for doing the follow-up surveys? **Yes**

REPORTING

Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP?
Create an annual utilization report for entire "book of business" which include the WOS outcome data and share with HR Senior Leadership. Each hospital within the Partners umbrella receives and annual EAP report with also includes the entire "book of business" WOS outcome data.

ROI

Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe. **Use the WOS outcome results to demonstrate EAP program value, see story below.**
Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **No**

STORY

Can you briefly describe a story or case example of how your WOS results have been shared?

The EAP at Partners HealthCare System is an internal program with 20 dedicated clinical and support staff located at nine different offices in the greater Boston area. It supports the over 76,000 employees who work at the two largest academic medical centers in Boston, Brigham and Women's Hospital and The Massachusetts General Hospital, and is also affiliated with Harvard Medical School. Core services of this EAP include brief, confidential, solution-focused counseling for a wide range of personal and work-related concerns as well as work-life and well-being services. Since 2009, Partners is one of the few providers (including internal programs and vendors) in the United States that is accredited in EAP by the Council on Accreditation (COA). External program accreditation demonstrates a commitment to continuous quality improvement and ensures the delivery of services that follow EAP industry best practices.

As part of a long-term quality improvement initiative, the EAP began collecting data on outcomes in 2012. By systematically measuring a set of valid and reliable outcomes relevant to EAP services, we hoped to show that the EAP has business value to the larger work organization. Finding favorable results on these kinds of workplace relevant metrics has strengthened the commitment of the business leadership to continue sponsoring and collaborating with the EAP. It also has motivated our counselors and staff who can see the fruits of their labors when clients have improvements in multiple outcome areas. The WOS Outcome data is shared every year as part of the Partners EAP Annual reports. Each hospital receives their own annual EAP report and we present an annual report for Partners HealthCare System, which includes our book of business. Senior leadership at Partners Healthcare and at each hospital/entity has access to our EAP annual reports.

Thanks to: **Andrea Stidsen, LICSW, CEAP; Henri Menco, LICSW, CEAP**
* Note: Partners participated in the validation study for the brief 5-question version of the WOS instrument.

DuPont

Country: **Global (based in Delaware, United States)**
Type of EAP: **Hybrid with Internal EAP Staff & External Vendors**
Size: **Number of Covered Employees: 48,000**

Year Collect WOS Data: 2011 - 2012 - 2013 - **2014** - 2015 - 2016 - 2017 - 2018 Total = **1 Year**

Version of WOS Scale: **5-item** Why: **ease of data collection across many work sites and languages in different countries**	Cases with WOS Data Past Year: **1,140** **Special Demonstration Project Only (Not a part of ongoing EAP practice)**

COLLECTION OF DATA

What types of EAP users are included in WOS data collection process? **Employee only cases presenting with requests for counseling.**

What types of EAP users are excluded from WOS data collection? **Non-employee; services other than counseling**; **clients at-risk or harm, or crisis cases**

How many EAP cases complete the WOS at the start of clinical process? **The cases with WOS data at start of case intake was 5,334.**

Time period between dates when collect Pre and the Post WOS data? **90 days**

Of cases with WOS data at start, how many complete the follow-up? **22% completed both Pre and Post WOS**

How do you collect follow-up data on WOS? **Three attempts were made using both telephone and email**

REPORTING

Please describe what you do with the results of the analysis of WOS change from Pre to Post use of EAP?
A presentation was developed that was specific to the WOS project (not incorporated into annual data). It was also then written up for publication in *Journal of Employee Assistance*. We found positive and statistically significant average results on all five WOS measures:

- **Absenteeism = 6.89 fewer hours per month after EAP (82% relative improvement)**
- **Presenteeism = 29% improvement**
- **Work Distress = 21% improvement**
- **Work Engagement = 16% improvement**
- **Life Satisfaction = 27% improvement**

Overall results were generally consistent across different countries with enough data to compare.

ROI

Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe**.**
No - We did not do a financial analysis to accompany the results
Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **Not Applicable at time**

STORY

Can you briefly describe a story or case example of how your WOS results have been shared?

The WOS was attractive as a vehicle for standardizing a study of effectiveness across multiple countries and cultures. WOS data was collected from over 80 countries in four operating regions (North America, Latin America, Europe/Middle East/Africa, and Asia-Pacific). We were able to show all of these different cultures accepted use of the EAP and that fears that certain age groups or cultural groups would never utilize the EAP services were, in fact, baseless.

The senior management was less interested in the "soft numbers" that they ascribed to Presenteeism and worker satisfaction than they were in the positive impact our EAP showed on reducing Absenteeism. Senior leaders based in the U.S. considered this outcome something we could monetize and show real cost impact for the company. Regional leaders outside of the U.S. were also impressed with the so-called "soft" number. We were able to show that EAP was having a positive effect on workers that could be helpful in reducing loss of key employees to other employers, data for use in PR and as concrete evidence of DuPont's value for employees globally.

Thanks to: **Paul Heck**, **MEd** (retired Global Manager of EAP and WorkLife Services)

Homewood Health, Inc.

Country: **Canada (based in Guelph, Ontario)**
Type of EAP: **External Vendor – National**
Size: **Dependent on each contract for how many employees/covered families have depression and are eligible for our specialty program**

Years Collect WOS Data: 2011 – 2012 - 2013 - 2014 - **2015** - **2016** - **2017** - **2018** Total = **4 Years**

Version of WOS Scale: **25-item full-scale**
Why: **Measure multiple areas for clinical outcomes**

Total program cases with WOS Data: **127 with complete dataset**

COLLECTION OF DATA

What types of EAP users are included in WOS data collection process? **Not used for general EAP; used only for Depression Care Specialty Program**

What types of EAP users are excluded from WOS data collection? **EAP cases**

How many EAP cases complete the WOS at the start of clinical process? **All cases in Depression Care Program**

Time period between dates when collect Pre and the Post WOS data? **Every 4 sessions data is collected**

Of cases with WOS data for the Pre, how many also complete the follow-up? **Not Applicable**

How do you collect follow-up data on WOS? **N/A as part of ongoing clinical care contact process**

REPORTING

Do you create one "book of business" summary report of the all of the data results across all customers and then share that report? **Currently report for a few large customers only, moving towards a book of business report for sharing with smaller customers and using for program evaluation.**
Approximately how many of your total customers see the overall results from your company (book of business data) on the WOS outcomes? **Working towards this type of reporting.**
Are the WOS results included in customer reporting and/or special presentations to the organization or key employer customers? **Included in a few large customer reports. Also reviewed internally.**
Approximately how many of your customers see their own specific results on the WOS outcomes (based on EAP users from their company only)? **Currently less than 5 with growth expected.**

ROI

Do you use the WOS results in building a business case or financial ROI for the EAP? If so, briefly describe.
Again, moving towards ROI reporting and how this may be used in business cases
Do you use the Chestnut Global Partners ROI Calculator tool at your EAP? **Not Applicable**

STORY

Can you briefly describe a story or case example of how your WOS results have been shared ?

We use the WOS full scale in our Depression Care program, which is designed for people who are at work, but struggling with depression or anxiety. This voluntary service provides longer-term Cognitive Behavioral Therapy based around 12 to 20 counseling sessions. This is different from traditional short-term counseling through EAP. We are in the beginning phase of customer reporting and how to use this data. Time was needed to collect enough data, clean data and become confident in the data. We are now ready to analyze and use the data. We have shared a couple of reports with customers and are currently working on a report for a national service industry customer. They are located in urban and rural settings, which makes them unique. We are working with the data for the one customer report as well as working on the best way to complete a report including all customers/clients. This would allow for a report that can be shared in business cases to support the efficacy of our program as whole, as well as program evaluation.

Our data also provides evidence for the construct validation of the WOS. At the start of treatment, we found the scores on the WOS for our Depression Program cases were higher than the averages for EAP cases on all five of the WOS measures. This finding was expected as people with clinical depression have a more severe mental health status than employees who are in acute distress and seeking help from an EAP.

Thanks to: **Shannon Remers, MSc**

7.2 Lessons learned from EAPs that collect WOS data

This is a summary of the profiles of the different EAPs that collect WOS data.

Characteristics of the EAPs. This convenience sample was selected to feature internal programs, external EAP vendors in the U.S. and other countries, and hybrid programs in corporate and government contexts. The number of covered employees in total ranged across the different EAPs – from 45,000 to over 1.1 million. This wide range of size demonstrates that even smaller size EAPs can collect outcomes data. The number of years that the EAP had been collecting WOS data ranged from 3 to 9 years, with an average of over 6 years. Thus, these EAPs have been committed to continuing to collect outcomes data for many years. Two special projects using the WOS were also included.

WOS version. All but two of the EAPs used the brief 5-item version of the WOS. The brief scale was selected because of the short amount of time needed to only ask five questions.

- WOS Brief 5-item version: All other EAPs
- WOS 9-item version with full Absenteeism Scale: Used only by Empathia
- WOS Full 25-item original version: Used only by Homewood Health

EAP services relevant to WOS. All of the EAPs limited the WOS data collection to EAP clients of counseling services, primarily clinical face-to-face sessions. Other kinds of non-clinical services from the EAP were excluded from outcomes assessment with the WOS (e.g., services such as work/life, legal assistance, financial assistance, management consultations, worksite trainings and crisis responses services, and educational self-care resources). Empathia was the only EAP to limit the WOS criteria within counseling cases, such that only cases that indicated their issue was negatively impacting the ability to do work were asked the WOS questions at Pre and Post use. Most EAPs also had an option of not asking WOS items in certain conditions of clinical complexity, risk or urgency or client preference to opt out. EAP counseling clients who were spouses or other family members of the covered employee also were excluded from WOS data collection.

WOS data collection practices. The percentage of all relevant cases where the WOS items were asked at the start of counseling ranged widely across the different EAPs, from about 10% to over 75% of all cases. See the distribution in Table 7.1. Note that having a higher percentage of cases with WOS data at the start creates the opportunity to also get the follow-up data to assess change in outcomes, whereas a lower starting percentage with WOS data automatically reduces the ability for the EAP to do the longitudinal follow-up data collection. Most of the EAPs contact cases at the follow-up using telephone and/or e-mail or text with a link to an online survey. Only one EAP still used paper surveys mailed to employees. All but one of the EAPs has one or more staff who have dedicated job duties to help collect the follow-up surveys. The number of attempts to contact the case at the follow-up ranged from 1 to 4 times, with an average of 2.2 attempts. The percentage of cases with Pre WOS data who were asked the WOS items again at the follow-up after counseling ranged widely across the different EAPs, from about 10% to over 75% of the cases with WOS data at the start. The average was 52% of cases at Pre and 38% of cases at Post that had WOS data.

Together, this shows that only about 1 in 5 (20%) of all relevant employee clinical cases were successfully administered the WOS at both Pre and Post use of EAP counseling. Thus, these EAPs were missing outcome change data on 4 out of every 5 cases. The number of cases per year with WOS scores at Pre and Post use of counseling ranged from only 40 to almost 2,200; with about 500 completed cases as the average.

Table 7.1. Methodology summary of EAP WOS data collection from 12 EAPs

Pre EAP Use: % Cases with WOS Data:	Post EAP Use: % Cases with WOS Data:
• 10% - 10% • • 33% • 50% - 50% - 50% • 66% • 75% - 75% - 75% - 75%	• 10% - 10% • 25% - 25% - 25% - 25% • 33% - 33% - 33% • 50% • • 75% - 75%+
Number of Days Between Pre and Post:	**Number of Contact Attempts at Post:**
• 30 • 60 - 60 - 60 • 90 - 90 - 90 - 90 - 90 - 90 - 90 - 90	• 1 - 1 - 1 - 1 • 2 - 2 - 2 • 3 - 3 - 3 - 3 • 4

Reporting of WOS results. All but one of the EAPs compiled an annual report that summarized the change over time results on WOS outcomes for the total of call cases collected during the past year. Few EAPs had enough cases with WOS data to produce reports of results specific to a particular employer client. More than half of these EAPs used the WOS results in a financial estimate of cost savings from the EAP – a return on investment (ROI) analysis – but several did not do this final step. Four EAPs used the EAP ROI Calculator tool from Chestnut Global Partners, but most were not.

Customer reactions to WOS results. These EAPs also shared some customer case examples and stories of the benefits of having empirical data on work-related outcomes was helpful to the EAP with their organization or with certain key customers of the EAP. Two specific projects with WOS data also illustrate the value of collecting outcomes data of interest to employers who sponsor EAP and workplace mental health services.

Special projects with WOS. In 2014, the US-based Dupont Corporation conducted a yearlong study of their hybrid EAP program in multiple countries around the world. The results found positive workplace outcomes that helped to justify the expansion of the services to employees in many countries. More recently, the Canadian EAP company Homewood Health, included the WOS full 25-item scale into the clinical management of employees with depression using a long-term treatment model with 12 to 20 sessions. What is particularly interesting about their data is that the WOS scores at the start of the depression care management program were all significantly higher than the normative scores for EAP counseling cases. This finding helps to further validate the WOS scales as measurement tools, as we would expect to find cases with a higher level of clinical impairment to have worse workplace outcomes than the typical EAP brief counseling kinds of cases that tend to present with less severe (but acute) issues in a variety of domains beyond just depression.

7.3 Further reading about EAPs that collect WOS data

Please see the Bibliography that follows for a list of specific written articles and conference presentations from many of the EAPs that were profiled.

Caterpillar Company – Hybrid EAP (international)

Pompe, J.C., & Lennox, R. (2010). *Case example: Measuring EAP success using workplace outcomes*. Presented at the 22nd Annual Institute of the Employee Assistance Society of North America, Montreal, QB, Canada.

Sharar, D.A., Pompe, J.C., & Lennox, R. (2012). Evaluating the workplace effects of EAP counseling. *IHPM Journal of Health & Productivity, 6*(2), 5-14. Available from EAP Digital Archve: http://hdl.handle.net/10713/7676

Sharar, D.A., Pompe, J.C., & Attridge, M. (2013). On-site versus off-site EAPs: A comparison of workplace outcomes. *Journal of Employee Assistance, 43*(2), 14-28. Available from EAP Digital Archve: http://hdl.handle.net/10713/4138

Pompe, J.C., Sharar, D.A., & Ratcliff, M. (2015). Caterpillar's Employee Assistance Program: Evaluating the workplace effects of EAP services. *Mental Health Works, Q*1, 5-9 . Available from: www.workplacementalhealth.org

Chestnut Global Partners – EAP vendor (China)

Peizhong, L. Mollenhauer, M., & Zhang, C. (2015). Examining EAP effectiveness in China. *Journal of Employee Assistance, 45*(3), 24-27.

Peizhong, L. (2016, November). *EAP Research presentations from around the globe.* Presented at the Annual Conference of the Employee Assistance Professionals Association, Chicago, IL.

Dupont Company – Hybrid EAP (international)

Lennox, R., & Mollenhauer, M. (2015, October). *The Workplace Outcome Suite: Results from an EAP Research Network.* Presented at the Annual Conference of the Employee Assistance Professionals Association, San Diego, CA.

Sharar, D., A., Mollenhauer, M., & Heck, P. (2016). Study: *EAP works across cultures and borders*. *Journal of Employee Assistance, 46*(3), 20-22. (Cover Story). Available from EAP Digital Archve: http://hdl.handle.net/10713/7676

Empathic – EAP vendor (United States)

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.

Hellas – EAP vendor (Greece)

Attridge, M., & Chassapoyianni, E. (2017, May). *Return on investment (ROI) analysis of employee assistance program: Employer case study of Piraeus Bank and Hellas EAP.* Keynote presentation at the 5th Forum on Employee Assistance Programs, Athens, Greece. Available from EAP Digital Archive: http://hdl.handle.net/10713/7233

Mazouropoulou, C. (2017, May). WOS (Workplace Outcome Suite): Longitudinal outcomes of the face to face EAP counseling services in Greece. Presentatied at the 5th Forum on Employee Assistance Programs, Athens, Greece. Available from from EAP Digital Archive: http://hdl.handle.net/10713/7232

Federal Occupational Health – Government – Internal EAP (United States)

Mintzer, J., & Tamburo, M.B. (2017, May). *Demonstrating Value: Measuring outcomes and mitigating risks with the workplace outcome suite within the Federal government.* Presented at the annual institute of the Employee Assistance Society of North America, Atlanta, GA.

Tamburo, M.B., & Mintzer, J. (2017). *Measuring outcomes and mitigating risk with the Workplace Outcome Suite in the federal workplace*. White Paper. Available from: http://hdl.handle.net/10713/6658

Mintzer, J., Morrow, V.Y., Tamburo, M.B., Sharar, D., & Herlihy, P. (2018). Demonstrating value, measuring outcomes and mitigating risk: FOH EAP study utilizing the Workplace Outcome Suite. *IHPM Journal of Health & Productivity, 10*(2), 28-34. Available from: http://www.ihpm.org/pdf/IJHP_V10N2_2018.pdf

Partners Healthcare – Internal EAP (United States)

Stidsen, A., Menco, H., & McPherson, T. (2014, September). Can implementing SBIRT enable you to demonstrate improved workplace outcomes? Presented at the Annual Conference of the Employee Assistance Professionals Association, Orlando, FL.

Menco, H., Stidsen, A., & Attridge, M. (2018, October). A quality improvement and outcomes initiative: Multi-year results for SBIRT and WOS. Presented at the Annual Conference of the Employee Assistance Professionals Association, Orlando, FL.

Menco, H., Stidsen, A., & McPherson, T. (2019). Implementing behavioral health screening and outcome measures at an Internal EAP: A quality improvement initiative at Partners HealthCare System. EASNA Research Notes. Available from: http://www.easna.org/publications

Appendix A

Study methodology

Study design

Employee users of the EAP completed the WOS *before* introducing the EAP counseling intervention and then completed the WOS again at several months *after* the intervention. A 90-day follow-up timeframe was recommended by CGP for administering the "post" measure rather than doing it immediately after the last EAP visit because it cannot determine if such improvement persists after counseling has ended. The use of a three-month follow-up period was intended to confirm that improvement on WOS constructs experienced at the end of counseling were then maintained over a longer time period. This data measurement approach with the WOS likely represents a more conservative set of results than if outcomes were assessed at the end of treatment.

Sample

As of April 2018, more than 30 different EA providers, large employers or EAP industry groups had kindly shared their data to Chestnut Global Partners. Most of these EAPs were from the United States but more than 25 other countries were represented among the cases. Most of these sources were external vendors of EAP services, EAPs that serve hospital systems (and often other employers in the same local community), some internal programs from large corporations, and several public sector and government organizations. Almost all of these cases were users of the counseling services from EA providers rather than users of other kinds of non-counselor services provided by the EAP (such as work/life resources or support for financial/legal issues).

Client anonymity. Although the unique identity of each user of the EAP was tracked from Pre to Post use of the EAP in order to collect and match up the Post use outcome data, clients were guaranteed anonymity and assured their employers would never be allowed to view their individual responses. The aggregated dataset provided for the analysis had only identification numbers and no other client specific personal information.

Sample size. The sample size used for analysis was **24,363 cases**. This count excluded more than 1,700 other cases that did not have enough data on the WOS at both the Pre and Post time periods or were removed from the final sample for other data integrity issues. Excluded from this total was one internal EAP with 354 cases. This particular source was excluded because it had not collected data on two of the five WOS measures (i.e., had missing data for all cases at Pre and Post on Absenteeism and Engagement) and no data on the case level client demographic or clinical experience factors. In addition, cases that were outliers for Work Absenteeism were also removed. This was defined the person reporting *more than 160 hours* of missed work in the past month (which exceeds the standard full-time work schedule of 40 hours per week for four weeks). These extremes for absence hours could be due to data entry mistakes, people with an abnormally high number of days for their regular employment schedule, or maybe were on a leave from work altogether. Although rare in the total sample (at less than 0.5%), all cases with outlier status for hours of work absence were removed from the dataset in order to have consistent data on the other four WOS scales.

Sample geography. Every case in the sample was able to be coded individually for the country where the client lived at the time of their EAP use. Most were determined by the location of the EAP vendor while

others were determined at the case level from data coding provided by large global employers that had employees located in multiple countries. A total of 28 different countries were represented. Other cases were merely coded as "Not in the USA". The mix of how many cases were from different countries was quite skewed. The vast majority of cases were from the United States (79% of total). China was second most common country (with 15% of the total cases) and 99% of these were from one external EAP vendor – Chestnut Global Partners China. The remaining 6% of the study sample was from 26 other countries. How many cases were from each of the 28 countries is shown in Table A.1.

Table A.1. Frequency distribution of cases country of EAP client

COUNTRY	Frequency	Percent
United States	19,234	78.9
China	3,615	14.8
Global (Not USA)	746	3.1
New Zealand	305	1.3
Brazil	195	0.8
Greece	111	0.5
Indonesia	17	0.1
Thailand	16	0.1
Mexico	15	0.1
France	13	0.1
Russia	13	0.1
India	12	0
Taiwan	11	0
Turkey	9	0
Belgium	7	0
Spain	6	0
Switzerland	5	0
Argentina	4	0
Colombia	4	0
Germany	4	0
UK	4	0
Australia	3	0
Chile	3	0
Hungary	3	0
Netherlands	3	0
South Africa	3	0
Venezuela	1	0
Vietnam	1	0
Total	*24,363*	*100*

Measurement of the Workplace Outcome Suite

Work Absenteeism is described in Section 3.

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 (Johns, 2010). The WOS Presenteeism measure is designed to assess the effectiveness of EAPs aimed at personal problems that may not require the employee to miss work, but rather fail to be productive in the daily tasks at hand, even if the task is not cognitively taxing. Presenteeism assesses whether the employee is doing what he or she is supposed to do at work, rather than being distracted by a problem. On the WOS, Work Presenteeism is measured in two ways: the original 5-item version and the single-item version from the brief WOS-5.

Workplace Distress is the feeling an employee has about the conditions of the work environment. It is not designed to evaluate the underlying cause of the distress, but only to measure the reduction in distress caused by the EAP intervention. High scorers on the WOS Workplace Distress scale may be clinically depressed, unhappy with their boss, dissatisfied with their chances for promotion, or even unhappy because of the demands the jobs places on their home life. However, the construct is directed at the feeling only and, as such, should be able to detect improvement in the employee's mental state linked to improvement in the working environment. On the WOS, Workplace Distress is measured in two ways: the original 5-item version and the single-item version from the brief WOS-5.

Work Engagement refers to the extent to which an employee is invested in his or her job. This construct goes beyond engagement in particular tasks to address a level of commitment to one's job (Attridge, 2009). Engaged employees take their work home with them and are excited about being at work. They often work late and think about work when they are home. 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, taking as much pride in their job as they do their own appearance. Workplace problems can be expected to diminish this type of enthusiasm as the demands of a problem often interfere with the normal level of excitement connected to one's job. On the WOS, Work Engagement is measured in two ways: the original full 5-item version and the single-item version from the brief WOS-5.

Life Satisfaction is a straightforward measure that addresses satisfaction with one's life (Diener, Emmons, Larsen, & Griffin, 1985). As a general construct, Life Satisfaction is not usually a very sensitive measure of the impact of a specific personal problem, but it can be useful in addressing the impact of workplace problems on one's general well-being and can be used to place the problem in a ''life'' context. On the WOS, Life Satisfaction is measured in two ways: the original 5-item version and the single-item version from the brief WOS-5.

Versions of WOS measures. All three versions of the WOS were represented in the EAP users included in this sample. The choice of which version of the WOS was used was made independently by each EAP.

- The original 25-item WOS was used by five EAPs and had 629 valid cases (3% of the total cases).
- The 9-item version of the WOS was used by two EAPs and had 5,847 valid cases (24%).
- The brief 5-item version of the WOS was used by 30 EAPs and had 17,887 valid cases (73%).

This study used data pooled from all of the WOS measures (25-, 9- and 5-item versions). The single-item was used for analyses for each outcome other than for Work Absenteeism.

Figure Set A.1 on Items for WOS outcomes other than Absenteeism.

Work Presenteeism - WOS Items

PRESENTEEISM	6.	I had a hard time doing my work because of my personal problems.
	7.	**My personal problems kept me from concentrating on my work.**
	8.	Because of my personal problems I was not able to enjoy my work.
	9.	My personal problems made me worry about completing my tasks.
	10.	I could not do my job well because of my personal problems.

Response: Rate level of agreement on 1 to 5 Likert type scale

Single Item: #7 above

Workplace Distress - WOS Items

WORKPLACE DISTRESS	21.	I often feel anxious at work.
	22.	Thinking about being at work makes me upset.
	23.	I am unhappy most of the time at work.
	24.	**I dread going into work.**
	25.	I can't wait to get away from work.

Response: Rate level of agreement on 1 to 5 Likert type scale

Single Item: #24 above

Work Engagement - WOS Items

WORK ENGAGEMENT	11.	I feel stimulated by my work.
	12.	I often think about work on my way to the work site.
	13.	I feel passionate about my job.
	14.	**I am often eager to get to the work site to start the day.**
	15.	I often find myself thinking about my work at home.

Response: Rate level of agreement on 1 to 5 Likert type scale

Single Item: #14 above

Life Satisfaction - WOS Items

LIFE SATISFACTION	16.	My life is nearly perfect.
	17.	I am not very satisfied with my life as a whole.
	18.	**So far, my life seems to be going very well.**
	19.	There isn't anything about my life that I would change if I could.
	20.	I am very disappointed about the way my life has turned out.

NOTE: 2 items reverse scored (17 & 20)

Response: Rate level of agreement on 1 to 5 Likert type scale

Single Item: #18 above

WOS data collection. Most EAPs conducted the Pre-test measure of the WOS telephonically during the client intake process, although other EAPs had the client complete intake paperwork themselves in a waiting area before meeting with an EA professional. The Post-test WOS measure typically was collected roughly 90 days after the Pre-test, either by phone or e-mail or a weblink to online survey data collection tool. Most EAP providers adopted a protocol of using up to three follow-up attempts to collect the Post-test data, either by e-mail or phone before considering the client as non-responsive. The response rate among the many different EAP providers who contributed raw data to this report was unknown - although it was estimated that approximately 30% of clients contacted at follow-up completed the Post-test WOS measure.

Preparation of WOS data. A small number of cases (< 1%) had missing data for one or more of the five WOS outcomes at the Pre-test and/or Post-test periods. These few cases had some of their WOS scores estimated in order to preserve a full dataset and not conduct tests with minor variations in the sample sizes depending on very small amounts of missing data on the focal measures. The replacement scores for missing WOS data were estimated in two ways: 1) for subscales of the full 25-item WOS, subscale items were estimated based on matching the individual set of five ratings to scores corresponding to the actual total score for the 5-item scale available from that same specific case (i.e., this option was available because some EAPs shared data with CGP on the total scale score but did not share the individual item scores that added up to the total score); or 2) for single items of the WOS-5 brief scale, scores were estimated based on average rating for the full sample for that same item.

Data analysis

All analysis was conducted using IBM SPSS version 24. The test of improvement over time (Pre to Post) was conducted using a multivariate analysis of variance 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 moderator factors used a general linear model ANOVA approach with repeated measures of time and the other potential moderator factor of interest as an interaction effect with time.

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 much 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 fairer way to compare the results of the five WOS scales. Thus, the *partial eta squared* effect (η_p^2) obtained in SPSS from each GLM repeated measures test result was examined. The η_p^2 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): a large size effect is .14 or greater; a medium size effect is between .06 to .13; a small size effect is between .01 to .05; and effect sizes of less than .01 are considered as trivial.

Measurement of other context factors

Other contextual factors of EAP use were also examined. These included the user characteristics of age, sex, the country where the client lived, the clinical factors of referral source into the EAP and the type of presenting problem or concern, and the contextual factors created by the business sponsor of the EAP related to the industry of the employer and delivery model for the EAP service. The specific coding of factors was standardized across the various formats of the raw data provided by the different EAPs. See Table A.2 for a summary of the counts of cases with data available for each contextual factor.

Table A.2. Description of EAP user sample on context factors

Factor	Count *n*	% valid cases
Client Context		
Sex of EAP User		*n* = 9,219
Male	2,988	32%
Female	6,231	68%
Age of EAP User	*M* = 38 years	*n* = 8,810
< 30 years	2,481	28%
30-39 years	3,094	35%
40-49 years	1,689	19%
50+ years	1,546	18%
Country of EAP User		*N* = 24,363
United States	19,234	79%
China	3,615	15%
Other Global	1,514	6%
Clinical Context		
Referral Source into EAP		*n* = 5,751
Self	4,950	86%
Supervisor	407	7%
Mandatory	120	2%
Family/Other	274	5%
Presenting Concern		*n* = 7,428
Mental Health and Stress	3,004	40%
Marital and Family	2,164	29%
Occupational & Work Stress	1,305	18%
Alcohol and Drug	276	4%
Other	679	9%
Employer Context		
Industry of Employer		*n* = 10,461
Healthcare	4,165	40%
Manufacturing	2,589	25%
Government	2,453	23%
Technology	1,254	12%
EAP Delivery Model		*N* = 24,363
External Vendor	15,086	62%
Employer Hybrid with External Vendor	4,760	20%
Employer with Internal EAP Staff	4,517	18%

Study limitations

Source bias. The EAPs who collected WOS data and went to the trouble of voluntarily sharing their data with us for this report may also be the kinds of EAP who are more interested in the quality of EAP services than other EAPs who do not do these activities. If so, then our findings may reflect the experience of only a particular group of industry leading vendors and hybrid or internal programs. The outcomes and potential impact of context factors for the much larger segment of all of the other EAPs in the world who did not share WOS data is unknown.

Missing additional context factors. Factors missing from this study are also potentially responsible for differences in WOS results. Some of these factors include the overall health or well-being status of the client (clinical risk factors), the counselor rated level of clinical severity of the case (seriousness of the risks), the number of counseling sessions experienced (clinical dosage delivered), the fidelity of the counseling interventions provided to meeting best practices for EAP (quality), whether or not the case was referred out after the EAP for more serious treatment (clinical referral), or if the sessions were provided in-person or telephone or via e-health technology tools (clinical modality). Further research is needed to tease apart which of these other factors may influence WOS outcomes.

No comparison group. Having only the intervention group experiencing EAP counseling with a no comparison group of employees equally distressed and not receiving EAP counseling, is known as a "Correlational" or "Before/After" single-group study. This kind of study design can identify *if* employees improved at work after EAP counseling, but it cannot prove EAP counseling was the most important causal factor in this improvement. Although less rigorous than a quasi-experimental or true experimental research study designs with random assignment of participants to treatment and control groups, the single group design is typical of almost all studies of the users of voluntary employee health and wellbeing benefits provided in real-life settings as part of normal service delivery. But see one project with a matched control group of non-users of EAP counseling compared to users of EAP counseling with Pre and Post data from three of the WOS outcomes (Richmond, Pampel, Wood, & Nunes, 2015). This study was used in Section 6 to make the ROI estimate results more conservative.

Appendix B

Validity and reliability and WOS measures

What is the psychometric validity and reliability of the WOS measures? This question was answered by conducting a series of correlational tests for WOS measures within only the Pre period, within only the Post period, and also the consistency over time from the Pre and the Post periods.

Validity of WOS measures

The relationships between the five scale dimensions were re-examined to confirm the pattern of moderately strong associations between the five WOS scales and to rule out redundancy with each other. The findings (see Table B.1) show moderate size intercorrelations between all five of the WOS measures (all $p < .001$). For the Pre EAP use period, the intercorrelations ranged from $r = -.50$ to $r = .25$. Similarly, the correlations between the five WOS measures in Post EAP use period ranged from $r = -.47$ to $r = .25$.

Table B.1. Correlations between WOS-5 brief scale outcomes at pre and at post and paired correlation over time for same measures

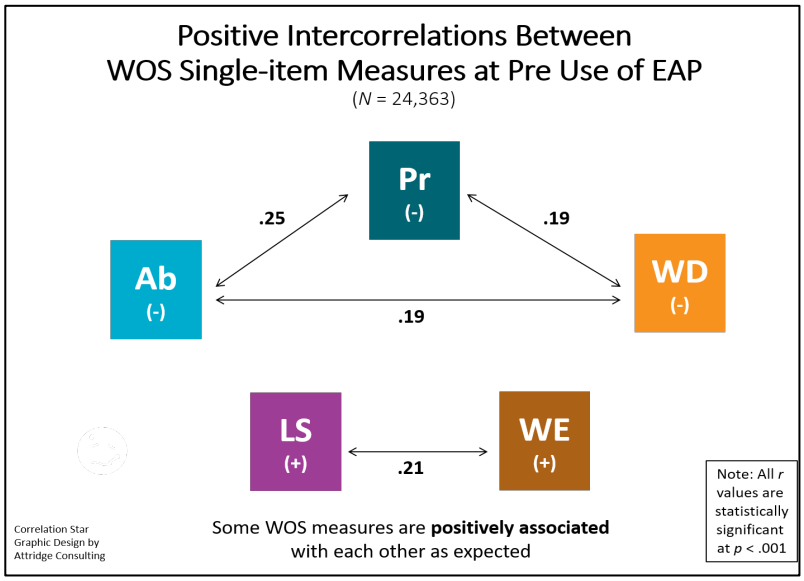
WOS Measure		**WA**	**WP**	**WD**	**WE**	**LS**
		POST Use of EAP at 3 Months Follow-up				
Work Absenteeism (WA)	PRE Use of EAP at Start of Case	**.34**	.30	.23	-.16	-.21
Work Presenteeism (WP)		.25	**.36**	.36	-.23	-.37
Workplace Distress (WD)		.19	.27	**.49**	-.47	-.31
Work Engagement (WE)		-.11	-.19	-.50	**.44**	.25
Life Satisfaction (LS)		-.16	-.30	-.22	.21	**.36**

Note: Total N = 24,363. All measures have 1-5 range of scores. Lower scores indicate better outcomes for Work Absenteeism, Work Presenteeism and Workplace Distress; higher scores indicate better outcome for Work Engagement and Life Satisfaction. Correlations below diagonal are from Pre EAP Use; Correlations above diagonal are from Post EAP Use; correlations on the diagonal are for paired Pre with Post scores for the same measure. All of the correlations in the table are significant at p < .001.

More specifically, we expected to find moderate positive correlations between the three WOS measures with negative valued outcomes (Work Presenteeism, Work Absenteeism and Workplace Distress) and also moderate positive correlations between the two WOS measures with positively valued outcomes (Work

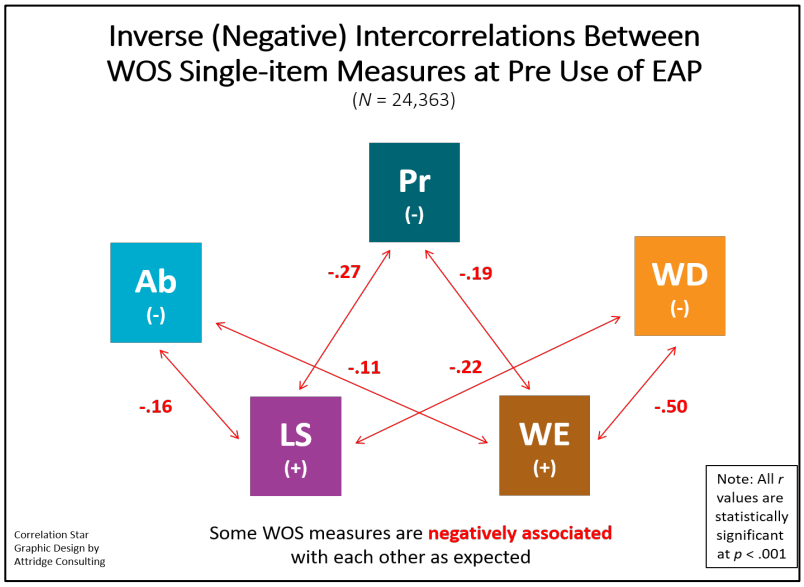
Engagement and Life Satisfaction). This pattern is displayed in Figure B.1 below by the black colored arrows between different pairings of the measures.

Figure B.1. Positive intercorrelations of WOS-5 measures



In addition, we also expected to find moderate negative correlations between the three WOS measures with negative valued outcomes (Work Presenteeism, Work Absenteeism and Workplace Distress) and each of the two WOS measures with positively valued outcomes (Work Engagement and Life Satisfaction). This pattern is displayed in Figure B.2 below by the red colored arrows different pairings of the measures.

Figure B.2. Negative intercorrelations of WOS-5 measures



These findings confirm the shared meaning or overlap of different aspects of the work experience for EAP counseling cases. It also shows that the more general outcome construct, Life Satisfaction, is linked somewhat to the four kinds of work outcomes. This pattern is evidence of the convergent validity of these

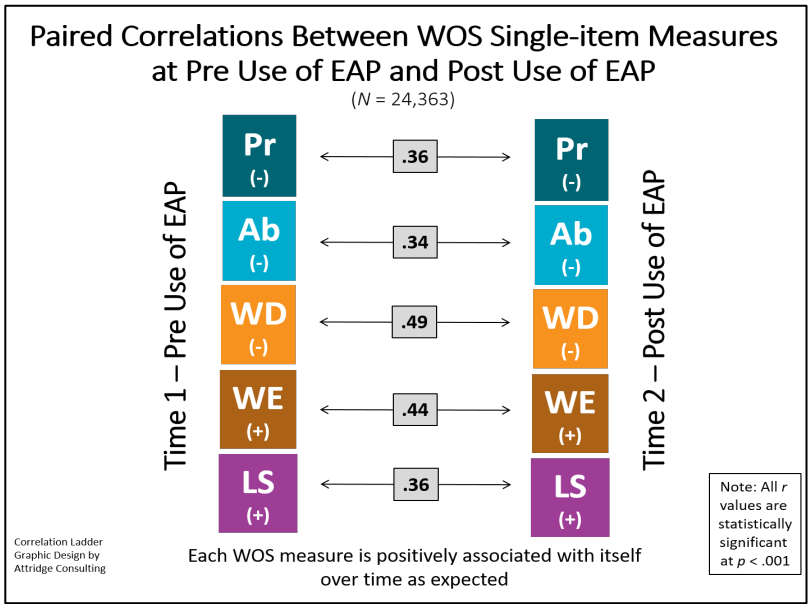
constructs as measured by the questions on the WOS. Also important for establishing the discriminant from of measurement validity is the finding that the shared variance among the WOS measures was not too high (the highest correlation of r = .50 when squared reflects 25% shared variance). These findings indicate that although the WOS measures do have some overlap, each measure has its own meaning that is distinct from the others and thus tells a different part of the larger workplace outcomes story.

Other tests (not shown) revealed only very small size correlations between the client demographic factors of age and sex with the five WOS measures at Pre EAP use (r = .11 or less). These findings also offer evidence of the discriminant validity of the WOS, as there was no reasonable expectation that men and women or clients of different ages should differ at baseline on levels of workplace outcomes.

Reliability of WOS measures

Measurement reliability for psychological constructs is demonstrated when the same measure is positively correlated with itself over time. Having a measure with high temporal reliability indicates consistency or stability over time in the level of responses such that each person in the sample is roughly in the same place in the overall distribution scores for the entire sample when ranked from low to high at both of the two time points. In the present study, all five of the WOS single-item measures had significant but moderate size correlations over time from Pre to Post use of the EAP (see diagonal of matrix in Table B.1 with r_{paired} = .34 to .49; all p < .001). Also see Figure B.3 below. Note that having too high of a correlation (similarity) over time for an outcome measure is not desirable, as this indicates not much change over time in the outcome scores. In contrast, paired correlations for personality trait or other more stable constructs tend to be much higher (i.e., r_{paired} of 0.70 or higher) than what we found for the WOS measures.

Figure B.3. Paired correlations over time of WOS-5 measures



Appendix C

Detailed statistical results

Table C1. Summary results for change over time on WOS-5 and new WOS composite measures

	Work Absenteeism NEW	**Work Presenteeism**	**Workplace Distress**	**Work Engagement**	**Life Satisfaction**	**WOS SuperScore NEW**
Items	1 or 3	1	1	1	1	5
Rating Range	1-5[a]	1-5	1-5	1-5	1-5	5-25
Higher Rating Indicates	Worse	Worse	Worse	Better	Better	Better
PRE – Before EAP Use	2.04 (1.40)	3.30 (1.38)	2.25 (1.35)	3.21 (1.32)	3.00 (1.25)	16.62 (4.20)
POST – After EAP Use	1.49 (1.06)	2.43 (1.32)	1.94 (1.18)	3.46 (1.21)	3.66 (1.16)	19.26 (3.90)
Raw Difference	0.55	0.86	0.31	0.26	0.69	2.64
Improvement Over Time	27%	26%	14%	8%	23%	16%
Paired Correlation Over Time	.34***	.36***	.48***	.44***	.36***	.50***
Paired *t*-test Over Time	59.27***	87.69***	37.00***	-29.58***	-176.54***	-101.30***
Statistical Effect Size as Cohen *d*	.76 Medium	1.12 Large	.47 Small	.38 Small	2.26 Large	1.30 Large
Statistical Effect Size as Partial Eta Squared (η_p^2)	.13 Medium	.24 Large	.05 Small	.04 Small	.19 Large	.30 Large

Note: N = 24,363. Table displays mean average score and standard deviation in *M* and (*SD*).

[a] Created from re-scoring the data of self-reported number of hours of absence in past month from the full Absenteeism Scale on WOS-25 and WOS-9 (using only 3 of the 5 original items) or the single item from WOS-5 brief version.

*** significant beyond chance at $p < .001$ level.

Table C.2. Summary results for change over time on WOS-25 original scales

	Work Absenteeism	**Work Presenteeism**	**Workplace Distress**	**Work Engagement**	**Life Satisfaction**
Items on Scale	5	5	5	5	5
Rating Range	0-160	5-25	5-25	5-25	5-25
Higher Rating Indicates	Worse	Worse	Worse	Better	Better
PRE – Before EAP Use	12.62 (24.05)	13.12 (6.42)	12.13 (5.62)	18.19 (4.94)	14.42 (4.30)
POST – After EAP Use	5.46 (18.07)	9.74 (5.36)	11.22 (6.22)	18.12 (4.30)	16.28 (4.04)
Raw Difference	7.16	3.83	0.92	.07	-1.86
Improvement Over Time	57%	29%	8%	<1%	13%
Paired Correlation Over Time	.18***	.46***	.45***	.41***	.55***
Paired *t*-test Over Time	6.58***	13.65***	3.76***	<1 *ns*	-11.57***
Statistical Effect Size as Cohen *d*	.23 Small	.51 Medium	.15 Very Small	.01 None	0.46 Medium
Statistical Effect Size as Partial Eta Squared (η_p^2)	.07 Small	.23 Large	.02 Small	.00 None	.17 Large

Note: N = 629. Table displays mean average score and standard deviation in *M* and (*SD*).

*** significant beyond chance at $p < .001$ level.

Table C.3. Work Absenteeism hours in past month on various versions of WOS measures

Measure	N cases paired data	Pre EAP Use	Post EAP Use	Difference*	
		Mean (SD)	Mean (SD)	Hours	%
5-item on Original WOS-25-item Scale	629	12.62 (24.05)	5.46 (18.07)	7.16	57%
5-item on Revised WOS-9-item Scale	5,847	10.57 (22.69)	5.53 (21.39)	5.04	48%
5-item on either 9 or 25 version	6,476	10.77 (22.83)	5.52 (21.09)	5.25	51%
3-items from full version to match instructions for single item WOS-5	6,356	8.93 (20.97)	4.83 (20.49)	4.10	46%
1-item on Brief WOS-5	17,578	6.80 (16.80)	3.45 (14.55)	3.35	49%
Adjusted measure used in this report**	**24,363**	**7.36 (17.90)**	**3.85 (16.36)**	**3.51**	**48%**

* all differences significant beyond chance ($p < .05$ in paired *t*-tests)
** Either 3-items from full scale or 1-item from WOS-5 depending on which version completed by case

Table C.4. Improvement over time in WOS-5 measures by age of client

WOS Measure	Context Factor: Age of Client				Interaction	Group
	Age under 30 Years	Age 31 to 40	Age 41 to 50	Age 51 or older	*Test of Time X Age*	*Test of Age*
Sample Size	2,481	3,094	1,689	1,546	8,810	8,810
Work Absenteeism Hours						
Pre EAP	3.38 (10.19)	4.52 (13.41)	6.87 (17.29)	8.06 (20.05)	Not tested	Not tested
Post EAP	1.77 (10.50)	2.40 (12.81)	3.97 (16.86)	6.23 (23.62)	(skewed *SD*)	(skewed *SD*)
Net Change	1.61	2.12	2.90	1.83	See 1-5 rating	See 1-5 rating
Improvement	**48%**	**47%**	**42%**	**23%**		
Work Absenteeism NEW 1-5						
Pre EAP	1.61 (1.11)	1.70 (1.21)	1.95 (1.37)	1.97 (1.42)	$F = 3.82$*	$F = 58.36$
Post EAP	1.29 (0.78)	1.37 (0.88)	1.51 (1.06)	1.58 (1.17)	$\eta_p^2 < .01$	$\eta_p^2 = .02$
Improvement	**20%**	**19%**	**23%**	**20%**	trivial effect	**small effect**
Interpretation		*groups similar in improvement*				
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)						
Pre EAP	3.20 (1.34)	3.23 (1.37)	3.31 (1.37)	2.57 (1.41)	$F = 36.73$*	$F = 26.42$*
Post EAP	2.15 (1.28)	2.22 (1.33)	2.58 (1.40)	2.41 (1.46)	$\eta_p^2 = .01$	$\eta_p^2 < .01$
Improvement	**33%**	**31%**	**22%**	**6%**	small effect	trivial effect
Interpretation		*groups different in improvement*				
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)						
Pre EAP	2.12 (1.29)	2.07 (1.29)	2.28 (1.37)	2.41 (1.40)	$F = 1.05$*	$F = 46.96$*
Post EAP	1.72 (1.08)	1.74 (1.10)	1.92 (1.20)	2.08 (1.31)	$\eta_p^2 < .01$	$\eta_p^2 = .02$
Improvement	**19%**	**16%**	**16%**	**14%**	trivial effect	**small effect**
Interpretation		*groups similar in improvement*				
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)						
Pre EAP	2.99 (1.33)	3.09 (1.31)	3.17 (1.34)	3.23 (1.34)	F = 1.71*	F = 25.31*
Post EAP	3.16 (1.29)	3.31 (1.27)	3.43 (1.25)	3.47 (1.25)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**6%**	**7%**	**8%**	**7%**	trivial effect	trivial effect
Interpretation		*groups similar in improvement*				
Life Satisfaction WOS-5 Single Item Rated 1-5 (higher score is better outcome)						
Pre EAP	3.05 (1.22)	3.08 (1.24)	3.01 (1.24)	2.95 (1.26)	$F = 5.98$ *ns*	$F = 14.50$*
Post EAP	3.79 (1.10)	3.75 (1.12)	3.64 (1.15)	3.53 (1.24)		$\eta_p^2 < .01$
Improvement	**24%**	**22%**	**21%**	**20%**	No effect	trivial effect
Interpretation		*groups similar in improvement*				
WOS SuperScore 5-25 NEW Composite of all Five Items (higher score is better outcome)						
Pre EAP	17.12 (3.61)	17.17 (3.85)	16.62 (4.06)	16.61 (4.29)	$F = 5.92$*	$F = 30.35$*
Post EAP	19.78 (3.44)	19.74 (3.52)	19.05 (3.82)	18.77 (4.18)	$\eta_p^2 < .01$	$\eta_p^2 = .01$
Improvement	**16%**	**15%**	**15%**	**13%**	trivial effect	**small effect**
Interpretation		*groups similar in improvement*				

Note: Missing data on Age for other 64% of full sample. Table displays mean average score and standard deviation in *M* and (*SD*). Red color font indicates findings for the interaction effect where the extent of improvement over time in the outcome was different for groups of the context factor of client age. Blue color font indicates findings for the main effect where the outcome levels at each time period differed between groups based on age of the client. Findings highlighted in yellow are the key age group that differs the most from the other age groups in the extent of improvement over time.

Table C.5. Improvement over time in WOS-5 measures by sex of client

WOS Measure	Context Factor: Sex of Client		Interaction	Group
	Men	**Women**	*Test of Time X Sex*	*Test of Male vs. Female*
Sample Size	2,988	6,231	9,219	9,219
Work Absenteeism Hours				
Pre EAP	5.16 (15.40)	5.30 (14.59)	Not tested	Not tested
Post EAP	3.27 (16.78)	3.19 (14.92)	(skewed *SD*)	(skewed *SD*)
Net Change	1.89	2.11	See 1-5 rating	See 1-5 rating
Improvement	**37%**	**40%**		
Work Absenteeism 1-5				
Pre EAP	1.73 (1.24)	1.80 (1.27)	*F* < 1 *ns*	*F* = 10.01*
Post EAP	1.38 (0.91)	1.44 (0.98)		$\eta_p^2 < .01$
Improvement	**20%**	**20%**	No effect	trivial effect
Interpretation	*groups similar in improvement*			
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)				
Pre EAP	3.25 (1.38)	3.22 (1.37)	*F* = 1.09 ns	*F* = < ns
Post EAP	2.31 (1.34(	2.32 (1.36)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**29%**	**28%**	trivial effect	trivial effect
Interpretation	*groups similar in improvement*			
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)				
Pre EAP	2.13 (1.30)	2.20 (1.33)	*F* < 1 *ns*	*F* = 9.07*
Post EAP	1.79 (1.14)	1.85 (1.16)		$\eta_p^2 < .01$
Improvement	**16%**	**16%**	No effect	trivial effect
Interpretation	*groups similar in improvement*			
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)				
Pre EAP	3.20 (1.32)	3.08 (1.34)	F < 1 *ns*	*F* = 32.77*
Post EAP	3.42 (1.27)	3.27 (1.26)		$\eta_p^2 < .01$
Improvement	**7%**	**6%**	no effect	trivial effect
Interpretation	*groups similar in improvement*			
Life Satisfaction WOS-5 Single Item Rated 1-5 (higher score is better outcome)				
Pre EAP	3.07 (1.25)	3.06 (1.22)	F < 1 *ns*	F < 1 *ns*
Post EAP	3.76 (1.13)	3.74 (1.09)		
Improvement	**22%**	**22%**	no effect	no effect
Interpretation	*groups similar in improvement*			
WOS SuperScore 5-25 NEW Composite of all Five Items (higher score is better outcome)				
Pre EAP	17.16 (3.89)	16.93 (3.93)	*F* = < 1 *ns*	*F* = 14.74*
Post EAP	19.71 (3.67)	19.39 (3.71)		$\eta_p^2 < .01$
Improvement	**15%**	**15%**	No effect	trivial effect
Interpretation	*groups similar in improvement*			

Note: Missing data on Sex for other 61% of full sample. Table displays mean average score and standard deviation in *M* and (*SD*).

Table C.6. Improvement over time in WOS-5 measures by country of client

Workplace Outcome Suite Measure	Context Factor: Country of Client			Interaction *Test of Time X Country*	Group *Test of Country*
	United States of America	**Other Global Countries**	**China**		
Sample Size	19,234	1,514	3,615	24,363	24,363
Work Absenteeism Hours					
Pre EAP	8.31 (19.05)	8.43 (17.83)	1.87 (7.81)	Not tested	Not tested
Post EAP	4.41 (17.71)	4.78 (16.51)	0.50 (3.01)	(skewed *SD*)	(skewed *SD*)
Net Change	3.90	3.65	1.37	See 1-5 rating	See 1-5 rating
Improvement	**47%**	**43%**	**73%**		
Work Absenteeism 1-5					
Pre EAP	2.15 (1.44)	2.23 (1.45)	1.39 (0.88)	$F = 97.35$*	$F = 500.52$*
Post EAP	1.54 (1.11)	1.70 (1.18)	1.15 (0.53)	$\eta_p^2 = .01$	$\eta_p^2 = .04$
Improvement	**28%**	**24%**	**17%**	**small effect**	**small effect**
Interpretation	*groups NOT similar in rate of improvement*				
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)					
Pre EAP	3.34 (1.38)	3.24 (1.35)	3.09 (1.39)	$F = 126.54$*	$F = 266.04$*
Post EAP	2.54 (1.35)	2.47 (1.31)	1.86 (1.16)	$\eta_p^2 = .01$	$\eta_p^2 = .02$
Improvement	**24%**	**24%**	**40%**	**small effect**	**small effect**
Interpretation	*groups NOT similar in rate of improvement*				
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)					
Pre EAP	2.31 (1.36)	2.44 (1.36)	1.86 (1.23)	$F = 18.85$*	$F = 383.62$*
Post EAP	2.02 (1.20)	2.21 (1.24)	1.44 (0.89)	$\eta_p^2 < .01$	$\eta_p^2 = .03$
Improvement	**13%**	**9%**	**23%**	trivial effect	**small effect**
Interpretation	*groups similar in rate of improvement*				
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)					
Pre EAP	3.27 (1.31)	3.08 (1.31)	2.96 (1.38)	$F = 9.24$*	$F = 186.27$*
Post EAP	3.54 (1.18)	3.30 (1.23)	3.13 (1.31)	$\eta_p^2 < .01$	$\eta_p^2 = .02$
Improvement	**8%**	**7%**	**6%**	trivial effect	**small effect**
Interpretation	*groups similar in rate of improvement*				
Life Satisfaction WOS-5 Single Item Rated 1-5 (higher score is better outcome)					
Pre EAP	2.99 (1.25)	3.06 (1.16)	3.06 (1.27)	$F = 27.58$*	$F = 33.02$*
Post EAP	3.64 (1.12)	3.55 (1.07)	3.85 (1.07)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**22%**	**16%**	**26%**	trivial effect	trivial effect
Interpretation	*groups similar in rate of improvement*				
WOS SuperScore 5-25 NEW Composite of all Five Items (higher score is better outcome)					
Pre EAP	16.45 (4.31)	17.67 (4.06)	16.22 (3.44)	$F = 12.47$*	$F = 249.71$*
Post EAP	19.08 (4.00)	20.53 (3.89)	18.47 (2.98)	$\eta_p^2 < .01$	$\eta_p^2 = .02$
Improvement	**16%**	**16%**	**14%**	trivial effect	**small effect**
Interpretation	*groups similar in rate of improvement*				

Note: Table displays mean average score and standard deviation in *M* and (*SD*). Red color font indicates findings for the interaction effect where the extent of improvement over time in the outcome was different for groups of the context factor of country. Blue color font indicates findings for the main effect where the outcome levels at each time period differed between groups based on country. Findings highlighted in yellow are the key country that differs the most from other countries the extent of improvement over time.

Table C.7. Improvement over time in WOS-5 measures by referral type

Workplace Outcome Suite Measure	Context Factor: Referral Type			Interaction *Test of Time X Referral*	Group *Test of Referral*
	Self-Referral	**Referral by Family or Other**	**Referral by Supervisor or HR Mandatory**		
Sample Size	4,950	407	394	5,794	5,794
Work Absenteeism Hours					
Pre EAP - *Mean*	7.53 (16.70)	10.19 (23.75)	8.49 (22.31)	Not tested	Not tested
Post EAP - *Mean*	4.19 (17.41)	4.24 (19.14)	9.27 (32.26)	(skewed *SD*)	(skewed *SD*)
Net Change	3.34	5.95	+0.78	See 1-5 rating	See 1-5 rating
Improvement	**44%**	**58%**	**-9%**		
	See next page Table C.7 for re-analysis with outliers removed; which shows no differences by group				
Work Absenteeism 1-5					
Pre EAP	2.15 (1.39)	2.16 (1.50)	1.98 (1.41)	$F = 7.43$*	$F < 1$ ns
Post EAP	1.58 (1.07)	1.45 (1.02)	1.65 (1.22)	$\eta_p^2 < .01$	
Improvement	**27%**	**33%**	**17%**	trivial effect	
Interpretation	*groups similar in rate of improvement*				
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)					
Pre EAP	3.36 (1.28)	2.83 (1.50)	3.05 (1.48)	$F = 8.54$*	$F = 29.12$*
Post EAP	2.60 (1.32)	2.34 (1.36)	2.52 (1.42)	$\eta_p^2 < .01$	$\eta_p^2 = .01$
Improvement	**23%**	**23%**	**17%**	trivial effect	**small effect**
Interpretation	*groups similar in rate of improvement*				
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)					
Pre EAP	2.26 (1.31)	2.37 (1.28)	2.31 (1.39)	$F < 1$ *ns*	$F = 3.37$*
Post EAP	1.99 (1.21)	2.07 (1.32)	2.07 (1.22)		$\eta_p^2 < .01$
Improvement	**12%**	**13%**	**10%**	No effect	trivial effect
Interpretation	*groups similar in rate of improvement*				
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)					
Pre EAP	3.26 (1.28)	3.30 (1.29)	3.30 (1.34)	F = 2.66 *ns*	$F = 2.90$ *ns*
Post EAP	3.52 (1.22)	3.73 (1.20)	3.55 (1.25)		
Improvement	**8%**	**13%**	**8%**	No effect	No effect
Interpretation	*groups similar in rate of improvement*				
Life Satisfaction WOS-5 Single Item Rated 1-5 (higher score is better outcome)					
Pre EAP	3.04 (1.16)	3.27 (1.33)	3.25 (1.23)	$F < 1$ *ns*	$F = 15.77$*
Post EAP	3.74 (1.10)	3.94 (1.08)	3.89 (1.08)		$\eta_p^2 < .01$
Improvement	**23%**	**20%**	**20%**	No effect	*trivial effect*
Interpretation	*groups similar in rate of improvement*				
WOS SuperScore 5-25 NEW Composite of all Five Items (higher score is better outcome)					
Pre EAP	16.53 (3.99)	17.27 (4.50)	17.13 (4.19)	$F = 3.62$*	$F = 9.84$*
Post EAP	19.09 (3.93)	19.81 (3.91)	19.11 (3.93)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**15%**	**15%**	**12%**	trivial effect	trivial effect
Interpretation	*groups similar in rate of improvement*				

Note: Missing data on Referral Type for other 76% of full sample. Table displays mean average score and standard deviation in *M* and (*SD*). Blue color font indicates findings for the main effect where the outcome levels at each time period differed between groups based on referral type.

Table C.8. Improvement over time in Absenteeism hours by referral type – outliers removed

Workplace Outcome Suite Measure	**Self-Referral**	**Referral by Family or Other**	**Referral by Work Supervisor or HR Mandatory**
Sample Size	4,950	407	394
Work Absenteeism Hours – ADJUSTED: trimmed of all cases at 160 maximum hours at Pre and/or Post (essentially not working for any days in past month) Note more similar standard deviations for each group			
Sample Size	4,894 56 removed = 1.0% PRE = 17 = 0.3% POST = 40 = 0.8%	399 8 removed = 2.0% PRE = 5 = 1.2% POST = 4 = 1.0%	377 17 removed = 4.3% PRE = 3 = 0.8% POST = 14 = 3.6%
Pre EAP - *Mean (SD)*	6.86 (13.87)	7.44 (16.35)	7.14 (17.78)
Post EAP - *Mean (SD)*	2.84 (9.93)	3.70 (11.28)	3.56 (14.07)
Net Change	4.02	3.74	3.58
Relative Improvement	**59%**	**50%**	**50%**
Interpretation of Result	*groups similar in rate of improvement when removed effects of small numbers of outlier cases with extreme maximum level of absenteeism*		

Table C.9. Improvement over time in WOS-5 measures by clinical concern

WOS Measure	Context Factor: Clinical Concern					Interaction	Group
	Mental Health & Stress	**Marital & Family Relations**	**Work**	**Alcohol & Drug Misuse**	**Other Concerns**	*Test of Time X Clinical Concern*	*Test of Clinical Concerns*
Sample Size	3,004	2,164	1,305	276	679	7,428	7,428
Work Absenteeism Hours							
Pre EAP	8.76 (18.43)	5.39 (11.11)	7.22 (16.52)	12.69 (28.99)	9.60 (19.40)	Not tested (skewed *SD*) See 1-5 rating	Not tested (skewed *SD*) See 1-5 rating
Post EAP	4.22 (16.78)	2.35 (9.17)	6.07 (23.69)	8.97 (32.00)	5.82 (19.68)		
Net Change	4.54	3.04	1.15	3.72	3.78		
Improvement	**52%**	**56%**	**16%**	**29%**	**39%**		
Work Absenteeism 1-5							
Pre EAP	2.32 (1.40)	2.01 (1.30)	2.04 (1.38)	2.28 (1.53)	2.25 (1.47)	$F = 8.52$*	$F = 20.12$*
Post EAP	1.64 (1.08)	1.49 (0.95)	1.60 (1.14)	1.59 (1.15)	1.72 (1.22)	$\eta_p^2 < .01$	$\eta_p^2 = .01$
Improvement	**29%**	**26%**	**22%**	**30%**	**24%**	trivial effect	**small effect**
Interpretation							
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)							
Pre EAP	3.40 (1.26)	3.38 (1.26)	2.99 (1.41)	2.92 (1.41)	3.38 (1.30)	$F = 8.24$*	$F = 21.91$*
Post EAP	2.62 (1.37)	2.61 (1.37)	2.48 (1.41)	2.34 (1.36)	2.58 (1.34)	$\eta_p^2 < .01$	$\eta_p^2 = .01$
Improvement	**23%**	**23%**	**17%**	**20%**	**24%**	trivial effect	**small effect**
Interpretation		*groups similar in rate of improvement*					
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)							
Pre EAP	2.30 (1.31)	2.01 (1.16)	2.74 (1.44)	2.04 (1.21)	2.42 (1.35)	$F = 6.82$*	$F = 73.61$*
Post EAP	1.94 (1.16)	1.80 (1.08)	2.28 (1.33)	1.80 (1.13)	2.13 (1.28)	$\eta_p^2 < .01$	$\eta_p^2 = .04$
Improvement	**16%**	**10%**	**17%**	**12%**	**12%**	trivial effect	**small effect**
Interpretation		*groups similar in rate of improvement*					
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)							
Pre EAP	3.26 (1.24)	3.48 (1.16)	3.05 (1.35)	3.57 (1.22)	3.09 (1.33)	$F = 1.94$ *ns*	$F = 44.26$*
Post EAP	3.61 (1.19)	3.74 (1.11)	3.34 (1.33)	3.77 (1.11)	3.36 (1.22)		$\eta_p^2 = .02$
Improvement	**11%**	**7%**	**10%**	**6%**	**9%**	No effect	**small effect**
Interpretation		*groups similar in rate of improvement*					
Life Satisfaction 1-5							
Pre EAP	2.98 (1.17)	2.98 (1.17)	3.32 (1.18)	3.05 (1.23)	2.92 (1.18)	$F = 6.87$*	$F = 21.40$*
Post EAP	3.65 (1.17)	3.63 (1.20)	3.79 (1.13)	3.87 (1.07)	3.52 (1.15)	$\eta_p^2 < .01$	$\eta_p^2 = .01$
Improvement	**22%**	**22%**	**14%**	**27%**	**21%**	trivial effect	**small effect**
Interpretation		*groups similar in rate of improvement*					
WOS SuperScore 5-25 NEW Composite of all Five Items (higher score is better outcome)							
Pre EAP	16.23 (3.87)	17.06 (3.61)	16.60 (4.24)	17.39 (4.10)	15.96 (4.20)	$F = 7.23$*	$F = 22.97$*
Post EAP	19.47 (3.78)	19.81 (3.45)	18.77 (4.22)	19.90 (3.61)	18.45 (4.10)	$\eta_p^2 < .01$ trivial effect	$\eta_p^2 = .01$ **small effect**
Improvement	**20%**	**16%**	**13%**	**14%**	**16%**		
Interpretation		*groups similar in rate of improvement*					

Note: Missing data on Clinical Concern for other 70% of full sample. Table displays mean average score and standard deviation in *M* and (*SD*). Blue color font indicates findings for the main effect where the outcome levels at each time period differed between groups based on clinical issue of the client.

Table C.10. Improvement over time in WOS-5 measures by industry

Workplace Outcome Suite Measure	Context Factor: Industry of Employer Sponsor of EAP				Interaction *Test of Time X Industry*	Group *Test of Industry*
	Health Care	**Manufact-uring**	**Government**	**Technology**		
Sample Size	4,165	2,289	1,254	2,453	10,458	10,458
Work Absenteeism Hours						
Pre EAP	8.06 (19.08)	8.16 (14.61)	10.86 (21.72)	7.69 (17.43)	Not tested	Not tested
Post EAP	5.07 (19.34)	3.51 (12.02)	3.65 (12.68)	4.57 (13.38)	(skewed *SD*)	(skewed *SD*)
Net Change	2.99	4.65	7.21	3.12	See 1-5 rating	See 1-5 rating
Improvement	**37%**	**57%**	**66%**	**41%**		
Work Absenteeism 1-5						
Pre EAP	2.03 (1.44)	2.54 (1.27)	2.69 (1.41)	2.17 (1.45)	$F = 89.75$	$F = 60.55$*
Post EAP	1.59 (1.14)	1.76 (1.05)	1.48 (1.13)	1.80 (1.23)	$\eta_p^2 = .03$	$\eta_p^2 = .02$
Improvement	**22%**	**31%**	**45%**	**17%**	**small effect**	trivial effect
Interpretation	*groups different in rate of improvement over time*					
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)						
Pre EAP	2.99 (1.41)	3.22 (1.21)	3.44 (1.52)	3.44 (1.32)	$F = 39.70$*	$F = 46.79$*
Post EAP	2.48 (1.37)	2.35 (1.26)	2.58 (1.54)	2.65 (1.24)	$\eta_p^2 = .01$	$\eta_p^2 = .01$
Improvement	**17%**	**27%**	**25%**	**23%**	**small effect**	**small effect**
Interpretation	*groups different in rate of improvement over time*					
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)						
Pre EAP	2.27 (1.34)	2.04 (1.18)	2.26 (1.49)	2.28 (1.34)	$F = 9.32$*	$F = 48.83$*
Post EAP	2.13 (1.26)	1.74 (1.03)	2.00 (1.31)	2.15 (1.14)	$\eta_p^2 < .01$	$\eta_p^2 = .01$
Improvement	**6%**	**15%**	**12%**	**6%**	trivial effect	small effect
Interpretation	*groups similar in rate of improvement*					
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)						
Pre EAP	3.25 (1.29)	3.42 (1.16)	3.40 (1.47)	3.37 (1.27)	$F = 29.1$*	$F = 27.21$*
Post EAP	3.52 (1.17)	3.79 (1.13)	3.45 (1.28)	3.44 (1.12)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**8%**	**11%**	**1%**	**2%**	trivial effect	trivial effect
Interpretation	*groups similar in rate of improvement*					
Life Satisfaction WOS-5 Single Item Rated 1-5 (higher score is better outcome)						
Pre EAP	3.13 (1.23)	3.03 (1.09)	3.24 (1.39)	3.14 (1.19)	$F = 11.14$*	$F = 21.94$*
Post EAP	3.60 (1.15)	3.68 (1.13)	3.84 (1.06)	3.63 (0.97)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**15%**	**21%**	**19%**	**16%**	trivial effect	trivial effect
Interpretation	*groups similar in rate of improvement*					
WOS SuperScore 5-25 NEW Composite of all Five Items (higher score is better outcome)						
Pre EAP	17.09 (4.13)	16.65 (3.42)	16.47 (4.99)	16.63 (4.07)	$F = 55.28$*	$F = 8.76$*
Post EAP	18.92 (4.02)	19.62 (3.44)	19.23 (4.59)	18.47 (3.83)	$\eta_p^2 = .02$	$\eta_p^2 < .01$
Improvement	**11%**	**18%**	**17%**	**11%**	**small effect**	trivial effect
Interpretation	*groups different in rate of improvement over time*					

Note: Missing data on Industry for other 57% of full sample. Table displays mean average score and standard deviation in *M* and (*SD*). Red color font indicates findings for the interaction effect where the extent of improvement over time in the outcome was different for groups of the context factor of industry. Blue color font indicates findings for the main effect where the outcome levels at each time period differed between groups based on industry. Findings highlighted in yellow are the key industry group that differs the most from other industry groups.

Table C.11. Improvement over time in WOS-5 measures by EAP delivery model

WOS Measure	Context Factor: EAP Delivery Model			Interaction	Group
	External Vendor Model	**Employer Hybrid Model**	**Internal Staff Model**	*Test of Time X EAP Model*	*Test of EAP Model*
Sample Size	15,086	4,760	4,517	24,363	24,363
Work Absenteeism Hours					
Pre EAP	6.63 (17.53)	9.33 (18.02)	7.74 (18.83)	Not tested	Not tested
Post EAP	3.64 (16.41)	3.22 (11.27)	5.26 (20.21)	(skewed *SD*)	(skewed *SD*)
Net Change	2.99	6.11	2.48	See 1-5 rating	See 1-5 rating
Improvement	**45%**	**65%**	**32%**		
Work Absenteeism 1-5					
Pre EAP	1.91 (1.38)	2.49 (1.35)	2.02 (1.43)	$F = 191.94$*	$F = 238.04$
Post EAP	1.43 (1.03)	1.58 (1.06)	1.61 (1.14)	$\eta_p^2 = .02$	$\eta_p^2 = .02$
Improvement	**25%**	**37%**	**20%**	**small effect**	**small effect**
Interpretation	*groups different in rate of improvement over time*				
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)					
Pre EAP	3.37 (1.36)	3.30 (1.38)	3.04 (1.42)	$F = 145.51$*	$F = 16.63$*
Post EAP	2.40 (1.31)	2.46 (1.41)	2.51 (1.38)	$\eta_p^2 = .01$	$\eta_p^2 < .01$
Improvement	**29%**	**25%**	**17%**	**small effect**	trivial effect
Interpretation	*groups different in rate of improvement over time*				
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)					
Pre EAP	2.26 (1.35)	2.12 (1.33)	2.34 (1.35)	$F = 32.96$*	$F = 64.50$*
Post EAP	1.91 (1.15)	1.86 (1.17)	2.15 (1.26)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**15%**	**12%**	**8%**	trivial effect	trivial effect
Interpretation	*groups similar in rate of improvement*				
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)					
Pre EAP	3.14 (1.32)	3.41 (1.31)	3.23 (1.31)	$F = 9.69$*	$F = 90.35$*
Post EAP	3.40 (1.22)	3.60 (1.21)	3.52 (1.20)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**8%**	**6%**	**9%**	trivial effect	trivial effect
Interpretation	*groups similar in rate of improvement*				
Life Satisfaction WOS-5 Single Item Rated 1-5 (higher score is better outcome)					
Pre EAP	2.93 (1.24)	3.12 (1.25)	3.11 (1.25)	$F = 44.63$*	$F = 35.35$*
Post EAP	3.65 (1.11)	3.72 (1.10)	3.63 (1.17)	$\eta_p^2 < .01$	$\eta_p^2 < .01$
Improvement	**25%**	**19%**	**17%**	trivial effect	trivial effect
Interpretation	*groups similar in rate of improvement*				
WOS SuperScore 5-25					
Pre EAP	16.53 (4.19)	16.62 (4.24)	16.94 (4.16)	$F = 80.53$*	$F = 1.66$ *ns*
Post EAP	19.32 (3.81)	19.42 (4.00)	18.85 (4.04)	$\eta_p^2 = .01$	
Improvement	**17%**	**17%**	**11%**	**small effect**	No effect
Interpretation	*groups different in rate of improvement*				

Note: Table displays mean average score and standard deviation in *M* and (*SD*). Red color font indicates findings for the interaction effect where the extent of improvement over time in the outcome was different for groups of the context factor of delivery model. Blue color font indicates findings for the main effect where the outcome levels at each time period differed between groups based on delivery model. Findings highlighted in yellow are the key delivery model type that differs the most from other delivery models.

Table C.12. Improvement over time in WOS-5 measures by year of data collection

WOS Measure	Context Factor: Year of Data Collection						
	2010 & 2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017 & 2018**
Sample Size	750	645	1,437	1,021	1,455	957	2,555
Work Absenteeism Hours							
Pre EAP	11.01	8.30	7.87	7.16	6.54	9.03	8.29
	(20.81)	(19.83)	(18.37)	(19.18)	(17.04)	(23.47)	(19.23)
Post EAP	6.76	5.09	4.02	4.28	4.02	4.22	4.32
	(23.60)	(21.41)	(17.93)	(19.45)	(18.56)	(16.89)	(16.37)
Improvement	**39%**	**40%**	**49%**	**40%**	**39%**	**53%**	**48%**
Interpretation	*Years similar in rate of improvement*						
Work Absenteeism 1-5							
Pre EAP	2.44 (1.62	2.09 (1.50)	2.06 (1.51)	1.93 (1.43)	1.83 (1.39)	2.05 (1.46)	2.11 (1.45)
Post EAP	1.67 (1.28)	1.46 (1.11)	1.39 (1.04)	1.40 (1.04)	1.36 (0.98)	1.47 (1.07)	1.57 (1.13)
Improvement	**32%**	**30%**	**33%**	**27%**	**27%**	**28%**	**26%**
Interpretation	*Years similar in rate of improvement, except for 2017-2018 is lower*						
Work Presenteeism WOS-5 Single Item Rated 1-5 (lower score is better outcome)							
Pre EAP	3.39 (1.41)	3.41 (1.37)	3.58 (1.32)	3.47 (1.35)	3.34 (1.37)	3.34 (1.37)	3.34 (1.37)
Post EAP	2.49 (1.24)	2.52 (1.26)	2.45 (1.23)	2.46 (1.25)	2.42 (1.25)	2.31 (1.23)	2.73 (1.42)
Improvement	**27%**	**26%**	**32%**	**29%**	**28%**	**31%**	**18%**
Interpretation	*Years similar in rate of improvement, except for 2017-2018 is lower*						
Workplace Distress WOS-5 Single Item Rated 1-5 (lower score is better outcome)							
Pre EAP	2.61 (1.44)	2.40 (1.34)	2.48 (1.34)	2.34 (1.32)	2.33 (1.35)	2.35 (1.37)	2.49 (1.38)
Post EAP	2.19 (1.23)	2.02 (1.14)	2.05 (1.12)	2.00 (1.14)	1.90 (1.09)	1.89 (1.08)	2.17 (1.29)
Improvement	**16%**	**16%**	**17%**	**15%**	**18%**	**19%**	**13%**
Interpretation	*Years similar in rate of improvement*						
Work Engagement WOS-5 Single Item Rated 1-5 (higher score is better outcome)							
Pre EAP	3.08 (1.34)	3.22 (1.32)	3.14 (1.25)	3.19 (1.29)	3.19 (1.27)	3.18 (1.31)	3.21 (1.30)
Post EAP	3.33 (1.20)	3.52 (1.15)	3.43 (1.10)	3.55 (1.09)	3.61 (1.10)	3.54 (1.11)	3.57 (1.23)
Improvement	**8%**	**9%**	**9%**	**11%**	**13%**	**11%**	**11%**
Interpretation	*Years similar in rate of improvement*						
Life Satisfaction 1-5							
Pre EAP	2.62 (1.18)	2.73 (1.22)	2.72 (1.20)	2.73 (1.19)	2.88 (1.18)	2.98 (1.25)	2.95 (1.28)
Post EAP	3.45 (1.06)	3.52 (1.12)	3.59 (1.04)	3.59 (1.04)	3.67 (1.03)	3.74 (1.00)	3.52 (1.26)
Improvement	**32%**	**29%**	**32%**	**32%**	**27%**	**26%**	**19%**
Interpretation	*Years similar in rate of improvement*						
WOS SuperScore 5-25 NEW Composite of all Five Items (higher score is better outcome)							
Pre EAP	15.24	16.06	15.74	16.19	16.50	16.42	16.21
	(4.52)	(4.41)	(4.36)	(4.23)	(4.21)	(4.51)	(4.08)
Post EAP	18.41	19.03	19.13	19.28	19.61	19.62	18.62
	(4.03)	(3.53)	(3.76)	(3.85)	(3.73)	(3.72)	(3.92)
Improvement	**21%**	**18%**	**22%**	**19%**	**19%**	**19%**	**15%**
Interpretation	*Years similar in rate of improvement, except for 2017-2018 is lower*						

Note: N = 9,588. Missing data on Year for other 61% of full sample. Table displays mean average score and standard deviation in *M* and (*SD*). Presenteeism F(d.f. = 6,9581) = 24.89, $p < .001$, $\eta_p^2 = .02$; other measures all $\eta_p^2 < .01$ trivial size effects (not shown). Findings highlighted in yellow are the year that differs the most from other years.

Table C.13. Change in lost productive time outcome for EAP Users and matched non-users in state of Colorado internal EAP study – WOS original scales for Work Absenteeism and Presenteeism

Quasi-Experimental Research Study of Internal EAP at State of Colorado (Published 2016 - Richmond et al.)	EAP Counseling User	Non-User Matched Control	
Sample size *n*	152	188	
PRE EAP - Before Start Counseling (Distress)			
Hours of Scheduled Work in Month	160	160	
Hours of Absenteeism	**15.20**	**13.00**	Results WOS
Actually Worked in the Past Month	144.80	147.00	math
Level of Work Presenteeism as % of Work Time	**36%**	**36%**	Literature
Hours of Work Presenteeism	52.13	52.92	math
Hours of Lost Productive Time	67.33	65.92	
POST EAP - Follow-up After Counseling (Recovery)	EAP User	Non-User	
Hours of Scheduled Work in Month	160	160	
Hours of Work Absenteeism	**10.70**	**16.90**	Results WOS
Reduction in Level of Work Absenteeism	**30%**	**-30%**	Results WOS
Actually Worked in Past Month	149.3	143.10	math
Level of Work Presenteeism - Same % from Pre	**36%**	**36%**	Repeat Pre
Hours of Work Presenteeism	53.75	51.52	math
Reduction in Level of Work Presenteeism	**-21%**	**-11%**	Results WOS
Reduction in Predicted Hours of Presenteeism	-11.29	-5.67	math
Hours of Work Presenteeism - Net	42.46	45.85	math
Hours of Lost Productive Time	53.16	62.75	math
Change: Pre - Post Difference			
Pre - Post Net Change in LPT	**14.17**	**3.17**	math
Change as Percentage of Pre LPT	**21.0%**	**4.8%**	math
Adjustment for ROI: Outcome of % Change in LPT Pre to Post by Non-Users as Percentage of the Outcome Achieved by EAP Users	**23%**		math

Table C.14. ROI for EAP based on WOS Work Absenteeism and Presenteeism

ROI for EAP - A Logic Model Example for Work Productivity					
	Pre EAP	**Post EAP**	**Change**		
WOS Inputs from EAP Survey	Start of Counseling	3 Months After Counseling	Change		
Absenteeism Hours (mean)	7.36	3.86	-48%		
Presenteeism 1-5 Rating (mean)	3.30	2.43	-26%		
Presenteeism Level (0%-100%)	36%	27%	Reduced at Post by above % Change		
Lost Productive Time (LPT)	**Hours per Month**			**Episode of Distress**	
Work Hours Expected	160	160		Months	Total
Absenteeism Hours (miss work)	7.36	3.86	-3.50	3	10.50
Actual Worked Hours	152.64	156.14			
Presenteeism Hours (partial work)	54.95	41.60	-13.35	3	40.06
Lost Productive Time (Hours)	62.31	45.46	-16.85	3	**50.56**
Conservative Adjustment	EAP Counseling Users (Treatment Group) Reduction in LPT = 21%				**-23%**
Net Hours of LPT Restored	Matched Non-Users (Control Group) Reduction in LPT = 5%				**38.93**
	Control Group Achieved Only 23% of Outcome of EAP User Group				
Financial Aspects of Employee	**Wages**	**Benefits**	**Total Compensation**	**Productivity Multiplier**	**Business Value**
Per Hour	$23.59	$10.60	$34.19	**1.30**	**$44.45**
Return Per Employee Case	**Value of Restored Work Productivity Over Episode**				**$1,731**
Utilization of EAP Annual	**Covered Employees**	**EAP Use Rate Counseling Cases per 100 Employees**	**Total Counseling Cases Year**	**% of Cases Employees**	**Total Employee Cases Year**
From Customer Report	1,000	4.9%	49	80%	**39**
Financial Investment in EAP	**Covered Employees**	**Annual Rate for EAP**	**PEPM Rate for EAP**	**Cost of EAP Total**	**Cost Per Employee Case**
From Customer EAP Account	1,000	$20.00	$1.67	$20,000	**$513**
Financial Return from EAP Use	**Return on Investment for EAP**			**Total Return for EAP**	**Net Return**
ROI	**$3.37**			$67,490	$47,490
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Legend for Inputs	WOS Survey	Research	EAP Reporting	BLS data	Just math

References

Workplace Outcome Suite Measures & EAP ROI Calculator from Chestnut Global Partners

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.

Sharar, D.A., & Lennox, R. (2014). The workplace effects of EAP Services: "Pooled" results from 20 different EAPs with before and after WOS 5-item data. *EASNA Research Notes, 4*(1). Available from: http://www.easna.org/publications

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.

Attridge, M., Servizio, L., Sharar, D., & Mollenhauer, M. (2015). *EAP ROI Calculator©: Conceptual approach and default data inputs: Research review appendix* (67 pages). Bloomington, IL: Chestnut Global Partners & Disease Management Strategy Group. See: http://chestnutglobalpartners.org/Services/EAP-ROI-Calculator

Servizio, L.A. (2017). Why CFOs should learn to love EAPs. *WorkSpan*, April, 51-57.

Servizio, L.A., Mollenhauer, M., & Shjerven, T. (2016). Taking the mystery out of ROI calculations. *Journal of Employee Assistance, 46*(4), 26-27.

Attridge, M. (2009). Measuring and managing employee work engagement: A review of the research and business literature. *Journal of Workplace Behavioral Health, 24*(4), 383–398.

Attridge, M. (2012). Employee assistance programs: Evidence and current trends. In R.J. Gatchel & I.Z. Schultz (Eds.), *Handbook of occupational health and wellness* (pp. 441-467). New York: Springer.

Attridge, M. (2016, October). *EAP industry outcomes for employee absenteeism and presenteeism: A global research analysis.* Presented the conference of the Employee Assistance Professionals Association, Chicago, IL. Available at EAP Digital Archive: http://hdl.handle.net/10713/7203

Attridge, M. (2017). Integration Insights Column (7): Implications of pricing for EAP integration and ROI. *Journal of Employee Assistance, 47*(1), 26-27. Available online from the EAP Digital Archive: http://hdl.handle.net/10713/7211

Attridge, M., Cahill, T., Granberry, S., & Herlihy, P. (2013). The National Behavioral Consortium industry profile of external EAP vendors. *Journal of Workplace Behavioral Health: Employee Assistance Practice and Research*, *28*(4), 251-324. Available at EAP Digital Archive: http://hdl.handle.net/10713/3687

Bureau of Labor Statistics (2018, June). *Economic news release: Table 5. Private industry, by major occupational group and bargaining unit status. United States Government*. Available from: https://www.bls.gov/news.release/ecec.t05.htm

Csiernik, R. (2011). The glass is filling: An examination of employee assistance program evaluations in the first decade of the new millennium. *Journal of Workplace Behavioral Health, 26*(4), 334-355.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, (1985). The satisfaction with life scale. *Journal of Personality, 49*(1), 71–75.

DeLapp, G., Sharar, D., Attridge, M., Veder, B. & Antonissen, D. (2018, October). *EAP outcomes, critical incident effectiveness measurement, and EAP product extension.* Keynote address at the Annual World Conference of the Employee Assistance Professionals Association, Minneapolis, MN, USA. Available at EAP Digital Archive: http://hdl.handle.net/10713/8369

Johns, G. (2010). Presenteeism in the workplace: A review and research agenda. *Journal of Organizational Behavior*, *31*(4), 519-542.

Joseph, B., Walker, A., & Fuller-Tyszkiewicz, M. (2018). Evaluating the effectiveness of employee assistance programmes: A systematic review. *European Journal of Work and Organizational Psychology*, *27*(1), 1-15.

Kessler, R.C., Barber, C., Beck. A., Berglund, P., Cleary, P.D., McKenas, D., et al. (2003). The World Health Organization Health and Work Performance Questionnaire (HPQ). *Journal of Occupational and Environmental Medicine, 45*(2), 156-174.

McLeod, J. (2010). The effectiveness of workplace counseling: A systematic review. *Counselling & Psychotherapy Research, 10*(4), *238-248.*

Mellor-Clark, J., Twigg, E., Farrell, E., & Kinder, A. (2013). Benchmarking key service quality indicators in UK Employee Assistance Programme Counselling: A CORE System data profile. *Counselling and Psychotherapy Research*, *13*(1), 14-23.

Mitchell, R.J., & Bates, P. (2011). Measuring health-related productivity loss. *Population Health Management*, *14*(2), 93-98.

Nicholson, S., Pauly, M.V., Polsky, D., Sharda, C. Szrek, H., & Berger, M.L. (2006). Measuring the effects of work loss on productivity with team production. *Health Economics, 15*, 111–123. doi:10.1002/hec.1052

Pauly, M.V., Nicholson, S., Polsky, D., Berger, M.L., & Sharda, C. (2008). Valuing reductions in on-the-job illness: 'Presenteeism' from managerial and economic perspectives. *Health Economics*, *17*(4), 469-486.

Richardson, J.T.E. (2011). Eta squared and partial eta squared as measurements of effect size in educational research. *Educational Research Review, 6*, 135-147.

Richmond, M.K., Pampel, F.C., Wood, R.C., & Nunes, A.P. (2015). The impact of employee assistance services on workplace outcomes: Results of a prospective, quasi-experimental study. *Journal of Occupational Health Psychology, 22*(2), 170-179.

Stewart, W.F., Ricci, J.A., Chee, E., & Morganstein, D. (2003). Lost productive work time costs from health conditions in the United States: Results from the American Productivity Audit. *Journal of Occupational and Environmental Medicine, 45*, 1234-1246.

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