How to Calculate the ROI for EAP Counseling from Improvements in Work Outcomes:

Part 2 of Series with Global Data from the Workplace Outcome Suite© by Morneau Shepell

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ABSTRACT. *This is the second in a three-part series based on the larger Workplace Outcome Suite© (WOS) Annual Report for 2018.[1] This popular self-report measurement tool was developed by Chestnut Global Partners in 2010 and is now owned by Morneau Shepell. It is a scientifically validated tool that is offered free to the employee assistance field. This paper presents a revised version of the chapter on the return on investment (ROI) from the 2018 WOS Annual Report. The aim is to provide a detailed example of how to calculate the business value for employee assistance programs (EAPs) based on employee users of counseling services. In this example, 24,363 cases with self-reported work absenteeism hours and work presenteeism ratings were used to estimate the ROI for EAPs. The combination of missed hours from work and lost productivity hours while at work were combined in a single metric of lost productive time (LPT). The improvement in productivity was compared to a no change estimate hypothetical condition which assumes that the same baseline level of deficit in LPT continued over a 3-month period of distress if untreated. This effect was adjusted down to remove the improvement likely to have been caused by naturally occurring influences other than use of EAP counseling (estimated at 23%). Changes in the outcomes revealed that almost five days of productive work time (39 hours) over the 3-month period were restored per case after the use of EAP counseling; worth an estimated $1,731 USD per EAP case. Most of the savings came from reduced work presenteeism rather than work absenteeism (79% vs. 21%, respectively). This outcome was then used in a model with industry averages for the level of annual utilization of EAP counseling (4.9% of all covered employees) and the total cost of the EAP program ($13 per employee per year). The result was an estimated ROI for EAP counseling of $5.19:$1.00.*

Introduction

There are at least 100 applied research and evaluation studies globally that support the business case for companies to provide workplace mental health and EAP services.[2] Several published reviews of workplace outcomes research show modest improvements in clinical and employee work performance outcomes that result from use of brief counseling from EAPs.[3-5]

The detailed example of how to calculate ROI presented in this paper uses inputs from EAP

research studies to estimate the ROI for EAPs under conditions of typical cost and use. Financial measures included using typical levels of employee hourly compensation in the U.S. and a multiplier of compensation for the business value of employee productivity. The primary outcomes of work absenteeism and work presenteeism among employee users of counseling from EAPs came from the Workplace Outcome Suite© (WOS). This approach was featured as so many EAPs already collect data on the WOS.

The WOS was developed by Chestnut Global Partners in 2010.[6] In December 2017, Chestnut Global Partners was acquired by Morneau Shepell and the ownership and administration of the WOS changed as well. This paper uses the aggregated results from the WOS aggregated norms from 24,363 cases (spanning service delivery dates from 2010 through 2018) that were published in 2018 in the *International Journal of Health and Productivity.*[7]

The analyses presented in this paper are intended to function as a "how to" guide for EAPs to estimate ROI. Many of the model inputs in this example can simply be replaced with use, cost, and outcome data specific to an EAP and the customer organization. By performing the same mathematical steps, an EAP could determine their own ROI.

Methods

Study Design for Collecting WOS Data

Employee users of the EAP completed the WOS *before* introducing the counseling intervention and again several months *after* the intervention. A 3-month follow-up period was intended to be sufficient to confirm that changes in outcomes occurring at the end of counseling were maintained over a longer time period after the counseling had ended.

WOS Sample

Sample Sources. Data was collected over a span of time starting in 2010 through April of 2018. Each year, a variety of different EA providers, large employers, or EAP industry groups shared their data with Morneau Shepell. Of the 38 sources of data, most were external vendors of EAP services and 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.

Sample Size. The sample was comprised of 24,363 cases with WOS data on all five measures at both before and after EAP use.

Sample Geography. A total of 28 different countries were represented in the sample. The mix of how many cases were from different countries was quite skewed. The vast majority of cases were from the U.S. (79% of the total cases). The second most common country was China (15%) and 99% of these cases were from one external EAP vendor – Chestnut Global Partners China. The remaining 6% of cases were from 26 other countries.

WOS Measures

Versions of WOS Measures. This study used EAP user data pooled from all three versions of the WOS measures (25-, 9- and 5-item versions). The choice of which version of the WOS was used was made independently by each EAP who provided data.

- The original 25-item WOS was used by five EAPs and had 629 valid cases.
- The 9-item version of the WOS was used by two EAPs and had 5,847 valid cases. This version has the original 5-item work absenteeism scale but has single items for each of the other four outcomes.

- The brief 5-item version of the WOS was used by 30 EAPs and had 17,887 valid cases. This version has only a single item taken from four of the original 5-item scales and a new item for work absenteeism.

Of the five outcomes measures in the WOS, only two – the work absenteeism and work presenteeism – were used in the ROI model.

Work Absenteeism. Absenteeism is when an employee does not show for scheduled work time such as missing an entire shift, coming in late, or leaving earlier than planned. Holidays or vacation days are generally not relevant to absenteeism as these are usually scheduled days off. Work absenteeism is measured in two ways: the original 5-item version and the single-item version from the brief WOS-5.

Hybrid Version of Absenteeism on WOS. A new strategy was devised to use all cases in the pooled data. Some subgroups had data from the original full work absenteeism scale and others had data from the single-item measure of work absenteeism. Only the data from the first three items of the full 5-item version were used because these three items conceptually matched the instructions for the single-item version. This item asks the person to consider absence consisting of missing work altogether, arriving late, or taking off early. One of these two versions (either the single-item or the revised 3-item from the original scale) were available from all cases.

Work Presenteeism on WOS. 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. On the WOS-5, presenteeism is measured using a single item: *"My personal problems kept me from concentrating on my work."* This item was rated on a Likert-type scale where 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neutral*, 4 = *somewhat agree*, and 5 = *strongly agree*.

Default Inputs for the ROI Model

The ROI estimation logic model was developed by Attridge Consulting, Inc.[8-12] It involves a number of inputs that come from the EAP, the employer customer, WOS average results, and productivity metrics from the research literature.

Lost Productive Time (LPT). Based on research conducted for the American Productivity Audit project[13], a single metric is used to simplify the result of the change in employee work performance from before to after EAP use. The focus was on the hours of LPT time in a month. A "past month" period was used in the WOS questions on absenteeism and presenteeism. LPT is mathematically derived from three factors: (1) total hours of the work schedule for the employee, (2) hours of missed work from absenteeism, and (3) hours of presenteeism or unproductive time while at work. This approach treats absenteeism and presenteeism the same, as both result in a lack of productivity from expected work time.

Inputs in the ROI model for levels of work absenteeism and presenteeism came from the WOS 2018 Annual Report and represent EAP industry average levels at before and after use of EAP. However, work presenteeism does not directly measure the level of work productivity or performance. As a remedy for this problem, other research on EAPs was used to establish the default level of unproductive time when employees first used the EAP for counseling.

Productivity Loss Before the Use of EAP Counseling. A baseline level of work productivity when distressed and first seeking help from the EAP was taken from a research review of longitudinal data with over 232,000 counseling cases collected from nine different EAPs located in Australia, Canada, or the U.S.[14] All of the cases had data at both before and after EAP use on work productivity/job performance outcomes that were standardized to the same 0-100% scale. After excluding WOS data, the

study indicated that on average employees were 64% productive during the past month before use of the EAP. Subtracting the level of productivity from the maximum of 100% yielded the percentage of time (36%) the employee was unproductive. This level is much lower than the 84% level of work productivity typical of "healthy" employees (based on an average across nine survey studies that used similar measures).[14]

Hours of Scheduled Work in a Month.
To calculate the number of hours that were missed and/or were less productive (i.e., presenteeism), we used the standard work week as the baseline number of hours of scheduled work in a month. In the U.S. it is 40 hours based on five 8-hour work days. With four weeks in a month, this is 160 hours per month.

Employee Hourly Compensation Rate. According to the U.S. Bureau of Labor Statistics (based on 2018 data), the average private sector worker was compensated at $34.19 per hour.[15] This is the combined cost to the employer for paid wages and benefits ($23.59 + $10.60, respectively).

Business Value of Productive Work Time – the Productivity Multiplier. Economists endorse the concept that an employee's productivity value is greater than how much the employee is being compensated. Economists use a metric called a "productivity multiplier" that is applied to the hourly compensation rate.[16-17] Other studies that have estimated workplace cost savings from applied health care interventions have also used a productivity multiplier.[9-12,14,18,19]

In this ROI model, a productivity multiplier ratio of 1.3 was used. The source of this figure was the average of results from two research studies with samples of hundreds of managers in the U.S.[16,17] When the multiplier of 1.3 was applied to the hourly compensation rate, it yielded $44.45 as the business value of one hour of productive work.

Investment in EAP. Most EAPs are paid using a capitated pricing model similar to what is used for health care and employee benefits. A recent paper cited a benchmark cost of $1.08 per employee per month for what it cost in 2018 to purchase comprehensive EAP services from an external vendor in the U.S.[20] This is an annual cost of roughly $13.00 per employee.

Utilization Rate of EAP Counseling. A 4.9% annual use rate of EAP counselor cases over a 12-month period was assumed. This clinical case count excludes users of other services from the EAP. This rate was the average of 43 different EAP vendors with standard capitated or fee-for-service pricing models. Free or embedded fee pricing models with very low use rates were excluded.[21]

Employee Users as a Percentage of All Users of EAP Counseling. Work performance outcomes and their associated cost savings are only relevant to the portion of the total EAP clinical cases served during the year for the individuals who worked for the employer that sponsored the EAP. Thus, it is necessary to remove the non-employee users from the total count of users. We assumed a mix of 80% employee users of the EAP and 20% of users being non-employees (e.g., spouse and children). This estimate was based on normative industry data from 57 different EAP vendors.[22]

Time Period for Untreated Distress. The time period of expected distress if untreated is essentially a multiplier of the 1-month period from the source data used to determine the amount of cost savings. Thus, it should be as realistic and conservative as possible. If a distressed employee had not used the EAP, it was assumed that the same level of distress experienced during the month before counseling would have continued for at least another three months. This period is consistent

with other analyses of EAP counseling ROI,[23,24] yet it was shorter than some EAPs that have used 6-[25] or 12-month periods.[26,27] A shorter impact period is more credible from a business perspective, when considering the substantial degree of impairment in work productivity before the start of EAP use (see above section). This kind of loss is unlikely to be sustained for a whole year without intervention from the employer. However, a 12-month episode of distress may be appropriate when assessing the cost impact on chronic behavioral health outcomes (clinical anxiety or depression).[28,29]

Adjustment for Non-EAP Influences on Improvements in Work Outcomes. In the WOS study, 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 a matched comparison group of employees from the same covered population who did not use the EAP.[30] It featured longitudinal data collected before and after use of the EAP (at 4-months later; *n* = 158) and from a matched control group (at baseline and again at 8-months later; *n* = 188) on the WOS measures of absenteeism, presenteeism and workplace distress (5-item versions). The same defaults and calculation process for LPT in this ROI model were repeated using the WOS results from the Colorado study (for details see Table A.13 in 2018 WOS Report[1]). The results showed that the Colorado EAP user group had a 21% reduction in LPT whereas the matched comparison group had only a 5% reduction in LPT. Thus, the distressed employees who did not use the EAP achieved only 23% of the level of improvement in LPT that was achieved by the employees who used the EAP. This finding was used in the ROI model to reduce the hours of avoided LPT by 23%. This was done as an attempt to remove a portion of the outcome that may have occurred over time without use of counseling. The financial and clinical default inputs for the ROI model are summarized in Table 1.

Table 1.
Default Inputs for ROI Model: Financial & Clinical

Metric	Default Number	Source
Employee paid wages per hour	$23.59	Private Sector Employees U.S. Bureau of Labor Statistics for 2018[15]
Employee benefits cost per hour	$10.60	
Employee hourly compensation	$34.19	
Productivity value multiplier	1.3	Economic research[16,17]
Business value of one productive work hour	$44.48	Compensation X productivity multiplier
Annual investment in comprehensive EAP per employee	$13.00	EAP vendor benchmark[20]
EAP use rate of counseling cases per 100 employees	4.9%	EAP vendor norms[21]
Employee status among the EAP counseling cases	80%	EAP vendor norms[22]
Period of time of continued distress, if issue untreated	3 months	Estimate from EAP research[23-24]
Reduction in LPT without use of EAP counseling	23%	Research study with non-users[30]

Results

The results are presented in four parts. Part 1 shows calculations for LPT before use of the EAP. Part 2 shows calculations of LPT after use of the EAP. Part 3 shows calculations of the change in LPT from before to after EAP use, and how to adjust the difference in LPT to remove a portion of the improvement due to factors other than use of EAP. Finally, Part 4 presents the financial results and ROI.

Results Part 1: LPT Before EAP Counseling

The analysis of WOS absenteeism data found that missed work per case during the month

before EAP use was 7.36 hours. Deducting these hours from the 160 hour schedule yielded 152.64 hours of time actually worked. The number of hours of unproductive time while at work was calculated by applying a 36% level of productivity deficit to the hours worked. This step resulted in 54.95 hours of LPT while at work in the past month. When combined with the number of missed hours the result was 62.31 total hours of LPT per month per employee before EAP use. This is summarized in Table 2.

Table 2.
Work-related Outcomes at Before and After Use of EAP Counseling (Past Month)

Metric	Before EAP	After EAP
Hours in full-time work schedule	160	160
Reported hours of absenteeism WOS[1]	7.36	3.86
Hours actually worked	152.64	156.14
Loss in productivity level while working[14]	36% lower	36% lower
Predicted hours of LPT while working	54.95	56.21
Reduction in WOS ratings of work presenteeism from before to after use[1]	N/A	26% lower
Reduction in predicted hours of LPT after use when apply WOS results	N/A	-14.61
Net LPT hours while working at after use	N/A	41.60
Total LPT	62.31	45.46

Results Part 2: LPT After EAP Counseling

The same calculation process described above was repeated using the inputs from the after EAP use period. Absenteeism was lower after use (3.86 hours) than before use. Thus, more hours were worked in the past month during the after EAP use period than before EAP use. Next, the same percentage deficit in work productivity from before use of EAP (36% of time worked) was applied to the total hours worked after EAP use. The predicted 56.21 hours of lost work time for the after EAP use period was reduced by the 26% that was found for the change in average ratings on the WOS presenteeism item from before to after use (3.30 vs. 2.43, respectively, on 1-5 scale). A reduction by 26% translated into 14.61 fewer hours of LPT than if the baseline of LPT had persisted over time. The level of presenteeism after use was reduced to 41.60 hours. When combined, the hours of absenteeism and presenteeism was 45.46 total hours of LPT per month per employee after use. These findings are summarized in Table 2.

Results Part 3: Change in LPT from Before to After EAP Counseling

The total hours of LPT per month changed from 62.31 hours before counseling to 45.46 hours after counseling; a difference of 16.85 hours or 2.1 full work days of productivity that was restored after use of EAP counseling. This difference was comprised of 21% from absenteeism and 79% from presenteeism. Thus, the change was derived mostly from improved productive time while at work. The change effect of 16.85 fewer hours of LPT per month after EAP use was then reduced by 23% (or 3.87 hours). This reduction was made to account for improvement over time due to factors other than EAP counseling. The final adjusted amount of change was 12.98 hours per month. The findings are summarized in Table 3.

When extended over a 3-month period of distress, the total amount of LPT from before EAP use compared to the reduced amount of LPT after EAP use was a difference of 38.94 hours. This difference represents 4.9 full days of LPT per case over a 3-month period of distress that would have occurred if it were not for the use of EAP counseling. Put another way,

the use of EAP counseling probably prevented a productivity loss equal to approximately 4.9 work days per employee.

Table 3.
Change in Work-related Outcomes from Before to After Use of EAP Counseling (Past Month)

Metric	Hours	Source
LPT hours - fewer	16.85	Difference in LPT hours from before to after use
Adjustment for factors other than EAP counseling that also influence improvement	-23%	Estimated from research[1,30]
	-3.87	23% of 16.85 hours
Adjusted change in LPT hours associated with EAP counseling	12.98	Result of 3.87 hours deducted from 16.85 hours

Results Part 4: Financial Results and ROI

Total cost savings per employee case was obtained by multiplying the 38.93 hours of further work loss avoided over the 3-month period of distress by the $44.48 business value per hour of work. The result was $1,731 in workplace productivity return per average EAP counseling case.

This individual employee-level cost savings for the impact of EAP counseling was applied to a typical employer with 1,000 employees that had an EAP. The EAP is typically allowed to be used by family members of employees as well. For this population, 4.9% of 1,000 population is 49 total counseling cases. This case count includes both employee and non-employee/family cases. If 80% of these counseling cases were employees and 20% were family or other non-employees, then 39 cases were relevant to the ROI. The financial return of $1,731 per case when mitiplied by 39 employee cases resulted in $67,490 total savings for the year.

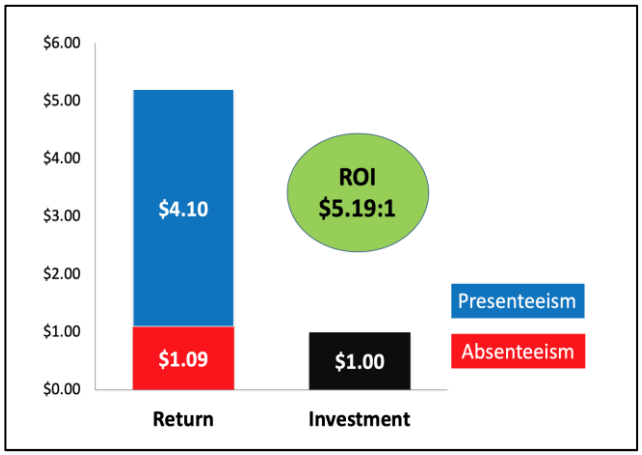
The cost of $13 per covered employee per year for EAP for a company with 1,000 employees was a total investment of $13,000. The ROI ratio was calculated by dividing the $67,490 return into the $13,000 investment. The result was a ROI ratio of $5.19 to $1.00. This means that there was $5.19 in financial return to the organization for every $1.00 invested in the EAP. These findings are summarized in Table 4.

Table 4.
Financial Results and ROI for an Organization with 1,000 Employees and Typical EAP Use Rate

Metric	Number
Results Per 1 Employee EAP Case	
Avoided LPT hours per month extended to a 3-month period per employee case	38.94 hours
Business value of one hour of productive work	$44.48
Work productivity loss avoided per employee case over a 3-month period of distress	$1,731
Results for 1,000 Employee Company	
EAP employee only total cases	39 cases
Total savings in avoided further LPT from EAP	$67,490
Investment in EAP	$13,000
Return on investment ratio	5.19:1

Moreover, as shown in Figure 1, most of this return was from improvement after EAP use in the work presenteeism compared to work absenteeism (79% vs. 21%, respectively). Reductions in hours of work presenteeism yielded a $4.10:$1.00 ROI. In contrast, reductions in hours of work absenteeism provided only a break-even ROI at $1.09:$1.00. These results indicate that employers should recognize that mental health and personal distress among employees impacts employee productivity while on the job more than it impacts missing work. Although presenteeism may be harder to observe each day by supervisors than absenteeism, it is much more important to overall work productivity.

Figure 1.
ROI for EAP Counseling from Work Productivity



Discussion

The paper illustrated how to calculate an estimate of the financial savings returned to the purchaser of EAP counseling services. Getting a 5:1 return on the total EAP budget in this analysis provides a strong financial value to employers that sponsor an EAP. This level of ROI could be considered typical of the EAP industry in the U.S. because normative inputs from industry sources and large scale research studies across many EAP providers were used at each step in the calculation process.
Yet, this does not mean that every EAP has the same 5:1 ROI. ROI is affected by various factors.

Price is the most obvious factor that can change in the estimate of ROI. For example, other things being equal with the same size employer, level of utilization and outcomes, a greater annual investment of $20 per covered employee for EAP service reduces the ROI to $3.37 per $1.00.[1]

Achieving higher than average rates of program utilization could yield a higher ROI than was estimated here, depending on how much the pricing for the EAP would also be increased to support servicing more users of the EAP.[20] Indeed, there are many examples of employers that do what it takes to fully fund and actively promote their EAP in order to get double or triple the industry average annual level of program usage.[31] Based on the authors' experience, EAPs can have greater utilization of counseling services when the EAP is integrated into the organization, promoted frequently, and offers multiple channels to access counseling support (in-person, phone, online digital – video, text chat, e-mails).

The approach taken by such employers to get the most out of their EAP spend is often aligned with larger goals endorsed by the leadership to create a more psychologically safe and healthy workplace.[32] The rationale for this kind of integrated and organizationally-focused approach to EAP delivery is described in recent articles that review the research evidence.[33,34]

A higher ROI can also come from EAPs that produce better than average outcomes for reductions in work presenteeism and work absenteeism. For example, one review of work outcomes did in fact find some variation between different EAPs in their results for changes in work absenteeism and work presenteeism from before to after the use of counseling.[14] According to Sharar (p. 13), purchasers of EAPs "need to move to value-based reimbursement models that tie payments to achieving outcomes that matter to employees and employers."[20]

Finally, is it important to understand that the financial return estimated in this ROI example is quite conservative. Even though the investment dollars represented all of the services provided by the EAP, the return dollars only represented one service component (individual brief counseling) that was used by one type of client (employees only) with an impact on only one kind of outcome (work productivity from combined absenteeism and presenteeism). The real ROI for EAP is much higher when the financial returns from other kinds of EAP services are also included in the model. Some of these other EAP services include educational services, trainings, personal legal and financial

assistance, childcare and eldercare support services for employees and family members, consultations to managers, crisis incident preparedness and response, and other kinds of workplace and organizational level services. A more comprehensive ROI model than is presented in this paper is needed for an organization to recognize the full financial value of a comprehensive EAP.[10,35,36]

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