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## EAP Cost-Benefit Research: 20 Years after McDonnell Douglas

**The landmark study of the costs and benefits of an internal EAP is still raising questions among current-day researchers.**

by Mark Attridge, M.A., Ph.D.
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It has been two decades since the seminal study of the financial costs and benefits of the employee assistance program at the McDonnell Douglas Corporation (Smith and Mahoney 1989, 1990). This study is credited with significantly advancing the business case for the field of employee assistance. Although it is considered a classic research work in the field, the study was not published in a scientific journal and therefore did not undergo a critical peer review.

In this article, I will revisit the methodology and major findings of the McDonnell Douglas study and raise some critical questions about it. In upcoming articles, I will reflect on the progress of the field in the 20 years since the study and describe the current state of research on outcomes and cost-benefit analyses of EAP services, then offer some remedies for future practices that take two different but promising paths to examining the costs and benefits of EAPs.

### Study Context and Methodology

The cost-benefit study of the McDonnell Douglas EAP was conducted because the company decided to expand the mission of its internal program to emphasize not just substance abuse but also mental health and family- and work-related kinds of problems. To support the decision to expand the EAP's services, a financial offset study was developed.

The study design featured a two-group model, with a "study group" of employees who had used the EAP in 1985 for chemical dependency or psychiatric conditions and then were followed over a four-year period from 1986-1989. Employees who had not used the EAP but had filed medical claims for alcoholism and chemical dependency or for psychiatric conditions were tracked as the "non-EAP" group and were used for comparison.

The groups were assembled in two steps. The first step involved using claims data to find employees who had filed medical claims for substance abuse or psychiatric conditions. The second step involved matching these employees with EAP records to see who had also used the EAP.

Note that in this design, employees in need of help were not randomly assigned to use or not use the EAP. Instead, the design used naturally occurring groups and thus was a quasi-experimental study with a longitudinal follow-up. Analyses comparing the two groups on various outcomes statistically controlled for group differences in certain demographic and occupational factors. Thus, this study used a strong research design methodology with archival outcome data from company records and health care claims.

### Cost Burden and EAP Impact

Using data only from the non-EAP group, the study first documented the heavy cost burden to the organization stemming from employees with substance abuse and mental health problems. Over the course of five years after starting treatment, these employees differed from the statistical averages across all employees at the company in the following ways:

- Much higher rates of absence (113 more absence days for chemical dependency and 56 more days for psychiatric conditions);
- Higher rates of termination from the company;
- Higher overall medical costs ($23,095 for chemical dependency and $13,019 for psychiatric conditions); and
- Higher overall medical costs for dependent family members ($37,398 for chemical dependency and $27,626 for psychiatric conditions).

Next, the study concluded that the sample of employees who had used the EAP for treatment fared relatively better than those with similar problems who did not use the EAP. Compared to the non-EAP control group, employees in the study group experienced the following outcomes over a five-year period:

- Fewer missed workdays (29 percent fewer for those with chemical dependency and 25 percent fewer for those with psychiatric conditions);
- Fewer job terminations (42 percent fewer for those with chemical dependency and 28 percent fewer for those with psychiatric disorders);
- Lower five-year average per-person medical costs ($7,150 less for chemical dependency-related problems

and $3,975 less for psychiatric problems); and
- Lower five-year average medical costs for family members of the affected employee ($14,728 less for chemical dependency problems and $8,762 less for psychiatric disorders).

A year-by-year examination of the findings revealed important differences over time in absences and medical costs, with EAP cases having higher rates in the first couple of years after starting treatment and then lower rates for later years. This pattern indicates the chronic and long-term nature of these conditions and shows that if the study had ended after two years rather than five, it would have concluded that the EAP was associated with increases (not decreases) in missed workdays and health care costs.

**Financial Implications**
These results, however, were not used to determine the financial cost offset of the EAP; rather, they were used as average impacts to estimate the amount of fu-ture savings for one year's worth of EAP cases. In 1988, the total caseload for the EAP at McDonnell Douglas was approximately 5,800 cases. Of this group, 602 had substance abuse or psychiatric conditions serious enough to be "impacted by the EAP." Thus, only about one in every 10 EAP cases qualified for a potential financial cost offset.

Given the differences in the outcomes between the EAP study group and the non-EAP control group over the years 1985-1989, the study authors projected that for the relevant EAP cases in 1989, the EAP would yield a total of $6.0 million in cost-offset effects over the five-year period 1989-1993. The factors underlying this estimation included the following:
- $3.0 million (50 percent of total savings) in health care medical savings for family dependents of the employee;
- $2.1 million (35 percent) in health care medical claims for the employee EAP cases; and
- $0.9 million (15 percent) in avoided missed workdays for the EAP employee cases.

[Note: the number of these cases was not reported, but presumably was similar to that from 1988.]

To put these statistics into perspective, if we assume that the EAP use rate in 1988 was the same as the cost-benefit analysis year of 1989 (i.e., approximately 600 high-severity treatment cases), this works out to about $10,000 in savings per case over five years, or $2,000 per case per year based on 1989 dollars. In 2010 dollars, this is $3,460 in average annual savings. The amount invested in the EAP was not disclosed, however, and thus a return-on-investment (ROI) figure was not provided for the McDonnell Douglas study. In an interview, however, the study authors stated the EAP had provided an ROI in excess of 4:1 (ALMACAN 1989).

**Limitations of the Study**
As a scientific merit reviewer for the workplace division of the U.S. government's National Registry of Evidence-based Programs and Practices, I have been trained to evaluate the scientific quality of research studies. In my opinion, the McDonnell Douglas study has some strengths, but it also has several deficits of omission and threats to internal validity. It did not report many of the basic elements of the study methodology, thereby leaving readers with many questions, such as the following:
- How many employees worked at the company, and how many used the EAP?
- How many employees were in the EAP and non-EAP groups?
- How were the EAP users with chemical dependency or psychiatric conditions identified and selected for the EAP study group?
- What were the extent and clinical merit of the "treatment" provided by the EAP?
- What was the level of clinical improvement in the EAP study cases?
- How much contact did the EAP have with these cases over the five years?
- How many cases dropped out of treatment from the EAP or from the control group?
- What interventions and clinical care did the EAP and non-EAP cases receive other than from EAP staff?
- To what extent did the study outcomes result from the actions of the EAP relative to the actions of other care providers (e.g., doctors, psychiatrists, mental health professionals, and substance abuse specialists)?
- Why were health care claims dollars analyzed but not the utilization rates of health care services, which are less prone to skewed data and outlier effects?
- Why was employee work productivity excluded from the outcomes?
- What kinds of treatment and health care were the dependent family members receiving?
- Why were cost-offset figures estimated for the future, when the study already had real data on outcome rates and cost values for the five-year period when EAP services were actually delivered?
- Why were only the high-severity cases studied, leaving the vast majority of the cases served by the EAP (the other 90 percent) unexamined for outcomes and cost offset?

**Many Questions Remain**
The McDonnell Douglas EAP study was a pioneering effort. It applied more rigorous research methods than prior works (including a comparison group and long-term follow-up of cases over five years), measured "hard data" for outcomes (health care costs, absence records, and employee turnover), and explored the effects on family members of employees who suffer from substance abuse and serious mental health conditions. It clearly demonstrated that substance abuse and psychiatric conditions were chronic conditions that were very costly to the company.

The study results showed sizable cumulative reductions in several outcome areas of interest to business leaders. In retrospect, though, its reputation exceeded its rigor, and many questions remain about how the study was conducted that simply make some of the findings difficult to understand and properly interpret. Twenty years later, a lot about the study remains a mystery.

**References**
ALMACAN, The. 1989. McDonnell Douglas Corporation's EAP Produces Hard Data. (8): 18-26.
Smith, D.C., and J.J. Mahoney. 1990. McDonnell Douglas Corporation Employee Assistance Program Financial

Offset Study: 1985-1988. Unpublished white paper. Bridgeton, Mich.: McDonnell Douglas.
___. 1989. McDonnell Douglas Corporation Employee Assistance Program Financial Offset Study. Presentation at the annual meeting of the Employee Assistance Professionals Association in Baltimore, Md.

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