GALLUP®

Meta-Analysis of the Relationship Between Gallup's Management Development Programs and Organizational Outcomes

JIM ASPLUND, M.A., GALLUP

SANGEETA AGRAWAL, M.S., GALLUP

SEPTEMBER 2022

Abstract

Objective

Estimate the relationship between participation in a Gallup strengths-based management development program and subsequent business performance.

Method

Our research method is a meta-analysis of all available Gallup client data on business performance related to participation in a Gallup management development program (e.g., Gallup's Boss to Coach course, Leading High-Performance Teams course or custom boss to coach development program, generally referred to as BTC [to represent the boss to coach concept] throughout this meta-analysis). Seventeen quasi-experimental studies from six organizations are included in the meta-analysis. All 17 consist of the same basic development intervention: in-depth instruction on strengths-based and engagement-focused coaching, as well as eight to 16 learning modules, one or two coaching calls with an experienced strengths coach, and cohort calls in which participants shared their learning with each other. On average, pre-course measurements occurred six to 18 months prior to the intervention, and post-course measurements lagged course completion by nine to 18 months.

Results

Course participation was associated with a range of positive outcomes for both leader-participants and the business units led by them. Specifically, participants were likelier than nonparticipating peers to increase their individual employee engagement (Cohen's d = 0.32, 95% confidence interval [CI] = [0.29, 0.35]) and were likelier to receive higher ratings of their performance (d = 0.75, 95% CI = [0.72, 0.79]). Teams led by participants were likelier to improve their employee engagement (d = 0.26, 95% CI = [0.18, 0.33]) and were likelier to have reduced employee turnover (d = -0.48, 95% CI = [-0.41, -0.54]).

Interpretation

Generalizable relationships between a strengths-based management development program and employee engagement, performance and turnover business outcomes have previously been identified in meta-analyses of employee engagement and strengths development programs, individually (Harter et al., 2002; Harter et al., 2010; Harter et al., 2020; Asplund & Blacksmith, 2011; Asplund et al., 2016; Asplund & Agrawal, 2018). As these content areas constitute a large part of the curriculum for the development course, the results of this study can be viewed as further confirmation of the relationships, as well as the utility of combining those content areas into a single intervention.

Individual course participants improved their employee engagement by up to 22% more than nonparticipants. Teams led by course participants improved their employee engagement by up to 18% more than teams led by nonparticipants, and they had 21% to 28% less employee turnover. Course participants had a 20% to 28% higher likelihood of performance improvements relative to their peers.

Background

The workplace has changed, and the pace of disruption is increasing. Managers must lead differently in the face of new challenges. Today's employees demand meaningful work, managers who care for them as people, ongoing communication, clear work expectations, and opportunities to learn and grow. They want a coach, not a boss.

The intent of Gallup's BTC course is to help all managers become more like the best managers that Gallup has studied. It follows Gallup's leadership framework to help clients optimize employee talent, transform their culture, and boost organizational effectiveness and client outcomes.

Participants receive individualized learning, shared experiences and one-on-one coaching.

Meta-Analysis

A meta-analysis is a statistical integration of data accumulated across many different studies. Meta-analysis has the potential to provide uniquely powerful information because it accounts for measurement, sampling errors and other idiosyncrasies that distort the results of individual studies. A meta-analysis reduces bias and provides an estimate of true validity or true relationship between two or more variables. Statistics typically calculated during meta-analyses also allow the researcher to explore the presence, or lack, of moderators of relationships. A meta-analysis provides a method by which researchers can determine whether validities and relationships generalize across various situations (e.g., across firms or geographical locations). For the present analysis, we used the Hunter-Schmidt random effects model meta-analysis methods (Schmidt & Hunter, 2014).

Researchers can conduct meta-analyses on the relationships between two or more variables, or the impact of two-group experimental interventions. The former are generally meta-analyses of r values, whereas the latter are meta-analyses of d values (the difference between treatment and control groups divided by the pooled standard deviation). Psychometric meta-analyses, which use advanced statistical methods such as reliability and range restriction distributions, are much more amenable to use of r values than d values. Because d values can be directly transformed into point-biserial r values, and vice versa, it is generally easiest to convert d values into r values, conduct the meta-analysis and then convert the true score r values back into d values for interpretative purposes; we used that process for this study.

For this meta-analysis, we corrected for artifactual sources of variation, such as sampling error, measurement error and range restriction, where possible. Measurement error was corrected for in most dependent variables based on artifact distributions obtained for previous Gallup meta-analyses. Test-retest reliability estimates were used based on Scenario 23 in Schmidt and Hunter (1996). Scenario 23 takes into account that some change in dependent variables (stability) is a function of real change.

The most general definition of a BTC intervention is one where a respondent completes the entire BTC curriculum, returns to work and begins to put into practice what they have learned. Any thorough evaluation of the efficacy of the intervention must wait

for the last step to occur. It takes time for teams to change processes and even more time for measurements of those changed processes to accumulate. For this study, the average latency of post-course measurement was nine to 18 months, although there was considerable variability in latency by organization and course cohort. A small number of participants from one organization were still in the middle of the course when their employee engagement data were tallied. There was similar variation in the timing of the pre-course measurements, with most being measured six to 18 months prior to the course, while some other participants' course completion lagged their initial measurement by over 30 months.

Accordingly, Gallup researchers accumulated research studies from all BTC clients where the following criteria were met:

1) sufficient population of study participants and peer control groups
2) adequate time elapsed post-completion
    a) No participants were included if their course had not yet begun.
    b) For two organizations, one small cohort was included to increase the number of participants — this cohort was in the middle of its program at the time the second employee engagement survey was conducted.
3) performance data available for both study and control populations

All of the included studies were quasi-experimental. Where possible, variables that were hypothesized to explain possible differences between nonrandomized treatment and control groups were utilized as statistical controls in analyses (i.e., demographics, baseline engagement, geography, age of business/work unit, trade area market statistics, tenure, job type, product type).

Dependent Variables

The included studies all employed one or more of the following dependent variables:

- individual employee engagement (i.e., the engagement of the person who completed Gallup's BTC course)
    - Five organizations provided these data for BTC attendees and nonattendees.
- team employee engagement (i.e., the engagement of the team[s] managed by the person who completed BTC)
    - Six organizations provided these data.
- individual performance metrics
    - Two organizations provided these data.
- team employee turnover (i.e., the employee turnover of the team[s] managed by the person who completed BTC)
    - Four organizations provided these data.

The study population included individuals and business/work units from six organizations and 32 countries. Study organizations came from a range of industries, including software, retail banking, healthcare, logistics, medical device manufacturing and electric utilities.

For the study, we:

- accumulated data from 14,774 course participants and 39,813 contrast employees
- converted d values and odds ratios from quasi-experimental studies to point-biserial r's
- conducted meta-analyses using artifact distributions, reporting observed and true score effect sizes, standard deviations and generalizability statistics
- corrected employee engagement effect sizes for range restriction
- converted r values back to d value effect sizes
- conducted utility analysis to estimate the practical value of the effect size estimates of the various intervention-outcome combinations

Results

Meta-analytic and validity generalization statistics for the relationships are in Table 1.

TABLE 1.

Meta-Analysis of Relationship Between Outcomes and BTC Intervention

	INDIVIDUAL-LEVEL ANALYSIS		TEAM-LEVEL ANALYSIS	
	Engagement	**Performance**	**Engagement**	**Turnover**
Number of Individuals/Teams	12,715	13,040	2,354	2,319
Number of r's	5	2	6	4
Mean Observed r	0.10	0.24	0.09	-0.16
Observed SDr	0.01	0.01	0.03	0.02
Mean Observed d	0.19	0.51	0.18	-0.32
True Effect Size r[1]	0.16	0.33	0.13	-0.23
True Effect Size d[1]	0.32	0.75	0.26	-0.48
% Variance Accounted For — Sampling Error	0	297	0	471
% Variance Accounted For[1]	100	1,663	284	890
90% CVr	0.16	0.33	0.13	-0.23
90% CVd	0.32	0.75	0.26	-0.48
95% Confidence Interval Lower r	0.14	0.32	0.09	-0.20
95% Confidence Interval Upper r	0.17	0.35	0.16	-0.25
95% Confidence Interval Lower d	0.29	0.72	0.18	-0.41
95% Confidence Interval Upper d	0.35	0.79	0.33	-0.54

1 Includes correction for dependent-variable measurement error and correction for unequal sample sizes
r = correlation | SD = standard deviation | CV = credibility value

Mean observed correlations and standard deviations are shown, followed by estimated true validities, after correcting for dependent variable measurement error. These results can be viewed as estimating the relationships across units/individuals within the average organization.

The findings show generalizability across organizations, as indicated by the 90% credibility values, all of which match the direction of the hypothesized relationships. That is, course completion effectively predicts the outcomes in the expected direction across organizations, including those in different industries and different countries.

The sample of studies has much less variance between the effect sizes than would be expected by sampling error. This often happens with small numbers of studies per table entry, as was the case here. As a consequence, the estimated variance attributable to artifacts exceeded the total observed variability.

Course completion effectively predicts the outcomes in the expected direction across organizations, including those in different industries and different countries.

Control Variables

Variables that were hypothesized to explain possible differences between nonrandomized treatment and control groups were utilized as statistical controls in analyses. As with the dependent variables themselves, the availability and quality of these control variables differed markedly both within and across organizations.

ENGAGEMENT

All studies were controlled for engagement survey administration cohort (baseline engagement prior to intervention). Some studies added additional variables, including tenure, age, race and job type.

PERFORMANCE

These studies were controlled for baseline performance.

TURNOVER

All studies employed control variables, including baseline turnover, and employee engagement, tenure and age.

Utility Analysis

Effect sizes such as those reported here can be challenging to interpret. Conventions regarding the utilities of relative effect sizes (Cohen, 1988) may not be informative, because the practical significance of those effects depends on the costs of improvement on the independent variable and the benefits of changes in the dependent variable. The research literature includes many examples of large, practical benefits shown in studies with numerically moderate effect sizes (Abelson, 1985; Carver, 1975; Lipsey, 1990; Sechrest & Yeaton, 1982).

A related issue is the fact that many interested parties may be unfamiliar with Cohen's d and its interpretation. We generated estimates of utility for all outcomes to simplify interpretation. Estimates are in Table 2. Readers interested in the methods of estimating utility can consult Harter et al. (2020).

TABLE 2.

Estimated Utility Across Outcomes

	ESTIMATED UTILITY	
	Low	**High**
Employee Engagement Increase (Participant)	10%	22%
Employee Engagement Increase (Team)	8%	18%
Performance: Increased Likelihood of High Performance (Represents higher probability of improved performance)	20%	28%
Turnover Reduction	21%	28%

Discussion

The intervention in this study was a manager development course completed by participants. Subsequent to course completion, those managers went back to their places of work and presumably attempted to use what they learned in the course to improve their performance. As a group, the managers who completed Gallup's course were successful in improving their post-course engagement and performance more than peer managers who did not participate. The effects of the BTC intervention on business outcomes appears to generalize across organizations; while there was meaningful variance in effect sizes across organizations, none had effect sizes equal to zero or with opposite signs to the hypothesized relationships.

Managers who completed Gallup's course were successful in improving their post-course engagement and performance more than peer managers who did not participate.

References

Abelson, R. P. (1985). A variance explanation paradox: When a little is a lot. *Psychological Bulletin, 97*(1), 129–133.

Asplund, J., & Agrawal, S. (2018). *The effect of CliftonStrengths® 34 feedback on employee engagement and sales: 2018 strengths meta-analysis.* Gallup, Inc.

Asplund, J., & Blacksmith, N. (2011). Productivity through strengths. In K. C. Cameron, & G. M. Spreitzer (Eds.), *Oxford Handbook of Positive Organizational Scholarship.* Oxford University Press.

Asplund, J., Harter, J. K., Agrawal, S., & Plowman, S. K. (2016). *The relationship between strengths-based employee development and organizational outcomes: 2015 strengths meta-analysis.* Gallup, Inc.

Carver, R. P. (1975). The Coleman Report: Using inappropriately designed achievement tests. *American Educational Research Journal, 12*(1), 77–86.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* New York, NY: Routledge Academic.

Harter, J. K., Schmidt, F. L., Agrawal, S., Blue, A., Plowman, S. K., Josh, P., & Asplund, J. (2020). *The relationship between engagement at work and organizational outcomes: 2020 Q$^{12®}$ meta-analysis: 10th edition*. Gallup, Inc.

Harter, J. K., Schmidt, F. L., Asplund, J. W., Killham, E. A., & Agrawal, S. (2010). Causal impact of employee work perceptions on the bottom line of organizations. *Perspectives on Psychological Science, 5*(4), 378–389.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*(2), 268–279.

Lipsey, M. W. (1990). *Design sensitivity: Statistical power for experimental research.* Newbury Park, CA: SAGE Publications, Inc.

Schmidt, F. L., & Hunter, J. E. (1996). Measurement error in psychological research: Lessons from 26 research scenarios. *Psychological Methods, 1*(2), 199–223.

Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings* (3rd ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Sechrest, L., & Yeaton, W. H. (1982). Magnitudes of experimental effects in social science research. *Evaluation Review, 6*(5), 579–600.

GALLUP®

World Headquarters

The Gallup Building
901 F Street, NW
Washington, D.C. 20004

t +1.877.242.5587
f +1.888.500.8282

www.gallup.com