



ROI, VOI and Performance Enhancement

Associated with Effective Wellness & Wellness Coaching Strategy

The following provides a high-level overview of validated studies across a wide range of respected professional journals related to the integration of wellness coaching strategies. Abstract summaries provided here, followed by select case study data from work with our partners. Of note are the consistently positive outcomes of an effective coaching strategy on quality of life, depression, self-efficacy, stress, diabetes, physical activity, weight loss, blood pressure, cholesterol levels, fruit and vegetable intake, tobacco use, family member behavior and overall performance. Organizationally, significant impact was noted with absenteeism, turnover, perceived stress levels, health care costs and Net Promoter Scores (NPS).

Literature Abstracts of Related Research

Effectiveness of Wellness Coaching for Improving Quality of Life (Clark, M. M., et al, 2016. *American Journal of Health Promotion*). In this single-arm cohort study (level 2b evidence), participating in wellness coaching was associated with improvement in 3 key areas of psychosocial functioning: QOL (Quality of Life), mood, and perceived stress level. The results from this single prospective cohort study suggest that these areas of functioning improve after participating in wellness coaching; Three areas of psychosocial functioning were assessed: quality of life (QOL; 5 domains and overall), depressive symptoms (Patient Health Questionnaire-9), and perceived stress level (Perceived Stress Scale-10). Participants were recruited from January 1, 2011 through December 31, 2011; data were collected up to July 31, 2012. These 100 wellness coaching completers exhibited significant improvements in all 5 domains of QOL and overall QOL ($P < .0001$), reduced their level of depressive symptoms ($P < .0001$), and reduced their perceived stress level ($P < .001$), and they maintained these improvements at the 24-week follow-up.

Coaching for Behavior Change in Physiatry (Frates, E. P., et al., 2011. *American Journal of Physical Medicine & Rehabilitation*). Behavior modification is vital to the prevention or amelioration of lifestyle-related disease. Health and wellness coaching is emerging as a powerful intervention to help patients initiate and maintain sustainable change that can be critical to physiatry practice. The coach approach delivers a patient-centered collaborative partnership to create an engaging and realistic individualized plan. The coaching process builds the psychological skills needed to support lasting change, including mindfulness, self-awareness, self-motivation, resilience, optimism, and self-efficacy. Preliminary studies indicate that health and wellness coaching is a useful and potentially important adjunct to usual care for managing hyperlipidemia, diabetes, cancer pain, cancer survival, asthma, weight loss, and increasing physical activity.

The impact of the Highmark employee wellness programs on 4-year healthcare costs. (Naydeck, B. L., et al., 2008. *Journal of Occupational and Environmental Medicine / American College of Occupational and Environmental Medicine*) To determine the return on investment (ROI) of Highmark Inc.'s employee wellness programs, growth curve analyses compared medical claims for participants of wellness programs versus risk-



matched nonparticipants for years 2001 to 2005. The difference was used to define savings. ROI was determined by subtracting program costs from savings and alternative discount rates were applied in a sensitivity analysis. Results: Multivariate models estimated health care expenses per person per year as \$176 lower for participants. Inpatient expenses were lower by \$182. Four-year savings of \$1,335,524 compared with program expenses of \$808,403 yielded an ROI of \$1.65 for every dollar spent on the program. Using sophisticated methodology, this study suggests that a comprehensive health promotion program can lower the rate of health care cost increases and produce a positive ROI.

Motivational Improvements for Health Behavior Change from Wellness Coaching (Mettler, E. A., et al., 2014. *American Journal of Health Behavior*). Clients completed a wellness questionnaire at baseline (before coaching) and at a 3-month follow-up. Overall, 177 participants (92% female, average age 42.9 (SD 11.2) years) were included in the analysis. Clients indicated priorities for coaching, and levels of *importance*, *confidence*, and *readiness* to change within each domain were compared between baseline and follow-up. *Results:* Participants identified weight management as their top priority and successfully reduced their BMI. Participants also demonstrated significant improvements in motivation and confidence in most health behavior domains. These results provide further support for the effectiveness of wellness coaching for weight management and for improving motivational readiness for behavior change.

Longitudinal Benefits Of Wellness Coaching Interventions For Cancer Survivors (Schmid, P., et al., 2009. *Medicine & Science in Sports & Exercise*). Thirty participants were recruited in three states and received intervention through the telephone. The participants included 20 breast, 7 prostate and 3 colorectal cancer survivors who ranged between 0.5-9 years since primary treatment ended. Instrument measures at baseline and the completion of the program included (3, 9, and 15 months from baseline): Hospital Anxiety & Depression Scale (HADS), Exercise Stage Assessment, Quality of Life Patient/Cancer Survivor and Self-Efficacy Scales. They were followed for a year after the completion of the intervention to evaluate the sustainability of WC. *Results:* During the intervention period, significant improvements were found in depression ($p=.003$) and anxiety ($p=.002$) measured by HADS, increased Exercise Stage Assessment ($p=.001$), and QOL ($p=.001$). Positive trends were noted in all other measures during the coaching. These positive trends continued from the cessation of coaching to 6 months after the intervention. A slight decline in these improvements was observed from 6 to 12 months but did not return to baseline. Patient-reported WC process improved lifestyle habits by helping with positive goal setting, awareness of food choices, and exercise as primary elements. Actual reported changes and improvements included exercise and eating healthier. The most helpful aspect of working with a personal coach included motivation and feedback. Self-report of fruit and vegetable consumption increased, and BMI and weight were improved.

Impact of a wellness coaching program for racial/ethnic minority women on the health behaviors of their family members (Simonsen, S., et al., 2016. *Journal of Women's Health*). Evaluated impact of a wellness coaching program targeting women on diet and physical activity behaviors of children, spouses/ partners, and grandparents living in the home. Assessed impact of a 12-month program on changes in health behaviors of women and their family members. Coaches recruited women to participate and helped them set tailored health behavior goals using Motivational Interviewing. Participants were randomized to receive either monthly coaching or quarterly coaching. *Results:* Data were assessed for 239 women; 65% had children; 49% had a spouse/partner, and 11% had a grandparent at home. At 12 months, more than half of the women reported their children and/or grandparents increased fruit & vegetable consumption and physical activity. More than half of women also reported their spouses/partners increased fruit and vegetable consumption. The lowest reported increase was spouse/partner physical activity, and even that was close to half (48%). In



multivariable models, women who reported being successful/very successful at achieving their own goals were 2.6 times as likely to report their spouses/partners had an increased physical activity level ($p=0.0203$).

Stress in the workplace: A coaching approach. (Wright, J., 2007. *Work: Journal of Prevention, Assessment & Rehabilitation*). Combined coaching and wellness education in the workplace create a medium whereby employees are able to take on board information about wellness in a way they can understand and implement in their own lives. (Studied company) owners reported a drop in absenteeism of 25% in the six months that followed the first intervention. The experiences support the workplace promotion of wellness coaching as one solution to skyrocketing health care costs, especially when the coaching is coupled with education in the tenets of living well.

Direct and Mediated Relationships Between Participation in a Telephonic Health Coaching Program and Health Behavior, Life Satisfaction and Optimism (Sears, Lindsay E, et al., *Journal of Occupational & Environmental Medicine*. 2016). The aim of this study was to examine the direct and mediated effects of a telephonic health coaching program on changes to healthy behaviors, life satisfaction, and optimism. Methods: This longitudinal correlational study of 4,881 individuals investigated simple and mediated relationships between participation in a telephonic health risk coaching program and outcomes from three annual Well-being Assessments. Results: Program participation was directly related to improvements in healthy behaviors, life satisfaction and optimism, and indirect effects of coaching on these variables concurrently and over a one-year time lag were also supported.

Employee weight management through health coaching (Merrill, R.M., 2010. *Eating and Weight Disorders – Studies on Anorexia, Bulimia and Obesity*). Study evaluated the effectiveness of an interactive health coaching intervention at lowering weight. The study involved 5405 employees aged 18–85, during 2001–2008. Results: Average body mass index (BMI) significantly decreased from 32.1 at baseline to 31.4 at 3 months, 31.0 at 6 months, and 30.6 at 12 months. Decreasing BMI was more pronounced in older age groups and among women, those using weight loss medication, those with higher BMI, and those with higher motivation and confidence to make behavior changes. Change in BMI through 12 months was -0.7% for those with normal weight, -2.0% for overweight, -3.6% for obese, and -7.1% for morbidly obese individuals at baseline. Among morbidly obese individuals, decrease in BMI through 12 months was -7.6% for those with “high” confidence to lose weight at baseline vs -4.4% for those with low confidence. Conclusion: Interactive health coaching significantly lowered BMI among participants through 3, 6, and 12 months of follow-up.

A systematic review of selected interventions for worksite health promotion. The assessment of health risks with feedback (Soler, R.E. et al., 2010. *American Journal of Preventive Medicine*). Systematic review of the literature to examine the level of evidence on the effectiveness of health promotion programs across a variety of risk factors. Sufficient or strong evidence across multiple studies was demonstrated for improvements regarding tobacco use, dietary changes, blood pressure control, cholesterol management, sick time, seat belt use, heavy drinking, physical activity, overall health risk score and medical utilization.

Performance Enhancement as an outcome associated with improved health and wellbeing has also been established in the literature, including Keyes & Grzywacz, 2005 (*Health as a Complete State: The Added Value in Work Performance and Healthcare Costs*), Cooper, Wilson & Jones 2019 (*An Exploratory Case Study of Mental Toughness Variability and Potential Influencers over 30 Days*) and Wu, et al., 2016 (*Overall Well-Being and Supervisor Ratings of Employee Performance, Accountability, Customer Service, Innovation, Prosocial Behavior, and Self-Development*).



Previous Catalyst Coaching 360 Study Highlights

Medical Claims Among Wellness Program Participants vs. Non-participants (Consistent with Naydeck, et al., 2008). Data from sample employer (3,200 ee) demonstrated those participating in the wellness program demonstrated an average of \$2,300 less in annual medical claims than those who were not active participants. Note that “active participation” was based on speaking consistently with a wellness coach, so there was limited activity-based self-selection (ie, as there would be with 5k participants or gym attendees) involved in this analysis.

Extended Illness Benefit (EIB) Utilization (Consistent with Cole, et al., 2019). The organization involved in this review considered initial 16 hours of sick time along with vacation part of a PTO bank. Hours tied to sick time beyond 16 hours are categorized as EIB (Extended Illness Benefit), which was the focus of this analysis. Maternity and anomalies (totaling 3% of those utilizing EIB) were removed. The remaining 97% of the total population was analyzed, with the following results:

- Wellness program participants are **2.3 times less likely to utilize EIB** than non-participants
- Among wellness program participants who do utilize EIB, they utilize 2.85 less hours per person than non-wellness program participants.

Satisfaction Levels - During recent surveys, **93% of respondents stated they would recommend the Wellness Program to others.** In addition, when responding specifically about their wellness coach, 92% stated the coaching calls were Beneficial or Very Worthwhile in helping them move in a positive direction with their health and wellness goals.

Retention (Consistent with Sears, et al., 2016). Retention rates were analyzed, comparing turnover among participants in the wellness program to non-participants. Results demonstrated a 9.8% difference in turnover between wellness program participants (7.7%) compared with non-participants (17.5%).

High Risk Cohort Study (Consistent with Naydeck, et al., 2008). Participants in coaching (compared to control group with similar risk factor levels) demonstrated:

- Approximately 50% fewer inpatient visits/1000 and 57% lower days/1000 vs. the control group
- 25% fewer outpatient visits, in spite of inclusion of desired preventative visit increase into category
- 62% fewer ER visits.
- Preventive visits (desirable) up 17%. Control group was down 23%.
- Large claims (\$50K+) down ~20% vs. the control.



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