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Executive coaching enhances goal attainment, resilience and workplace well-being: a randomised controlled study

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In a randomised controlled study, 41 executives in a public health agency received 360-degree feedback, a half-day leadership workshop, and four individual coaching sessions over 10 weeks. The coaching used a cognitive-behavioural solution-focused approach. Quantitative and qualitative measures were taken. This is the first published randomised controlled study in which coaching was conducted by professional executive coaches external to the organisation. Compared to controls, coaching enhanced goal attainment, increased resilience and workplace well-being and reduced depression and stress. Qualitative responses indicated participants found coaching helped increase self-confidence and personal insight, build management skills and helped participants deal with organisational change. Findings indicate that short-term coaching can be effective, and that evidence-based executive coaching can be valuable as an applied positive psychology in helping people deal with the uncertainty and challenges inherent in organisational change. Practical implications are discussed and recommendations are made for the effective measurement of coaching outcomes.

Keywords: executive coaching; well-being; positive psychology; resilience

Introduction

The use of executive coaching in organisations has grown significantly in the past 10 years, and is now viewed as a mainstream means of enhancing performance. Executive coaching can be understood as a helping relationship formed between a client who has managerial or supervisory authority and responsibility in an organisation, and a coach who uses a range of cognitive and behavioural techniques in order to help the client achieve a mutually defined set of goals with the aim of improving his or her professional performance and well-being and the effectiveness of the organisation (adapted from Kilburg, 1996).

As the use of executive coaching has increased, the peer-reviewed knowledge has also grown. In the 62 years between 1937 and 1999 there were only a total of 93 articles related to coaching cited in the database PsycINFO. In contrast, between 2000 and 2008 there were over 400 articles cited. Most of this literature is discussion articles and opinion or social commentary pieces rather than empirical research. Indeed, a literature search in September 2008 found only 42 empirical studies which examined the impact of executive coaching interventions. Of these 42 citations, 28 used a case study methodology or retrospective survey approaches, 11 used a within-subjects (pre-post) design, and 3 used a between-subjects

quasi-experimental design. The literature search failed to reveal any randomised controlled outcome studies which examined the impact of executive coaching conducted by professional executive coaches.

Can executive coaching be effective?

Although limited in quantity, the existing literature such as it is suggests that executive coaching may well be an effective means of creating purposeful, positive individual change. Early research, using qualitative single subject case studies, reported that coaching could be effective in helping clients develop constructive leadership styles (e.g., Diedrich, 1996; Kiel, Rimmer, Williams, & Doyle, 1996; Tobias, 1996). Hall, Otazo, and Hollenbeck (1999) interviewed 75 executives to explore their perceptions of the effectiveness of coaching. These retrospective qualitative interviews suggested that coaching can both improve business results and contribute to executive development.

Whilst such qualitative approaches can reveal a rich and detailed picture, the lack of standardised quantitative measures limits meaningful comparisons between different studies. Further, a retrospective approach to evaluation, where participants are asked their views once the intervention is completed, is open to a number of biases including recall errors and

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demand characteristics. Overcoming the limitations of retrospective reports by using a within-subjects (pre-post) design, Conway (2000) employed a standardised commercial 360-degree feedback assessment to examine whether executive coaching would help participants develop a more accurate understanding of their leadership style. Conway found that executive coaching did not improve the accuracy of participants' self-perceptions of their leadership skills. However, Kampa-Kokesch's (2002) within-subjects study of 50 executives found that executive coaching resulted in improved leadership styles as measured by the Multi-factor Leadership Questionnaire (Bass & Avolio, 2000). Other studies have also reported success in enhancing leadership style and improving managerial style flexibility and problem solving (e.g., Jones, Rafferty, & Griffin, 2006; Styhre, 2008).

Coaching, goal attainment and mental health: past research

Given the stresses inherent in the contemporary workplace and the emphasis on performance and well-being within many organisations, it is surprising that few studies have examined the impact of professional executive coaching on goal attainment and well-being. Using a quasi-experimental design, Gyllensten and Palmer (2005) found that coaching reduced stress as measured by the Depression, Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995). Libri and Kemp (2006) reported on a within-subject, ABAB single case design, finding that executive coaching improved core-self evaluations and self-reported goal attainment. Using a within-subjects design, Bowles and Picano (2006) found that coaching enhanced the quality of life for district recruiting managers in the US Army. More recently in a similar US Army setting, but using a between-subjects design, Bowles, Cunningham, De La Rosa, and Picano (2007) found that coaching was particularly effective for middle management (compared to executive managers) although both groups demonstrated growth on some dimensions of leadership competencies and achievement of self-set goals.

In addition to the above workplace-based research, a number of studies have found that life coaching in non-work settings can reduce anxiety, stress or depression, enhance hope, well-being and resilience and facilitate goal attainment (e.g., Grant, 2003; Green, Oades, & Grant, 2006; Green, Grant, & Rynsaardt, 2007; Spence & Grant, 2007). Thus, overall there is emerging evidence that coaching can be an effective positive individual change methodology. The present paper seeks to add to the literature by reporting on a randomised controlled outcome study which investigated the impact of professional executive

coaching on executives' goal attainment, resilience and workplace well-being. To the authors' best knowledge, this is the first published randomised controlled outcome study of executive coaching where the coaching has been conducted by professional executive coaches external to the organisation, rather than by peers or managers acting as in-house coaches.

Central aspects of executive coaching

Although the theoretical frameworks used in executive coaching vary considerably, ranging from the cognitive through to psychodynamic and the solution-focused (see Peltier, 2001), there are a common set of principles underpinning the executive coaching process. These principles sit at the heart of the applied positive psychological enterprise and include collaboration and accountability, awareness raising, responsibility, commitment, action planning and action. That is, regardless of theoretical formulation, the coaching relationship is one in which the coach and coachee form a collaborative working alliance, set mutually defined goals and devise specific action steps which lead to goal attainment (Kemp, 2008). The coachee's responsibility is to enact such plans, the coach's role is to help keep the coachee on track, helping them to monitor and evaluate progress over time as well as providing an intellectual foil for brainstorming and self-reflection.

Executive coaching may thus be effective through at least three underlying cognitive and behavioural mechanisms. Firstly, having a supportive relationship in which to confidentially discuss personal and professional issues has been shown to relieve stress and anxiety (Myers, 1999). Secondly, the process of setting self-concordant and personally valued goals, and then purposefully working towards achieving them, can enhance well-being and build self-efficacy (Sheldon & Houser-Marko, 2001). Thirdly, systemically engaging in such processes along with being supported in dealing with any setbacks can build resilience and enhance self-regulation (Baumeister, Gailliot, DeWall, & Oaten, 2006). As a result of the above, coachees may well experience a greater sense of personal confidence, job satisfaction and well-being as well as being better equipped to deal with change and workplace stressors.

Context of the present study

The present study was conducted in a large-scale public health agency in Australia. The agency covers a geographical region of approximately 40,000 square kilometres with 17,000 employees. The annual budget is AU\$1.5 billion (US\$1.17 billion). The agency had been undergoing a period of significant change and organisational restructuring.

As in many areas in the Western world, the Australian public health sector is under intense scrutiny and pressure both internally and externally. This pressure comes from the media, government and consumer groups who seek to identify financial mismanagement, ethical conflicts, clinical errors and anything less than optimal performance. This scrutiny is occurring in a setting of budget cuts, understaffing, stretched resources and increasing demand for services. The Australian health sector has undergone considerable changes with significant pressures on executives and senior managers. It is these issues that make this a useful context in which to examine the impact of executive coaching as an applied positive psychology.

The aim of the Leadership Development Program was to develop the leadership and management capability of executives and senior managers. The program was based on individual 360-degree feedback, and one half-day leadership training workshop followed by individual executive coaching. The coaching sessions were delivered by two experienced professional executive coaches who were external to the organisation. It was hypothesised that participation in the coaching program would be associated with increased goal attainment, increased resilience, decreases in depression, anxiety and stress, and increases in workplace well-being. It was also hypothesised that participation in the training workshop alone would not be associated with the above changes.

Method

Participants

Participants were executives and senior managers from the nursing sector of a major Australian public health service agency who took part in a Leadership Development Program as part of their professional development. Participants' roles were at Director and Senior Managerial level. Fifty individuals attended the workshop. However, due to unexpected changes in work demands, organisational restructuring or sick leave, nine individuals were not able to complete all questionnaires or attend all coaching sessions within the specified timeframe. Data from these individuals has been dropped from the analysis. Forty-one individuals completed all the questionnaires and coaching sessions within the specified 8–10-week timeframe (38 females and 3 males, mean age 49.84 years).

Design and procedure

The study used a randomised controlled waitlist design with measures at Time 1, Time 2 (10 weeks) and Time 3 (20 weeks). All participants attended a one-half day training workshop and completed the initial (Time 1) measures prior to the commencement of the workshop.

Table 1. Experimental design of study.

	Time 1 Baseline	Time 2 10 weeks	Time 3 20 weeks
Group 1	Training workshop Begin coaching	Complete coaching	No measures taken
Group 2	Training workshop Begin waitlist	Begin coaching	Complete coaching

Following completion of the measures, participants were randomly assigned to either Group 1 or Group 2. Both quantitative and qualitative measures were used.

Table 1 outlines the research design of the study. Initially, a between-subjects design was used, with Group 1 being the Coaching Group and Group 2 acting as a Waitlist Control Group. Once the executive coaching for Group 1 had finished, post-coaching measures for Groups 1 and 2 were taken (Time 2). A within-subjects design was then employed with Group 2 receiving executive coaching. Final measures were taken at Time 3. All participants completed measures at Time 1 and Time 2. Only Group 2 participants completed measures at Time 3.

Overview of the Leadership Program

The Leadership Development Program focused on enhancing and developing leadership capability, with the aim of equipping participants to better lead themselves, their staff and their organisations more effectively through a period of substantial organisational change. Specifically, the program aimed to help participants to:

- (1) Manage and develop staff at a time of limited financial and staffing resources;
- (2) Develop their leadership skills to meet the current and future needs of health care service delivery;
- (3) Meet the challenges inherent in a period of substantial organisational change;
- (4) Develop leadership credibility, professional identity and individual career opportunities.

The program consisted of 360-degree feedback on participants' existing leadership styles, one half-day leadership education and training workshop, and four individual executive coaching sessions over an 8–10 week period.

The 360-degree feedback process

The 360-degree feedback process was designed to raise participants' awareness of their current leadership styles, and to help them further develop constructive leadership styles. The Human Synergetics Life Styles

Inventory (LSI; Lafferty, 1989) was used for the 360-degree feedback. The LSI is a widely used assessment inventory which measures 12 thinking styles and behaviours, combining these into three key clusters. The constructive cluster consists of achievement, self-actualising, humanistic-encouraging and affiliative facets. The passive-defensive cluster consists of approval-seeking, conventional thinking, dependant and avoidance facets. Finally, the aggressive-defensive cluster consists of oppositional, power-seeking, competitive and perfectionistic facets.

In terms of leadership behaviours, the constructive cluster is synonymous with transformational leadership styles, emphasising the importance of articulating a clear sense of mission and purpose, being intellectually stimulating, providing timely and encouraging feedback, and coaching and mentoring. Because a leader who displays constructive and transformational leadership behaviours is able to enhance transitions by empowering and motivating staff (McDaniel & Stumpf, 1993), the participants in the program were encouraged to focus on selecting goals for coaching that aligned with facets of the constructive cluster of the LSI. In line with best practice for 360-degree assessment procedures (Rogers, Rogers, & Metlay, 2002), participants rated themselves and were also rated by a minimum of five others: peers, direct reports and their own manager.

The Leadership Training Workshop

The half-day interactive leadership development workshop prepared participants to begin the development coaching process by providing a detailed overview of all components of the program. The workshop included information about constructive and transformational leadership styles, an introduction to the LSI framework and feedback process, the development of strategies for gaining maximum benefit from the coaching process, and the development of strategies to deal with the difficulties of organisational change. The workshop incorporated group interactions and discussions and goal-setting. Specific reference was made to issues related to readiness to change to prepare participants for their role as coachees.

The executive coaching sessions

The coaching sessions were underpinned by a cognitive-behavioural, solution-focused framework (Grant, 2003). This approach posits that goal attainment can be usefully facilitated by understanding the reciprocal relationships between one's thoughts, feelings, behaviour and the environment, and structuring these to best support goal achievement. Incorporating a solution-focused perspective into a cognitive-behavioural

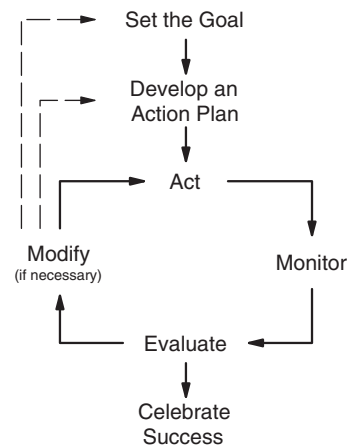


Figure 1. Generic model of self-regulation.

approach helps orientate the coaching towards the development of personal strengths and solution-construction rather than towards problem analysis.

This approach to coaching helps individuals achieve their goals by: (1) identifying desired outcomes, (2) delineating specific goals, (3) enhancing motivation by identifying personal strengths and building self-efficacy, (4) identifying resources and formulating action plans, (5) monitoring and evaluation progress, and (6) modifying action steps (based on evaluation of progress). As shown in Figure 1, the monitor-evaluate-modify steps form a change cycle of self-regulated change (Carver & Scheier, 1998) and this is central to the coaching process. After initial goal setting, the coach's role is to help coachees move through the self-regulation cycle, by helping them develop action plans, and monitor and evaluate their progress between each coaching session.

To enhance the goal directed nature of the coaching program, the GROW model (Whitmore, 1992) was used to structure each coaching session. When using the GROW model the session starts by setting a goal for the coaching session. Coach and coachee then explore the current reality, before developing options for action and concluding with specific action steps that help define the way forward. An outline of the GROW model is provided in Table 2.

There were four coaching sessions in total, and these were held over an 8–10 week period. There was some additional telephone follow-up between sessions. Coaching sessions were scheduled at 2–3 week intervals. The initial coaching session included a debrief on the 360-degree feedback, the setting of specific goals based on the feedback, and the development of between-session action steps to be undertaken by the coachee. As such feedback can be emotionally disturbing (Rogers et al., 2002), in line with best practice, participants were contacted within 48 hours after the initial session in order to monitor their reactions

Table 2. The GROW model.

Acronym	Description	Example questions
Goal	Coachee is asked to identify what they want to achieve in the session. Determines the focus of the session.	What do you want to get out of this session? What would be the best use of our time?
Reality	Raises awareness of current situation. Examines how current reality is impacting on the goals.	How would you like to feel after this session? How have things gone since our last session? What worked? What did not work? What did you learn?
Options	Identify and assess possible options. Encourages solution-focused and action-orientated thinking and brainstorming.	What options are there? What could be done? What's the most important thing to do next? What else could you do?
Way forward	Helps the coachee define the next steps. Develop specific action plan. Fosters motivation to maintain momentum.	Which options are most effective? What exactly will you do? How can you overcome any barriers?

Source: Whitmore (1992); Greene and Grant (2003).

to the feedback. The coaching was conducted by two experienced professional executive coaches with a combined total of more than 38 years of coaching and organisational change experience. Both coaches held tertiary qualifications in Coaching Psychology.

Measures

Both quantitative and qualitative measures were used.

Quantitative measures

Goal Attainment Scaling (GAS). Following consultation with stakeholders and participants, a list of seven personalised statements based on the aims of the program were developed. From this list, participants were asked to select two statements that best represented the two goals that they wished to focus on during the program. The seven statements were:

- (1) To increase my understanding of constructive leadership.
- (2) To gain greater self-awareness, self-confidence and resilience in my role as a leader.
- (3) To improve my leadership and communication styles.
- (4) To identify my own learning needs and develop a meaningful Professional Development Plan.
- (5) To gain greater clarity regarding my own career direction.
- (6) To explore more positive strategies for managing the challenges I face at work.
- (7) To expand my knowledge of resources available to support me in my leadership role and in my professional development.

Participants then rated their goal/s for perceived difficulty on a 4-point scale (1 = *very easy*, to 4 = *very difficult*). They also responded to the question 'up to

today, how successful have you been in achieving this goal,' and rated their goal attainment on a scale from 0% (no attainment) to 100% (complete attainment). Goal attainment scores were calculated by multiplying the difficulty rating by the degree of success. Participants also rated the length of time they have been trying to achieve their goals. Such goal attainment scales have been used in prior coaching outcome studies (for discussion on GAS see Spence, 2007).

Resilience. Resilience was assessed with an 18-item version of the Cognitive Hardiness Scale (Nowack, 1990). This scale, based on Kobasa's (1979) work, assess the individual's sense of personal control, their propensity to rise to meet challenges, and their commitment to action. The measure is scored on a 5-point Likert-type scale. Nowack (1990) reports an internal consistency of 0.83.

Depression, anxiety and stress. The Depression Anxiety and Stress Scale (Lovibond & Lovibond, 1995) was used as a measure of psychopathology. The DASS-21 is comprised of three sub-scales measuring depression, anxiety and stress. Because it is designed to be used with both clinical and non-clinical populations it is a useful assessment tool for coaching. Internal consistency and test-retest reliability have been found to be good ($r=0.71$ to 0.81 ; Brown, Chorpita, Korotitsch, & Barlow, 1997).

Workplace Well-being. Workplace well-being was measured with the Workplace Well-being Index which has been found to be a reliable and valid measure (WWBI; Page, 2005). The 16-item WWBI assesses the degree of wellbeing and satisfaction that individuals gain from their work using 'very

dissatisfied' (0) and 'very satisfied' (10) as the scale anchors. The Workplace Well-being Index includes 15 domain-specific items such as 'How satisfied are you with how meaningful your work is?', 'How satisfied are you with your working conditions?', 'How satisfied are you with the recognition you receive for good work?', and one question assessing global workplace satisfaction 'How satisfied are you with your job as a whole?' Cronbach's alpha for this study was 0.91.

Qualitative measures

In order to gather data on participants' experience of the program participants were asked to respond to the following questions:

- What specific positive benefits (if any) did you gain from participating in this program?
- What specific positive outcomes (if any) have flowed into your workplace?

The use of an open-question methodology is an important point in this study because it allowed the participants themselves to determine which issues they considered to be of most benefit.

Results

It was hypothesised that participation in the coaching program would be associated with increased goal attainment, increased resilience, decreases in depression, anxiety and stress, and increases in workplace well-being. It was also hypothesised that participation in the training workshop alone would not be associated with the above changes. Means and standard deviations for all variables are shown in Table 3.

Data was analysed using a 2×2 repeated measures ANOVA consisting of one between-subjects factor (group) and one within-subjects factor (time) to analyse the data for Time 1 and Time 2. Paired sample *t*-tests were used to analyse the data for Time 2 and Time 3 for Group 2, and for planned contrasts. A significance level of 0.05 was set for all tests.

Goal attainment

A repeated measures ANOVA for goal attainment showed a significant time (Time 1, Time 2) by group (Group 1, Group 2) interaction effect, $F(1, 39) = 26.26$, $p < 0.001$, indicating that Group 1 had higher goal attainment scores at the completion of coaching at Time 2, compared to Group 2 who did not receive coaching at that time. Planned contrasts indicated that goal attainment scores for Group 2 did not differ significantly from Time 1 to Time 2, $t(20) = 1.38$, *ns*. However, goal attainment scores for Group 2

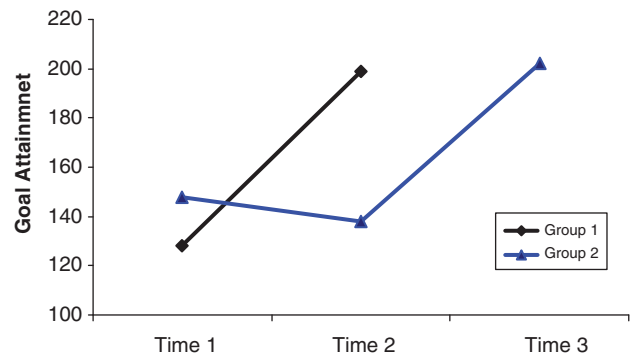


Figure 2. Goal attainment for groups across time.

significantly increased, $t(20) = 4.92$, $p < 0.001$, once they had completed coaching at Time 3 (Figure 2).

Resilience

A repeated measures ANOVA for the Cognitive Hardiness Scale showed a significant time (Time 1, Time 2) by group (Group 1, Group 2) interaction effect, $F(1, 39) = 6.75$, $p < 0.05$, indicating that Group 1 had higher scores at the completion of coaching at Time 2, compared to Group 2 who did not receive coaching at that time. Planned contrasts indicated that scores for Group 2 did not differ significantly from Time 1 to Time 2, $t(20) = 0.59$, *ns*. However, scores for Group 2 significantly increased, $t(20) = 3.10$, $p < 0.01$, once they had completed coaching at Time 3 (Figure 3).

Depression

A repeated measures ANOVA for depression showed a significant time (Time 1, Time 2) by group (Group 1, Group 2) interaction effect, $F(1, 39) = 4.42$, $p < 0.05$, indicating that Group 1 had lower depression scores at the completion of coaching at Time 2, compared to Group 2 who did not receive coaching at that time. Planned contrasts indicated that depression scores for Group 2 did not differ significantly from Time 1 to Time 2, $t(20) = 0.96$, *ns*. Depression scores for Group 2 did not significantly decrease, $t(20) = 1.46$, *ns*, once they had completed coaching at Time 3.

Anxiety

A repeated measures ANOVA for anxiety did not show a significant time (Time 1, Time 2) by group (Group 1, Group 2) interaction effect, $F(1, 39) = 0.047$, *ns*, indicating that Group 1 did not have lower anxiety scores at the completion of coaching at Time 2, compared to Group 2 who did not receive coaching at that time. Planned contrasts indicated that anxiety

Table 3. Means and standard deviations for all variables.

	Time 1		Time 2		Time 3	
	M	SD	M	SD	M	SD
GAS						
Group 1	128.00 _a	52.87	199.50 _a	49.99	—	—
Group 2	148.00 _a	46.00	138.09 _{a,b}	51.14	202.85 _b	47.34
Resilience						
Group 1	62.25 _d	6.49	66.95 _d	6.74	—	—
Group 2	64.90 _d	5.70	64.00 _{c,d}	8.53	68.42 _c	6.24
Depression						
Group 1	5.00 _d	8.14	2.00 _d	3.37	—	—
Group 2	3.23 _d	3.06	5.42 _d	9.31	2.28	3.36
Anxiety						
Group 1	2.40	4.13	2.50	3.83	—	—
Group 2	3.33	4.57	4.00	9.12	1.52	2.89
Stress						
Group 1	10.40	10.39	8.10	8.49	—	—
Group 2	9.90	7.75	10.09 _e	9.08	5.80 _e	5.86
WWB						
Group 1	102.66 _d	25.58	113.95 _d	24.11	—	—
Group 2	104.80 _d	22.26	104.61 _{c,d}	31.62	115.42 _c	25.39

GAS = Goal Attainment Scaling; WWB = Workplace Well-being.

Notes: Subscript *a* denotes statistically significant interaction effect; $p < 0.001$. Subscript *b* denotes statistically significant difference; $p < 0.001$. Subscript *c* denotes statistically significant difference; $p < 0.01$. Subscript *d* denotes statistically significant interaction effect; $p < 0.05$. Subscript *e* denotes statistically significant difference; $p < 0.05$ (one tailed test).

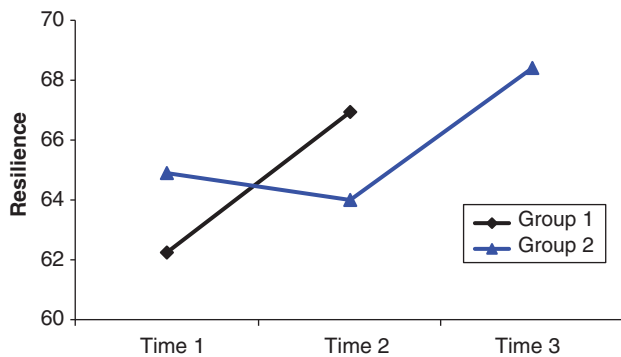


Figure 3. Resilience for groups across time.

scores for Group 2 did not differ significantly from Time 1 to Time 2, $t(20) = 0.20$, *ns*. Anxiety scores for Group 2 did not significantly decrease, $t(20) = 1.18$, *ns*, once they had completed coaching at Time 3.

Stress

A repeated measures ANOVA for stress did not show a significant time (Time 1, Time 2) by group (Group 1, Group 2) interaction effect, $F(1, 39) = 0.679$; *ns*, indicating that Group 1 did not have lower stress scores at the completion of coaching at Time 2, compared to Group 2 who did not receive coaching at that time. Planned contrasts indicated that stress

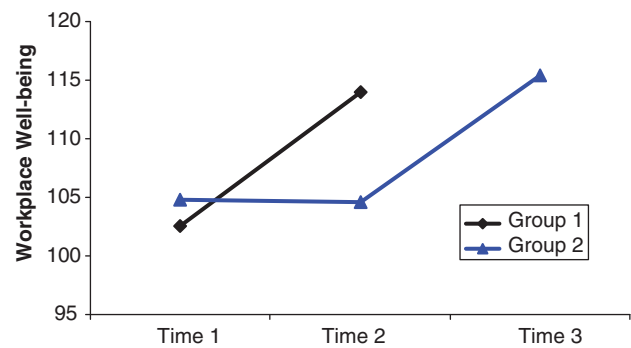


Figure 4. Workplace well-being for groups across time.

scores for Group 2 did not differ significantly from Time 1 to Time 2, $t(20) = 0.08$, *ns*. However, a one-tailed *t*-test indicated that stress scores for Group 2 had significantly decreased, $t(20) = 1.95$, $p < 0.05$, once they had completed coaching at Time 3.

Workplace well-being

A repeated measures ANOVA for workplace well-being showed a significant time (Time 1, Time 2) by group (Group 1, Group 2) interaction effect, $F(1, 39) = 3.39$, $p < 0.05$, indicating that Group 1 had higher workplace well-being scores at the completion of coaching at Time 2, compared to Group 2 who did

Table 4. Correlational relationships.

	Resilience	Depression	Anxiety	Stress
WWB	0.343*	-0.390*	-0.284	-0.557**
Resilience	–	-0.306*	-0.076	-0.403**
Depression	–	–	0.671**	0.832**
Anxiety	–	–	–	0.663**

WWB = Workplace Well-being.

**Correlation is significant at the 0.01 level.

*Correlation is significant at the 0.05 level.

not receive coaching at that time. Planned contrasts indicated that workplace well-being scores for Group 2 did not differ significantly from Time 1 to Time 2, $t(20) = 0.38$, *ns*. However, workplace well-being scores for Group 2 significantly increased, $t(20) = 3.13$, $p < 0.01$, once they had completed coaching at Time 3 (Figure 4).

A correlational analysis was conducted to explore the relationships between workplace well-being, resilience, and depression, anxiety and stress. Results are presented in Table 4.

Qualitative data

Participant's responses were systematically classified and grouped according to thematic content. As recommended by Spector (1984), the validity of the emerging categories was established by asking the questions. Do the categories fit and work? Are they clearly indicated by the data? Reliability was established by looking for inconsistencies in the responses.

Thirty-nine of the 41 participants wrote qualitative comments (95% response rate). Comments differed in length from one or two point-form sentences to two pages of detailed narrative. The following categories emerged and are ordered below in terms of the frequency with which they were mentioned by the participants (note: some participants made more than one response):

- (1) Increased confidence: 25 responses
- (2) Helped build applied management skills: 24 responses
- (3) Better able to deal with organisational change/stress: 23 responses
- (4) Gained personal or professional insights: 14 responses
- (5) Helped me find ways to develop my career: 12 responses

Representative comments from the above categories are presented below. As can be seen, some responses fit into a number of different categories:

- (1) Increased confidence

I learnt that I had acquired (and demonstrated to others) many of the transformational

leadership skills that I had admired in others. I had not recognised that in myself. The 360-degree feedback was very insightful and I will be working hard to improve in areas I need to. This has given me extra confidence and insight and the tools to strengthen my relations and profile with my line managers and my profile within the organisation.

Mainly around self-confidence, but also just lifting myself out of a large rut... It gave me back my confidence, and got me out of my self-doubt.

- (2) Helped build applied management skills

I have started to meet/confer with my team more, and deal with them more 1:1 based on their needs and performance development... I was able to do some 'silent coaching' with my staff and without them being aware of it, got them to solve problems rather than me telling them what to do.

It quite possibly saved my team! I was able to go into executive meetings with much more confidence, encouraging and supporting my team and presenting a strong, dynamic proactive profile. It was leading by example.

- (3) Better able to deal with organisational change/stress

At the beginning of the program there was a high degree of uncertainty about the restructure of the hospital management positions. The program provided an important opportunity for me to reflect and determine how to deal with future directions... I feel more confident and have gained insight, which will assist in service development and embracing change that will benefit our service delivery.

I set up a Team Planning day in which we looked at the effect of organisational change on us and the staff in the hospital. Then we did some team building to create systems and processes that will ensure staff are supported and that our approaches are consistent with each other. Thank you so much for this opportunity, it feels like a huge gift.

It has been a life changing experience for me and has energised me to keep up the good fight... I developed more self-confidence and greater stress tolerance and better ability to lead with integrity.

- (4) Gained personal or professional insights

I found I had greater understanding of my motivators and ability to see things from a different perspective. It helped me find a level

of acceptance of my own ability/achievements and a plan to move forward.

I am able to coach my team better as I have more personal insight. I am less competitive and more constructive and have less guilt and more confidence. I am able to be more innovative as I am more confident.

(5) Helped me find ways to develop my career

Ability to reflect on my own skills... I gained increased confidence in my own abilities and personal and professional growth. I feel more valued in my position and career through personal awareness of my strengths that I had previously devalued.

Discussion

It appears that the coaching program was indeed successful in helping participants reach their goals. The participants chose two goals from seven broad pre-determined goals that were aligned with the organisation's leadership development and organisational change objectives. The finding that goal attainment was enhanced is consistent with past research into coaching (e.g., Grant, 2003; Green et al., 2006; Gyllensten & Palmer, 2005; Smither, London, Flautt, Vargas, & Kucine, 2003).

Goal selection for workplace coaching is not a straightforward process. Forcing employees to undertake specific goals may alienate them and create resentment, and this may be particularly problematic in a time of major organisational change (Twine, Humphries, & Kearns, 2006). On one hand, it is important that goals align with the organisation's imperatives so as to create the required change. On the other hand, it is important that the coachee has a choice in defining the goals. This is because commitment to self-set goals tends to be higher than commitment to goals set by other people (Locke, 1996), and goals that reflect personal values are more satisfying when attained (Sheldon, 2001).

This study addressed this dilemma by offering coachees a range of broadly defined goals that had been determined through extensive pre-program consultation with stakeholders and participants. Thus, there was general agreement with the content of all seven goals before the program started, and the coachees had a degree of choice as to which specific goals they focused on. The idea that participants were pre-committed to these goals is supported by the fact that, on average, participants had been trying to attain these goals for 3.24 years. In addition, a number of qualitative comments mentioned that the goal attainment was a rewarding experience.

Coaching builds resilience

The coaching program was also effective at enhancing resilience. This finding makes sense in that as individuals work through the self-regulation cycle towards their goals (Figure 1) there are barriers and challenges to be overcome. These could include negative self-talk, self-defeating behaviours or simply staying focused on one's goal over time. Overcoming such barriers is likely to improve an individual's resilience and improve self-confidence (Gyllensten & Palmer, 2005). Indeed, the qualitative comments indicated that many of the participants experienced improvement in their levels of self-confidence and resilience following coaching. This is in accord with past work. For example, Taylor (1997) found that solution-focused coaching fostered resilience in medical students, and Green et al. (2007) found that solution-focused coaching enhanced resilience in high school students.

The finding that personal resilience was enhanced in the present study's population is an important one. The public health sector is one where resources are scarce and high work-related demands are commonplace. Past research in the public health sector has found that effective organisation-level processes in terms of policies and procedures for handling challenging workloads can maximise the use of resources, and can also improve organisational resilience (Miller & Xiao, 2007). The present study focused on building resilience at the individual level. It appears that executive coaching may be an effective method of building personal resilience, and future studies could explore the efficacy of resilience building in greater depth. Given that past research has found that sick leave tends to significantly increase in times of organisation change and stress (Hansson, Vingard, Arnetz, & Anderzan, 2008), it would be useful to know if the self-reported increases in personal resilience found in the present study translate into cost savings through reduced sick leave or staff turnover.

The impact on depression, anxiety and stress

Based on previous work it was hypothesised that participation in the coaching program would be associated with reduced depression, anxiety and stress (e.g., Grant, 2003; Gyllensten & Palmer, 2005). Indeed, there was a significant interaction effect for depression between Time 1 and Time 2 indicating that Group 1's levels of depression significantly reduced whilst Group 2's levels increased. However, there was no significant difference between Group 2's depression levels at Time 2 and their levels at Time 3 (when Group 2 had completed coaching). In relation to anxiety, there was no significant impact, nor was there an interaction effect for participants' stress levels between Time 1 and Time 2. However, there was a

significant reduction in stress levels for Group 2 once they had completed coaching at Time 3. Thus, the findings for the impact on depression, anxiety and stress are less clear than for the other dependant variables.

One explanation may be that, in the present study, participants' levels of depression, anxiety and stress were within the normal range (see Lovibond & Lovibond, 1995), and the failure to observed widespread reductions in depression, anxiety and stress may simply be due to measurement floor effects inherent in the DASS. This highlights an important issue in the measurement of coaching outcomes using instruments that measure psychopathology, and this point is particularly salient for research into coaching and applied positive psychology. Pathology-orientated instruments, such as the DASS, only measure the presence or absence of depression, anxiety or stress and not the presence or absence of well-being, and when used as the sole measure of psychological states will not detect the full psychological impact of coaching.

Workplace well-being

Participants' levels of workplace well-being increased significantly following coaching. This finding has implications for organisations because the coaching primarily focused on the attainment of goals that were aligned with the organisation's leadership objectives, rather than being primarily focused on the enhancement of the executives' well-being. This suggests that this kind of executive coaching may have the potential to benefit both the employee and the organisation.

There are a number of mechanisms that may be responsible for the increase in well-being. Firstly, goal attainment can enhance well-being, particularly if the goals are personally valued (Sheldon, Elliot, Kim, & Kasser, 2001). Secondly, past work has shown that social support and a sense of autonomy, both central to the coaching process, can buffer the impact of stressors on well-being (Daniels & Guppy, 1994). Along similar lines, self-acceptance has been found to be related to workplace well-being (Donaldson-Feilder & Bond, 2004), and the qualitative comments indicated that many participants experienced increased self-acceptance and confidence as a result of coaching.

In relation to the assessment of the impact of the coaching intervention on mental health. Both WWB and resilience were negatively correlated with the DASS scores. Whilst the anxiety and stress scores on the DASS did not change for both groups, both WWB and resilience scores were significantly different following coaching. This finding underscores the importance of using a broad range of mental health measures to assess the psychological impact of coaching. In order to detect a broad range of psychological outcomes it is important to assess the full spectrum

from mental illness to mental health (for a useful discussion of this issue see Keyes, 2003), and future research should bear this point in mind.

Limitations of the present study

There are several limitations inherent in the present study, and these should be taken into account when interpreting these findings. Firstly, the participants were senior level employees of a public sector health service. This sector is recognised as being a particularly challenging work environment (Miller & Xiao, 2007). Management in the public sector tends to receive less leadership development than (for example) the private professional services sector (Mikelson & Nightigale, 2004). Thus, the executive coaching may have been effective because the participants had not previously received such intensive leadership development in the past. It should also be noted that, unlike many executive populations, the majority of participants in this study were female. This may have been because most of these participants had began their careers as nurses, and there are far more female than male nurses (Wilson, 2005). Thus these findings may not generalise to other populations, for example, to male managers in a professional services area. In addition, the outcome measures were self-report, and responses could be subject to a demand characteristic effect in which participants felt obliged to report making progress. Finally, although organisational change formed an important part of the context in which this study was conducted, no direct measures of organisation change were taken; the focus was entirely on the individual. Future studies should explore the impact of executive coaching at both individual and organisational levels. However, despite the above limitations, the present study has presented original data related to the use of executive coaching in the public health service sector, and has extended the knowledge-base on executive coaching.

Practical implications

A number of practical implications flow from this study. This study has shown that as little as four coaching sessions can be effective. Executive coaching typically takes place over a greater number of sessions, with many experienced coaching practitioners recommending 8–10 sessions (Berman & Bradt, 2006). However, Burke and Linley (2007) found that just one coaching session improved goal self-concordance and commitment, although they did not measure goal attainment. The results of the present study extend Burke and Linley's (2007) work and suggest that short-term coaching interventions can indeed be effective.

Future research should explore this issue and compare short-term to longer-term interventions.

The quantitative results of this study provide support for the notion that executive coaching can indeed increase goal attainment, enhance resilience, ameliorate depression and stress, and increase workplace well-being. The participants' qualitative responses support many of the quantitative findings and also suggest that executive coaching may well be a valuable tool in helping individuals deal with the uncertainty and challenges inherent in organisational change. Given that many organisational change initiatives are problematic (Stober, 2008), and such change failures can be costly in both business and human terms, organisations should consider using individual coaching as a support mechanism in conjunction with organisational-level change initiatives during times of significant change, thereby building resilience and well-being at both an organisational and individual level.

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