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## How does a brief strengths-based group coaching intervention work?

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AQ1<sub>1</sub>

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We conducted a field study with random allocation to investigate the impact of a strengths-based coaching intervention on self-efficacy, confidence in goal confidence and strengths knowledge using a short bespoke coaching intervention. Thirty-two student participants were assigned to either a coaching group, who set a goal and undertook a group coaching session, or a control group, who set goals but did not receive coaching. We hypothesised that the experimental group would improve on all measures (H1), and would differ significantly from the control group (H2). There was a significant increase in self-efficacy ( $t(15) = -5.437, p?.001, r = .92$ ) and confidence in goal attainment ( $Z = -3.51, p?.001, r = .62$ ) between the pre- and post-coaching scores for participants in the coaching condition. However, there were no significant differences between the coaching group and the control group on self-efficacy ( $t(30) = .61, p = .55, d = .21$ ), confidence in goal attainment ( $U = 92, z = 1.44, p = .15, r = .25$ ) and strengths knowledge ( $U = 124, z = -.151, p = .88, r = .02$ ). Our discussion suggests that future longitudinal research is needed to tease out the potential mechanisms of strengths-based coaching further, for instance, considering individual differences affecting goal setting in the first place, and also strengths use as well as strengths knowledge.

AQ2<sub>1</sub>

AQ3<sub>1</sub>

AQ4<sub>1</sub>

**Keywords:** self-efficacy; strengths knowledge; group coaching; goal confidence; SMART goals

AQ5<sub>1</sub>

### Practitioner points:

- (1) Focused group coaching appears effective as a short-term boost for people's belief in their capacities and confidence in their goals.
- (2) Coaching practitioners should consider and evaluate how goal setting might interplay with individual characteristics and other activities.

The coaching literature is highly diverse in terms of differing models and techniques informing practice and research (e.g. Palmer & Whybrow, 2007). However, there is still relatively little concrete evidence about whether coaching is an effective means of improving relevant outcomes (Grant, 2012). Grant (2012) outlines the practical limitations in conducting relevant studies in organisational settings, such as the costs involved, and the difficulty of recruiting large samples of participants, calling for more within subject outcome research and also randomised controlled studies (RCS). He outlines that a small number of RCS have been conducted. In the workplace, RCS have demonstrated that coaching increases goal attainment (Grant, Curtayne, & Burton, 2009)

AQ7<sub>1</sub> AQ8<sub>1</sub>

AQ9<sub>1</sub>

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AQ6<sub>1</sub>

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and reduces risk of absence from sickness amongst employees (Duijits, Kant, Van den Brandt, & Swaen, 2007). Using student samples, RCS have demonstrated that life coaching has a positive impact on cognitive hardiness and hope (Green, Grant, & Rynsaardt, 2007) as well as self-efficacy and resilience (Franklin & Doran, 2009). A number of RCS have taken place within a health context and have demonstrated that coaching is effective at improving decision-making (Gattellari, 2005), increasing post-training proficiency (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004), increasing goal attainment when coupled with mindfulness training (Spence, Cavanagh, & Grant, 2008), and is a successful intervention for individuals with diabetes (Wolever et al., 2010). Furthermore, a RCS conducted by Spence and Grant (2007) compared peer with professional life coaching and found the latter to have greater positive outcomes, suggesting that expertise is an important element of coaching. However, whilst these RCS have all demonstrated the positive impact of coaching there has been one RCS, conducted by Ringwalt et al. (2009), which considered the use of coaching to improve the effectiveness of a drug prevention programme but found that coaching was ineffective. This result suggests that coaching is not always the most appropriate intervention to use. Furthermore, previous studies have used various techniques, targeted different purposes, measured different outcomes and have taken place in different contexts, making it difficult to compare across relevant studies.

To determine whether or not coaching is effective, it is a prerequisite to consider (1) the type of coaching, (2) the coaching context and (3) characteristics of the coachee. Indeed, Passmore and Fillery-Travis (2011) argue that the impact of coaching is highly situational and context-dependent; with differential impact depending on the individuals involved as well as the context, analogous to research findings in counselling contexts (e.g. Lambert & Barley, 2002). Therefore, it is important in any coaching research to consider (1) which particular outcomes are envisaged to be affected by a particular coaching process, (2) what individual differences characterise coachees, (3) how coaching compares to other conditions, or indeed a control which does not receive coaching, and (4) where possible use before and after measures to measure change. We now outline how we conducted a small-scale randomised controlled study to examine the outcomes of a strengths-based coaching intervention, drawing from the growing strengths-focused literature.

### ***Strengths-focused perspectives in coaching research***

Given the need to conduct more research on specific coaching interventions, we set out to investigate the effectiveness of a brief coaching intervention situated in a positive paradigm. Traditionally, many development interventions in both organisational and non-organisational contexts had focused on identifying individual weaknesses and ways to counteract or ameliorate these. Linley and Harrington (2006) suggested that as a result individual strengths had been largely ignored in development contexts, despite nascent evidence that building on strengths may be more beneficial than focusing on weaknesses. A strength can be defined as, 'A natural capacity for behaving, thinking or feeling in a way that allows optimal functioning and performance in the pursuit of valued outcomes' (Linley & Harrington, 2006, p. 88). Research has considered the associations between such (personal) strengths and positive outcomes. For example, there is a relationship between strengths and life satisfaction (Park, Peterson, & Seligman, 2004), as people are motivated by doing what they do best, and individuals who use their strengths experience

less personal stress (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). Furthermore, people who use their strengths are happier, have higher self-esteem and experience higher levels of vitality than those who do so to a lesser extent (Govindji & Linley, 2007). In addition, the use of strengths in the workplace also has positive organisational outcomes in terms of associations with higher levels of engagement and performance (Crabb, 2011; Harter, Schmidt, & Hayes, 2002; Smedley, 2007; Stefanyszyn, 2007). Taken together, these findings suggest that identifying and utilising personal strengths is linked to a range of positive outcomes.

Therefore, strengths-based approaches are now becoming more commonplace in organisations (Clifford, 2011), evident, for instance, in the growing application of strengths-based performance management (e.g. Bouskila-Yam & Kluger, 2011; Smedley, 2007; Stefanyszyn, 2007). As coaching by nature aims to facilitate optimal functioning and performance (Grant, 2001), it would follow naturally that focusing on strengths can also play an important role within coaching. A growing body of research in the field has described the relationship between strengths and positive outcomes. Linley, Nielsen, Gillett, and Biswas-Diener (2010) examined the relationship between strengths and including life satisfaction and affect tracking a sample of university students over time, also measuring progress towards personal goals. Their pattern of results showed that a composite measure of strengths use was associated with goal progress; this in turn was associated with both composite measures of need satisfaction and well-being at both six weeks and 10 weeks post-baseline. The researchers suggested that strengths use is one way of pursuing self-concordant goals effectively. The goal self-concordance model posits that individuals who pursue intrinsic and internalised self-concordant goals, which are, are more likely to achieve these because of the effort put into attaining these, and that successful goal attainment is linked to greater well-being outcomes in turn (Sheldon & Elliot, 1999). In other words, there is an upward positive spiral between self-concordant goal attainment and happiness (Sheldon & Houser-Marko, 2001). Overall, the goal self-concordance model provides an explanation of the potential relationship between strengths and positive outcomes; but it is difficult to determine the direction of causation, as it may be the case that individuals who have higher well-being are more inclined to set self-concordant goals in the first place. There is also a need to conduct more research which unpicks which activities are effective at making strengths salient and encouraging their use, as, for instance, Linley et al.'s (2010) study included a self-set goal activity but no active facilitation or intervention. Another potential area for future research is to investigate to what extent strengths in specific areas are more important than other strengths in the relationship between strengths and positive outcomes (Wood et al., 2011).

Nonetheless, strengths are a construct of increasing relevance in a coaching. A relatively recent study piloted an evidence-based strengths coaching programme with primary school boys aged between 10 and 11 (Madden, Green & Grant, 2011). The programme involved raising self-awareness, identifying personal resources and self-regulation, and the results showed increases in engagement and hope. However, there was no control group in this study; thus, it is difficult to deduce whether or not these increases were a direct result of the coaching intervention. Another gap in research is that there are few studies on strengths-focused group coaching in non-sports settings, which is surprising as it has been argued that more durable changes are likely to occur when working with a group, particularly for leadership and executive settings (Kets De Vries, 2005). Our own literature search elicited one paper considering leaders as 'climate engineers' (Linley, Woolston, & Biswas-Diener, 2009) which included valuable notions on



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how strengths can be over- and underplayed and a model for practice, illustrated by a brief case study.

It was our objective to extend the evidence base for strengths-based coaching interventions in group settings in a field study. Drawing from previous research which had indicated that strengths are associated with self-efficacy, in other words people's belief in their capabilities (Govindji & Linley, 2007) and goal-related variables (Linley et al., 2010), we measured both. We designed a controlled study with random allocation to investigate the effects of strengths-based coaching on self-efficacy, strengths knowledge and self-set goals as measured by goal confidence. Due to pragmatic reasons, as we were keen to pilot an intervention which would be of practical value, we adopted a 'brief coaching' solution-focused approach (e.g. Iveson, George, & Ratner, 2011). We recruited a non-occupational population as we set out to investigate how strengths-based approaches could assist with preparing for the world of work. These were university students who were about to undertake a 'sandwich year', which is a professional training in industry, or were about to leave university. A further advantage of undertaking the study with this sample was that the students were all completely new to coaching, so they had no prior experience, which was an advantage for controlling for the potential effects of prior experience (which can be an issue in organisational samples). More specifically, we hypothesised that participants receiving a focused group coaching intervention would increase in confidence in goal attainment (H1a) and self-efficacy (H1b) at the time of the follow-up measure. We also hypothesised that post-intervention measures would be higher when compared to the control group (H2) for goal attainment (H2a), self-efficacy (H2b) and strengths-knowledge (H2c). It was a secondary aim to investigate which aspects of the coaching participants found most beneficial, and to what extent participants set themselves concrete goals in the first place.

## Method

### *Participants*

Following a favourable ethical review from the researchers' institution participants were recruited via email, social media and personal networks. We recruited a total of 32 university students studying psychology who were intending to go on placement in their third year or planning on entering employment at the end of their course; 16 in each group (based on a G\*Power3 analysis of effect size .8 and power .7). The mean age of participants was 26 (SD = 6.36), with a range from 21 to 44 years. Twenty four of the participants were female and eight were male.

### *Study design and procedure*

This study was conducted by the second author who also facilitated the coaching sessions. Following informed consent to participate in the study, we randomly assigned students to either the coaching condition or the control group. All participants received a written information pack. Participants in the group coaching condition group were asked to set themselves a concrete (specific, measurable, realistic, achievable, time-framed) work-related goal and completed measures of confidence in attaining that goal and self-efficacy; we also recorded age, gender and their intended career path. Immediately after the coaching session, participants were asked to complete a post-intervention

questionnaire which re-measured confidence in goal attainment, self-efficacy and strengths knowledge to minimise the risk of participant attrition.

Participants in the control group also set themselves work-related goals which were only required to complete one questionnaire which collected demographic information, confidence in attaining the goal, self-efficacy and strengths knowledge. These participants were offered the opportunity to participate in a coaching session once all of the data had been collected. On completion of the study, participants in both conditions were provided with a debrief sheet and given the opportunity to ask any further questions.

### ***The group coaching intervention***

The experimental group was invited to attend a focused group coaching session lasting approximately 45 minutes. This started with a brief introduction to the session and a warm-up exercise (including an introduction to at least three other people) to ensure that the group could establish rapport. This was followed by a facilitated group discussion around identifying strengths, using some set questions to explore potential sources of strengths, such as 'What are you particularly good at?' and 'What do you find comes naturally to you?'. The second part of the coaching session involved a facilitated group discussion around how the identified strengths could be applied to individuals' goals. Participants were encouraged to make notes using a Coaching Worksheet throughout the coaching session so that they had a record to take away with them.

### ***Materials and measures***

The one-item measure of confidence in goal attainment had a 7-point Likert scale ranging from 'very unconfident' to 'very confident'. We used the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) which consists of 10 items which are scored on a 4-point scale ranging from 'not at all true' to 'exactly true'. It is scored by adding up the responses to all items, to give a total sum of between 10 and 40, with higher scores suggesting a higher level of self-efficacy; coefficient alpha was recorded as .84 at baseline.

These participants were then required to complete a second questionnaire after attending the coaching session which consisted of the same measure of confidence in goal attainment, the General Self-Efficacy Scale ( $\alpha = .78$ ), and the Strengths Knowledge Scale (Govindji & Linley, 2007;  $\alpha = .59$ ). The latter scale measures how aware individuals are of their strengths and consists of eight items which are scored on a 7-point scale ranging from 'strongly disagree' to 'strongly agree'. It is scored by initially subtracting the response to item two from eight, and then adding up all of the responses to give an overall score of between 8 and 56, with higher scores indicating greater strengths knowledge. We noted that coefficient alpha for strengths knowledge was lower than we might have expected, further investigation showed that this was due to one item, which if removed would have improved internal consistency to .87. However, after deliberation we decided not to remove this item from the analysis, as we wanted to cover the entire content domain of the scale, but noted this as a potential limitation.

We also included questions relating to the actual coaching experience which were how enjoyable, useful and challenging participants found the experience (rated on a 5-point scale from 'not at all' to 'very'; and an open item asking what the most useful features were.

Results

Demographic and participant self-set goal information

Participants reported a range of intended career paths including work areas such as human resources, forensic work, research, occupational psychology, social work and clinical or counselling psychology. Participants' self-set work goals also covered a range of goal content; the most common goal ( $n = 9$ ) as gaining relevant work experience, another common goal category ( $n = 6$ ) was gaining and developing job- or role-specific skills; three participants recorded that they wanted to increase their confidence and the other goals included extending personal/professional networks, publishing research developing rapport with others or gaining specific professional qualifications. As a further exploration of the data, we coded goal specificity to determine how SMART (specific, measurable, achievable, realistic and time-framed) these goals were; eight participants set such SMART goals (four participants in each condition), 12 set partly specified goals, (six in the coaching condition, one in the control group) and 17 participants only set general goals (e.g. 'improve my confidence'; six in the coaching condition, and 11 in the control group).

Descriptive statistics in overview

Table 1 summarises mean scores and standard deviations, where the mean score in the coaching group increased following group coaching for all three variables, and was higher compared to the control group, the largest increase was observed for confidence in goal attainment. But it was also notable that the control group was more self-efficacious than the experimental group at baseline, and also more confident than the coaching group at baseline.

Within-group analyses

As some of the measures did not meet parametric assumptions, we had to deviate from our original plan to undertake analyses of variance. A Wilcoxon test was conducted to test differences in the confidence in goal attainment before and after attending the coaching session amongst participants in the coaching condition (H1a). Before attending the coaching session, the mean confidence in goal attainment was 4.44 (SD = 1.09), and after the coaching session the mean confidence in goal attainment was 5.81 (SD = .834). This difference was statistically significant,  $Z = -3.51$ ,  $p < .001$ ,  $r = .62$ .

A paired samples  $t$ -test was conducted to investigate differences in self-efficacy (H1b); the difference was also statistically significant,  $t(15) = -5.437$ ,  $p < .001$ ,  $r = .92$ .

Table 1. Mean scores for self-efficacy, confidence in goal attainment and strengths knowledge post-intervention.

Variable	Pre-intervention	Post-intervention	
	Group coaching $M$ (SD)	Group coaching $M$ (SD)	Control group $M$ (SD)
Self-efficacy	29.31 (3.71)	32.75 (3.42)	32 (3.54)
Confidence in goal attainment	4.44 (1.09)	5.81 (.83)	5.25 (1)
Strengths knowledge	–	43.94 (5)	42.75 (7.43)

**Between-group analyses**

As the data did not fulfil parametric assumptions, a Mann–Whitney U test was conducted to test differences between the two groups in confidence in goal attainment (H2a). The mean rating of confidence in goal attainment for the coaching group was higher at a value of 5.81 (SD = .884) than the mean for the control group was 5.25 (SD = 1). However, this difference was not statistically significant,  $U = 92$ ,  $z = 1.44$ ,  $p = .15$ ,  $r = .25$ .

An independent samples  $t$ -test was conducted to compare differences between the two groups in self-efficacy (H2b). The mean self-efficacy score for the coaching group was at 32.75 (SD = 3.42) higher than the mean for the control group which was at 32 (SD = 3.54). However, this difference was not statistically significant,  $t(30) = .61$ ,  $p = .55$ ,  $d = .21$ .

A second Mann–Whitney U test was conducted to investigate whether there were any differences between the overall strengths knowledge score of participants in the coaching condition and participants in the control condition (H2c). The mean score on the strengths knowledge scale for participants in the coaching condition was 43.94 (SD = 5.0) and the mean score for participants in the control group was 42.75 (SD = 7.43). This difference was not significant,  $U = 124$ ,  $z = -.151$ ,  $p = .88$ ,  $r = .02$ .

**Group Coaching Evaluation**

Most participants found the coaching highly enjoyable ( $M = 4.69$ ,  $SD = .47$ ), useful ( $M = 4.50$ ,  $SD = .63$ ) but comparatively less challenging ( $M = 2.81$ ,  $SD = 1.16$ ). For the open-ended item, six participants said that they found the identification of their strengths particularly useful, two participants each found the group discussion element and the enjoyable atmosphere particularly helpful, other answers from one participant each were about the goal setting element, the efficient organisation and the combination of goals and strengths.

**Discussion**

This study investigated the effects of a strengths-based coaching intervention on self-efficacy, strengths knowledge and confidence in goal attainment by conducting a small-scale controlled study with a student sample without prior experience of coaching. It was our first hypothesis that a strengths-focused group coaching intervention would increase goal attainment and self-efficacy and strengths knowledge more so than for a matched control group, which was supported. This is in line with previous findings which have shown improvements in self-efficacy after coaching interventions (e.g. Evers, Brouwers, & Tomic, 2006; Franklin & Doran, 2009) and increased goal attainment (Grant et al., 2009). The results relating to observed patterns of change in the coaching group suggest that a strengths-based coaching intervention was effective at increasing both self-efficacy and confidence in goal attainment. This is in line with previous research which has shown strengths-based interventions to have a positive impact on outcomes (e.g. Govindji & Linley, 2007; Linley et al., 2010; Madden et al., 2011). The observed effect could be explained by the goal self-concordance model which suggests that if a goal matches an individual's strengths then they are more likely to achieve that goal and derive positive benefits from it (Linley et al., 2010). Through the coaching session, coachees may have been able to increase the self-concordance of the goal they had set by aligning it with

their strengths, and gaining an understanding of how they could apply their personal strengths in order to achieve their respective goal.

However, the between conditions (the group coaching condition post-intervention versus control) was not significant for confidence in goal attainment, self-efficacy or strengths knowledge; hence, there was no support for H2. Inspection of the means reveals that the control group was naturally more self-efficacious than the coaching group, suggesting that despite our efforts to hold the groups constant (e.g. the demographics were very similar, neither had prior coaching experience), the two groups do not meet the requirements of randomisation as they were dissimilar at baseline. Such 'fluke' effects have also been observed in previous research (Sheldon, Kasser, Smith, & Share, 2002).

Given that the coaching intervention was so focused on identifying strengths amongst participants which was also identified by the participants as the most useful feature of the intervention, it is somewhat surprising that there was no statistically significant difference in strengths knowledge between the coaching group and the control group. One possible explanation is that the group coaching may have been too brief to allow sufficient time for coachees to identify and develop their strengths knowledge, or perhaps not challenging enough to really stimulate behavioural or cognitive change; participants noted that they found participation much more enjoyable and useful, than challenging as such. In addition, participants were asked to complete the post-study questionnaire immediately after the group coaching session, and this may not have been long enough to foster meaningful changes in self-perceptions. Referring to the literature on training, time is an important factor as trainees need the 'opportunity to perform' in order to transfer learning (e.g. Cromwell & Kolb, 2004; Grossman & Salas, 2011; Meyer, Lees, Humphris, & Connell, 2007).

An alternative explanation could be that students might already be more aware of their own strengths than a wider population (so a pre-selection effect), and that particularly motivated students self-selected to take part in our study. This observation relates back to the suggestion of Passmore and Fillery-Travis (2011) who argued that the impact of coaching is highly situational, with differential impact depending on the individual and context. Strengths-based coaching may not show as effective in this particular context given a potential uniformity in strengths awareness, but may be for other individuals in alternative contexts.

Given that there were no significant differences between the two groups, but that the coaching group 'improved', this pattern might suggest that an element of the intervention which both groups shared might be linked to this observation. Both the control group and coaching group were asked to set themselves a work-related goal and were provided with some brief information about SMART goals before completing the measures of self-efficacy, confidence in goal attainment and strengths knowledge, to facilitate this aspect. Thus, it is tenable that the goal setting element had the greatest influence on the results, over and above the strengths-focused aspect present in the actual group coaching. We conducted an exploratory analysis post hoc by comparing the means for goal attainment between participants who had set themselves SMART, partly SMART or general goals only at both baseline and post-intervention for the experimental group. But interestingly, all participants reported an improvement in goal confidence, regardless of goal specificity [e.g. for the SMART group the mean increased from  $M = 3.75$  ( $SD = .95$ ) to  $M = 5.25$  ( $SD = .50$ )]; however, notably the non-specific goal group had higher goal confidence ( $M = 5.33$ ) to start off with.

Goal setting has been shown to be an effective motivational technique in many settings (Locke & Latham, 2002), and is often used in coaching contexts and a feature of many interventions (e.g. Sheldon et al., 2002). But the results discussed here also appear to suggest that confidence in one's goals is also important.

### ***Limitations and future research***

This study focused on the use of one brief coaching session, in line with previous research, which has shown that positive outcomes can occur after one brief session (Luthans & Peterson, 2003). Hence longitudinal research would enable more detailed investigation of whether actual goal attainment is increased through the use of strengths-based coaching interventions, and whether these interventions differ by where individuals are in their career and lifespan. Whilst we focused on students for the reasons detailed earlier, it is equally tenable that strengths-coaching may be more effective amongst individuals who are at a later stage in their career when they have had more opportunities to discover and use their strengths in the 'real world'. Admittedly, it is also major limitation that we did not administer a fully randomised trial, as for pragmatic reasons we were only able to collate one measure in time from the control group. Using a larger sample, future research would also do well to try and disentangle why some participants set themselves SMART goals as instructed, whereas others did not. A checking and revision of goals as part of any intervention could actively address this, and also inclusion of additional measures as, for instance, more effective goal setting may be linked to self-confidence or other characteristics. Finally, it would be important to determine, for instance, through initial piloting, to ensure that any intervention is challenging enough to stimulate change.

### ***Future research and practice***

The experimental group improved in self-efficacy and goal confidence, and also commented on how beneficial and indeed enjoyable they found a strengths-based approach, so we found some evidence that even very short focused interventions may reap benefits. A number of participants also commented on how useful they found listening to others during the session and the reflection gained from this. So another aspect for future research and practice would be to determine if strengths-based group coaching works differently to individual approaches, as this may also have benefits in terms of reduced time and cost implications. Finally, but perhaps most importantly, we note that our measure of strengths knowledge was relatively brief and cursory, as knowing one's strength is one thing, but using them is another (e.g. Biswas-Diener, Kashdan & Minhas, 2011).

### ***Conclusion***

To address our initial objectives, we contributed to the evidence base in coaching by taking a randomised approach to investigate the effects of group coaching compared to a control group, observing changes in self-efficacy and goal confidence whilst being mindful that it is often not possible in field research to fully match different groups, which we noted as a limitation. The avenues for future research however are rich, as it remains to be determined for whom, who and when strengths-coaching is most effective,



also considering interactions with goal setting processes any individual differences associated with these.

### Notes on contributors

Dr Almuth McDowall has been co-editor for *Coaching: An International Journal of Theory, Research and Practice* since 2010. Almuth's main research and practice interests are in the areas of work-life balance and coaching, as well as psychometric development and evaluation. After a successful career in health and fitness, as a personal instructor working primarily with performing artists, Almuth retrained in psychology and completed her PhD at City University. There she started out her professional career as a senior consultant with the Psychometrics Centre, undertaking and overseeing a range of consultancy-related projects. Almuth now combines her academic post at the University of Surrey, where she is Course Director for the MSc in Occupational and Organizational Psychology, with freelance work as an independent practitioner. She wishes we could just stop speaking about the science-practitioner gap. If there is one, it is only due to our perceptions; we are all interested in the same things. Almuth is keen to advance the evidence base in coaching, and has served on the editorial board for the Coaching Psychology Conference for the past couple of years. Almuth has published in the academic and in the practitioner press, and is a regular speaker at national and international conferences. She works in the field of work-life balance as a coach and advisor to organisations, and has a keen interest in undertaking research with the Police and other emergency services.

Lucy Butterworth completed her B.Sc. in Psychology and her M.Sc. in Occupational Psychology at the University of Surrey. She was awarded the Division of Occupational Psychology's Student Prize for best research in 2012 for her undergraduate dissertation on environmental behaviours. She conducted the research presented in this paper for her M.Sc. dissertation for which she was awarded a distinction. Lucy now consults with the Huron Group on organisational development and is committed to a coaching approach.

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