A longitudinal, mixed method evaluation of self-awareness training in the workplace

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Abstract

Purpose – The purpose of this study is to investigate whether self-awareness, which is associated with general well-being and positive life outcomes, is also of specific benefit in the workplace. The authors tested the relationship between self-awareness and job-related well-being, and evaluated two different interventions designed to improve dispositional self-awareness at work.

Design/methodology/approach – Full-time employees took part in these training interventions and completed questionnaires using a switching-replications design. Questionnaires measured dispositional self-attentiveness (reflection and rumination) and job well-being (satisfaction, enthusiasm and contentment) at three time points over a period of six weeks. Statistical analyses were complemented with qualitative analysis of reported impacts.

Findings – Self-awareness was positively associated with job-related well-being and was improved by training. Employees reported gaining a greater appreciation of diversity, improved communication with colleagues and increased confidence.

Research limitations/implications – Sample size limited the extent to which the relatively weak relationships between the concepts could be identified.

Practical implications – Self-awareness is demonstrated to be of value at work, associated with higher well-being and improvements in several positive occupational outcomes. The self-awareness training is more likely to result in active work-based improvements than in reflective changes.

Originality/value – Dispositional self-awareness is shown to be subject to change through training. The study demonstrates the value of self-awareness at work and identifies a range of related work outcomes.

Keywords Well-being, Reflection, Mixed methods, Self-awareness

Paper type Research paper

Introduction

The impact of self-awareness on our lives has long been under debate. For many humanistic psychologists and psychotherapists, good self-awareness is the key to a

fulfilled and actualised life (Rogers, 1961), characterised by high levels of well-being. Development of self-awareness is also recognised as being at the core of many human resource development (HRD) initiatives, for example, in Cseh *et al.*'s (2013) recent study on global leaders' learning. In the training and development literature, self-awareness is often assumed to be a generic process through which many positive organisational outcomes, such as improved leadership (Storr and Trenchard, 2010), can be achieved. Yet self-awareness research has identified a sadder-but-wiser paradox (Fenigstein *et al.*, 1975). Although those who are more self-aware are certainly wiser about their lives and interactions with others, they often report lower affective well-being. This paradox has been addressed by the delineation of a reflective and ruminative style of self-attentiveness, with the former associated with the positive outcomes and the latter with the negative (Trapnell and Campbell, 1999). This complexity in self-awareness is rarely recognised in the organisational training and development field, and this study aims to remedy this by developing a sophisticated understanding of self-awareness training and its associated outcomes in the workplace. To do this, we use a mixed-method approach: testing hypotheses by conducting quantitative analysis and using qualitative methods to address broader research questions.

Self-awareness

Self-awareness can be defined as a higher-level concept which includes the extent to which people are consciously aware of their interactions or relationships with others and of their internal states (Trudeau and Reich, 1995; Trapnell and Campbell, 1999). Within this broad definition, a distinction may be drawn between situational and dispositional self-awareness (Brown and Ryan, 2003). Situational self-awareness is an automatic process, whereby an individual compares the self to internalised standards, and then makes changes to reduce any inconsistency (Silvia and Duval, 2001). Dispositional self-awareness, also known as self-consciousness or self-attentiveness, refers to the tendency for an individual to focus and reflect on the self (Fenigstein *et al.*, 1975). These measures of self-awareness recognise that there are individual differences in the extent to which people attend to or analyse their inner worlds.

Dispositional self-attentiveness can take two forms (Trapnell and Campbell, 1999). The first, rumination, is a tendency to focus on negative self-perceptions and emotions and is a core process in depression, exacerbating negative mood, increasing negative thinking and impairing social problem solving (Watkins and Moulds, 2005). The second, reflection, is the tendency to reflect objectively on the self and is associated with the positive outcomes of psychological mindedness, greater self-knowledge and better psychological adjustment (Trapnell and Campbell, 1999).

In addition, greater self-awareness is associated with improved self-regulated behaviour and psychological well-being (Brown and Ryan, 2003; Wilson and Dunn, 2004) and improved mental health (Ghasemipour *et al.*, 2013), with reflection associated with positive feelings of well-being and rumination with the negative feelings of anxiety and depression. Recent surveys demonstrate that around 90 per cent of employers believe that there is a link between work and employees' health and well-being, with around 55 per cent also believing that the costs of investing in well-being are outweighed by the benefits (Young and Bhaumik, 2011). The first aim of this study, therefore, is an attempt to replicate the reported relationship between

self-awareness and general well-being within a more specific work context. This aim is addressed using quantitative measures to test the following hypothesis:

H1. Dispositional self-awareness is positively correlated with job-related well-being.

Developing self-awareness at work
The positive influence of self-awareness is increasingly being recognised in the workplace, for example, in identifying that self-aware leaders are more effective and have more satisfied subordinates than less self-aware leaders (Atwater *et al.*, 1995). Self-awareness is also associated with important outcomes such as higher job satisfaction (Luthans and Peterson, 2003) and more effective career decisions (Singh and Greenhaus, 2004). This association between self-awareness and positive life and work outcomes demonstrates that training to improve self-awareness has the potential to bring real benefits to individuals and organisations.

There is certainly evidence that situational self-awareness can be manipulated (Mischel *et al.*, 1973), but if the beneficial effects of self-awareness are to be capitalised on by individuals and organisations, training needs to focus on influencing longer-term dispositional self-awareness. In a seminal review, Wilson and Dunn (2004) outlined three main routes to improving self-knowledge and awareness. The first method, structured introspection, is associated with greater well-being and has positive effects on health, academic performance and job outcomes (Pennebaker *et al.*, 2003). The second method is seeing oneself through others' eyes, and research shows that self-awareness can be improved by the use of individual coaching to help managers work through the self-other rating discrepancies from 360-degree feedback (Luthans and Peterson, 2003). The final method for improving self-awareness is that of self-observation. This approach can help to align conscious and unconscious goals, which in turn is associated with greater personal happiness (Schultheiss and Brunstein, 1999).

A training programme built on these three recommendations has the potential to improve employee self-awareness and associated benefits. The second aim of this study, therefore, is to evaluate the effect of self-awareness training interventions on dispositional self-awareness and wider work outcomes. This aim is addressed through both quantitative and qualitative methods. First, the following hypotheses are assessed using quantitative measures:

H2a. Self-awareness training can improve dispositional self-awareness.

H2b. Self-awareness training can improve job-related well-being.

Second, because research into self-awareness training at work is still evolving, we explore the wider effects on work outcomes using qualitative research, guided by the following research question:

RQ1. What effect does self-awareness training have on participants' work lives?

Finally, we compare two types of training, reflecting different approaches to developing self-awareness at work[1]. The first, a generic self-awareness workshop, trained participants directly in the three methods outlined by Wilson and Dunn. This training was developed in collaboration with the tutors of the Person-Centred Counselling

postgraduate certificate at a large UK university. It focused on teaching participants skills such as journaling, reflection, self-analysis and awareness of other people's perceptions.

This type of generic approach is rarely used in the workplace however and a more common approach is to use personality-based interventions, based on the proposition that they help people to develop self-awareness, i.e. "gain insights about themselves and how they interact with others" (CPP Inc, 2014). The second type of training in this study, therefore, adopted a personality-based workshop to compare the relative utility of the two kinds of training.

The personality workshop introduced participants to the Enneagram personality typology. The Enneagram was chosen for this study because of its emphasis on learning about one's personality type by developing skills at introspection, learning to see oneself through others' eyes and attempting to understand the unconscious motivations that prompt observed behaviour, the three approaches to improving self-awareness recommended by Wilson and Dunn. The typology describes nine types of people based on their worldview, or preferred and habitual way of dealing with the world, outlining both the common behaviours and hidden motivations of different personality types (Brown and Bartram, 2005; Newgent *et al.*, 2004). There is an increasing body of evidence demonstrating the validity and reliability of this model of personality (Wagner, 1983; Sutton *et al.*, 2013).

The comparison of these two workshops is guided by the following research question:

RQ2. To what extent do generic and personality-related training programmes differ in their effect on job-related well-being and work outcomes?

Evaluation of self-awareness training
Evaluating the impact and effectiveness of training programmes is of central importance if the benefits of training are to be clearly demonstrated. Although there are several models for evaluating training, Kirkpatrick and Kirkpatrick's (2006) remains the most widely used, for example, in an influential meta-analysis by Arthur *et al.* (2003) which demonstrated a medium to large effect size for different organisational training methods. The model identifies four levels at which the impact of a training programme can be evaluated:

(1) *Reaction*: Participants' affective and attitudinal responses to the training.
(2) *Learning*: How much participants learned on the programme.
(3) *Behaviour*: The extent to which participants change their behaviour as a result of the training.
(4) *Results*: The impact of the training on organisational outcomes.

We use Kirkpatrick's model in this study to provide a coherent overall evaluation of self-awareness training.

There have been frequent calls for organisational research to use mixed-methods approaches to provide better evaluations of interventions and increase the generalisability of findings (Nielsen *et al.*, 2010; Biron *et al.*, 2012). We use a longitudinal, multi-method design to investigate the malleability and impact of self-awareness at work.

Methodology

Design

The study used a mixed-method, medium-term longitudinal design. First, to address *H1*, a quantitative assessment of the relationship between self-awareness and job-related well-being was conducted. Second, the impact of self-awareness training was evaluated using an integrated quantitative and qualitative approach. To address *H2*, a pre- and post-test assessment of dispositional self-awareness and job-related well-being was conducted. Given the paucity of research on the wider occupational outcomes of self-awareness, this was elaborated on with qualitative analysis of participants' reports of the perceived outcomes of attending the workshops, addressing *RQ1*. This analysis particularly focused on their perceptions of the training sessions' influence on work performance and relationships. The potentially differential effects of the workshops (*RQ2*) was addressed by statistical and qualitative comparisons throughout. Finally, because the effects of any self-awareness improvements may take some time to be exhibited, we utilised a longitudinal design.

The measurement of self-awareness faces a rather unique challenge in that the act of completing a self-report questionnaire could in itself feasibly increase participants' self-awareness. This study therefore adopted a switching-replications design, which addresses this and other factors, such as the difficulty of recruiting control groups in an organisational context and the ethical issue of withholding potential benefits from a control group (Trochim, 2006).

The switching-replication design contains two groups and three measurement times, allowing a pre-test "control" evaluation, as well as a post-test comparison. It was adapted in this study to include a third group who participated in the second type of training workshop. Thus, Groups 1 and 2 undertook Enneagram training, and Group 3 undertook the generic self-awareness training. Group 2 initially acted as a control group by completing the questionnaire measure twice before engaging in the training. The research design further allowed both short-term (1 week) and longer-term (4 weeks) effects of the workshops to be assessed, as indicated in Figure 1.

Collection of quantitative data. Questionnaires, including demographic variables and the following measures, were completed online via unique links emailed to each participant. Non-response was followed up once by email after a week.

Self-awareness. Trapnell and Campbell's (1999) Rumination-Reflection Questionnaire (RRQ) was used to assess the two aspects of dispositional self-attentiveness. The RRQ consists of 24 items (12 each for both of the sub-scales), which are scored on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Job-related well-being. Warr (1990) recommends measuring three axes of affective well-being: depressed-enthusiastic, anxious-contented and pleased-displeased
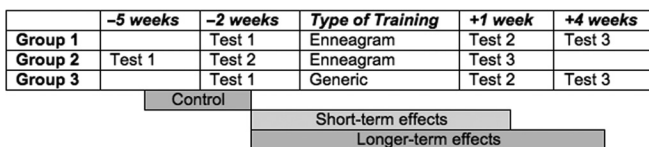
Figure 1.
The switching-replications design

	–5 weeks	–2 weeks	*Type of Training*	+1 week	+4 weeks
Group 1		Test 1	Enneagram	Test 2	Test 3
Group 2	Test 1	Test 2	Enneagram	Test 3	
Group 3		Test 1	Generic	Test 2	Test 3

Control

Short-term effects

Longer-term effects

(often measured through job satisfaction). We measured the first two axes using Warr's job-related well-being measure. This consists of 12 emotional adjective items with a six-point frequency response scale assessing anxiety-contentment and depression-enthusiasm (Stride *et al.*, 2007, Warr, 1990). The final axis (job satisfaction) was measured using the three-item scale from the Michigan Organisational Assessment Questionnaire (MOAQ) (Cammann *et al.*, 1979, in Cook *et al.*, 1981), scored on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree).

Collection of qualitative data. An open-ended question was included in the final questionnaire to provide a richer source of data on the impact of self-awareness training. The exact phrasing of the question was:

> This questionnaire has asked you about some aspects of your work but there may be things that have not been covered. Looking back over the last few weeks, what effect do you think attending the workshop has had on you and your work life (if any)?

Qualitative analysis was conducted by the first author with the aid of TAMS software (Text Analysis Markup System). Coding consistency was checked by an independent researcher who, while expert in the field, was not involved in the study.

To make a comparison with the quantitative measure of self-awareness, responses were first analysed using content analysis assessing the extent to which respondents freely described changes in dispositional self-awareness (reflection or rumination). This was followed up by template analysis, which aimed to identify evidence of changes in self-awareness beyond the reflection/rumination concept, as well as the wider impacts of the training sessions. As the template developed, themes and concepts which emerged from the data were continually refined and developed by comparison with subsequent cases.

Sample
Participants were recruited through the first author's contacts in senior management positions and subsequently by word of mouth. In total, 88 participants attended the workshops and 79 completed all three questionnaires. British participants made up 89 per cent of the sample. A total of 73 per cent were white, with 9 per cent being from other ethnic backgrounds, and 18 per cent not providing information about their ethnicity. The majority of the sample (67 per cent) was female.

Results
Results are reported separately for the quantitative and qualitative approaches, with the discussion providing an integration of the findings.

Quantitative results
In common with many applied studies, sample size in this study is somewhat limited and power in the analyses is correspondingly reduced. We therefore report effect sizes to aid in interpretation of the results.

Descriptive statistics and correlations for all measures at the pre-test time ($x-2$ weeks) are given in Table II. Cronbach's alphas for all scales were acceptable ($\alpha > 0.7$). As expected from the theoretical models and published work, the three job-related well-being scales were positively correlated, as were the two self-awareness scales.

Controls. To check for systematic differences between the participants in each group, demographic variables were analysed. Industry sector showed a significant difference between the groups, $\chi^2 (4) = 20.7, p < 0.001$, with Group 3 having a lower than expected percentage of respondents in Education and a correspondingly higher percentage in Health Services, while Group 2 had a lower than expected percentage of respondents from Health Services. However, the groups did not differ on nationality $\chi^2 (4) = 1.5, p > 0.05$, ethnicity $\chi^2 (2) = 3.87, p > 0.05$, sex $\chi^2 (2) = 1.45, p > 0.05$ or occupation $\chi^2 (6) = 3.59, p > 0.05$. In addition, one-way ANOVA demonstrated no significant difference between the groups on age ($F (2, 83) = 1.13, p > 0.05$), job tenure ($F (2, 80) = 1.51, p > 0.05$) and organisational tenure ($F (2, 80) = 0.44, p > 0.05$). These findings suggest that the subsequent analysis is unlikely to be affected by systematic differences between the participants of the two types of workshop.

Paired-sample *t*-tests were conducted on the first and second completions of the questionnaire for the control group (Group 2). The mean difference between rumination scores on the two completions was 0.15, ($t_{32} = 1.74, p > 0.05$) and for reflection scores was 0.07, ($t_{32} = 1.11, p > 0.05$). On this evidence, therefore, there is nothing to suggest that completion of the questionnaire alone significantly affected the participants' self-awareness.

H1. Dispositional self-awareness is positively correlated with job-related well-being

The expected positive correlations between reflection and well-being were found for job contentment ($r = 0.21, p < 0.05$) and enthusiasm ($r = 0.23, p < 0.05$) but not satisfaction. Additionally, negatively focused self-awareness (rumination) was significantly negatively correlated with job contentment ($r = -0.19, p < 0.05$) (Table I).

H2a. Self-awareness training can improve dispositional self-awareness.

H2b. Self-awareness training can improve job-related well-being.

RQ2. To what extent do generic and personality-related training programmes differ in their effect on job-related well-being?

To evaluate the short-term impact of the workshops on well-being and self-awareness, repeated measures ANOVA was conducted, with time as a two-level within-subjects factor (pre- and post-training) and the type of workshop as a between-subjects factor.

Measure	Mean	SD	N	1	2	3	4	5
Reflection	3.33	0.73	86	(0.89)				
Rumination	2.98	0.82	86	0.28**	(0.95)			
Job satisfaction	5.52	1.25	84	−0.06	−0.16	(0.86)		
Job contentment	3.22	0.60	83	0.21*	−0.19*	0.39**	(0.78)	
Job enthusiasm	3.91	0.56	83	0.23*	−0.13	0.56**	0.63**	(0.82)

Table I.
Descriptive statistics for all measures at time *x*-2 weeks

Notes: Cronbach's alpha given in brackets; **correlation is significant at the 0.01 level (one-tailed) *correlation is significant at the 0.05 level (one-tailed)

The main effect of time was not significant (F (5,69) = 2.19, $p > 0.05$) and there was no significant main effect of type of training or interaction between time and type of training. Reflection was significantly lower after the training (F (1,73) = 6.16, $p < 0.05$), though this was a small effect size (partial $\eta^2 = 0.078$). There was a significant difference between the rumination scores of participants in the two types of workshops (F (1,73) = 6.81, $p < 0.05$), though again this was a small effect size (partial $\eta^2 = 0.085$) and did not have a significant interaction with time.

The longer-term effect of the workshops was analysed using repeated measures ANOVA on the Group 1 (Enneagram) and Group 3 (generic) participants, as they completed the questionnaires both one week after and four weeks after the workshop (refer to Figure 1). This revealed a significant main effect of time F (10, 27) = 3.07, $p < 0.05$, (a medium effect size, partial $\eta^2 = 0.53$) but not of type of training F (5, 32) = 1.71, $p > 0.05$. The interaction between time and training was not significant F (10, 27) = 2.00, $p > 0.05$.

Mauchley's test indicated that the assumption of sphericity had been violated for the main effect of time on job satisfaction, (χ^2 (2) = 15, $p < 0.001$) and job contentment (χ^2 (2) = 6.89, $p < 0.05$). Therefore, degrees of freedom for these two measures were corrected using Greenhouse-Geisser estimates of sphericity ($\varepsilon = 0.74$ and 0.85 respectively).

There was a significant effect of time on job satisfaction F (1.48, 53.38) = 25.92, $p < 0.001$, (a medium effect size, partial $\eta^2 = 0.42$) and of type of training on rumination F (1, 36) = 4.32, $p < 0.05$, (a small effect size, partial $\eta^2 = 0.11$). Post-hoc tests indicated that job satisfaction was significantly lower in the longer term and that participants in the generic training had significantly lower rumination scores than those in the Enneagram training.

There was a significant interaction between time and type of training on job contentment F (1.7, 61.08) = 3.61, $p < 0.05$, and reflection F (2,72) = 3.44, $p < 0.05$. The effect sizes for both these interactions were small (partial $\eta^2 = 0.09$ for both). Figures 2 and 3 illustrate these interactions graphically.

These results demonstrate that the training had significant, small- to medium- sized effects on self-awareness and job well-being, and that the two workshops had some differential effects as well. The next part of the study uses qualitative analysis to further substantiate and explore these findings.
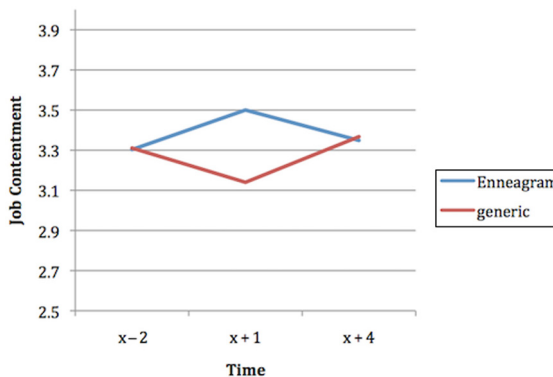

Figure 2.
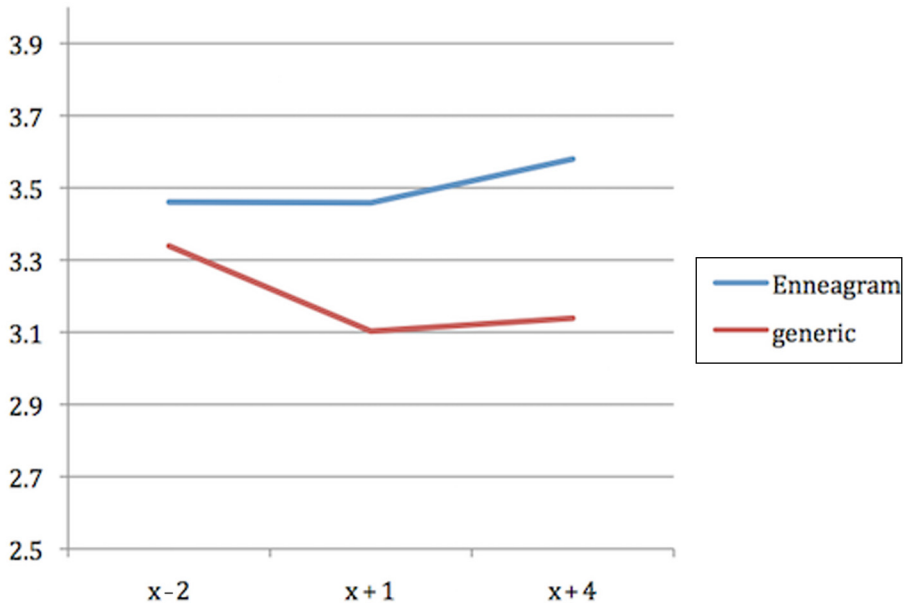Longer-term effects of self-awareness training on job contentment

Qualitative results

> *RQ1.* What effect does self-awareness training have on participants' work lives?

> *RQ2.* To what extent do generic and personality-related training programmes differ in their effect on job-related well-being and work outcomes?

Content analysis. To analyse the free responses of participants for the presence of self-awareness themes, a coding scheme was constructed from the individual items on the RRQ and the descriptions of the reflective and ruminative tendencies described by Trapnell and Campbell (1999). Comments indicating an increase in reflection were most common (26 per cent of respondents in the short term and 33 per cent in the long term), followed by 16 per cent of respondents indicating a decrease in rumination. It was rare that participants reported a decrease in reflection or an increase in rumination. This is in contrast to the statistical findings that participants showed a significant short-term decrease in reflection and no short-term effect on rumination. The longer-term drop in rumination for the generic group found in the quantitative analysis was also not reflected in the content analysis. Effects on reflection were more frequently reported by generic training participants, while a decrease in rumination was more frequently reported by Enneagram participants. Within the Enneagram workshop participants, there was no clear difference between short- and longer-term effects.

In summary, while this content analysis demonstrated some effects comparable with the measures of self-attentiveness used in the statistical analysis, only a minority of the participants' responses addressed these concepts. Therefore, a more flexible template

analysis was adopted for a deeper exploration of the effects of the training workshops on individual participants.

Template analysis. Template analysis is a set of techniques involving the coding and organising of themes in textual data (King, 2004) and was chosen as the analysis method here because of its flexibility (starting from a priori themes and developing a more tailored template as analysis proceeds), and because it is particularly suited to larger sample sizes, where comparisons can be made within and across cases. In this study, a more positivist than constructivist stance was adopted, using the analysis as a means to uncover underlying causes and effects and attempting to create a certain level of researcher objectivity.

The analysis path began with the development of five a priori themes from the literature review of self-awareness concepts. However, initial coding using these themes resulted in only a minority of the comments being coded (examples are given in Table II), and two of the themes (self-other agreement and situational self-awareness) were found not to be relevant to any responses. Overall, responses were more "active" than these a priori themes were able to capture, using the awareness rather than simply reporting its development.

In addition, comparison of shorter- and longer-term responses did not show any major differences using this template. There were responses in both groups suggesting that there had not been enough time yet to see the effects, implying that an even longer study time might be beneficial.

The template was, therefore, further developed and refined, resulting in four main themes (overall effect, internal/reflective changes, specific effects and future) each with several contingent themes, which formed the final template and are now described in more detail.

Overall effect

No effect. A substantial number of respondents (19) reported that the workshop had had little or no effect on their work lives, for example, *"I wouldn't say it has had any strong, direct effect in itself"*. Despite this, the majority went on to talk about how it had affected them, mentioning a range of specific and general effects. This paradox may be because of a recognition that the workshop effects were limited by the individual's opportunity for application or the limited timescale of the study:

> I will continue to think about the Enneagram over the coming months […]. So maybe it will have a slight long-term influence on my thoughts and behaviour – ask me again in a year!

Negative effects. Three of the respondents mentioned a short-term negative effect of the workshop on their lives. For example, "Immediately after the workshop I felt very vulnerable, and that was not good for me in the workplace". These comments were

Aware of interactions with others	I feel I have learnt a lot about myself but more about the team that I work with and following the workshop I feel we are all interacting a lot better
Dispositional self-awareness	What has happened is that I have "observed" myself from a distance more, which is encouraging me towards greater self-awareness
Aware of internal states	Gave me more insight into myself. Its made me understand my emotions a lot more

Table II.
A priori self-awareness themes with example quotes

confined to the respondents on the Enneagram course. This could be because of the fact that the Enneagram model specifically describes parts of personality that people often hide from themselves because they feel uncomfortable with them. Bringing these aspects to light can cause discomfort and a feeling of vulnerability.

Generally beneficial. Although most of the comments described specific beneficial effects, which are further analysed below, several indicated that the workshop had had a generally beneficial effect on them and their work lives, e.g. "It definitely had a positive effect" and "I found it very useful in my work and social life". These comments were again confined to those who took part in the Enneagram workshops and suggest that the Enneagram workshop was felt to be beneficial in a broader arena, while the generic workshop was limited to work-related effects.

Internal/reflective changes. Three main sub-themes emerged here:

Understanding/acceptance of oneself. Building on the a priori "awareness of internal states" theme, by far the most commonly reported effect was that of improved understanding or acceptance of oneself. A total of 35 respondents mentioned this in their comments: "It has helped me understand why I tend to do or avoid doing certain things, at least better than before". This improved understanding was described as helping participants to gain a new insight into themselves, part of which involved facing their weaknesses. Recognising weaknesses allowed participants to accept themselves as a whole person rather than denying parts of themselves they were not happy about.

Respondents also reported gaining a greater understanding of how they appeared to and interacted with others, and how they could deal with that. "This helps me avoiding [sic] taking the reactions of others personally and will help me deal with others better in the future". This sub-theme, then, explores the development of self-awareness in line with accepted definitions within psychology as outlined in the introduction: a conscious awareness of one's interactions with others, as well as one's internal states.

Understanding/acceptance of others. The other major effect indicated by respondents was the extent to which their understanding of colleagues had improved, which developed out of the a priori "awareness of interactions with others" theme. "I felt that it has given me a greater insight into how others behave at work – and with that perhaps more compassion and acceptance that it's 'just how they are'".

The Enneagram workshops were felt to be particularly useful in giving participants a framework to understand the different views that people have of the world and a greater appreciation for this diversity of views. Similar comments were also reported by respondents on the generic workshop, who described how valuable they found it to see how differences between colleagues made them into an effective team.

Continuing reflection. The workshops were the trigger for continuing reflection and a challenge to think further for several respondents, an effect similar to the "dispositional self-awareness" a priori theme. The workshop gave a framework for reflection and a way of taking a step back to consider the situation objectively: "did appreciate the methods of creating abstraction: using imagery […] to aid a deeper evaluation". Participants described how the workshop had encouraged them to observe themselves more and, thereby, to develop their self-awareness.

Specific effects. Besides the above-described general effects, many responses also reported specific effects or practical actions and changes that had resulted from the

workshops. These effects were not captured at all with the a priori self-awareness themes but rather seemed to flow naturally out of the respondents' consideration of how the workshop had affected their lives.

Confidence. Respondents described an improvement in their confidence or self-image, and the effect of this on their work lives: "It has improved my self-image which has made me more content with my own work situation".

Made active changes. Although most of the effects of the workshop were described in terms of changes in how participants viewed the world or internal changes, several participants wrote about how the workshop had encouraged them to make active changes at work. These changes ranged from how they treated others ("I have also realised that others in the team have vulnerabilities which has helped me to respond in a more effective/empathic way"), to personal changes ("It has made me more assertive in making space for me").

Improved relationships/communication with others. One of the major internal changes that participants reported was an increased understanding of others. This internal change was echoed by a specific improvement in their relationships with others at work by participants on both workshops. "The atmosphere in our meetings is more harmonious and open".

Job-related considerations. The final specific work-related effect of the workshops was thoughts about the participants' current job, for example, in opening up new career options: "it brings into focus possible directions which I can consciously steer my career in".

Future. Finally, the issues addressed in the a priori "time" theme could be further refined into a future theme. These responses focused on how the participants planned to continue using the knowledge from the workshop to guide their future development and included two sub-themes:

Self-development. Responses which included this theme were limited solely to those participants who had attended the Enneagram workshop. Although acceptance of self (the major effect described by all workshop participants) is an important starting point, the Enneagram personality system encourages further development by describing how people are restricting their own lives. As one participant described it: "The thing I liked about it was that it also includes how one can self develop as that type and how you may appear to others". Several specific changes that participants had made were discussed in the context of this continuing self-development and were often related to the Enneagram type with which they had identified.

Possible future effects. Finally, there was a recognition that the impact of the training might be felt at some point in the future. "I like to keep an open mind and will see how this recently acquired knowledge develops" and "It's quite early to see what changes there might be".

Discussion

In this study, we aimed to develop an understanding of the impact of self-awareness training at work. We examined the relationship between self-awareness and job-related well-being (*H1*) and evaluated whether self-awareness and well-being could be improved by targeted interventions (*H2*). We also explored the wider outcomes

associated with self-awareness, identifying reported changes because of the training workshops (*RQ1* and *RQ2*).

*Self-awareness and well-being at work (*H1 *and* H2*)*
The positive relationship between self-awareness and well-being found in previous research was partially replicated for a work-related context. Reflection was positively correlated with job contentment and enthusiasm, while the association of rumination with negative affect found by other authors (Watkins and Moulds, 2005) only partly transferred to the work environment, with rumination being associated with job-related anxiety. The positive relationship between job satisfaction and self-awareness found in previous research (Atwater *et al.*, 1995) was not replicated in this study, perhaps because of the different measures of self-awareness used. Atwater *et al.* used a self-other agreement measure of self-awareness rather than the dispositional measure we used. It is conceivable that job satisfaction is more closely linked to congruence in self-other ratings than it is to self-attentiveness. This finding highlights the need for further research to explore the differences between the concepts measured by self-other congruence and self-report.

Testing of *H2* revealed small- to medium- sized effects of training on both self-awareness and job-related well-being. Interestingly, the changes in self-awareness were apparent despite the use of a dispositional measure, indicating that self-awareness training can bring about changes in dispositional self-attentiveness. Overall, the quantitative analysis demonstrated that self-awareness can be changed by targeted training. Given this, the qualitative analysis becomes even more interesting as it can begin to identify some of the outcomes of self-awareness training in more detail.

*Other outcomes associated with self-awareness training (*RQ1*)*
According to the taxonomy of learning transfer put forward by Barnett and Ceci (2002), the training reported here requires "far" transfer: the learning and application occur in quite different domains, as well as different social, functional and temporal contexts. The no effect sub-theme may to some extent illustrate the difficulty that participants had in their attempts to transfer learning of the complex skill of self-awareness from the training session to normal work life, a proposition supported by the fact that most of the responses indicating there had been no effect then went on to describe possible effects. As Barnett and Ceci observe, individual differences in both cognitive skill and familiarity with the contextual factors have a substantial influence on the success of learning transfer. The variety of outcomes reported by participants may, therefore, be understood as dependent on these individual differences and the subsequent extent of learning transfer. In support of this interpretation, the possible future effects sub-theme captured participants' beliefs that the training would continue to have effects in the future, as and when opportunities for applying the learning arose.

The form of self-acceptance described in the understanding/acceptance of self-theme has strong roots in the humanist tradition of psychology, and there are decades of research demonstrating a link between self-acceptance and lower psychopathology, higher self-esteem and increased acceptance of others (Williams and Lynn, 2010). This latter relationship was also drawn out in this analysis, with

understanding/acceptance of others being the second most frequently mentioned outcome of the workshops.

Several more specific effects of the workshops were also reported, including improved confidence and relationships with others, as well as changes related to participants' jobs and careers. Again, this may be reflective of the "far transfer" nature of this training: while participants may have difficulty transferring their learning, those who are successful in doing so are able to reap the benefits in a range of different contexts. A key consideration for training and development professionals will be how to promote this far transfer for all participants so that self-awareness training provides a good return on investment for those organisations wishing to invest in it. Barnett and Ceci (2002) have suggested a taxonomy for far transfer that could help guide further research on the best ways to promote the transfer of self-awareness training for all participants.

Differential effects of the training programmes (RQ2)
Quantitative and qualitative comparison of the two types of training revealed several differences. As regards the impact on self-awareness, the generic training produced a drop in rumination in the longer term. Rumination is associated with depression and ineffective problem solving (Watkins and Moulds, 2005), and an intervention like this which can bring about a longer-term decrease in this aspect of self-attentiveness could be valuable to organisations.

There was also a differential effect on job-related well-being. The Enneagram workshop increased job contentment in the short term, while the generic workshop decreased it, though by the time of the final measurement (one month after the workshop), job contentment for all participants had returned to pre-workshop levels. There are indications that the short-term decrease in reflection for participants on the generic workshop may have been on the rise again by the final measurement point, while the participants on the Enneagram workshop were showing an increase in reflection in the longer term. With reflection being associated with positive outcomes such as improved well-being and mental health (Brown and Ryan, 2003, Ghasemipour *et al.*, 2013), this provides some evidence for benefits of using personality-based development activities such as this workshop.

Finally, the qualitative analysis also highlighted some differences between the two workshops, with the generic workshop providing participants with tools to enable greater objectivity and reflection and the Enneagram workshop encouraging greater self-development and application across different contexts (e.g. home and work).

Overall evaluation of self-awareness training. This study has demonstrated a range of effects of self-awareness training at all levels of Kirkpatrick's evaluation model (Kirkpatrick and Kirkpatrick, 2006). The first level, reaction, evaluates training by assessing the participants' initial reactions to it. In this case, themes such as generally beneficial or negative effect captured these reactions, with the emphasis being on how the training had been generally a positive experience and negative effects short-lived.

The second level in this model, learning, evaluates the extent to which the participants' knowledge has increased. In self-awareness training, the knowledge being developed is the participants' understanding and awareness of themselves. An expected by-product of doing this training in groups with other people is that each participant

also gains insight into other people and a greater understanding of others. Evidence that this learning took place for many of the participants is captured in the understanding/ acceptance of self and others themes.

In the third level, training is evaluated for its effect on trainees' behaviour. This can be both internal and external behaviour. Internal changes in behaviour were captured in the continued reflection theme, where participants often reported using tools learned in the training sessions, as well as the changes in reflection and rumination measured by the RRQ. External, observable behaviour changes included those described in the made active changes theme.

The final level of evaluation is that of results or effect on the business. Although the organisational impacts were not measured directly here, several beneficial impacts on the wider organisation were reported by the participants, including improved relationships and communication with colleagues. Overall, then, these training programmes led to an improvement in individual self-awareness, as well as a demonstrable impact on many outcomes of importance to both individual and organisational performance.

Limitations and further research
The sample size limited the extent to which the statistical relationships between the concepts under study could be identified. Hopefully, the findings of this study will serve to convince future potential participants (and their managers) of the impact of developing self-awareness and, thereby, enable the larger-scale studies to be conducted.

It should also be noted that the study was only able to compare two types of workshop. Further research therefore needs to explore whether the effect of the workshop is specific to Enneagram training or whether other types of personality-tailored workshops have the same effect.

Implications
The relationship of self-awareness with positive life outcomes found in the general psychological and medical literature has been replicated here in an occupational setting. Reflection was found to be related to job enthusiasm and job contentment and rumination to job anxiety. One of strengths of this study is the use of a longitudinal, mixed-methods approach often called for by researchers in this field (Nielsen *et al.*, 2010) rather than a simple quantitative cross-sectional design, enabling the longer-term effects of interventions to be assessed.

A key finding was that participants' reports of the effects of the training indicated a focus on doing rather than simply being aware of. The training courses were designed to improve participants' self-awareness, and yet the majority of comments about their effects incorporated descriptions of how the participants' had changed their behaviour as a result. This has significant implications for future research on self-awareness. Given the difficulty with measuring such a complex and subjective concept, it may be that a focus on the practical outcomes of self-awareness is the most fruitful avenue to explore. Certainly, it is these practical impacts that are of most interest to the organisations which may invest in this kind of training.

In addition to these general findings, this study also provides the first published evidence of the benefits of an Enneagram training course in a work setting. An

introductory Enneagram workshop may be particularly appropriate where an organisation wishes to provide employees with a framework for understanding themselves and others, perhaps in team-building or encouraging self-development.

Overall, this research demonstrates the positive impact of self-awareness training on outcomes of interest in the workplace. On an individual level, self-awareness is related to employee well-being, and at a group or team level, participants taking part in self-awareness workshops report improved understanding of colleagues and an improved confidence in their ability to work with others.

Note

1. Although the content of the two training workshops was different, both used the methods outlined by Wilson and Dunn and the structure of the exercises – such as individual reflection, group work and pair discussion – was designed to be comparable. Details are available on request from the first author.

References

Arthur, W. Jr, Bennett, W. Jr, Edens, P.S. and Bell, S.T. (2003), "Effectiveness of training in organizations: a meta-analysis of design and evaluation features", *Journal of Applied Psychology*, Vol. 88 No. 2, pp. 234-245.

Atwater, L., Roush, P. and Fischthal, A. (1995), "The influence of upward feedback on self- and follower ratings of leadership", *Personnel Psychology*, Vol. 48 No. 1, pp. 35-59.

Barnett, S.M. and Ceci, S.J. (2002), "When and where do we apply what we learn? A taxonomy for far transfer", *Psychological Bulletin*, Vol. 128 No. 4, pp. 612-637.

Biron, C., Karanika-Murray, M. and Cooper, C. (2012), *Improving Organizational Interventions for Stress and Well-being: Addressing Process and Context*, Routledge, Hove.

Brown, A. and Bartram, D. (2005), *Relationships between OPQ and Enneagram Types*, SHL Group plc, London.

Brown, K.W. and Ryan, R.M. (2003), "The benefits of being present: mindfulness and its role in psychological well-being", *Journal of Personality and Social Psychology*, Vol. 84 No. 4, pp. 822-848.

Cook, J.D., Hepworth, S.J., Wall, T.D. and Warr, P.B. (1981), *The Experience of Work – A Compendium and Review of 249 Measures and their Use*, Academic Press, London.

CPP Inc (2014), "Myers-Briggs type indicator instrument (MBTI) personality test info", available at: www.cpp.com/products/mbti/index.aspx (accessed 7 November 2015).

Cseh, M., Davis, E.B. and Khilji, S.E. (2013), "Developing a global mindset: learning of global leaders", *European Journal of Training and Development*, Vol. 37 No. 5, pp. 489-499.

Fenigstein, A., Scheier, M.F. and Buss, A.H. (1975), "Public and private self-consciousness: assessment and theory", *Journal of Counselling and Clinical Psychology*, Vol. 43 No. 4, pp. 522-527.

Ghasemipour, Y., Robinson, J.A. and Ghorbani, N. (2013), "Mindfulness and integrative self-knowledge: relationships with health-related variables", *International Journal of Psychology*, Vol. 48 No. 6, pp. 1030-1037.

King, N. (2004), "Using templates in the thematic analysis of text", in Cassell, C. and Symon, G. (Eds), *Essential Guide to Qualitative Methods in Organizational Research*, SAGE Publications, London.

Kirkpatrick, D. and Kirkpatrick, J. (2006), *Evaluating Training Programs: The Four Levels*, Berrett-Koehler, San Francisco, CA.

Luthans, F. and Peterson, S.J. (2003), "360-degree feedback with systematic coaching: empirical analysis suggests a winning combination", *Human Resource Management*, Vol. 42 No. 3, pp. 243-256.

Mischel, W., Ebbesen, E.B. and Zeiss, A.R. (1973), "Selective attention to the self: situational and dispositional determinants", *Journal of Personality and Social Psychology*, Vol. 27 No. 1, pp. 129-142.

Newgent, R.A., Parr, P.E., Newman, I. and Higgins, K.K. (2004), "The Riso-Hudson Enneagram type indicator: estimates of reliability and validity", *Measurement and Evaluation in Counseling and Development*, Vol. 36, pp. 226-237.

Nielsen, K., Taris, T.W. and Cox, T. (2010), "The future of organizational interventions: addressing the challenges of today's organizations", *Work & Stress*, Vol. 24 No. 3, pp. 219-233.

Pennebaker, J.W., Mehl, M.R. and Niederhoffer, K.G. (2003), "Psychological aspects of natural language use: our words, our selves", *Annual Review of Psychology*, Vol. 54 No. 1, pp. 547-577.

Rogers, C.R. (1961), *On Becoming a Person*, Houghton Mifflin, Oxford.

Schultheiss, O.C. and Brunstein, J.C. (1999), "Bridging the gap between implicit motives and explicit goals", *Journal of Personality*, Vol. 67 No. 1, pp. 1-38.

Silvia, P.J. and Duval, T.S. (2001), "Objective self-awareness theory: recent progress and enduring problems", *Personality and Social Psychology Review*, Vol. 5 No. 3, pp. 230-241.

Singh, R. and Greenhaus, J.H. (2004), "The relation between career decision-making strategies and person-job fit: a study of job changers", *Journal of Vocational Behavior*, Vol. 64 No. 1, pp. 198-221.

Storr, L. and Trenchard, S. (2010), "From swampy lowlands to giddy heights", *Journal of European Industrial Training*, Vol. 34 No. 5, pp. 475-487.

Stride, C., Wall, T.D. and Catley, N. (2007), *Measures of Job Satisfaction, Organisational Commitment, Mental Health and Job Related Well Being: A Benchmarking Manual*, Wiley-Blackwell, Chichester.

Sutton, A., Allinson, C. and Williams, H. (2013), "Personality type and work-related outcomes: an exploratory application of the Enneagram model", *European Management Journal*, Vol. 31 No. 3, pp. 234-249.

Trapnell, P.D. and Campbell, J.D. (1999), "Private self-consciousness and the five factor model of personality: distinguishing rumination from reflection", *Journal of Personality and Social Psychology*, Vol. 76 No. 2, pp. 284-304.

Trochim, W.M.K. (2006), "Research Methods Knowledge Base, 2nd ed.", available at: www.socialresearchmethods.net/kb/ (Accessed 3 June 2006).

Trudeau, K.J. and Reich, R. (1995), "Correlates of psychological mindedness", *Personality and Individual Differences*, Vol. 19 No. 5, pp. 699-704.

Wagner, J. (1983), "Reliability and validity study of a Sufi personality typology: the Enneagram", *Journal of Clinical Psychology*, Vol. 39 No. 5, pp. 712-717.

Warr, P. (1990), "The measurement of well-being and other aspects of mental health", *Journal of Occupational Psychology*, Vol. 63 No. 3, pp. 193-210.

Watkins, E. and Moulds, M. (2005), "Distinct modes of ruminative self-focus: impact of abstract versus concrete rumination on problem solving in depression", *Emotion*, Vol. 5 No. 3, pp. 319-328.

Williams, J.C. and Lynn, S.J. (2010), "Acceptance: an historical and conceptual review", *Imagination, Cognition and Personality*, Vol. 30 No. 1, pp. 5-56.

Wilson, T.D. and Dunn, E.W. (2004), "Self-knowledge: its limits, value and potential for improvement", *Annual Review of Psychology*, Vol. 55, pp. 493-518.

Young, V. and Bhaumik, C. (2011), *Health and Well-Being at Work: A Survey of Employers*, Department for Work and Pensions, Sheffield.

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