

Applied Studies Evaluating the Challenge of Change

Resilience Training Programme

The Challenge of Change (CoC) Resilience training programme is strongly evidence-based, and the research that it is based on began at the University of York in the 1980s. The research was aimed at identifying the individual differences that make people more or less resilient, and led to the development of the eight scales that comprise the pre-training CoC Profile: Rumination, Emotional Inhibition, Toxic Achieving, Avoidance Coping, Perfect Control, Detached Coping, Sensitivity, and Flexibility. Scale scores range from 0 – 10, with lower scores preferable for the first five and higher scores for the last three. All of them are implicated in resilience, but the two scales that have emerged as the most important are Rumination (the tendency to continue to churn over emotional upset) and Detached Coping (the ability to keep issues in perspective and not turn molehills into mountains).

Each of the scales took several years to develop, and the validation studies based on interpersonal behaviour as well as cardiovascular and immune function have been widely published. However, in addition to the experimental research there have been several applied studies aimed at evaluating the efficacy of the training programme. The earliest was a controlled trial of the impact of the training on sickness-absence amongst UK Police officers (Roger & Hudson, *International Journal of Stress Management*, 1995). The study used stratified random allocation to experimental groups which received the CoC Resilience programme, and control groups which received dummy training (conventional stress management). There were approximately 70 officers in each condition. Participants in the two conditions were not in contact during the follow-up period and they were not aware that sickness-absence was being monitored. The results showed a significant reduction in sickness-absence amongst the experimental groups, and no change for controls. The effects were sustained over an 18-month follow-up, and refresher sessions for selected experimental groups enhanced the benefits. In view of the added benefits, a new web-based CoC Refresher programme will become a formal part of the CoC Resilience Training programme from this year.

The Four studies – UK and NZ organisations

The sickness-absence study with the Police in the UK included a follow-up assessment of Detached Coping scores, which had increased significantly in the trained group but remained unchanged in the controls. A subsequent applied study in a large NZ company examined the effects of CoC Resilience training on Detached Coping and Rumination scores as well as organisational climate during follow-up, and a third study in a different NZ company assessed the relationship between 360 feedback for managers and their scores on the CoC Profile. A fourth study in the UK examined the effects of the training on follow-up CoC Profile scores and on sickness-absence rates, and this report summarises the findings from the last three studies.

Study 1: Follow-up Effects of CoC Resilience Training on Profile Scores and on Organisational Climate (Large NZ Organisation - 2006/2007)

One way to assess the effectiveness of training is to re-administer measures that are used as part of the training process. All participants in the CoC Resilience training programme complete the 8-scale CoC Profile before the session, and they are blind to what is being measured until the codes are explained during the session. Although scores are in principle confidential participants are from time to time invited to provide their scores for research purposes, with the assurance that any identifying features are removed once the data have been collated for analysis.

Controlled trial on effects of the training

In the course of implementing the training programme in a large NZ company the opportunity arose to carry out a controlled trial of the effects of the training on follow-up Profile scores. The study involved two sectors of the company which were located separately from one another. Resilience training had been planned for groups from both sectors, and in preparation for the training all staff completed the CoC Profile and the CoC Climate Survey. The Climate Survey was developed using appropriate psychometric techniques and provides a sensitive barometer of organisational climate on four dimensions labelled Management Style, Empowerment, Workload and Communication.

One-year interval to ensure decay in recall affects

The groups from one sector received the training, but it had to be postponed for the groups in the other sector. This provided the opportunity to compare experimental (trained) and control (untrained) sets of groups, and the CoC Profile and Climate Survey were re-administered to staff from both sectors to provide the measure of change. One of the confounds for repeated measures is recalling responses to the initial test administration, so the re-administration took place over a one-year inter-test interval to ensure a decay in recall effects.

Significant change

The follow-up focused on the two key resilience scales – Rumination and Detached Coping – as well as scores on the CoC Climate Survey. Analyses of variance of the data showed that there was a significant reduction in Rumination ($p < .05$) and a significant increase in Detached Coping ($p < .01$) in the experimental groups, with no change for the controls. Scores on three of the Climate Survey dimensions (Management Style, Empowerment and Communication) had also increased significantly (all $p < .01$) for the experimental groups. The lack of change in the Workload dimension was not altogether surprising: there is a widespread trend for fewer people having more work to do, and scores on this dimension tend to be both lower and resistant to change in general across samples.

Study 2: The Relationship Between CoC Profile Scores and 360 Feedback

This study was based on the 360 feedback from direct reports for a sample of 28 managers in a different NZ company from Study 1. CoC Profile scores were also available for the managers, each of whom had an average of 10 direct reports (range: 6 – 15) providing 360 feedback across 31 different dimensions, each on a scale from 0 to 5. The more elaborate a measure of behaviour becomes the more difficult it is to interpret, and psychometric techniques are generally aimed at reducing the wide range of potential variables to a meaningfully interpretable number. To reduce the enormous number of ratings derived from the 360 protocol, an initial study was done on a separate sample of managers from the same company in which the dimensions were factor-analysed to discover how they grouped together into common categories (or factors).

Emergence of two factors

Just two factors emerged, with the highest loadings for the first factor on 6 dimensions which were unambiguously concerned with Relationship Skills (such as Peer Relationships, Integrity and Trust, Listening). The highest loadings for the second factor were on 5 dimensions concerned with Task Skills (such as Business Acumen, Action Oriented, Drive For Results). Ratings were averaged to provide a single score on each factor for each manager, which were then analysed together with their scores on the eight Profile scales. Two of the scales – Detached Coping and Sensitivity – were merged to provide a ninth Profile index of what is called ‘Detached Compassion’, which assesses the extent to which people can relate to others’ feelings without becoming identified with them and is equivalent to empathy.

Discrete clusters

The matrix of correlations amongst the nine CoC Profile scores and the summed 360 feedback scores showed discrete clusters. The data were then analysed using multiple regression, with scores on the Profile as independent variables and scores on either the Relationship Skills or Task Skills factors as the dependent variables. The results showed significantly more positive feedback on Relationship Skills for managers who scored low on emotional inhibition (beta $-.373$; $t = -2.30$; $p < .03$) and high on detached compassion (beta $.459$; $t = 3.79$; $p < .01$). In other words, the managers who attract significantly more positive ratings are those who express emotion appropriately and can pick up quickly and accurately on how people feel while still keep issues in perspective.

Analysis of the Perfect Control scale

Although the Perfect Control scale did not enter significantly into the regression, the correlation matrix showed that managers who scored higher on this scale attracted less positive ratings. Managers with high scores on this scale are likely to be micro-managers who want every ‘i’ dotted and ‘t’ crossed and are reluctant to devolve control, which in fact represents a lack of trust in direct reports.

Strong task-focus not necessarily associated with toxic features

Toxic Achieving is characterised by being time-driven, regarding the ends as justifying the means, and often responding with anger when outcomes are not delivered. Since task-oriented managers tend to be more aggressively driven than relationship-oriented ones it had been anticipated that the Toxic Achieving scale would be related to the second Task Skills factor, but there was no relationship between them. From the perspective of the company this is an encouraging result, indicating that amongst their managers, having a strong task-focus is not necessarily associated with the more toxic features that sometimes go with it. The age and gender of each manager was also recorded, and the significant correlation between gender and Task Skills echoes findings in other research. However, a t-test comparing means was not significant, and the gender analyses might in any event be biased by sample differences (there were only 8 female managers, compared with 20 males).

Evidence for confidence in 360 measures

There is much debate about the reliability of 360 feedback assessments, such as responses tending to regress to the mean (in other words, a preference for endorsing scale points towards the middle of the range). One of the 360 categories is Perspective, which echoes the principle of the Detached Coping scale from the CoC Profile. There is a wealth of evidence for the reliability and validity of the Detached Coping scale, and the significant correlation ($.673$; $p < .01$) between this scale and the Perspective dimension provides some evidence for confidence in the 360 measures as well.

Study 3: Impact of the CoC Resilience Training on CoC Profile and Climate Survey Scores and Sickness-Absence Rates in a UK Organisation

Over the years selected individuals have been accredited to provide the CoC Resilience programme, and a contract secured by one of the UK accreditees included a commitment to evaluating the effects of the training at follow-up. The training was implemented in four sectors within the organisation, and focused on changes in the CoC Profile and CoC Climate Scale scores and in sickness-absence rates. The study did not include a control group and the analyses were consequently within-subjects, although overall sickness-absence rates across the organisation as a whole were available for comparison.

Significant changes in key scores

The inter-test interval for the initial follow-up was six months, at which time the CoC Profile and Climate Survey were re-administered and changes in sickness-absence assessed. The findings for the Profile showed that Rumination scores had decreased significantly ($p < .01$) and Detached Coping scores had increased significantly ($p < .01$). Scores on both Emotional Inhibition ($p < .01$) and Perfect Control ($p < .05$) had diminished significantly as well, but none of the other Profile scores showed significant changes at follow-up.

Views of organisational climate

There were no significant changes in the scores on the CoC Climate Survey, but in view of the high baseline scores this finding was not surprising. The scoring for this particular sample cast scores into a range from 0 – 40 rather than 0 – 30, and scores in the interval from 30 – 40 represent positive views of organisational climate. Baseline scores were in this interval for all factors except Workload, and as has been pointed out, this factor tends to be generally suppressed across different samples and is resistant to change. The findings suggest that employees in this particular organisation have a high level of engagement and job satisfaction, but needed the resilience skills to be able to cope more effectively with high levels of pressure.

Significant reduction in sickness-absence

For the sickness-absence data, the rates for the four sectors in which the training was implemented were recorded as well as the rates for the organisation as a whole. The data for the six-month follow-up period were compared with the corresponding six-month period the previous year, and the results showed that sickness-absence was reduced at follow-up by between 16% and 43% across the four sectors, compared with a change of just 0.25% for the organisation as a whole.

Conclusions

Taken together, the findings from the three studies reported in this paper provide clear evidence for the efficacy of the Challenge of Change training programme in enhancing resilience skills. The two most important measures of resilience in the CoC Profile are Rumination and Detached Coping, and both were shown to change significantly in a positive direction in Studies 1 and 3. Although Study 3 lacked a control group, the substantial reductions in sickness-absence amongst trained groups replicates the earlier study by Roger and Hudson (1995), who reported significant sickness-absence rates following CoC Resilience training in a controlled trial. The Roger and Hudson study also included a follow-up assessment of scores on Detached Coping, and echoing the findings from studies 1 and 3 reported here, the scores had increased significantly at follow-up in the trained groups.

Although no direct performance measures were available to compare the managers and their teams in Study 2, the results offer clear evidence that CoC Profile scores correctly identify behaviours that optimise team feedback on relationship skills. High scores on Detached Compassion (in other words, sensitivity with detachment) and low scores on Emotional Inhibition and, to a lesser extent, Perfect Control were related to more positive feedback. Scores on Detached Coping, Emotional Inhibition and Perfect Control showed corresponding significant changes following training in Study 3, and Detached Coping had also increased significantly after training in the original Roger and Hudson study. The analyses reported in Study 2 indicate ways in which 360 feedback measures might be simplified, and the CoC Resilience programme provides the practical strategies for effecting changes in the behaviours highlighted as significant in this study.



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