

FMCG FTSE 100 Experiment

Key Issue

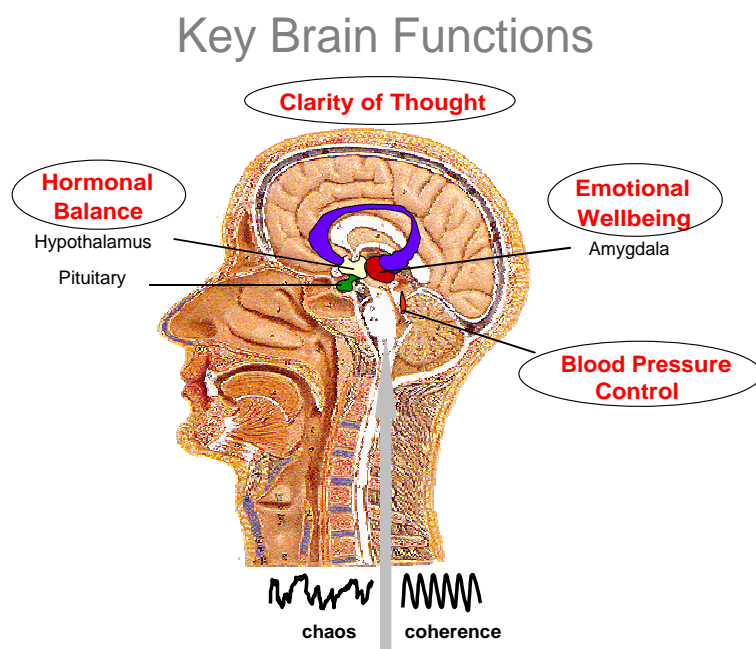
Most organisations now accept that the pressure to deliver in a complex globalised economy can have a detrimental impact on the health and well being of its workforce, which can significantly impair their ability to perform. Responsible organisations now acknowledge this fact and recognise their 'duty of care' to promote a balanced lifestyle to their employees. However the issue for many organisations is that there have been few programmes that can be objectively shown to produce sustained long-term improvements in the performance and well being of employees.

The Way Forward

In 2001 a leading FMCG Global business identified a programme that draws on leading edge research, which has been shown in numerous organisational studies around the world to generate rapid and sustained improvements in the performance and health of employees and therefore significantly impact the business.

This Peak Performance programme specifically teaches a number of techniques that allow people to consciously alter the quality of the internal electrical signals sent to the brain. Changing these internal signals enables individuals to maximise intellectual ability through a process called cortical facilitation. Cortical facilitation helps individuals to react faster, make better decisions, seize opportunities and be more perceptive and creative. In addition, teaching individuals to consciously control their physiology has been shown to enhance a wide variety of health and well being parameters (see Figure 1).

Figure 1



The electrical signal sent to the brain by the heart alters the function of a number of key brain areas. The signal can be chaotic, as shown on the left, or coherent, shown on the right.

In view of this compelling scientific evidence the client organised a pilot study to evaluate the efficacy of the Peak Performance programme in an industrial setting in central Europe. This brief report presents the key findings measured before and after the Peak Performance programme.

Results

This small-scale pilot study involved 40 individuals; twenty received training in Peak Performance and twenty individuals acted as controls, receiving no intervention. A number of health, well-being and performance parameters were assessed before and after training in both the intervention and control group. The study was conducted with the help of the client's in-house medical research team, who led in the protocol design, conducted the testing of individuals and carried out all laboratory and statistical analyses.

a) Hormonal Function

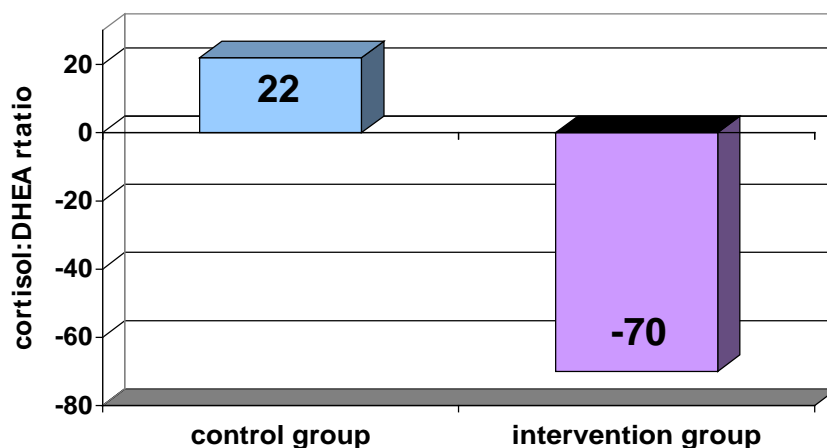
We tracked the level of cortisol and DHEA before and for up to six months after the training. Cortisol is the body's main stress hormone and is known to be associated with aging, depression, obesity, diabetes, immune impairment and heart disease. DHEA is the body's natural antidote to cortisol and increased DHEA levels have been shown to have an antidepressant effect, improve memory and cognition, enhance immune function, protect against heart disease and have anti-cancer properties. The cortisol:DHEA ratio is widely used as a biological marker of ageing.

We demonstrated a significant positive correlation between high cortisol:DHEA ratios and impaired cognitive function, confirming previous research, which demonstrated that impairments in these tasks might be due to the disabling action of cortisol in the hippocampus and prefrontal cortex. These areas of the brain have been shown to be important for short-term memory and retrieval.

We also demonstrated a significant reduction in the cortisol:DHEA ratio three months after training in the intervention group. The control group's cortisol:DHEA ratio increased over the same time period (Figure 2).

Figure 2 Cortisol:DHEA ratio.

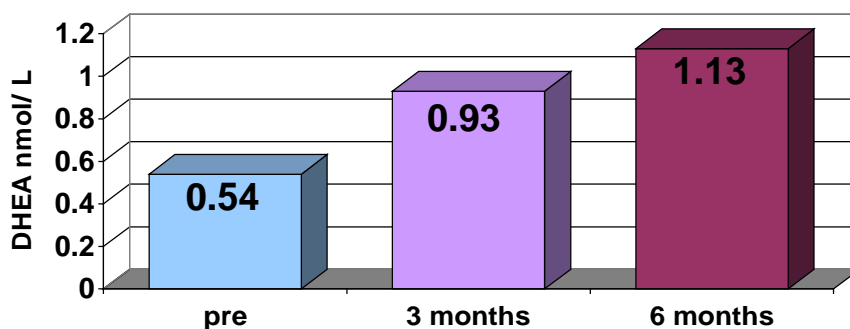
The significant reduction in cortisol:DHEA ratio after training in the intervention group compared to the control group ($p < 0.005$).



This significant reduction in the cortisol:DHEA ratio in the intervention was primarily due to a sustained increase in DHEA levels in the intervention group. As these changes can often be transient, it is notable that we observed these changes to be sustainable six months after the intervention began (Figure 3).

Figure 3 DHEA levels.

Sustained improvements in DHEA levels after training ($p < 0.01$).

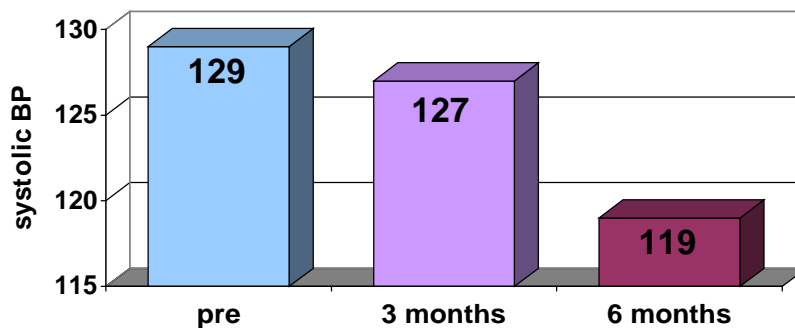


b) Blood Pressure

High blood pressure affects one in four adults and is considered one of the most important public health issues facing the Industrialised World. The Peak Performance programme has been consistently shown to reduce blood pressure in a number of organisations. Similarly, in this study there was a significant reduction in systolic blood pressure 6 months after training (Figure 4). These are large changes in blood pressure, which are associated with a risk reduction of 50% in the incidence of stroke. According to the guidelines for hypertension, the effect of the intervention has been to shift the group from a “high normal” blood pressure category (systolic of 130mm+) to an “optimal” blood pressure category (systolic of <120mm).

Figure 4 Blood pressure

Significant improvement in blood pressure six months after training (p<0.001).

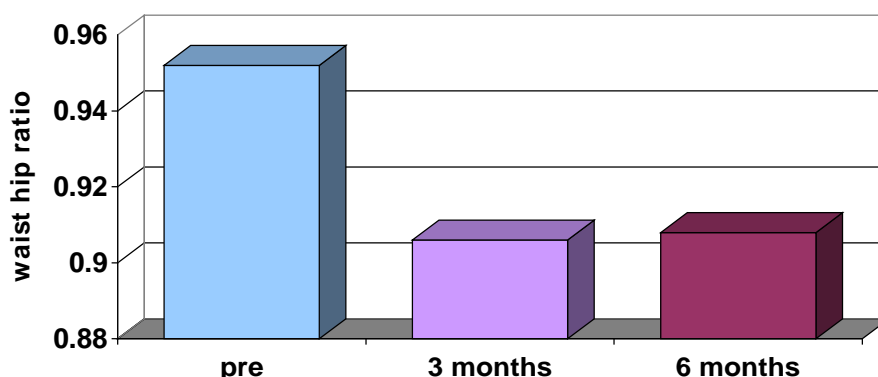


c) Body Fat

Obesity is on the increase and is known to be a significant independent risk factor for cardiovascular disease. Central obesity, with fat deposited around the waist, is thought to be a better predictor of cardiovascular disease (CVD) and diabetes risk than weight itself. Therefore we examined the effect of training on abdominal fat, as measured by the waist:hip ratio (WHR). We demonstrated a significant reduction in WHR three months after training, which was not seen in the control group. This significant reduction in abdominal fat was sustained for up to six months (Figure 5).

Figure 5 Abdominal Fat

Significant reduction in abdominal fat three and six months after training ($p < 0.05$).



d) Perceived “psychological” benefits

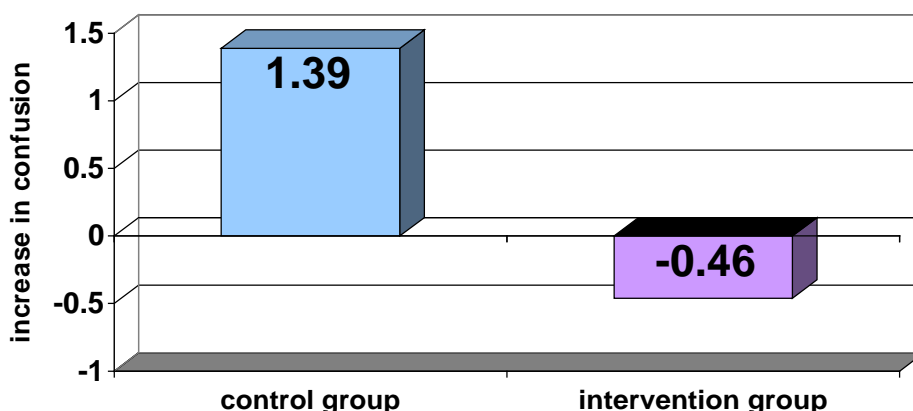
For some people, healthy behaviours will be most likely adopted if they feel a benefit from the program. One of the challenges facing programs such as these is to adequately measure the full range of individually perceived benefits after the intervention. For some people, these physiological changes will primarily result in better mood, whilst others will report better sleep.

Despite these individual differences, we attempted to capture this range of benefits through the use of “psychometric” scales, designed to measure a range of emotional states. On the whole, individuals self-report a variety of improvements in psychological status, however many of these just failed to meet the criteria for statistical significance. Often these effects, which are termed “close to significance” are due to the small size of the study. In this study, we measured 20 people before and after the intervention, which is probably too small a study sample to see clear significant effects. A larger study would clarify whether these effects were real, but we can be encouraged by these positive preliminary findings.

One of the instruments we used was the Profile of Mood States (POMS). One of the key parameters measured by the POMS is the degree of perceived “mental confusion”. We demonstrated a near significant reduction in confusion in the intervention group compared to the control group, who deteriorated, three months after training (Figure 6).

Figure 6 Mental Clarity

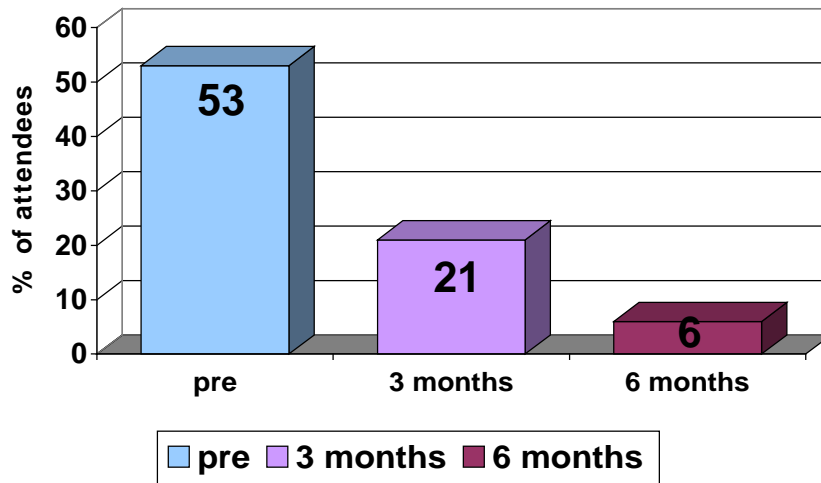
Reduction in confusion in the intervention group



All participants in the training arm also completed an extensive psychometric questionnaire, the Personal and Business Performance Assessment (PBPA), prior to attending the course. The PBPA addresses individual and business performance issues and also includes the General Hospital Questionnaire (GHQ)-12 and the Hospital Anxiety Depression Scale (HADS). The GHQ has been used to categorise individuals as “stressed” in many research studies. In this study, we demonstrated a reduction in the percentage of “stressed” individuals after training. (Figure 7).

Figure 7 Stress Levels

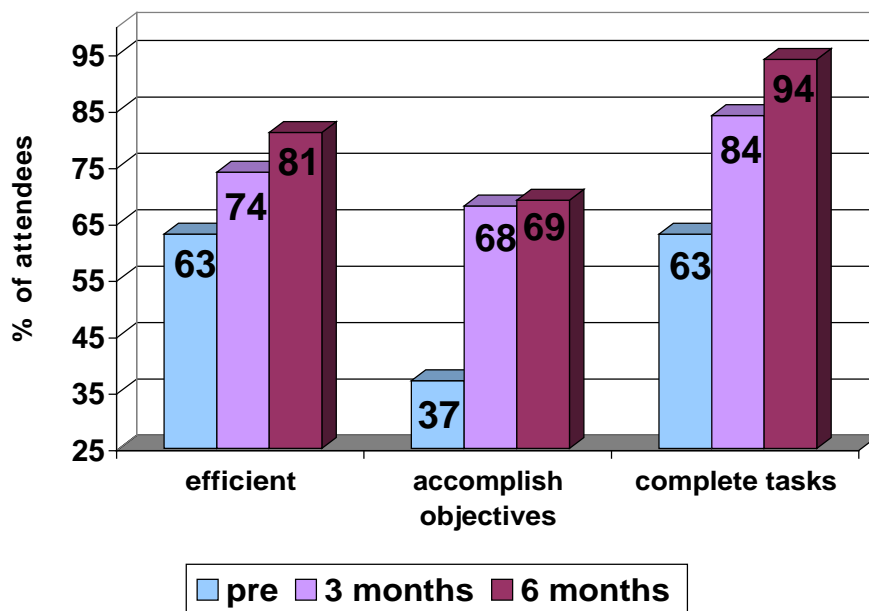
Reductions in the percentage of “stressed” individuals in the intervention group over time.



One of the major advantages to improving the emotional and physical health within the workplace is improved work performance. Although this study did not formally measure the impact on work performance, we demonstrated a subjective improvement in work performance using the PBPA questionnaire. A number of sample questions from this construct are shown below (Figure 8).

Figure 8 Performance

Improvements in individual's subjective assessment of their own work performance in the intervention group over time.



It would be of enormous benefit to examine, in future studies, the impact of training on real measures of work performance in order to validate these subjective individual perceptions. This should not downplay the importance of these perceived benefits, since it is often the perception of benefit that actually drives improved behaviours.

Conclusion

The Peak Performance programme has been shown to demonstrate a significant and sustained improvement in a wide variety of subjective and objective parameters of personal health and well being in addition to subjective parameters of business performance.

In view of the above evidence it may be worthwhile determining the extent of the benefits of this training when implemented on a larger scale.