Can meditation reduce work stress?

By Dr Ramesh Manocha of Sydney's Royal Hospital for Women, February 2009.

Scientific studies have consistently found that meditation does not give better results than taking a short nap, listening to pleasant music or thinking pleasant thoughts. However, according to recent research, the application of a new definition of meditation involving "mental silence" appears to have effects substantially greater than this, especially with regard to the impact of stress.

Although more than 3,000 scientific studies exist on meditation within the major scientific databases, only about 4% are reports on randomised controlled trials (RCTs), the only way to reliably exclude the placebo effect. Researchers who have systematically evaluated these RCTs consistently find that meditation, as it is practised and defined in Western society (eg relaxation, attention focusing and mindfulness), is little more than a sophisticated way of generating a placebo effect.

Descriptions of the meditative experience that originated in ancient India, however, reveal that a key feature of meditation is the experience of mental silence. Western definitions have not emphasised this feature.

Currently, the Royal Hospital for Women's Meditation Research Program (MRP) is systematically evaluating the mental silence perspective of meditation. Over the past nine years, a multifaceted evaluation program has been conducted to evaluate the effect of mental silence on a variety of health and behavioural factors, especially stress.

Key studies

In 2000, a health and wellbeing survey of 348 long-term meditators who used a single, homogenous form of meditation called Sahaja Yoga (SYM), which focuses on the experience of mental silence, demonstrated that these meditators had better mental and physical health than the general population. It also showed that a consistent relationship existed between health, especially mental health, and how often meditators reported experiencing mental silence.

An RCT of SYM for asthma demonstrated that mental silence meditation not only was significantly more effective at improving psychological factors and quality of life when compared to a standardised stress management strategy, but also showed that it reduced the severity of the physical disease process, whereas stress management did not (Manocha R et al, Thorax 2002; 57:110-115).

Having recognised that the most profound effects of mental silence appeared to be related to mood, anxiety and stress, the potential of this approach for the management of occupational stress was obvious. Thus, in 2001 the MRP designed and implemented the Meditation for Work Stress project, the largest RCT of meditation for occupational stress currently in the literature (178 participants). The study was specifically designed to determine whether or not this approach to meditation resulted in more than just a placebo effect.

The stress management program was eight weeks in duration and involved one-hour evening sessions twice weekly, delivered at Sydney Hospital. Participants travelled directly from work to the sessions. They were asked to practise mental silence meditation twice daily for approximately 10-15 minutes each time, with the aid of written and audio materials. Between classes, instructors made themselves available to take queries or give specific advice to participants.

A comparison group was selected that was also meditating but focused on the conventional Western idea of meditation (relaxation and contemplation, rather than mental silence). A second comparison group comprised a no-treatment waiting list.

Classes for both intervention groups were conducted at the same locations, in similar rooms, at the same time of day, and were of equal duration. Both groups had experienced health professionals as principal instructors. Thus, the two interventions were structured identically, with the core experience of mental silence being the only major difference.

At the end of the eight-week program, the SYM group demonstrated significantly greater improvements in standardised measures of work-related stress, anxiety and depressive feelings, as measured using

standardised assessment tools taken from the Occupational Stress Inventory (OSI), the State Trait Anxiety Inventory (STAI), the General Health Questionnaire (GHQ28) and the Profile of Mood States (POMS).

The reduction in work-related stress in the SYM group was 27%, compared to 15% in the non-mental silence group and 7% in the untreated group. Anxiety improved by 24% in the SYM and 12% in the non-mental silence group, but worsened by 5% in the untreated group. Depressive symptoms improved by 66%, 39% and 10% respectively. Standard statistical analyses demonstrated that these changes were significant, thus confirming that mental silence has an effect greater than a placebo and probably greater than conventional, non-mental silence approaches to meditation.

It has been generally assumed that meditative interventions reduce stress by mitigating its physiological effects, that is, by reducing levels of stress hormones, blood pressure, etc. However, our study indicates that mental silence may do more than this.

While both active interventions reduced somatic arousal, the SYM group also appeared to alter participants' cognitions and perceptions, suggesting that changes in the way they thought and felt contributed to their reduction in stress.

For example, further analyses demonstrated that the participants in the SYM group improved their personal coping resources * (such as their ability for self care and coping skills). Similarly, participants in the SYM group also reduced their trait anxiety levels. Participants in the other groups, however, did not demonstrate these changes. Since the major differentiating feature of SYM is mental silence, it is reasonable to conclude that this experience might somehow modify the way that we think and feel about the various factors in our environment that contribute to stress. Thus this approach to meditation, and the state of consciousness called mental silence, not only mitigates the physiological impact of stress but also alters cognitive behavioural style (ie the "way people think") and hence the propensity to be stressed. (This will be the major focus area for future research.)

* *[OHS Alert Newsletter, 2009, Issue 1, 13 February 2009, FEATURE: Can meditation reduce work stress? 1 Copyright 2009, CCH Australia Ltd]*

Based on the research outcomes, a flexible, evidence-based meditation strategy for work stress has been developed and implemented in a variety of settings, including corporate offices, healthcare institutions and government departments. Clients include Caltex, IBM, law firms and a number of public hospitals. Two case studies are provided below.

Case study 1: top tier law firm

Stage 1 was a one-hour combined lecture (45 minutes) and hands-on meditation workshop (15 minutes). The aim of Stage 1 was to familiarise participants with the rationale and benefits of meditation, followed by actual instruction in a basic meditation technique that participants could then use at home or in the workplace, in conjunction with a resource kit (CD, instruction card, etc) given to each participant at the end of the session. Designed to occupy a single lunch-hour, the event was advertised internally by HR and attracted 250 legal and administrative staff across three offices (Sydney, Melbourne and Brisbane).

Stage 2 was a three-week follow-up program providing 30-minute in-house lunchtime meditation sessions twice per week at each office, facilitated by experienced instructors. Stage 2 aimed to teach workers more advanced meditation skills. One hundred and twenty staff participated, most attending once per week for the full three weeks. Attendance was voluntary, with approximately 25% attrition by the end of the program. Outcomes were quantified at each stage.

Assessment of the impact of Stage 1 using visual analogue scales indicated that 73% of participants experienced a significant degree (ie greater than 25%) of "mental silence", 80% of participants experienced a significant improvement in "calm and peacefulness", and 62% of participants experienced a significant improvement in "stress, anxiety and tension". There was a strong correlation between participants' ratings of the "mental silence experience" and their "sense of reduced stress" and increased sense of "calm and peacefulness".

Participants who completed Stage 2 demonstrated improvements in resilience and stress of between 55% and 65% ($p < 0.05$).

This was assessed using the Positive and Negative Affect Schedule (PANAS), a standardised measure

designed to assess positive feelings (associated with better attitude to work) and negative feelings (associated with stress and burnout). Qualitative feedback indicated that participants found the initiative both enjoyable and beneficial. The law firm has requested similar programs in its remaining Australian offices.

Case study 2: general practitioners

Health professionals, especially GPs, are among the most highly stressed professional groups, and yet stress and its consequences can lead to reduced ability to make important, sometimes life-saving, decisions.

Stage 1 was an afternoon workshop involving lectures on stress, work-life balance and meditation. The lectures were followed by three meditation sessions designed to teach participants basic, intermediate and advanced skills. Recognising that many GPs are too time-poor and/or isolated to access ongoing support and advice in their workplace, Stage 1 aimed to impart sufficient skills, experience and familiarity to allow GPs to practise meditation at home in a relatively self-sufficient manner. Three hundred and twenty GPs participated in Stage 1, in two events (Sydney and Melbourne).

Stage 2 was a self-directed two-week home practice program. Participants were required to document their twice-daily practice as well as their meditative experience and psychological state.

The program was endorsed by the Royal Australian College of General Practitioners so that participants could earn professional development points essential for their medical registration. Completion of Stage 1 earned 10 points and completion of Stage 2 earned an additional 40 points.

Outcomes were quantified at each stage. The Stage 1 event, as with Case study 1, was assessed using visual analogue scales.

Within these, 93% of subjects experienced a reduction in their "usual mental activity", in line with the aims of the meditation technique. Specifically, 40% experienced a greater than 50% reduction of mental activity and 18.3% experienced a greater than 70% reduction in mental activity; 96% of subjects experienced an increase in their sense of "calm and peacefulness", and 53% experienced a greater than 50% increase in "calm and peacefulness". Further, 93% of subjects experienced a reduction in their sense of "tension and anxiety", and 46% experienced a greater than 50% reduction in "tension and anxiety". Again, the improvement correlated with the experience of mental silence.

The Stage 2 component used the Kessler 10 (K10), a well-known psychological distress measure. One hundred and eleven participants who attended the event completed the home-based meditation tasks and provided pre- and post-K10 data.

At the beginning of the skilling program, 54% of the GPs were in the elevated risk category. The Australian population by comparison has only 36% in this category. At the end of the two-week home-based program, however, 28.6% of the sample * was in the elevated risk category, that is, one quarter of the participants had improved sufficiently to shift into the low risk category ($p < 0.001$).

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Qualitative feedback was very positive, with 98.8% of respondents indicating that their learning needs had been fully (53.5%) or partly (45.3%) met, and 97.5% felt that the event was fully (56.0%) or partly (41.5%) relevant to their professional life. These pilot study outcomes have led us to begin designing an official program to be rolled out in the capital cities across Australia during the latter half of 2009.

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