Effect of yoga on somatic indicators of distress in professional computer users

Comments to:

Association between occupational asthenopia and psycho-physiological indicators of visual strain in workers using video display terminals
Ruta Ustinaviciene, Vidmantas Januskevicius
Med Sci Monit, 2006; 12(7): CR296–301

Dear Editor,

Ophthalmologic and psycho-physiological indicators confirmed the subjective perception of visual strain due to visual display terminal [VDT] work in two hundred and eight professional computer users [1]. The report also mentioned that easily accessible and simple examinations could be used to evaluate strain at the work place related to preventive programs or interventional studies.

Various interventions have been used to reduce visual discomfort, including breaks during work, modifying the computer location, lighting and reflection, modifying the indoor environment, and the use of certain eye drops [2].

Yoga is an ancient Indian science which includes the practice of specific postures, cleansing practices, regulated breathing, and meditation [3]. A controlled trial was carried out to evaluate the effect of a combination of yoga practices on self-rated symptoms of visual discomfort in professional computer users in India [4]. At the end of sixty days of yoga practice there was a significant decrease in self-rated visual discomfort, while the non-yoga control group showed an increase.

Apart from visual strain, VDT workers experienced a greater subjective perception of stress than office workers [5]. Stress is related to high work load, high work pressure, diminished job control and stress related to the use of new technology. The practice of yoga has been shown to reduce psycho-physiological indicators of mental stress in persons with high baseline stress levels associated with a physical disability [6], their social circumstances [7] or their occupation [8].

Somatic indicators of distress were assessed in two hundred and ninety one professional computer users with ages between 21 and 49 years, who were randomly assigned to two groups, yoga (YG, n=146) and wait-list control (WL, n=145). The participants were from a software company in Bangalore city (India) and they all used a computer for more than six

hours each day, for five days a week. All of them had normal health based on a clinical history and examination. Both groups had comparable job assignments and responsibilities as rated by the human resource personnel from the software company. Both groups were assessed at baseline and after sixty days. At the end of sixty days there were 62 persons in the YG group and 56 in the WL group.

The YG group (average age of 32.8 years (±8.6 S.D.); 11 females) practiced yoga for sixty minutes each day for five days in a week. The practice consisted of joint loosening techniques (*shithilikarana vyayama)* for 10 minutes, physical postures (*asanas*, 15 minutes), regulated breathing practices (*pranayamas,* 10 minutes), eye cleansing exercises (*trataka,* 10 minutes) and guided relaxation techniques (15 minutes). The WL group (average age of 31.9 years (±10.2 S.D.); 13 females) spent the same time talking to friends (60%), watching television (16%), playing indoor games (12%) or exercising in the gym (12%). This was how they usually spent the time allotted as a work break. Hence they were carrying on with their usual routine.

A section of the symptom checklist 90 – Revised [SCL-90-R] specific to 'somatization' with 12 items was administered to both groups at baseline and after two months of the interventions. The checklist was administered and scored by the investigator who was blind to the allocation of subjects to YG and WL groups. Each item was rated on a 0 to 4 scale for distress. The sum of the scores for the 12 items was analyzed using a repeated measures analysis of variance (ANOVA) followed by *post hoc* analyses with Bonferroni adjustment (SPSS version 10).

Both groups (YG and WL) had comparable baseline scores for the somatization dimension of the SCL-90-R as follows: group average of 12.03 (±6.62 S.D.) and 9.93 (±7.38 S.D.), respectively ($p>0.05$). At the end of two months the YG group showed a decrease in scores [average score of 6.34 (±6.13 S.D.)], ($p<0.001$) whereas the WL group showed an increase in the score [average score of 12.82 (±8.24 S.D.)], (p=0.003).

The somatization dimension of the SCL-90-R reflects distress related to the way physical sensations are perceived [9]. The cardiovascular, gastrointestinal, respiratory, and other systems with autonomic mediation are included. It has already been reported that physical and psychological symptoms have significantly decreased following a 10 week behavioral medicine intervention, with a greater reduction in those who were 'high somatizers' at baseline [10].

Hence in the present study practicing yoga for sixty days reduced somatic indicators of distress in professional computer users. Based on these results it may be interesting to determine whether yoga practice prevents the development of actual somatic illness in asymptomatic professional computer users.

Sincerely,
Shirley Telles and Naveen K.V.,
Swami Vivekananda Yoga Research Foundation,
No. 19, K.G. Nagar, Bangalore 560 019, India,
e-mail: anvesana@gmail.com

REFERENCES:

1. Ustinaviciene R, Januskevicius V: Association between occupational asthenopia and psycho-physiological indicators of visual strain in workers using video display terminals. Med Sci Monit, 2006; 12(7): CR296–301
2. Sheedy JE, Shaw-McMinn PG: Diagnosing and treating computer related vision problems. Burlington, MA, Butterworth-Heinemann, 2003
3. Visweswaraiah NK, Telles S: Randomized trial of yoga as a complementary therapy for pulmonary tuberculosis. Respirology, 2004, 9: 96–101
4. Telles S, Dash M, Manjunath NK et al: Effect of yoga on visual perception and visual strain. J Mod Optics, 2006; in press
5. Tomei G, Rosati MV, Martini A et al: Assessment of subjective stress in video display terminal workers. Ind Health, 2006; 44(2): 291–95
6. Telles S, Srinivas RB: Autonomic and respiratory measures in children with impaired vision following yoga and physical activity programs. Int J Rehab Health, 1999; 4(2): 117–22
7. Telles S, Narendran S, Raghuraj P et al: Comparison of changes in autonomic and respiratory parameters of girls after yoga and games at a community home. Percept Mot Skills, 1997; 84: 251–57
8. Vempati RP, Telles S: Baseline occupational stress levels and physiological responses to a two day stress management program. J Indian Psychol, 2000; 18(1–2): 33–37
9. Holi MM, Marttunen M, Aalberg V: Comparison of the GHQ – 36, the GHQ – 12 and the SCL – 90 as psychiatric screening instruments in the Finnish population. Nord J Psychiatry, 2003; 57(3): 233–38
10. Nakao M, Myers P, Fricchione G et al: Somatization and symptom reduction through a behavioral medicine intervention in mind/body medicine clinic. Behav Med, 2001; 26(4): 169–76

Received: 2006.08.25

Index Copernicus

Global Scientific Information Systems for Scientists by Scientists

www.IndexCopernicus.com

TM
INDEX COPERNICUS INTERNATIONAL

EVALUATION & BENCHMARKING

PROFILED INFORMATION

NETWORKING & COOPERATION

VIRTUAL RESEARCH GROUPS

GRANTS

PATENTS

CLINICAL TRIALS

JOBS

STRATEGIC & FINANCIAL DECISIONS

Index Copernicus integrates

IC Scientists

Effective search tool for collaborators worldwide. Provides easy global networking for scientists. C.V.'s and dossiers on selected scientists available. Increase your professional visibility.

IC Virtual Research Groups [VRC]

Web-based complete research environment which enables researchers to work on one project from distant locations. VRG provides:

- customizable and individually self-tailored electronic research protocols and data capture tools,
- statistical analysis and report creation tools,
- profiled information on literature, publications, grants and patents related to the research project,
- administration tools.

IC Journal Master List

Scientific literature database, including abstracts, full text, and journal ranking. Instructions for authors available from selected journals.

IC Patents

Provides information on patent registration process, patent offices and other legal issues. Provides links to companies that may want to license or purchase a patent.

IC Grant Awareness

Need grant assistance? Step-by-step information on how to apply for a grant. Provides a list of grant institutions and their requirements.

IC Conferences

Effective search tool for worldwide medical conferences and local meetings.

IC Lab & Clinical Trial Register

Provides list of on-going laboratory or clinical trials, including research summaries and calls for co-investigators.