



Medical yoga in the workplace setting—perceived stress and work ability—a feasibility study



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ABSTRACT

Objective: This study examined the feasibility of using an intervention of Medical Yoga in the workplace and investigated its effects on perceived stress and work ability.

Design and setting: This was a quasi-experimental pilot study comparing a group who received Medical Yoga (intervention group, N = 17), with a group waiting to receive Medical Yoga (control group, N = 15). **Intervention:** Medical Yoga in nine weekly sessions led by a certified instructor, as well as an instruction film to be followed at home twice weekly.

Main outcome measures: Feasibility was assessed through recruitment, eligibility, willingness to participate, response to questionnaires and adherence to the intervention plan. Stress was measured with the Perceived Stress Scale, work ability with the Work Ability Index.

Results: Convincing unit managers to let their employees participate in this intervention was difficult. Eligibility was perfect, but only 40% of workers were willing to participate. The subjects adhered to a great extent to the intervention and answered the questionnaires satisfactorily. Reaching target individuals requires careful attention to informing participants.

The intervention showed no significant effects on stress and work ability, though the two measures correlated significantly over time.

Conclusion: Factors limiting feasibility of this workplace intervention were identified. Work place interventions may need to be sanctioned at a higher managerial level. The optimal time, length and availability of the workplace intervention should be explored further. Knowledge from this study could be used as a foundation when planning a larger scale study.

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1. Introduction

In Sweden, as in the rest of the world, health care is a growing sector in both the public and private arenas.¹ Health care employs a considerable number of people – half a million individuals in Sweden alone. This represents 13% of the workforce – the largest work contingent in the country – and the majority are women.² In addition, the nursing and care professions have the highest numbers of workers on sick leave.² of all professional categories.

There are reports from the health care sector of increased workload, complex work processes, inability to perform the required work tasks within the allotted time, and a growing concern about achieving standards of quality.^{3,4} Ultimately, this boils down to

concerns for patient safety,⁵ which leads to stress and ill-health amongst staff.³ – more so in the public than the private domain⁶ Work stress has been found to be associated with reduced work ability,^{7,8} i.e. reduced capacity to perform the tasks a function demands, and worker's health and competence.⁹ Therefore, the current situation in the health care sector is costly and could potentially be a threat to safe medical management.

Yoga is an ancient Tibetan form of health-promoting activity that encompasses both the physical and the mental aspects of relaxation. It is a series of bodily movements combined with specific breathing techniques and meditation, in which the focus of attention is inwards, using the body as a tool to reach a meditative state. Its goals are health and well-being. The method has been evaluated scientifically and has been shown to have positive effects on pain,^{10,11} stress,^{12,13} and quality of life.^{12,14} In a study among nurses, yoga was found to improve sleep and decrease work stress.¹⁵ The measurable objective effects include lower blood pressure,¹⁴ reduced levels of stress hormones.¹⁶ and lower blood

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glucose levels^{17,18} The type of yoga chosen seems indifferent for the positive effects.¹⁹

Medical Yoga (MY) is a Swedish form of yoga adapted from the classic Kundalini yoga that allows people with neck and back pain to benefit from the exercises. Like traditional yoga, the movements in MY are very slow, but they are always guided by an instructor who is a trained health care practitioner. Studies of MY have demonstrated positive effects on stress,¹² and chronic low back pain²⁰ and the method is used in the Nordic countries, Australia, the UK and the US²¹.

The aim of this study, which is part of a master's (MSc) study in occupational health, was to test the feasibility of a work-based intervention with MY among medical public nursing home and home care service staff. MY could, considering its stress-reducing effects be excellently suited for these types of health care workers. The intervention was offered to the staff of one unit; the other unit served as a control. The feasibility of this type of intervention was determined through assessing recruitment, eligibility, willingness to participate, response to questionnaires and adherence to the intervention plan. Further, subjects' stress levels and perceived work ability were assessed before and after the intervention and compared between the two groups.

2. Materials and method

2.1. Study design

This was a quasi-experimental study, as the assignment to intervention/control was not randomized.

2.2. Recruitment and sample

The unit managers of five work groups of medical staff in public nursing homes and home care services in the target county in southern Sweden were contacted to gauge their interest in the study; three managers responded positively as regards their staff participating. Subsidiarity was the deciding factor for selecting participant workgroups; they had to be located close to the lead investigator (GF), and the sample was therefore described as a convenience sample. The medical staff categories included registered nurses, auxiliary nurses and nurses' assistants; the only inclusion criterion was that the subjects belonged to any of these three professional categories. It was decided to exclude subjects who were pregnant, as the pregnancy may lead to stress in itself,^{22,23} as well as a decreased ability to deal with stress or reduced work ability. Though these subjects were not prohibited from taking part in the MY intervention, their data would be omitted from the analysis. In the same vein, subjects who were currently undergoing other forms of stress-reducing therapy would not be prohibited from the MY training, but their data would be excluded in the analysis.

In the first step, the participating unit managers informed their staff about the study using a leaflet supplied by the investigators, and invited staff to a meeting with the lead investigator. At the meeting, information concerning MY, the purpose of the study and the logistics involved was provided, and questions from the potential participants were answered. Care was taken to keep the information regarding the potential effects of MY as neutral as possible, only stating the outcome measures in the study and how they would be measured. A screening question regarding stress²⁴ was answered by each of the staff members interested in participating.

2.3. Intervention and setting

The MY training was offered to the intervention group over a period of nine weeks in the autumn of 2014. In agreement with

the local unit manager, one morning and one afternoon session – each lasting 75 min – were scheduled every week in order to allow all staff to attend once a week. The sessions were timed so that participants could attend after finishing a shift or on a day off. In addition, the participants were instructed to practice MY at home at least twice a week using a downloadable 25-min instruction video.

Due to a lack of suitable facilities at the workplace, the MY training sessions were held at a nearby training facility. The lead investigator (GF), a certified MY instructor, was in charge of all the sessions. The sessions – whose content is based on the MY protocol developed by the Institute of Medical Yoga²⁵ – started with breathing exercises while lying down followed by seated exercises for the whole body, and finished with seated meditation. The frequency of the training was based on previous research²⁶

The control group was offered MY after completion of the study period and was thus designated a waiting-list control group.

2.4. Measurements and outcomes

Some demographic variables were collected for all participants: age, sex, profession, degree of employment (i.e. part or full time), type of employment (i.e. permanent or temporary) and number of years at the current work place.

The Perceived Stress Scale (PSS) was chosen because it is a generic instrument that measures the perceived level of stress in one's life.²⁷ It examines both work-related and private stress through 14 questions that are summed up on a scale from 0 to 56; the higher the value, the higher the levels of stress. A previous longitudinal study suggests that mean values for PSS range from 12.0 to 17.5 among an adult population.²⁸

The Work Ability Index (WAI) was used to measure perceived work ability.²⁹ It contains 7 items on work ability in relation to the best perceived ability and in relation to work demands. It also involves parameters for illness and sick-listing. Guideline values exist for excellent (44–49), good (37–43), moderate (28–36) and poor (7–27) work ability.³⁰

PSS and WAI were measured before the first training session and one week after ending the MY training for the intervention group, and at the corresponding times (i.e. nine weeks apart) for the control group.

To check compliance with the home training program, an automated text message was sent to the participants in the intervention group every Sunday afternoon asking about the number of home training sessions during the past week. This task was managed using a program called SMS Track[®].³¹

2.5. Data analysis

To assess the feasibility of the study, a number of parameters were examined. Recruitment rate was calculated through dividing the number of units participating by the number of units approached. Eligibility was the number of participants excluded by the initial stress question plus any of the exclusion criteria. Willingness to participate was calculated through dividing the number of subjects in the study by the number of subjects in the source population. Response rate to questionnaires was the number of those successfully completed divided by the total number administered. Finally, adherence to the intervention was the number of exercise sessions performed (in class and at home) divided by the "desired" number (9 supervised classes + 18 at-home exercises = 27). For those participants who trained more than 27 times, adherence was noted as 27.

Descriptive analysis compared the intervention and the control group with regards to the available demographic variables using *t*-tests for parametric data and Mann-Whitney for non-parametric data. Additionally, baseline values for PSS and WAI scores were

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