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Impact of acupuncture on stress levels of professionals working with maltreated children

BACKGROUND

Occupational stress is recognised as a major risk to psychosocial well-being, which can undermine health.[1] One of the major consequences of chronic stress is the development of the syndrome of burnout. Burnout constitutes a sense of failure and exhaustion, caused by an excessive decrease in energy, which may especially affect professionals who work in direct contact with people.

Professionals who work with maltreated children and the socially vulnerable typically show high levels of stress due to the physical and mental overload caused by the excessive demands of their work, in terms of both quantity and emotional strain.[2]

OBJECTIVES

Irrespective of treatment rationale, acupuncture treatment is often individualised. Thus, it is important to consider what the optimal treatment parameters are for the reduction of stress. It is of fundamental interest to investigate the influence of the needling location (eg, which traditional acupuncture points should be used) on stress reduction in order to develop a basic protocol for intervention.

METHODS

This study was approved by the Ethics Committee of the University of São Paulo Medical School (reference no. 357/14). Nineteen professionals (13 female and 6 male) aged 40.6±8.59 years (mean±SD) and working with maltreated children in a group shelter in São Paulo, Brazil, were treated with 10 sessions of acupuncture. Acupuncture points were selected based upon the traditional energy diagnosis of each patient, which was assessed using a questionnaire of physical and psychological symptoms and evaluation of tongue and pulse. Stress levels were measured before and after acupuncture treatment using the Lipp's inventory of stress symptom scale[3] and compared using Student's t-test.

Table 1 Stress levels of 19 professionals before and after traditional Chinese acupuncture

Variable	N	Mean	SD	Minimum	Maximum	p Value*
Before acupuncture	19	20.6	8.9	2	37	0.0011
After acupuncture	19	13.6	8.2	1	29	

Data are scores on the Lipp's inventory of stress symptom scale. Scores of ≥7 indicate harmful stress levels (alert phase) and ≥20 indicate severe stress levels (exhaustion phase).
*By Student's t-test (before vs after acupuncture).

FINDINGS

At baseline, 18 of the 19 subjects (95%) had levels of stress that were potentially harmful to health (Lipp's inventory of stress score ≥7; table 1). After acupuncture treatment, a statistically significant reduction in mean stress levels was observed. A total of 34 different classical acupuncture points were used, as well as local points (in cases of acute or chronic pain). Table 2 presents the frequencies of use of the 10 most commonly selected acupuncture points for the treatment of stress in this population.

COMMENT

Our findings suggest that 10 sessions of traditional acupuncture attenuate high levels of stress in professionals working with maltreated children. However, given the lack of an appropriate control group, we cannot exclude the potential contribution of the placebo effect, non-specific needling effects or even the natural history of stress or regression to the mean. This is a preliminary study and its findings will need to be confirmed through future controlled studies.

Studies in rats have demonstrated positive effects of two of the most commonly points used in this study (ST36 and *Yintang*) for the reduction of stress and symptoms of depression.[4 5] Besides the fact that our findings corroborate the existing literature, this study utilised a number of other acupuncture points that may also play a significant role in reducing stress, thus expanding the therapeutic possibilities. Ultimately our sample was too small and the treatment too heterogeneous to draw any firm conclusions about point specificity; however, acupuncture point selection is worthy of further study.

Finding alternative ways to deal with stress or burnout is extremely important as such modalities may increase the individual chance of recovery while reducing the cost associated with utilisation of other health services. Stress reduction may also improve both the quality of the employee's life and their family dynamics.

FUTURE RESEARCH

This was a preliminary study developed with a limited sample and without a control group. To confirm these initial (encouraging) findings, randomised controlled trials are essential. Despite its limitations, to our knowledge this is

Table 2 Most commonly used traditional acupuncture points

Acupuncture points	Number of times used	Frequency of use (%)*
ST36 (*Zusanli*)	172	90.5
Yintang	170	89.5
LR3 (*Taichong*)	153	80.5
BL62 (*Shenmai*)	141	74.2
PC6 (*Neiguan*)	138	72.6
SP6 (*Sanyinjiao*)	125	65.8
LI4 (*Hegu*)	121	63.7
CV4 (*Guanyuan*)	104	54.7
KI3 (*Taixi*)	91	47.9
GB34 (*Yanglingquan*)	87	45.8

*Based on maximum of use of n=190 (ie, 19 individuals ×10 sessions).

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the first study that points to the possible benefits of acupuncture for decreasing stress levels in the workplace. This is worthy of further study, given the large indirect clinical implications. Caregivers are also important role models, so it is necessary to invest efforts to ensure they are healthy for the sake of the children under their supervision. Reducing the stress of these particular professionals may also help increase the potential for resilience of these victimised children.

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Contributors Oliveira led the acupuncture consultations and Scivoletto supervised. The two authors participated in the analysis of the results and in the writing of the manuscript.

Competing interests None declared.

Patient consent Obtained.

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