

The effects of Yoga on School Anxiety



MARCUS STUCK, Dipl. Psych.
University of Leipzig,
Institute of Applied Psychology

Six years studies at University of Leipzig & University London.

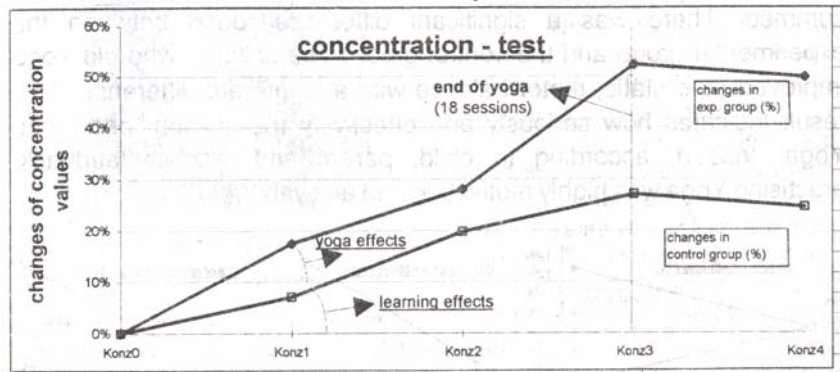
1993-Masters of Psychology (Dipl. Psych.) subject of thesis : "Eastern influence in the Western psychology". 1993-Three months visit to India (BHU-VARNASI, Sivananda Ashram, Rishikesh) 1994-Working at the Institute of Applied Psychology at Leipzig University (Germany) 1995-Doing Ph.D. work - subject - "Yoga with Children".

Address : University of Leipzig,
Institute of Applied Psychology,
Tieckstr 2, 04275, Leipzig,
Germany.

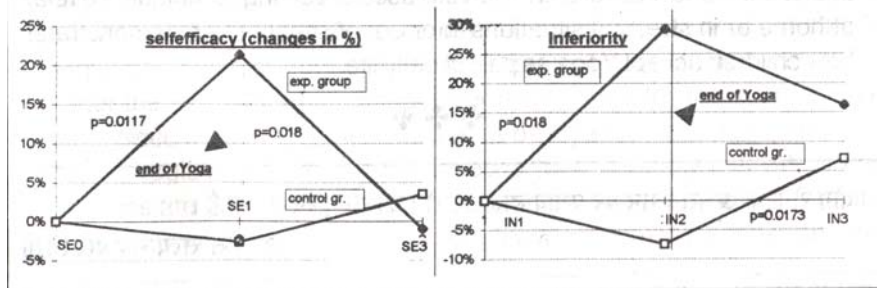
1] Introduction : The project of investigating the role of Yoga on children is being carried out at the Psychology Department of Leipzig University in co-operation with a primary school in Leipzig, Germany. The goals of this project are to find out more about the effects of Yoga on school children, who have school anxiety and to investigate the role of Yoga on children in general, because there has not been much research done until now. In the Yoga-course the children were taught several asanas and breathing techniques (I do not call it pranayama in this context) of Yoga and how to use their body and breathing to relax at home or in school (e. g. in stressful situation/examin.) The investigation has not yet been completed, since another course with 9 further children will begin within the next few months.

2] Explanation to the Investigation plan : In the first part of the study, nine 12 years old children (4 female, 5 male) were investigated. The children performed Yoga in 18 sessions, two times per week. All the children suffered from anxiety, which was measured with the school anxiety questionnaire from W. WICZERKOWSKI. A pre and a post test were carried out before and after the Yoga-sessions and an effect stability second post test after an additional 10 week period was also administered. An investigation was undertaken of the physio-psychological effects of each Yoga-session on the children, in terms of skin response data, which show the changes of the sympathetic nervous system stability, during the Yoga sessions. This biological data

The concentration tests show that the children, who were doing Yoga (we did several balance asanas e.g. vokasana, bukasana) improved their ability to concentrate on a subject, in comparison to the control group. The graph below also shows, that upon completion of the Yoga-sessions, neither further improvement nor decline of concentration is evident. The results from the parent and teacher interviews regarding children's concentration levels have not yet been evaluated.



In the selfefficacy and inferiority scales we can see clear improvements stemming from the Yoga-sessions. After the Yoga sessions ended, as seen in the graph below, significant regression in terms of selfefficacy and inferiority is evident. The values fell to their pre-Yoga levels for self efficacy; the inferiority scale also demonstrates a regressive trend. One may contend that upon completion of the Yoga sessions, self efficacy and inferiority levels declined due to children no longer being able to do something "very special" (because doing Yoga with children is rare in Germany). The children also feel more accepted by their peers (see graph on self concept for peer acceptance). A reason for the peak of improvement could be that during the Yoga-treatment children experienced that they can successfully cope with difficult asanas (e.g. bukasana), if they are concentrating on them during the Yoga sessions with the Yoga teacher, as well as at home.

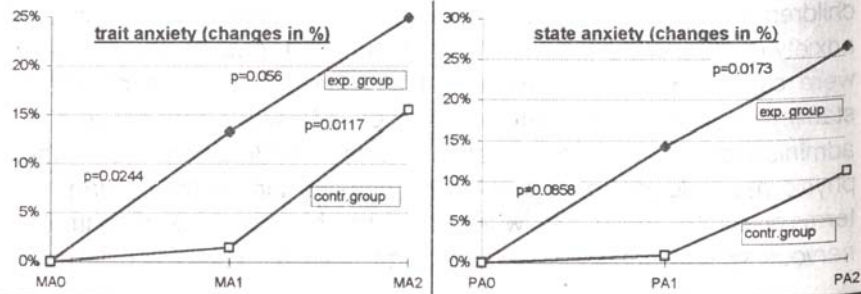


has not been fully analysed yet, the results can be published in a future article. Before and after each session, the children were asked about their psychological states, e. g. mood, level of relaxation, level of activity, level of satisfaction. Alongwith the children, the teacher and parents were interviewed about any changes in the children's behaviour and about the role Yoga played in the children's daily life.

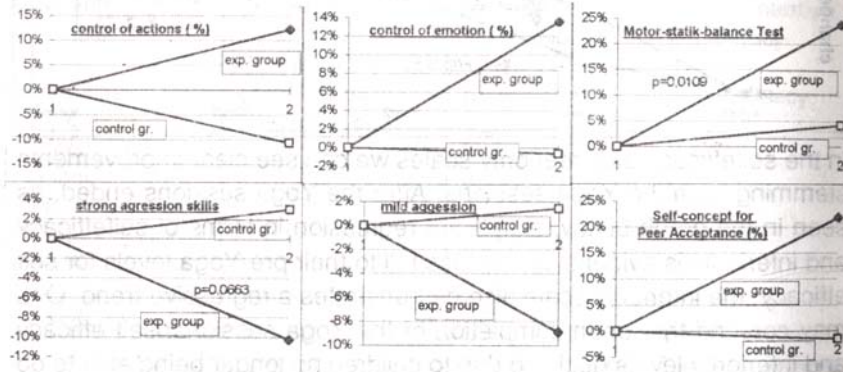
Investigation Plan : 18 children (9 experimental group, 9 control group)

Pre-test	18 YOGA-Sessions (9 weeks/two times p/w) Concentration testing (3 times) Direct Yoga-Session data (Psychological; Psychological)	POST-test 1	POST-test 2
Anxiety (trait, state) Concentration Aggression		Anxiety (trait, state) Concentration Aggression	Anxiety (trait, state) Concentration Inferiority
Selfefficacy Inferiority Motor-static-balance Test Self-concept for Peer Acceptance		Selfefficacy Motor-static-balance-Test Self-concept for Peer Acceptance	Selfefficacy

3] Results of the Investigation-Part 1 : In the following, I wish to introduce the main results of the first investigation. The differences between the control and experimental groups were found with the Wilcoxon Matched-Pair Signed-Rank test. The homogeneity of both groups was demonstrated with the Mann-Whitney U-test State anxiety, as well as trait anxiety were shown to be significantly different between the two groups. This demonstrates that Yoga has a measurable influence on the treatment of anxiety. The second post-test shows that there is no further improvement in comparison to the control group. Therefore the improvement was made possible through the use of Yoga-treatment.



The scales for mild as well as strong aggression show significant improvements in comparison to the control group. Children learned to relax and to control their emotions and actions (see graph). The ability to keep motor-static balance was also measured via 14 balance exercises before and after the Yoga sessions. Each of the balance positions had to be maintained as long as possible (max. of 10 sec). Upon completion of the static motor tasks, all values for both the control and trial subjects were summed. There was a significant difference found between the experimental group and the control group. The children who did Yoga improved their static, motor balance with a significant difference. This result indicates how seriously and effectively the children performed Yoga. Indeed, according to child, parent and teacher feedback, practising Yoga was highly motivating and enjoyable.



The children were asked after the course how they used breathing techniques (rhythmic breathing, nadi-sodhana, ujjayi) and the asanas in their daily lives (after school or at home) to relax. 7 out of 9 children used asanas and 6 out of 9 children used breathing techniques to relax at home or in stressful situations in or out of school.

Ten weeks after finishing the course 6 out of 9 children continued to use asanas and 4 out of 9 children still used breathing techniques to relax at home or in stressful situations in or out of school. This demonstrates how children accept Yoga as part of daily life.



योग रोगी के अचेतन मन पर प्रभाव डालकर रोग का उन्मूलन करता है।

- परमहंस सत्यानंद सरस्वती