

## **Evolving Priority in Developing Nations: to Prevent Personal Bias in Social Welfare Decisions, Growing Need for Administration to Realise That Humanity is Only Religion!**

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**ABSTRACT:** Health remains an important goal for society. 'Health for all' is the motto of the world health organization. All hospitals spend only on allopathic drugs & modernization despite the benefits of exercise medicine being well proven. Actually, if there is a single remedy which can prevent & treat a host of lifestyle diseases like hypertension, diabetes, cardiac disease, osteoporosis, depression, etc it is only 30 minutes of exercise a day. More so it is free. Probably realizing these benefits there was a move to introduce a holistic exercise Suryanamaskar by the Indian government in year 2015 in all schools. After resistance from few organizations this path breaking decision was unfortunately withdrawn. This paper focuses on the importance of simple, economical health inventions & exercises like Suryanamaskar & the need to remove personal choices & viewpoints from their introduction for benefit of all. For large & populous countries like India which can barely afford to spend 3 % of GDP on health, disease prevention by exercise medicine is a good solution. To allow personal bias of a few people to hamper progress of the majority is an alarming & regrettable trend. As is said "one can count the seeds in an apple but not the apples in a seed" "Only time will tell the far reaching losses & effects of these myopic & vote bank appeasing decisions."

**Key words:** Suryanamaskar, endurance, core stability, body kinetics, energy expenditure, mind

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### **I. INTRODUCTION**

"The Best All Round Exercise" was how we heard SuryaNamaskar being described and recommended to us a few years ago. The Namaskar is not just a set of physical movements for the vanity of muscular development. Rather it is a dance of joy, a celebration by the epitome of creation in thankfulness, to the Creator. It is no surprise that it begins and ends with the hands folded in remembrance and gratitude [1,2]. Let us briefly discuss Suryanamaskar under the following headings:

#### **1. Physical Training**

Sports science, with its progress over the last few years has categorized gains from exercise into three main subsets:

- a) Endurance (cardiovascular & muscular)
- b) Strength
- c) Flexibility

These gains of exercise are governed by the all-important principle of Specificity i.e. the gains of exercise are particular to the system of training. Thus a marathon runner who focuses on cardiovascular endurance training will be training mainly that particular system and thus will gain mainly in stamina. However he will be unable to match the strength of a weight lifter or the flexibility of a gymnast who focus on training those systems of fitness. To gain on all three fronts the athlete must train all the above three modes of physical performance separately and adequately. Although a particular system may be more important for a competitive athlete, none can afford to completely ignore the other faculties of development. Thus a normal adult in the west who is interested in all round physical development, is advised to run for at least 20 – 30 minutes every day, do weight training at least three times a week and flexibility exercises for 15 – 20 minutes everyday.

Not only does this involve great amounts of time, effort, equipment and expense, the athlete often lags behind in one of the faculties. Sports injuries are the inevitable result.

Suryanamaskar is probably the only known mode of exercise that trains all the three faculties of exercise at the same time. Thus 2/3<sup>rd</sup> time is saved to develop the same level of fitness in all three systems and in today's hectic lifestyle that is certainly a huge saving!

Also this type of training is a better replication of real life where all faculties are used together rather than individually. In fact the main advantage of Suryanamaskar is that it can be used for any phase of exercise e.g. warm up, main exercise and cool down too [3-12].

## **2. Core Stability**

One of the most important recent principles of sports biomechanics and injury prevention is the concept of Core stability. The trunk of the body which includes by abdominal muscles in the front and spinal muscles behind and is enveloped by the Pelvic and chest diaphragms is called the Core or foundation of the musculoskeletal system. The core of the body also contains all the important organs of the body except the brain. The fitness of the core also impacts the health of the organs and prevents metabolic diseases like diabetes. Also stronger the foundation, the limbs move with better ergonomics and kinetics. The causes of many aches and pains in the body are poor core stability which leads to faulty postures and subsequent illnesses. If the core is weak, the limbs move on an unstable base and therefore cannot transfer optimum power. They are also more prone to injuries.

Specific exercises are required by the sports man for proper core stability. On a biomechanical analysis of Suryanamaskar, it seems that this principle was realized long ago. Proper core stability also helps maintain normal posture and resolve the commonest complaints faced in routine orthopedic practice. In fact with its alternate flexion and extension of the spinal column and strengthening of pelvic and shoulder girdle muscles, Suryanamaskar gets to the core of core stability! [5,6,13,14]

## **3. Balancing The Kinetic Chain**

The entire body is kinetic chain. A stiffness or weakness in one area is bound to effect some other part of the body also for example, a weak abdominal muscles will often cause an exaggerated curve in the lower spine which often results in backache. Sportsmen who use one side of the body via racquet sports etc often face over development of the dominant side. Suryanamaskar are a balancing exercise. It simultaneously develops both sides of the body. It is unique in the way that it takes care of the whole kinetic chain from head to toe! All the important large muscles are exercised and kept strong and flexible. Starting from the core, it works on the hips and shoulders and the limbs cyclically, thereby providing health to the entire chain [2,3,5,6,15].

## **4. The Mind**

Suryanamaskar is prayer in action. It prays to the Foremost force in the solar system the Sun to grant it health & peace [5,6,16,17,18,19,20,21]

## **5. Caloric Expenditure**

The currency of exercise today is caloric expenditure. Kohli et al., had the good fortune of getting a scholarship in Sports science in one of the premier sports medicine & science centres in Asia. He requested for a chance to offer him as a subject to calculate the caloric expenditure of Suryanamaskar vis-à-vis running. Singapore Sports Science centre is one of the rare centres of the world to have a portable caloric expenditure machine. The protocol for the test was that he would run five kms in twenty five minutes and then do 108 Suryanamaskars in twenty five minutes after a rest of ten minutes. The results surprised us all. The caloric expenditure of both the running and Suryanamaskar phases of exercise was comparable being around 250 Kcals for each of the 25 minutes. For the first time in the world, we had shown that Yoga was not just about stretching and forgetting the calories. This was a bumper draw where the overweight could expend calories and simultaneously become more flexible by the same exercise. Dr Kohli's friends in Singapore remarked that people there were more concerned about their trim looks and now that we had shown equal efficacy for losing weight and burning calories, people would also accept getting better minds and hearts by Suryanamaskar!!

The same study was subsequently tried on a Chinese doctor and the results were even more astounding! Energy used was found to be about 280Kcals for Suryanamaskar and only 240Kcals for running. The difference between our two results was probably due to habituation. He was only an experienced runner and Suryanamaskar was new to him. It was indeed a proud moment as an Indian, when all the athletes in Singapore started to use Suryanamaskar for warm up and cool down phases on exercise after this study [6-10].

The following studies further prove our point that exercise is invaluable in physical, mental & emotional development of children. It promotes the building of a strong & ethical social structure.

## **6. Mental**

Coe et al., study the effects of Physical education on academic achievement in children in 2003 in UAS. The students of middle school were assessed and it was found that beyond a "Threshold physical activity" contributed highly to better scholastic achievement. Silbey et al., presented his work on the relationship between physical activity and cognition in children with a metanalysis study in 2003. Significant improvement was observed by Physical activity and cognition (perception skills, IQ, verbal test, Maths Tests & Memory). Greatest impact was found in elementary and middle school students and the authors strongly protested the cutting down of hours used in Physical education.

Other valuable studies show decrease in disruptive behaviours and increase in desirable behaviours and attention span of children [14,15,22,23,24]

### **7. Emotional**

The study on School Sports as a protection factor against adolescent risk behaviours by Page et.al., showed the male and female students reporting participation in one or two teams were significantly more likely no not have engaged in cigarette smoking, drug use as compared to non sportspersons. Sport Participation & Health Factors by Pyle et.al., presented a study of 770 high school students aged around 16 yrs & found that For both boys and girls competitive sports participation was associated with a lower frequency of mental health problems, eating and dietary problems and total risks compared to non-competitive peers. The critical review of Scully & Kremer's on Physical exercise and psychological well being was a masterwork offers a critical examination of evidence relating to the relationship between physical exercise and psychological benefits. The review examines existing literature on exercise and mental health in relation to changes in anxiety, depression, mood, self-esteem, and stress reactivity, premenstrual syndrome and body image. The general conclusion is that a range of exercise regimens may be able to play a therapeutic role in relation to a number of psychological disorders [25,26,27,28].

### **8. Social**

Nichols et.al., in 2004 Presented a study on Measuring the impact of crime reduction interventions involving sports activities for young people. The authors concluded that Sports works at primary, secondary & Tertiary levels and works by a) providing diversion from crime b) deterring criminality c) enables self development d) directs towards pro social values. Dobonzet.al., presents the major finding, consistent with previous research, was that high school athletes outscored their non-athlete peers on the leadership ability measure. Female athletes showed greater leadership ability than male athletes, although the difference was not statistically significant. The authors conclude that there is a possibility that athletics offers young women and men the chance to improve leadership ability. The authors recommend maintaining athletic programmes for the purposes of developing leadership and suggest that educational policy-makers and administrators should re-examine any proposed budget cuts that may affect athletic participation [29, 30, 31, 32, 33].

## **II. DISCUSSION**

Firstly developing India spends less than one fifth on health, as compared to defence. The expenditure on fertilisers & chemicals is more than the expense on health. This raises the need to introduce ingenious social schemes & encourage self motivated organisations to spread the message of health amongst population. 65 % of India is less than 35 yrs & half is less than 25 %. To make health a political or religious issue, subject to decision & judgements of a section of population, especially when the need of social inventions is immense in a populous nation, is an unforgivable fallacy. Humanity is above all religions, choices, judgements & opinions. In face of such strong proof of need of positive social interventions, proactive governments should be courageous enough to reverse partisan judgements taken in a hurry [34,35].

## **III. CONCLUSION**

We will do tremendous harm to ourselves if efforts are not made to encourage this simple physical activity in school. It is the need of the hour to focus on simple, economical health inventions like Suryanamaskar & urgently remove personal choices & viewpoints from interfering with mainstream introduction of such very important social health decisions.

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