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## Smart Irrigation System Using Simple Mobile Detector Circuit

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**Abstract---**Now-a-days mobile phones have almost become as an integral part of human life serving multiple needs of humans. This application makes use of the simple keypad or basic mobile phone as a solution for irrigation control system. The irrigation water Pump can be controlled over by giving a call or by sending a SMS. No high level software or any embedded system is used in this project. It will help in development of technology oriented irrigation in Agriculture. The result produced by the system gives more satisfied technological development in irrigation.

*Keywords---*DC Power, Cell Phone Detector, Monostable Multivibrator.

#### I. INTRODUCTION

THIS circuit requires 9v DC power supply for its operation. A 9v DC Adaptor or a 9v volt battery can be used a power source[3]. Cell Phone Detector is a circuit that can sense the presence of any activated cell-phone nearby and gives an indication of activated cell-phone near around of it. Basically Cell-phone detector is a Frequency Detector or a Current to Voltage Converter Circuit which catches frequencies about 0.8 - 3.0GHz (Mobile band frequencies). RL tuned circuit (Resistor-Inductor circuit) is not suitable for detecting the RF signals in Giga Hertz range. CA3130 is the 15MHz BiMOS IC with MOSFET inputs and a bipolar output. MOSFET transistors are present in the inputs that provide very high input impedance. ... IC CA3130 works off 5 to 16 volts and can be phase compensated with a single external capacitor. It also has terminals to adjust the offset voltage and strobing[4]. The disk capacitor along with the leads acts as a small gigahertz loop antenna to collect the RF signals from themobile phone. Op-amp IC CA3130 (IC1) is used in the circuit as a current-to-voltage converter with capacitor C3 connected between its inverting and non-inverting inputs[5]. A monostable multivibrator (MMV) often called a oneshot multivibrator, is a pulse generator circuit in which the duration of the pulse is determined by the R-C network connected externally to the 555 timer[6][11]. In such a vibrator, one state of output is stable while the other is quasistable (unstable). The **T** or "toggle" flip-flop changes its output on each clock edge, giving an output which is half the frequency of the signal to the T input. It is useful for constructing binary counters, frequency dividers, and general binary addition devices. It can be made from a J-K flipflop by tying both of its inputs high. In this paper, section II

gives the literature review, Section III says the Materials and Methodology of the system. Section IV presents the Experimental Result of the System and Section V concludes the work.

#### II. LITERATURE REVIEW

The adaptability of the mobile phones cannot be underestimated. They are portable and perform functions like simple call, SMS, and data services. The focus of detecting mobile phones by its features to determine potential vulnerability [1][7]. Tests were carried out at Pacific Northwest National Laboratories, USA. The first part of determining the RF signal as a detection point was carried out by looking at the internal oscillators necessary to operate the microprocessor and RF synthesizer. To detect the cell phone by detecting the RF transmitter. They found out that since the mobile phone keeps a continuous communication with the tower, this technique was successful. A LED is set off which has been configured on PORTA3. When the correct code has been keyed in the correct order; the access granted LED is set off which is configured on PORTA2 and in turn [2]; an electric pulse is sent to the Relay (RL1) via PORTA1. PORTA has been configured as an output port. After the pulse has been sent to the RELAY (RL1), the magnetic field created by the armature coil attracts the armature to connect the contact thereby connecting the circuit and the signal being sent to the receiver[6][9].

#### III. MATERIALS AND METHODOLOGY OF THE SYSTEM

#### **Components:**

**DC Power Supply:** This circuit requires 9v DC power supply for its operation. A 9V DC Adaptor or a 9v volt battery can be used a power source[2].

#### **Mobile Detector:**

**Cell Phone Detector** is a circuit that can sense the presence of any activated cell-phone nearby and gives an indication of activated cell-phone near around of it[4]. Basically Cell-phone detector is a **Frequency Detector** or a **Current to Voltage Converter Circuit** which catches frequencies about 0.8 -3.0GHz (Mobile band frequencies) [3]. RL tuned circuit (Resistor–Inductor circuit) is not suitable for detecting the RF signals in Giga Hertz range. This Mobile Detector Circuit can detect incoming/outgoing calls, messaging, video transmission and any SMS or GPRS uses within the range of 1 meter. This circuit is very useful to detect Cell-phones at Cell-phone restricted places like Exam halls, meeting rooms, hospitals etc. It is also useful in detecting the unauthorized use or spying using hidden Cell Phone[6]. It can detect the RF Transmission from the Mobile Phone and triggers Buzzer to produce beep sound, even if the phone is kept on Silent mode and this alarm continues beeping till the presence of RF signals [7].

Components used to design the circuit are listed in the

LIST OF COMPONENTS			
S. No.	Descripti on	Range	Qty
1	Battery	9v,12v	Each 1
2	Capacitor	10nf,0.1uf,10uf, 100uf,47pf,0.2uf,	Each 1
		2.2M	2
3	Resistor	100K,10K,470 ohm	Each 1
		1K	4
4	IC	555,CA3130,7476	Each 1
5	Diode	In4001	
6	Led	-	2
7	Dc motor (core less)	12v	1
8	LDR	-	1
9	NPN	Bc548	2
,	transistor	Bc547	1
10	Relay	230v	1
11	Connecti ng wires	-	few

#### Table: 1 TABLE 1

#### **Monostable Multivibrator:**

Monostable multivibrators (one-shot timers) are widely used in various modern electronic applications, such as communication systems, phase-locked loop circuits, instrumentation measurement systems, and power conversion control circuits [1]. A monostable circuit can provide an adjustable pulse waveform with specified width and height in response to a triggering signal. Typically, monostable circuits are implemented using an operational amplifier (OPA), which is performed as a voltage comparator, together with a timing capacitor and three resistors [2]. IC 555 timer is an integrated circuit(IC) or a chip used for various electronic applications. The IC was designed in 1971 by Hans R. Camenzind under a contract to which was later acquired by Philips. It has b ever since. It was the very first commercial timer IC to be designed. IC 555 timer got its name from three 5 kilo ohm resistors connected in series voltage divider. Monostable multivibrators (one-shot timers) are widely used in various modern electronic applications, such as communication systems, phase-locked loop circuits, instrumentation measurement systems, and power conversion control circuits [1]. A monostable circuit can provide an adjustable pulse waveform with specified width and height in response to a triggering signal. Typically, monostable circuits are implemented using an operational amplifier (OPA), which is performed as a voltage comparator, together with a timing capacitor and three resistors [2].

#### **Toggle Flip-flop:**

T-flip-flop is a much simpler model of the JK-flip flop. Right here both inputs of JK- flip flop are linked collectively so they may be called a single input J-ok flip-flop [3]. When clock pulse is given to the flip-flop, the output is to be toggled. The symbol and truth table is given below in fig.1.



Fig 1: T Flip-flop and its Truth Table

#### **9v Battery**

The nine-volt battery format is commonly available in primary carbon-zinc and alkaline chemistry, in primary lithium iron disulfide, and in rechargeable form in nickelcadmium, nickel-metal hydride and lithium-ion[5]. Mercuryoxide batteries of this format, once common, have not been manufactured in many years due to their mercury content [13].

#### Mobile detecting circuit:

Cell Phone Detector is a circuit that can sense the presence of any activated cell-phone nearby and gives an indication of activated cell-phone near around of it[3]. Basically Cell-phone detector is a Frequency Detector or a Current to Voltage Converter Circuit which catches frequencies about 0.8 -3.0GHz (Mobile band frequencies)[8]. RL tuned circuit (Resistor-Inductor circuit) is not suitable for detecting the RF signals in Gigahertz range [9].

#### 555 timer circuit:

This pin is used to discharge an external capacitor that works in conjunction with a resistor to control the timing interval [5]. In most circuits, pin 7 is connected to the supply voltage through a resistor and to ground through a capacitor.

... Thus, pin 4 must be connected to the supply voltage for the 555 **timer** to **operate** [10].

#### **Relay driver:**

A **Relay driver** is an electro-magnetic switch that will be used whenever we want to use a low voltage **circuit** [5] to switch a light bulb ON and OFF which is connected to 220V mains supply.

#### **Design of the System**

The system flow diagram of the irrigation system is in fig.2.



Fig 2: Flow Diagram

#### **Procedure of System**

- 1. Water pump is supplied with power through mobile detector and the control circuit from DC battery.
- 2. Place the Mobile detector circuit near GSM or Cell phone.
- 3. If a Call or SMS is send to the cell phone or GSM, the Mobile Detector Circuit will get 'ON' and after 5 sec seconds by the use of T-Flip-flop the control circuit makes the Water Pump to get 'ON'.
- 4. Again send a Call or SMS the T-Flip-flop actively to its work of making the Water pump 'OFF'.
- 5. Circuit Diagram of the system is shown below in fig.3



Fig 3: Circuit Diagram

#### IV. EXPERIMENTAL RESULT

The Experimental output of the system produces better result in making the water pump ON/OFF Condition. The Results are furnished in table 2.

S.	Phone Call	Mobile	Monostable	TFF	Motor
NO.	or	detector	State	Output	Condition
	Message	LED		_	
1	First call or	ON	High Quasi	High	On
	message		stable state		
2	Second call	ON	High Quasi	Low	Off
	or message		stable state		

The water pump is supplied with power through control circuit and mobile detector by DC battery. The Cell phone or GSM is place near the mobile detector circuit. If the call or

SMS is send to cell phone, the mobile detector circuit detect the signal then the light pulse from Monostable Multivibrator induce the T-flip-flop to activate the control circuit ON in 5 Seconds which make water pump to 'ON' Condition. Again a call or SMS is made to the cell phone which sends the pulse to T-flip-flop which make the water pump 'OFF' condition.

#### Merits & Demerits of the system

There are some merits and demerits available in implementing the system. These are shown below

#### Merits

- ➢ It's used for safety purpose
- ➢ It's very user friendly.
- ➢ It's affordable price to install.
- It's used for home appliance control

- It's used to control machinery in industrial
- And also used for agriculture and to control the motor.

#### Demerits

- It's capable of holding very low voltage.
- This ideas can be used for negative purpose actions such as activation of blast materials etc.. is also possible.
- ➢ It's uses only under low power consumption

#### V. CONCLUSION

Irrigation has been the backbone of human civilization since man has started agriculture. As the generation evolved, man developed many methods of irrigation to supply water to the land. In the present scenario on conservation of water is of high importance. Present work has made an attempt to save the natural resources available for human kind. By continuously monitoring the status of the soil, the flow of water can be controlled and thereby reduce the wastage.

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#156, 3<sup>rd</sup> Floor, Kalidas Road, Ramnagar, Coimbatore - 641 009, Tamil Nadu, India. Phone: 0422-4377821 www.ciitresearch.org Innovations in Electronics and Material Science (NCIEMS-2020) On 28<sup>th</sup> February 2020 Sponsored by DBT- MST (Under Star College Scheme) Organized by Department of Electronics and Communication Systems Nehru Arts and Science College, Coimbatore

# Characterization of TiO<sub>2</sub> Thin Films for Different Annealing Temperature Using Chemical Bath Deposition

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Abstract-TiO2 is most widely studied materials due to its exclusive and outstanding structural, optical and electrical properties, among the various transition metal oxides (ZnO, SnO2, WO3, NiO etc.,). TiO2 has wide band gap, due to its applications in a various fields such as dye-sensitized electrodes, solar cell, gas sensors, photocatalysts, wave guide, antireflective coatings and integrated optical amplifiers. A chemical bath deposition method has several advantages including simplicity, low cost, easily controlled doping levels and feasible preparation of large area films. Moreover the method is simple, less time consuming and cost effective compared to other methods. Annealing of TiO2 nanostructured thin films were characterized by Chemical Bath Deposition method (CBD). The different characterization of tio2 nano structural, thin film studied by X-ray diffraction (XRD), Fourier Transform Infrared Spectra (FTIR), UV-Vis Spectra, photoluminescence (PL). X-ray diffraction results indicates the investigated samples were corresponds to tetragonal anatase phase .Atomic Force Microscopy (AFM) is used to find the roughness of the surface, The rms value of 200°C TiO<sub>2</sub> thin films was found to be 33 nm, further it was increases to 43nm for 500°C thin films. The bang gap energy was found to decreases from 3.42 eV to 3.27 eV with increase of annealing temperatures. The electrical resistivity was found to be 2.78  $\Omega$ .cm and 1.81 $\Omega$ .cm for different annealing temperature. And results obtain in the electrical measurements confirms that these type of material suitable for gas sensor or solar cell applications.

Keywords-TCO, TiO2 Thin Films, Annealing Temperature.

# STRESS AND COPING STRATEGIES OF BANK EMPLOYEES: A STUDY WITH REFERENCE TO COIMBATORE DISTRICT

# **Dr. K. SURESH**

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He has depth knowledge in basket ball, hand ball and soft ball and published one book entitled "TRB in physical education and prepared hand book for extracurricular activities in sports. He published more than ten papers in reputed journals. He has acting selection committee member for Bharathiar university hand ball, basket ball and soft ball team. Act as a coach for Bharathiar university basket ball and soft ball team and participated in the South Zone and All India inter University tournaments.

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முனைவர் செந்தில்குமார் பொன் மூர்த்தி இராமகிருஷ்ண மிசன் வித்தியாலயம் மாருதி உடற் கல்வியல் கல்லூரியில் துணைப் பேராசிரியராக பணியாற்றி வருகின்றார் அவர் 2003 ஆம் ஆண்டில் இளநிலை வணிகவியல் பட்டத்தையும் 2007 ஆம் ஆண்டு முதுநிலை வணிகவியல் பட்டத்தையும் பாரதியார் பல்கலைக்கழகத்தில் பயின்று பட்டம் பெற்றார். இவர் இளநிலை உடற்கல்வியியல் பட்டத்தை 2009 ஆம் ஆண்டு மற்றும் முதுநிலை



உடறகல்வியியல் பட்டத்தை 2009 ஆம் ஆண்டு மற்றும் முதுநிலை உடற்கல்வியியல் பட்டத்தை 2010-02ஆம் ஆண்டு மாருதி உடற் கல்வியல் கல்லூரி, தமிழ்நாடு உடற்கல்வியியல் மற்றும் விளையாட்டு பல்கலைக்கழகத்தில் பயின்று பட்டம் பெற்றார் கடந்த 10 ஆண்டு காலமாக உடற்கல்வியியல் துறையில் துணை பேராசிரியராக பணிபரிந்து வருகிறார் பல்வேறு ஆராய்ச்சிக் கட்டுரைகளை தொகுத்துள்ளார். உடற்கல்வியியல் ரீதியாக அதிகப்படியான களரிப்பயட்டு சம்பந்தமான ஆராய்ச்சி கட்டுரைகளை வழங்கியதற்காக 2020ஆம் ஆண்டில் ஆரஞ்சு உலக சாதனை விருதை

பெற்றுள்ளார். இவர் சுமார் 120 படிவம் 8 மட்டைப்பந்து கிரிக்கெட்) விரர்களை உருவாக்கி உள்ளார். மாருதி உடற்கல்வியியல் கல்லூரி மட்டைப்பந்து அணியின் பயிற்சியாளராக சுமார் பத்தாண்டு காலமாக பணியாற்றி வருகின்றார் இதன் மூலமாக அந்த அணி பல்கலைக்கழகம் இடையிலான, கல்லூரி இடையிலான, மாநில அளவிலான மற்றும் மாவட்ட அளவிலான மட்டைப்பந்து போட்டியில் பல்வேறு வெற்றிகளை பெற்றுத் தந்துள்ளார்.



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# தற்காப்பு கலைகளின் தாய்

Dr. P. செந்தில் குமார்

வெளியீடு : சுகீத் பதிப்பகம் சூலூர் – 641402



# தற்காப்பு கலைகளின் தாய்

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### நூல் ஆசிரியரைப் பற்றி

பொன் முனைவர் செந்தில்குமார் மூர்த்தி இராமகிருஷ்ண மிசன் வித்தியாலயம் மாருதி உடற் கல்வியல் கல்லூரியில் துணைப் பேராசிரியராக பணியாற்றி வருகின்றார் அவர் 2003 ஆம் ஆண்டில் இளநிலை வணிகவியல் பட்டத்தையும் 2007ஆம் ஆண்டு முதுநிலை பாரதியார் வணிகவியல் பட்டத்தையும் பயின்று பட்டம் பல்கலைக்கழகத்தில் பெற்றார். இவர் இளநிலை உடற்கல்வியியல் ஆம் ஆண்டு மற்றும் பட்டத்தை 2009 முதுநிலை உடற்கல்வியியல் பட்டத்தை 2010-1 2 ஆம் ஆண்டு மாருதி உடற் கல்வியல் கல்லூரி, தமிழ்நாடு உடற்கல்வியியல் மற்றும் விளையாட்டு பல்கலைக்கழகத்தில் பயின்று பட்டம் பெற்றார். கடந்த 10 ஆண்டு காலமாக உடற்கல்வியியல் துறையில் துணை பணிபுரிந்து வருகிறார் பேராசிரியராக ஆராய்ச்சிக் கட்டுரைகளை பல்வேறு தொகுத்துள்ளார். உடற்கல்வியியல் ரீதியாக அதிகப்படியான களரிப்பயட்டு சம்பந்தமான ஆராய்ச்சி கட்டுரைகளை வழங்கியதற்காக 2020 ஆம் ஆண்டில் ஆரஞ்சு உலக சாதனை விருதை பெற்றுள்ளார். இவர் சுமார் 100 களரி மாணவர்களை உருவாக்கி உள்ளார். மாவட்ட அளவிலான களரிபயட்டு போட்டிகளை சுமார் 5 ஆண்டுகாலமாக நடத்தி உள்ளார். மாருதி உடற்கல்வியியல் கல்லூரி மட்டைப்பந்து அணியின் பயிற்சியாளராக பணியாற்றி வருகின்றார்.

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on

# YOGA FOR GLOBAL HEALTH, HAPPINESS AND HARMONY

Date: 6" & 7" March, 2020

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Dr. Ch. VST. SAIKUMAR Dr. T. THANGAMANI



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#### EFFECT OF YOGA TRAINING ON PHYSICAL HTNESS VARIABLES AND BATTING A BILITY OF COLLEGE LEVEL MALE CRICKETERS

Dr. P. santh ilkuma r

SriRamakrishna Mission VidyalayaMawthi College of Physical Education. Coimbatox=64.1029, TamilNadu

A BSTRACT

The pulp ose of the study is to find out the effect of specific yog at raining physical filness variables and batting ability of college level male Cricketers. To achieve the pulpose of this study 30 cricketers as a subjects from Ramakrishna Mission Vidy algo and the College of physical education Coimbatore, Tamil Nadu India. At Random group design was used in this experimental study. Thirty subjects were selected from the age group of 16-25 years. In each category 15 was experimental group and 15 was Control group. Reliest was conducted in all the selected variables and post test was conducted after 6 weeks training. Reland posttest swere also be conducted in the physical fitness variables namely; Flexibility Reaction Time. Batting ability namely; Ront Foot and Back Foot as testing with sit and reach to grave from Timertest and ten rating scale. The data was collected before and after the training programmes and statistically analyzed by using dependent "if test. These results illustrate how to develop the blatting ability while providing yog attaining for the cricketers.

#### CRICKET

Cricket is basically a bat and ball game played between two teams of eleven players. It is one of the oldest sports in the world and has its origin in 16th century in England. The expansion of the British Empire spread this once colonial recreational sport into a spirited game to all corners. Today cricket seems to be a virtual lifeline of many commonwealth nations. Cricket is a game in which each team has to bowl and bat according to certain rules and regulations. A team which scores greater number of runs will be the winner.

#### PHYSICAL FITNESS AND CRICKET

Cricket is a sport in which fitness is traditionally not thought of as very important. However, the success in the 1990s and 2000s of the world beating Australian team has been attributed to their professionalism, and in part to the way they address their fitness. The other test playing nations have rightfully put more emphasis on fitness recently and are reaping the benefits.

#### METHODOLOGY

The purpose of the study is to find out the effect of yoga training on physical fitness variables and batting ability of college level male Cricketers. The experimental group underwent yoga training for eight weeks 5 days per week for 45 minute per day. The control group was not given any specific training programme. The experimental design used is pre-test and post test randomized group design. Batting ability were assessed by using subjective rating test.

#### SELECTION OF SUBJECTS

To achieve this purpose a total number of thirty college level male cricketers in the age group of 1.8 – 25 years were randomly selected from Ramakrishna Mission Vidyalaya Maruthi College of physical educationCoimbatore District, Tamil Nadu. Among the selected subjects, 1.5 were experimental group and 1.5 were control group.

#### SELECTION OF VARIABLES

The following variables were selected and the data were collected using the appropriate tools.



**Dr. Ch. VST. Saikumar** has been working as a Principal and Secretary of Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education for the past seven years and is having 30 years of teaching experience in the same institution. He was graduated from Nagarjuna University, Guntur, Andhra Pradesh, did his B.P.Ed. from Andhra University and M.P.Ed. from Bharathiar University and secured Gold medal in both B.P.Ed. and M.P.Ed. He got his M.Phil. from Annamalai University and Ph.D. from Bharathiar University and NIS Diploma in Cricket from NSNIS South Centre, Bangalore. He has published 5 books in physical education. He also published more than 30 research articles in

reputed journals and published more than 35 research papers in national and international seminars and conferences. He has guided more than 45 M.Phil. and 20 Ph.D. scholars and at present guiding 5 Ph.D. research scholars.

Dr. T. Thangamani is a multi-talented in the field of physical education. No one can separate physical education from his life. He has dedicated his whole life for the development of sports and games. He was graduated from Sacred Heart College, Tirupathur District, Tamil Nadu, did his H.P.Ed., B.P.Ed., M.P.Ed., M.Phil., Ph.D., from Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education, Coimbatore. He has got his additional qualifications viz., M.Com., M.Sc.(Yoga), M.Sc.(Psychology), PG Diploma in Yoga, from several institutions of South India. He dedicated himself as a physical director in Ramakrishna Mission Vidyalaya Gandhi



Teacher Training Institute for 7 years. Another two years as a physical director in Ponnusamy Gounder Teacher Training Institute, Salem. He also worked as a physical director for about 8 years in C.D.Nayagam T.Nagar, Hr. Sec. School. He has been instructing yoga practice for all category of people for about 20 years. In this Regard he has organized national and international conferences and seminars. At present, he is working as a Assistant Professor in Sri Ramakrishna Mission Vidyalaya Maruthi College of physical education in Coimbatore. He is the key person in bring out a distinct text book for physical education in school education under Tamil Nadu Text book Corporation. Besides that, he has authorized many books regarding Physical Education. He has published 20 books in the field of Physical Education. He also published more than 15 research articles in reputed journals, and 10 research papers in National and International seminars and conferences.

Still he has long way to go.....



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THE CONSEQUENCE OF SURYANAMASKAR FORCORPORAL AND PSYCHOSOMATIC CONSOLE

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#### Abstract

Sun-salutation that is known as Suryanamaskar in Sanskrit is one of the popular forms of

Hatha Yoga. "Surya" means "Sun" and "Namaskar" means "to bow down." In Hindu mythology, the sun is worshipped as a symbol of health and immortal life. The Rig Veda declares that "Surya is the Soul, both of the moving and unmoving beings". Suryanamaskar has been a traditional yoga based practice. It is a salutation to this powerful celestial body, around which other planets revolve and take light and heat from it. Surya Namaskar or Sun Salutation is a very ancient technique of paying respector expressing gratitude to the Sun that is the source of all forms of life on the planet. The sun is the life or energy source for our planet and is an element in everything we eat, drink or breathe; we get physical health, well being, vitality and energy. There is no prospect of life in the absence of the Sun's rays. Suryanamaskar is a series of twelve physical postures. These alternating backward and forward bending postures flex and stretch the spinal column through their maximum range giving a profoundstretch to the whole body. The present day children are facing a ruthless competition, infrequently they play and lack of physical activities leads to anxiety and restlessness, especially during exams. If the students follow a sedentary lifestyle and do not get enough physical exercise, then blood circulation gets affected, they becoming lazy, as the body becomes slower, the mind also becomes dull. The result: lots of time with the book, but no retention. If they adopt Suryanamaskar in their daily scheduleit certainly boosts endurance power and reduces the feeling of anxiety and restlessness. Regular practice of Suryanamaskar for students provides strength and vitality to the body and it's the best workout for muscles and improves flexibility in spine and in limbs, it calms the mind and helps improves concentration. Children as young as 5year-old and above can start doing Suryanamaskar daily. It is the most simple yet effective. This yoga poses individually address particular parts of the body, both anatomically and physiologically. Research has shown that Suryanamaskar when practiced regularly, have the potential to prevent over a hundred aliments.

Key words:Suryanamaskar,Mythology, Traditional, Salutation,Potential

#### INTRODUCTION

Modern society also offers innumerable distractions and undesired attractions, especially

linked to modern media and communication technologies, on which we have become dependent. The massive presence of media and the time spent on media technologies by children are clear indicators of the shift in lifestyles and priorities of our new generation. Children worldwide are spending more and more time in front of television sets or computer screens and on cell phones, making media a central part of their lives. Young people today are expected to be and are often constantly online. Advertising, communications, as well as education present a brand new social networking image to make media accessible to children.

Children are suffering from bullying, behavioral issues, problems with attention and selfregulation, sleep disorders, obesity, computer dependency, drug abuse, and lack of school motivation, even leading to dropouts. Recent dropout rates in high schoolsare close to 30%, despite several years of political priority and designated measures. Furthermore, schools are faced with the challenge that students are more attracted to the Internet, social media, and gaming



**Dr. Ch. VST. Saikumar** has been working as a Principal and Secretary of Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education for the past seven years and is having 30 years of teaching experience in the same institution. He was graduated from Nagarjuna University, Guntur, Andhra Pradesh, did his B.P.Ed. from Andhra University and M.P.Ed. from Bharathiar University and secured Gold medal in both B.P.Ed. and M.P.Ed. He got his M.Phil. from Annamalai University and Ph.D. from Bharathiar University and NIS Diploma in Cricket from NSNIS South Centre, Bangalore. He has published 5 books in physical education. He also published more than 30 research articles in

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Still he has long way to go.....



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on

# YOGA FOR GLOBAL HEALTH, HAPPINESS AND HARMONY

Date: 6<sup>th</sup> & 7<sup>th</sup> March, 2020

# PROCEEDINGS

Dr. Ch. VST. SAIKUMAR Dr. T. THANGAMANI



### Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education

(An Autonomous College Re-accredited by NAAC, Affiliated to the Tamil Nadu Physical Education & Sports University, Chennai) Coimbatore - 641 020





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#### EFFECTS OF SELECTED YOGIC BREATHING TECHNIQUES ON SELECTED PHYSICAL AND PHYSIOLOGICAL VARIABLES ON INTER COLLEGIATE HANDBALL

#### PLAYERS.

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#### ABSTRACT

One of the initiation techniques into prananyama is through the practice of yogic breathing or yoga breathing, yogic breathing helps us break down and understand our breathing better as being composed of diaphragmatic and thoracic breathing. Although this breathing technique forms a basis to advanced pranayama techniques, it leads to important benefits of its own and provides us a glimpse of what we are capable of reaching through pranayama. During breathing for pranayama inhalation (puraka) stimulates the system and fills the lungs with fresh air retention (kumbhaka) raises the internal temperature and plays an important part in increasing the absorption of oxygen exhalation (rechaik) causes the diaphragm to return to the original position and air full of toxins and impurities is forced out by the contraction of intercostal muscles. These are the main components leading to pranayama which massage the abdominal muscles and tone up the working of various organs of the body. Due to the proper functions of these organs, vital energy flows to all the systems. The success of pranavama depends on proper ratios being maintained between inhalation, exhalation and retention. The purpose of the study was to find out the effect of selected yogic breathing techniques on Bharathiyar university inter collegiate hand ball players. A total of 15 (N-15) handball players aged between 17 and 25 years were selected from Sri Ramakrishna mission Vidyalaya College of Arts and Science Coimbatore. The subjects were only experimental group. The experimental group was asked to take part in selected yogic breathing techniques for eight weeks. After consulting experts in the field of yoga and also go through the available literature. The following Physical and physiological variables were selected for this study. The Physical fitness variables are againty and abdominal muscular endurance and the physiological variables is cardio respiratory endurance. The analysis of data revealed that the training programme showed significant changes selected variables such as agility, abdominal muscular endurance and cardio respiratory endurance due to eight weeks of training programme for yogic breathing techniques.

Keyword: Agility, Abdominal Muscular Endurance and Cardio Respiratory Endurance

#### INTRODUCTION

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#### TRAINING PROCEDURE

The programmes of different type of yogic breathing techniques were prepared with great care. Exercises were chosen primarily to warm-up the complete body. The experimental group

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